Embracing a Growth Mindset.

Commerce Bancshares, Inc.

2019 Annual Report & Form 10-K

Team members featured from left to right: Renee Blake, Anthony Atencio, Kala Gebhard, Rod Campbell and Niaz Khan

Embracing a Growth Mindset

The world is changing, and it is changing more quickly than ever. New technologies, shifting customer demographics and expectations, and an evolving competitive landscape are reshaping the banking industry. Commerce understands that to thrive and endure for the long term, we need to stay curious, be agile in response to our customers' needs and maintain a strategic vision that positions us to grow and innovate.

Commerce is committed to changing with the times, and to do that, our organization embraces a growth mindset. We look at challenges as opportunities to innovate, at disruption as a chance to uncover new ways to create value. We build on the 154-year foundation of our successful franchise but look for ways to raise the performance bar even higher. To do this, we bring together best-in-class products with exceptional teams dedicated to understanding and accepting our customers' unique challenges. As we enter a new and uncertain decade in financial services, it is Commerce's growth mindset that underpins and enables our continued success.

About the Cover

Our ability to communicate and collaborate is one of our greatest strengths as an organization, and embracing a growth mindset will propel us beyond our current level of success. We encourage team members from across the bank to come together, bringing diverse perspectives and new ideas for helping our customers and growing our business.

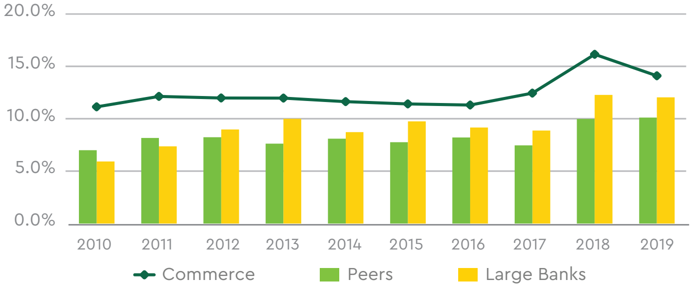
From left to right: Crystal Yang, Business Line Project Manager; Beth Feuring, Director of Talent Development; Felecia Hogan, Bank Operations Group Manager; and Matt White, Director of Commercial Strategy, Marketing and Sales Delivery

Financial Highlights

(In thousands, except per share data)	2015	2016	2017	2018	**2019**
OPERATING RESULTS					
Net interest income	$ 634,320	$ 680,049	$ 733,679	$ 823,825	**$ 821,293**
Provision for loan losses	28,727	36,318	45,244	42,694	**50,438**
Non-interest income	422,444	446,556	461,263	501,341	**524,703**
Investment securities gains (losses), net	6,320	(53)	25,051	(488)	**3,626**
Non-interest expense	650,792	689,229	744,343	737,821	**767,398**
Net income attributable to Commerce Bancshares, Inc.	263,730	275,391	319,383	433,542	**421,231**
Net income available to common shareholders	254,730	266,391	310,383	424,542	**412,231**
Cash dividends on common stock	84,961	87,070	91,619	100,238	**113,466**
AT YEAR END					
Total assets	$ 24,604,962	$ 25,641,424	$ 24,833,415	$ 25,463,842	**$ 26,065,789**
Loans, including held for sale	12,444,299	13,427,192	14,005,072	14,160,992	**14,751,626**
Investment securities	9,901,680	9,770,986	8,893,307	8,698,666	**8,741,888**
Deposits	19,978,853	21,101,095	20,425,446	20,323,659	**20,520,415**
Equity	2,367,418	2,501,132	2,718,184	2,937,149	**3,138,472**
Non-performing assets	29,394	14,649	12,664	13,949	**10,585**
Common shares outstanding[1]	118,179	117,454	117,543	116,685	**112,132**
Tier I common risk-based capital ratio	11.52%	11.62%	12.65%	14.22%	**13.93%**
Tier I risk-based capital ratio	12.33	12.38	13.41	14.98	**14.66**
Total risk-based capital ratio	13.28	13.32	14.35	15.82	**15.48**
Tier I leverage ratio	9.23	9.55	10.39	11.52	**11.38**
Tangible common equity to tangible assets ratio	8.48	8.66	9.84	10.45	**10.99**
Efficiency ratio	61.42	61.04	62.18	55.58	**56.87**
OTHER FINANCIAL DATA (based on average balances)					
Return on total assets	1.11%	1.12%	1.28%	1.76%	**1.67%**
Return on common equity	11.43	11.33	12.46	16.16	**14.06**
Loans to deposits	61.44	63.71	66.18	69.27	**71.54**
Equity to assets	10.00	10.16	10.53	11.24	**12.20**
Net yield on interest earning assets (T/E)	2.93	3.04	3.19	3.53	**3.48**
PER COMMON SHARE DATA					
Net income – basic[1]	$ 2.11	$ 2.26	$ 2.63	$ 3.61	**$ 3.59**
Net income – diluted[1]	2.10	2.26	2.62	3.60	**3.58**
Market price[1]	35.00	49.94	50.65	53.69	**67.94**
Book value[1]	18.81	20.06	21.89	23.93	**26.70**
Cash dividends[1]	0.705	0.740	0.777	0.853	**0.990**
Cash dividend payout ratio	33.35%	32.69%	29.52%	23.61 %	**27.52%**

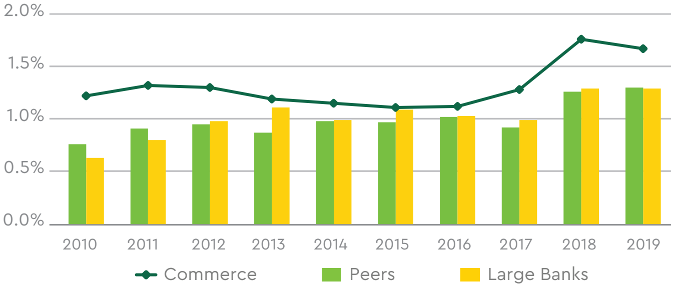
[1]Restated for the 5% stock dividend distributed December 2019

Return on Average Common Equity



Commerce 10-Year Average: 12.4% Peers' 10-Year Average: 8.2%

Return on Average Assets



Commerce 10-Year Average: 1.3% Peers' 10-Year Average: 1.0%

Source: S&P Global Market Intelligence, and company reports and filings as of December 31, 2019

Letter to Our Shareholders

David W. Kemper
Executive Chairman
COMMERCE BANCSHARES, INC.
FEBRUARY 25, 2020

Commerce Bancshares enjoyed another strong year of financial performance in 2019. Modest loan growth and strong deposit retention, combined with low credit costs, partially offset the compressed net interest margin created by a flattening yield curve. Despite a slowdown in economic growth in 2019, the overall economy remains strong as we have now entered the longest business cycle expansion on record. The Federal Reserve's interest rate cuts in the second half of the year provided an additional boost to keep the markets we serve growing and healthy. We expect this modest economic growth to continue as we head into 2020.

The banking industry continues to face pressure due to consolidation, changing demographic trends and increased competition. Our team members remain committed to recognizing these trends as opportunities and strive to continually deliver innovative products and services to address our customers' unique challenges. Our strong culture is the key driver of our long-term success. It's a culture that embraces a growth mindset — continuously striving to improve — and provides us with the framework to build upon our success and deliver value-added solutions to our customers.

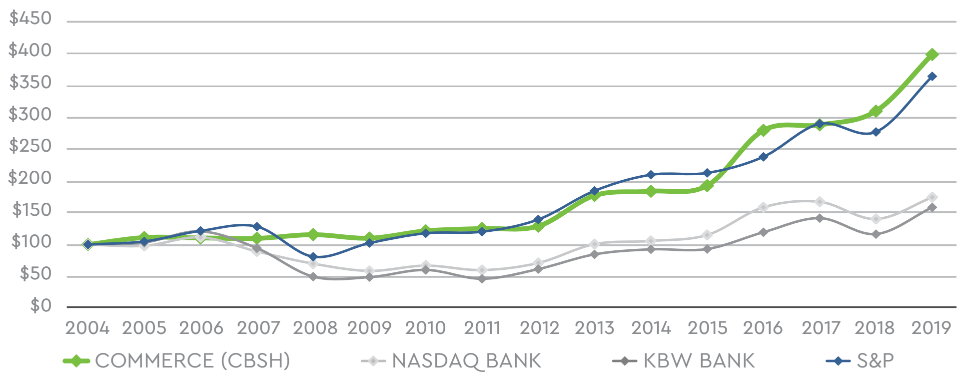
The execution of our long-term strategic objectives allowed us to deliver one of the highest returns on equity among the 50 largest banks in the country. Consistent with our strong financial position, we returned capital to shareholders through increased dividends and share repurchases. In February 2020, we increased our quarterly common dividend 9% to $.27 per share, our 52nd consecutive year of dividend increases. Additionally, over the course of 2019, we repurchased approximately $285 million of common shares. Over the past 15 years, the annualized total return for shareholders has been 9.6% compared to the KBW Bank Index of 3.1%.

We will continue to focus on the long-term growth and health of your company with an emphasis on building customer relationships, collaborating across business lines and providing innovative solutions. While the current interest rate environment will put pressure on banking industry earnings, I have confidence in our diversified business model and in our consistent approach to driving shareholder value. It is this approach that will position Commerce to deliver strong earnings growth for many years to come.

I would like to thank our team members, customers and shareholders for their ongoing support, and look forward to our continued success in 2020.

Long-Term Shareholder Return

Cumulative Total Return Indexed, 12/31/2004 = $100



Source: Bloomberg as of December 31, 2019

Over the past 15 years
9.6%
Annualized Shareholder Return

Embracing a Growth Mindset

John W. Kemper
President and Chief Executive Officer
COMMERCE BANCSHARES, INC.
FEBRUARY 25, 2020

Dear Commerce Shareholders:

The past year for your company was marked by strong performance against the backdrop of healthy economic growth but also an increasingly challenging yield curve, which put pressure on net interest margins. This performance was driven by delivering innovative products and solutions to our customers, maintaining discipline related to credit and expense management, and investing in technology and talent that will pay dividends for years to come.

Although we are certainly pleased with these financial results, we are equally encouraged by the underlying growth that makes this possible. At Commerce, when we talk about growth, we talk about the mindset that is needed to sustain and propel our organization into the future. This mindset, and the work that supports it, goes beyond merely showing growth for growth's sake. Growth means more than a swelling balance sheet, increasing headcount and expansion into new geographic markets — though certainly these may be desired outcomes. To us, growth must be measured in terms of our capabilities and cohesion as a team. Having a growth mindset means challenging ourselves to adapt to a changing world and avoiding the complacency that can afflict any high-performing organization, much less one with a history and culture 154 years in the making. When we approach our customers' needs with a growth mindset, we see their challenges as opportunities to help. This is how we strive to be a better partner, add more value to customers' lives and enterprises and, through this collaboration, create rewards for our team members and shareholders.

Our Results

In some ways, 2019 had the misfortune of following 2018, an exceptional year for bank earnings, driven by an expanding net interest margin which was, itself, a product of rising short-term interest rates. These factors, combined with the benefits of tax reform and benign credit, created a near-ideal earnings environment. Despite the reversal of this interest rate situation and the resultant headwinds, our results in 2019 were nonetheless robust, reflecting the diversity of our business model, the steady geographic markets we serve and the focus on delivering on our "blue chip" strategic objectives.

In 2019, net income available to common shareholders totaled $412 million. Returns on average assets and average common equity totaled 1.67% and 14.1%, respectively, positioning Commerce as having one of the best financial

Return on Average Assets
1.67%

Return on Average Common Equity
14.1%

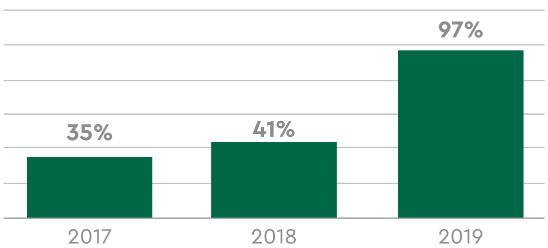
performances of the nation's 50 largest banks. The bank grew year-end loan balances 4%, increased year-end deposit balances 1% and generally grew revenue across our business lines, all while keeping credit losses to a minimum and maintaining a strong balance sheet.

Dividend Increase of
9%
in 2020

We returned more than $407 million in capital to our shareholders in 2019, including $122 million in cash dividends and $285 million in common share repurchases. In February 2020, we increased our common dividend 9% to $.27 per share, the 52nd consecutive year of such increases. This steady shareholder return of Commerce stock, including dividends, has outpaced the KBW Bank Index by an annualized 6.5% over the last 15 years.

Payout Ratio

Capital Returned to Common Shareholders as a Percentage of Net Income Available to Common Shareholders



Capital includes total cash dividends paid on common stock plus total common shares repurchased

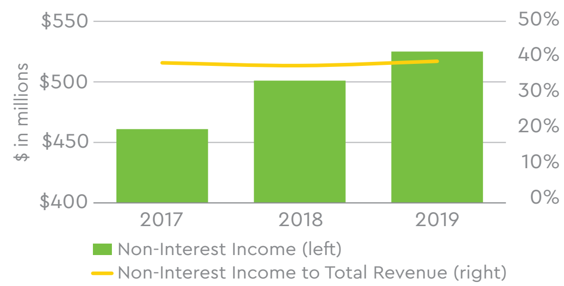
Strength of Our Business

Commerce's core strengths lie in the super-community model that distinguishes us from other banks — a model that emphasizes local connection, decision-making and service, coupled with the sophisticated products and advice typically found at larger banks. Our strong capital position, credit discipline, earnings profile and focus on operational efficiency enable us to invest in new products, services and markets.

The strength of the Commerce franchise also depends on the diversity in our loan portfolio and fee-based businesses. Our significant presence in payments and wealth management provides consistent returns and positions Commerce uniquely among our peer bank and non-bank competitors. More importantly, these capabilities allow us to add more value to every customer relationship.

Diverse Revenue

Non-Interest Income as a Percentage of Total Revenue



We ended 2019 with a tangible common equity to asset ratio of 11% and a total risk-based capital ratio of 15.5%. Our robust capital ratios position us well, both for future growth and for times of economic stress. Because of this strong position and steady earnings profile, Commerce enjoys an a1 baseline credit assessment rating from Moody's. Only five other banks in the country maintain a credit rating at this level or better.

Strength and Growth Across Our Business Segments

Consumer Banking

In the consumer banking segment, Commerce is focused on refining and improving the customer experience and, because all customers are different, doing so through the channels they prefer. During 2019, we introduced a host of new consumer enhancements, with particular emphasis on digital channels and personalizing the banking experience. Over the course

of the year, Commerce delivered 22 new functionality releases in our mobile banking app while improving our app store rating to a 4.7 on both Android® and iOS platforms. In addition, we introduced Commerce**Premier** — a new relationship management program designed to deepen our engagement with key retail clients. To better understand our customers' needs, our branch bankers leverage a Customer Advising Referral Assistant (CARA) tool to help identify financial challenges and recommend proven solutions.

We continue to innovate with new ideas for branch design to address changing customer preferences. We recently opened our first Commerce Bank Connect™ location in St. Louis. This location has many new capabilities compared to a traditional branch and is designed to connect our brand and solutions with people, ideas and the community as a whole. Another new location in Denver is designed as a collaborative space to engage small business and retail customers with relevant bank partners. We also introduced a new branch in Peoria, refreshed 27 locations across our footprint, and optimized our branch and ATM locations to align with customer needs. Our long-term focus continues to be on making investments in innovation while managing our expenses appropriately. These initiatives allowed us to grow retail deposits 2% while holding costs well below peer benchmarks.

Commercial Banking and Commercial Payments

Our commercial banking and payments teams serve more than 13,000 business clients. We recognize the value of having a financial partner that truly understands clients' unique financial needs. Our teams are comprised of highly skilled bankers and payments experts with considerable knowledge of the markets where we operate and the industry verticals we serve. We use insights gained from working with clients across the U.S. to help businesses access the payments system, manage risk, fund growth and improve cash flow.

Our commercial division continues to focus on the growing healthcare industry. Through our team of seasoned specialists, many of whom have direct experience in the healthcare field, CommerceHealthcare® delivers a fresh perspective on financial solutions, focusing on receivables, payments and financing.

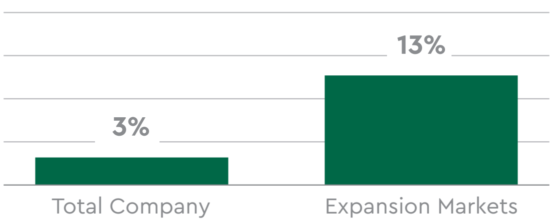
In close consultation with our existing customers, CommerceHealthcare® recently introduced new solutions for patient refunds and online bill pay, pre-service enrollment for patient financing and remote deposit for providers. Our tools help providers streamline financial processes, optimize revenue and payments, and improve cash flow.

Our CommercePayments™ group thinks about the future of payments beyond the payer — focusing on the supplier to help balance the equation. As a payments leader, we take a pragmatic approach to payment solution development, keeping our customers at the forefront of all that we do. Our CommercePayments™ team strives to provide reimagined and simplified payables and receivables solutions that allow our customers to focus on what matters most to them.

With the significant growth in our expansion markets, we continue efforts to ensure Commerce is positioned to effectively serve these communities through strategic locations, high-performing talent and local industry specialists. In 2019, we upgraded our commercial offices in Oklahoma City, Houston, Nashville and Indianapolis. We also opened an additional business banking center in the Highlands area of northwest Denver. We are committed to investing in and expanding our presence in these markets.

Expansion Market Loan Growth

3-year CAGR



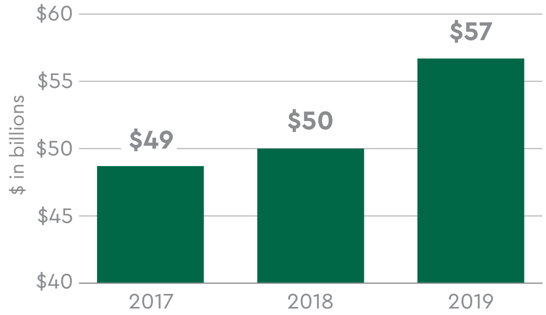
Wealth Management

As one of the nation's largest bank-managed trust companies, we have the scale, product depth and professional team to serve the needs of individual and institutional clients, while providing financial advice with an individualized approach and tailored solutions. Within our personal wealth service model, we oversee Commerce Brokerage Services, Inc., Commerce Trust Company and Commerce Family Office, delivering a suite of comprehensive solutions to address our clients' unique needs.

Our differentiated wealth management business was a strong contributor to our financial results in 2019. The team grew asset management revenue 7%, and assets under administration reached a record $56.7 billion. We continue to outperform our peers in client satisfaction (96%) and are industry leading in our retention of individual investment assets (96%), reflecting the strong partnerships we form with our clients.

We continue to find innovative ways to fuel growth in our wealth management business. We recently invested in a new private banking lending platform that will transform how we support unique client needs with highly specialized products. We launched a new client relationship management (CRM) system to better serve our clients and identify future opportunities. Additionally, we are expanding our brand awareness efforts and implementing a new consumer engagement process to increase our client relationships and the breadth of services we provide. We believe investments such as these will position us for continued growth and superior returns well into the future.

Trust Assets Under Administration



Our Culture – Raising the Bar by Embracing a Growth Mindset

At Commerce, we cultivate a culture of high performance and continuous improvement. We believe our culture — in particular, our ability to communicate and work collaboratively on behalf of our customers — is our differentiating strength and the source of our long-term competitive advantage.

Collaboration Across the Bank

Collaboration is at the heart of everything we do. As mentioned in last year's report, we have been immersed in the planning and building phases of a complete core deposit system conversion. This project is an example of an extraordinary collective effort, spanning business lines, operations and information technology, to create a successful implementation that is scheduled to go live in 2020. Recent CRM upgrades in our commercial, payments and trust areas have created the foundation for better information-sharing and collaboration across all corners of the bank. These tools enable the communication and collaboration that is at the heart of our Commerce culture, allowing us to work together with agility on behalf of our customers.

Diversity, Inclusion and Equity

Over the past few years, Commerce has made significant progress in building a more diverse and inclusive culture in which all team members can thrive. We believe our success is defined not only by our ability to help people meet their financial challenges, but also by the mark we leave on the world at large. That's why we make ongoing investments in ideas, programs and technology that serve our customers, strengthen our communities and support a healthy working environment. As a socially responsible corporate citizen, we continuously seek opportunities to make a difference. Our community involvement, diversity and inclusion initiatives, and sustainability efforts are all products of a culture that emphasizes being a force for good in our region and in our industry. The common denominator behind these investments is our commitment to meeting people where they are, learning about their needs, and building strong and lasting relationships.

“As a socially responsible corporate citizen, we continuously seek opportunities to make a difference.”

In support of the diverse makeup of today's labor force, Commerce offers a variety of internal resource groups, mentoring programs and networking opportunities to help team members feel connected to our bank and to each other. EMERGE, a resource group that focuses on creating a culture that attracts, develops and engages young professionals, now boasts nearly 600 members across Commerce. RISE, a similar group created to support the personal and professional growth among women at Commerce, has 1,200 engaged members. Recent launches of VIBE (multicultural) and PRIDE (LGBTQIA+) groups have brought even more diverse stakeholders into the fold.

Supporting Our Communities

As a bank, we know our success is tied inextricably to the communities we serve. Our team members volunteer for and serve a host of local nonprofit entities across our markets. In 2020, Commerce is offering all team members the opportunity to spend a day with full pay volunteering for causes of their choosing. Our people are also engaged in governance and leadership roles, serving on the boards of more than 500 nonprofits. According to the Federal Reserve, Commerce is considered a leader in providing community development services, and we have maintained an "outstanding" rating for community reinvestment for more than 20 years. Last year, Commerce bankers donated nearly $300,000 to the E2E Foundation, an employee-owned 501(c)(3) that launched in 2016, to support teammates in need. Additionally in 2019, Commerce Trust Company advised on more than $22 million of charitable investments into our communities on behalf of the Commerce Bancshares Foundation and private foundations that have engaged the bank as trustee.

Looking Ahead in 2020

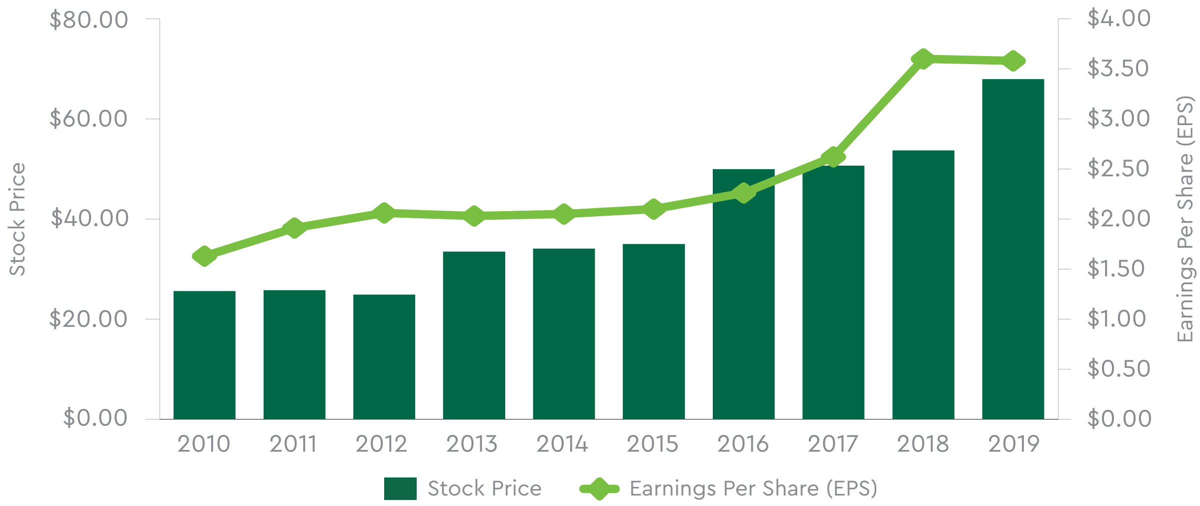
We have a lot to be proud of — and grateful for — as we enter 2020. Our consistently strong financial performance, our culture and values, and the strength of our team position us to take a long-term view. The markets we serve continue to be healthy, and economic activity remains strong.

We will continue to invest in our banking activities in expansion markets outside of our legacy footprint. We have been successful in hiring experienced bankers in these markets who embrace our Commerce culture and deliver the entire suite of competitive products and solutions to our customers.

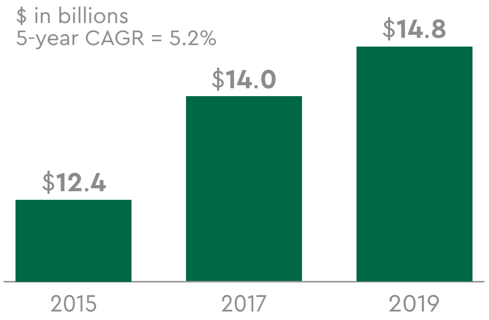
The banking industry will continue to experience disruption from consolidation and non-bank competitors. Part of our growth mindset is to look at this disruption as a source of opportunity. As we look to the future, our bank will continue to invest in the people and technology needed to adapt to a changing landscape. We will focus on continuous improvement and efficiency while sustaining our investment and focus on "blue chip" objectives that drive our growth well into the future.

Our team members come to work every day to accept as their own the challenges our customers face. Our customers are at the center of everything we do; their needs serve as our compass. While the future holds challenges, we will seek to learn and to grow, and to sustain the success of your company through this new decade.

Growth in EPS and Stock Price



Total Loans



Fee Income

↑5%

in 2019

$285

Million in Share Repurchases in 2019

Forbes 2019

BEST BANKS IN AMERICA

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Performance Highlights

- Commerce reported earnings per share of $3.58, down less than 1% from 2018. Return on average assets totaled 1.67% in 2019, while the return on common average equity was 14.1%, which compares favorably to the top 50 bank industry average of 1.25% for return on average assets and 11.0% for return on average common equity.
- Net income available to common shareholders totaled $412 million in 2019 compared to $425 million last year, reflecting 5% growth in our fee income and a disciplined approach to managing expenses, offset by higher loan losses.
- In 2019, Commerce paid a regular cash dividend of $.99 per share (restated) on common shares, representing a 16% increase over the prior year. In February 2020, we announced a 9% increase in our regular cash dividend, marking the 52nd consecutive year in which regular cash dividends increased. Also in 2019, for the 26th year in a row, we paid a 5% stock dividend.
- Total shareholders' equity grew to $3.1 billion, while our Tier I common risk-based capital ratio decreased to 13.9%, compared to 14.2% last year. In 2019, we purchased $285 million in treasury stock of the company.
- Period end total loans grew $591 million, or 4%, in 2019, driven mostly by increases in commercial and industrial loans and personal real estate loans, which grew 9% and 11%, respectively.
- Loan growth in our expansion markets continued to outpace that of the company overall, with loans increasing 5% to $2.3 billion at year end. Revenue growth from our expansion markets increased 12% in 2019. We continued to support and develop our commercial banking teams in our expansion markets, adding new team members and opening a business banking center in Denver during 2019.
- Fee income increased 5% overall on solid growth from trust fees, mortgage banking revenue and cash sweep commissions, which grew 5%, 32% and 29%, respectively. The diversity in our products continues to add consistency to our earnings and complements our lending activities to build stronger banking relationships.
- Fee income from our wealth management businesses grew 6% to $184 million. Commerce Trust Company assets under administration now total $56.7 billion.
- Credit quality remains strong. While net loan charge-offs grew to $50 million, mostly on higher consumer losses, net credit losses totaled only .35% of total loans. In addition, non-performing assets declined to .07% of total loans and remain at very low levels.
- Commerce Bank was named among America's Best Banks 2019 by Forbes. We were the top-ranked Missouri-based bank and ranked 17th in the nation overall.

Commerce by the Numbers

$26.1
Billion in Assets

47th
Among U.S. Banks

$7.6
Billion in Market Capitalization

18th
Among U.S. Banks

$34.4
Billion in Trust Assets Under Management

18th
Among U.S. Banks[1]

$20.5
Billion in Total Deposits

$14.8
Billion in Total Loans

12th
Largest Commercial Card Issuer[2]

154
Years in Business

a1
Baseline Credit Assessment

Commerce is 1 of 6 U.S. banks with an a1 or better Moody's rating

4,858
Full-Time Equivalent Employees

FULL-SERVICE BANKING FOOTPRINT

164 full-service branches and 366 ATMs

St. Louis • Kansas City
Springfield • Central Missouri
Central Illinois • Wichita
Tulsa • Oklahoma City • Denver

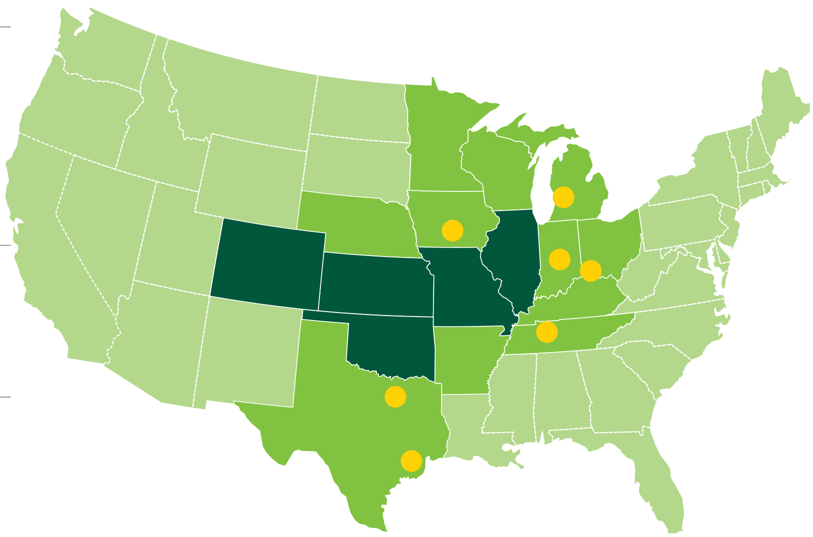
COMMERCIAL OFFICES

Cincinnati • Nashville • Dallas
Des Moines • Indianapolis
Grand Rapids • Houston

U.S. PRESENCE

Extended Commercial Market Area

Commercial Payments Services
Offered in 48 states across the U.S.



Source: S&P Global Market Intelligence, and company reports and filings as of December 31, 2019
[1]Regulated U.S. depositories, which includes commercial banks, bank holding companies and credit unions
[2]Based on Top 50 U.S. Banks by asset size as of 2018 and Nilson Report rankings

Community Advisors

Our Community Advisors help us understand the unique needs and challenges of our customers and communities. They are business owners, educators, professionals and civic leaders who take on the challenges of their organizations and communities every day. We're continually impressed by their hard work and grateful to them for sharing their valuable insights. It is because of our Community Advisors in each of our markets that we're able to say "Challenge Accepted.®"

Missouri

CAPE GIRARDEAU

Nick Burger
Commerce Bank

Tim Coad
Coad Chevrolet and Coad Toyota

Gregg E. Hollabaugh
Commerce Bancshares, Inc.

Mike Kasten
Beef Alliance

Adam Kidd
Kidd's Gas & Convenience Store

Frank Kinder
Red Letter Communications, Inc.

Steve Sowers
Commerce Bank

Susan Layton Tomlin
Layton & Southard, LLC

Allen Toole
Schaefer's Electrical Enclosures

Ben Traxel
Dille & Traxel

CENTRAL MISSOURI

Dan Atwill
Boone County Commission

Dr. Holly Bondurant
Tiger Pediatrics

Brent Bradshaw
Orscheln Management Co.

Philip Burger
Burgers' Smokehouse

Brad Clay
Commerce Bank

Sarah Dubbert
Commerce Bank

Mark Fenner
Former Energy Industry CEO

Joe Hartman
Retired, Commerce Bank

Gregg E. Hollabaugh
Commerce Bancshares, Inc.

Robert S. Holmes
Commerce Bancshares, Inc.
Commerce Bank

George M. Huffman
Pearl Motor Company

Jack W. Knipp
Knipp Enterprises

Rick Kruse
Retired, Boone National Savings & Loan Assoc.

Dr. Mike Lutz
Mike Lutz, DDS

Dr. Clifford J. Miller
Green Hills Veterinary Clinic

Robby Miller
Mexico Heating Company

Todd Norton
Commerce Bank

Mike Petrie
Commerce Bancshares, Inc.

Robert K. Pugh
Retired, MBS Textbook Exchange

Gina Raines
Commerce Bank

Jim Rolls
Retired, Associated Electric Cooperative

Steve Sowers
Commerce Bank

David Townsend
Agents National Title Insurance Company

Andy Waters
AW Holdings, LLC

Larry Webber
Webber Pharmacy

Robin Wenneker
CPW Partnership

Dave Whelan
Commerce Bank

Dr. John S. Williams
Retired, Horton Animal Hospital

HANNIBAL

C. Todd Ahrens
Hannibal Regional Healthcare System

David M. Bleigh
Bleigh Construction Company,
Bleigh Ready Mix Company

Jim Humphreys
Luck, Humphreys and Associates, CPA, PC

Darin D. Redd
Commerce Bank

Mike Scholes
Reliable Termite & Pest Control, Inc.

Steve Sowers
Commerce Bank

HARRISONVILLE

Aaron Aurand
Crouch, Spangler & Douglas

Connie Aversman
Commerce Bank

Larry Dobson
Real Estate Investments

Mark Hense
iFIL USA, LLC

Scott Milner
Max Ford

Brent Probasco
Cass Regional Medical Center, Inc.

Aaron Rains
Commerce Bank

Laurence Smith
Reece Nichols Smith Realty

Dr. Larry Snider
Retired, Snider Optometry

Timothy Soulis
Golden Classics Jewelers

KANSAS CITY

Ali H. Armistead
Alaris Capital, LLC

Kevin G. Barth
Commerce Bancshares, Inc.
Commerce Bank

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Mark One Electric Co., Inc.

Clay C. Blair, III
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Timothy S. Dunn
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Stephen G. Mos
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Edward J. Reardon, II
Commerce Bank

Ora H. Reynolds
Hunt Midwest Enterprises, Inc.

Dr. Nelson R. Sabates
Sabates Eye Centers

Charles S. Sosland
Sosland Publishing Company

Thomas R. Willard
Commerce Trust Company
Tower Properties Company

POPLAR BLUFF

Edward L. Baker
Edward L. Baker Enterprises

John A. Clark
Attorney at Law

Larry Greenwall
Greenwall Vending Co.

Charles R. Hampton, Jr.
Charles R. Hampton & Son Construction Co.

Gregg E. Hollabaugh
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Kenny Rowland
Commerce Bank

Steve Sowers
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Gregory West
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ST. JOSEPH

Mark Barkman
Commerce Trust Company

Brett Carolus
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James H. Counts
Morton, Reed, Counts & Briggs, LLC

David Cripe
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Pat Dillon
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Todd Meierhoffer
Meierhoffer Funeral Home & Crematory

Patrick Modlin
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Amy Ryan
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Judy Sabbert
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Rick Schultz
RS Electric

Bill Severn
NPG, Inc.

Heidi Walker
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Julie Walker
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ST. LOUIS METRO

Blackford F. Brauer
Hunter Engineering Co.

Kyle Chapman
BW Forsyth Partners

Charles L. Drury, Jr.
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Frederick D. Forshaw
Forshaw of St. Louis

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Moto, Inc.

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Commerce Bank

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Buckeye International, Inc.

James B. Morgan
Subsurface Constructors, Inc.

Chrissy Nardini
American Metal Supplies Co., Inc.

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ESCO Technologies, Inc.

Steven F. Schankman
Contemporary Productions, LLC

James E. Schiele
Consultant

Paul J. Shaughnessy
BSI Constructors, Inc.

Thomas H. Stillman
Summit Distributing

Christine Taylor
Enterprise Holdings, Inc.

Andrew Thome
J.W. Terrill

Gregory Twardowski
Investments

Kelvin R. Westbrook
KRW Advisors, LLC

ST. LOUIS METRO EAST

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Breakthru Beverage

Harlan Ferry
Retired, Commerce Bank

Matthew Gomric
Commerce Bank

Jared Katt
Chelar Tool & Die, Inc.

Thomas Lippert
Liese Lumber Company, Inc.

Robert McClellan
Retired, Hortica

James Rauckman
Rauckman High Voltage Sales, LLC

Dr. James T. Rosborg
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Richard Sauget Jr.
Mayor of Sauget

Jack Schmitt
Jack Schmitt Family of Dealerships

Kurt Schroeder
Greensfelder, Hemker & Gale, PC

Joe Wiley
Quest Management Consultants

Dr. Charles J. Willey
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Commerce Bank

Greg Kendall
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Organizational Development Strategies

Stuart Krawll
Beam of St. Louis, Inc.

Patrick N. Lawlor
Lawlor Corporation

Scott Lively
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Stephen Mattis
Allied Industrial Equipment Corporation

Lisa D. McLaughlin
Reilly & McLaughlin

McGraw Milhaven
KTRS

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Powers Insurance

Sue Prapaisilp
Global Foods Market

Dennis Scharf
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ST. CHARLES COUNTY NORTH

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Commerce Bank

Lou Helmsing
Craftsmen Trailer

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St. Charles Community College

Susan Kalist
Commerce Bank

Greg Kendall
Commerce Bank

Dr. Art McCoy
Jennings School District

Peter J. Mihelich, Jr.
Goellner Promotions

Duane A. Mueller
Cissell Mueller Construction Company

Howard A. Nimmons, CPA, CFP
Nimmons Wealth Management

Tarlton J. Pitman
Pitman Funeral Home, Inc.

Lisle J. Wescott
SSM Health – St. Joseph Hospital

William J. Zollmann, III
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Don Zykan
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SPRINGFIELD

Roger Campbell, Jr.
Campbell Ford

Brian Esther
Commerce Bank

James P. Ferguson
Heart of America Beverage Co.

Charles R. Greene
American Sportsmen Holding Co.

Bunch Greenwade
Rancher

Robert A. Hammerschmidt, Jr.
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Dr. Hal L. Higdon
Ozarks Technical Community College

Gregg E. Hollabaugh
Commerce Bancshares, Inc.

Robert S. Holmes
Commerce Bancshares, Inc.
Commerce Bank

Craig Lehman
Shelter Insurance Agency

Michael Meek
Investments

Alvin D. Meeker
Retired, Commerce Bank

James F. Moore
Retired, American Products

Robert Moreland
Commerce Bank

David Murray
R.B. Murray Company

Douglas D. Neff
Commerce Bank

Keith Noble
Commerce Bank

Richard Ollis
Ollis/Akers/Arney Insurance &
Business Advisors

Mike Petrie
Commerce Bancshares, Inc.

Doug Russell
The Durham Company

Rusty Shadel
Shadel's Colonial Chapel

David Waugh
Independent Stave Company

MOKAN

Donald Cupps
Ellis Cupps & Cole

Harvey R. Dean
Pitsco, Inc.

Joe Dellasega
U.S. Awards

Adam Endicott
Unique Metal Fabrication, Inc.

Jay Hatfield
Jay Hatfield Chevrolet

Phil Hutchens
Hutchens Construction

Jerrod Hogan
Anderson Engineering

Wesley C. Houser
Retired, Commerce Bank

David C. Humphreys
TAMKO Building Products, Inc.

Don Kirk
H & K Camper Sales, Inc.

Barbara J. Majzoub
Yorktown Properties

Douglas D. Neff
Commerce Bank

Eric Schnelle
S & H Farm Supply, Inc.

Steve W. Sloan
Midwest Minerals, Inc.

Brian Sutton
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Clive Veri
Commerce Bank

Jerry Watley
Able 2 Products Company, Inc.

Wendell L. Wilkinson
Retired, Commerce Bank

Kansas

BUTLER COUNTY (EL DORADO)

Vince Haines
Gravity :: Works Architecture

Ryan T. Murry
ICI

Marilyn B. Pauly
Commerce Bank

Jeremy Sundgren
Sundgren Realty, Inc.

Mark Utech
Commerce Bank

GARDEN CITY

Monte Cook
Commerce Bank

Richard Harp
Commerce Bank

Gerald Miller
Commerce Bank

Mike Petrie
Commerce Bancshares, Inc.

Lee Reeve
Reeve Cattle Company

Patrick Rooney
Rooney Farms

Tamara Roth
Allred & Company, CPA's, Inc.

Pat Sullivan
Retired, Sullivan Analytical Service, Inc.

HAYS

D.G. Bickle, Jr.
Warehouse, Inc.

Monte Cook
Commerce Bank

Brian Dewitt
Adams, Brown, Beran & Ball, CPAs

Stuart Lowry
Sunflower Electric Power Corporation

Deron O'Connor
Commerce Bank

Marty Patterson
Rome Corporation

Mike Petrie
Commerce Bancshares, Inc.

Kevin Royer
Midland Marketing Coop

LAWRENCE

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Commerce Bank

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Lawrence Memorial Hospital

Eugene W. Meyer
Retired, Lawrence Memorial Hospital

Allison Vance Moore
Colliers International

Martin W. Moore
Advanco, Inc.

Kevin J. O'Malley
O'Malley Beverage of Kansas, Inc.

Edward J. Reardon, II
Commerce Bank

Dan C. Simons
The World Company

Michael Treanor
TreanorHL

LEAVENWORTH

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DeMaranville & Associate, CPAs, LLC

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Sherry DeMaranville
DeMaranville & Associate, CPAs, LLC

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J.F. Denney Plumbing & Heating

Jeremy Greenamyre
Greenamyre Rentals

Chris Klimek
Central Bag, Co.

Lawrence W. O'Donnell, Jr.
Lawrence W. O'Donnell, Jr., CPA Chartered

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Commerce Bank

Edward J. Reardon, II
Commerce Bank

Robert D. Schmitt, II
Mama Mia's, Inc.

Kurt Seelbach
Armed Forces Insurance Exchange

MANHATTAN

Mark Bachamp
Olsson Associates

Linda Cook
Kansas State University

Monte Cook
Commerce Bank

Shawn Drew
Commerce Bank

Neal Helmick
Griffith Lumber Co.

Dr. David Pauls
Surgical Associates

Mike Petrie
Commerce Bancshares, Inc.

WICHITA

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Connell & Connell

Monte A. Cook
Commerce Bank

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Dondlinger Construction

Craig Duerksen
Commerce Bank

Ronald W. Holt
Retired, Sedgwick County

Eric Ireland
Commerce Bank

Paul D. Jackson
Vantage Point Properties, Inc.

Kristi Krok
Commerce Bank

Brett Mattison
Decker & Mattison Co., Inc.

Derek L. Park
Law Office of Derek Park, LLC

Marilyn B. Pauly
Commerce Bank

Mike Petrie
Commerce Bancshares, Inc.

John Rolfe
Kansas Leadership Center

Barry L. Schwan
House of Schwan, Inc.

Thomas D. White
White & Ellis Drilling, Inc.

Illinois

BLOOMINGTON-NORMAL

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Commerce Bank

Neil Finlin
Farnsworth Group, Inc.

Ron Greene
Afni, Inc.

Jared Hall
Keplr Vision Services

Mary Bennett Henrichs
Integrity Technology Solutions

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Commerce Bancshares, Inc.

Robert S. Holmes
Commerce Bancshares, Inc.
Commerce Bank

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AdvocateAuroraHealth

Nick Kemp
Vogo Cabinets

William Phillips
Commerce Bank

Jay Reece
Mueller, Reece & Hinch, LLC

Alan Sender
Retired, Chestnut Health Systems

CHAMPAIGN-URBANA

Mark Arends
Arends Hogan Walker, LLC

Matt Deering
Meyer Capel

Brian Egeberg
Commerce Bank

Brent A. Eichelberger
Commerce Bank

Donna Greene
University of Illinois Foundation

Tim Harrington
Devonshire Group

Gregg E. Hollabaugh
Commerce Bancshares, Inc.

Kim Martin
Martin Hood, LLC

Roger Rhodes
Retired, Horizon Hobby, Inc.

PEORIA

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Coldwell Banker Commercial
Devonshire Realty

David W. Altorfer
United Facilities, Inc.

Royal J. Coulter
Coulter Companies, Inc.

Peter T. Coyle
Arthur J. Gallagher & Co.

Dr. Michael A. Cruz
OSF Healthcare System

Brent A. Eichelberger
Commerce Bank

Gregg E. Hollabaugh
Commerce Bancshares, Inc.

Robert S. Holmes
Commerce Bancshares, Inc.
Commerce Bank

Dr. James W. Maxey
OSF Orthopaedics

Richard D. Moore
Caterpillar, Inc.

Jonathan A. Williams
Commerce Bank

Janet M. Wright
Central Illinois Business Publishers, Inc.

Oklahoma

OKLAHOMA CITY

Gary Bridwell
Orange Power Group

Steve Brown
Red Rock Distributing Co.

Jim Cleaver
Midsouth Financial Company

Clay Cockrill
Manhattan Construction Company

Sherry Dale
The Mettise Group

Mark Fischer
Fischer Investments

Zane Fleming
Eagle Drilling Fluids

Mike McDonald
Triad Energy

Shannon O'Doherty
Commerce Bank

Vince Orza
Retired, Family Broadcasting Corporation

Kathy Potts
Rees Associates, Inc.

Joe Warren
Cimarron Production

TULSA

Jack Allen
HUB International Limited

Stephanie Cameron
AAON, Inc.

R. Scott Case
Case & Associates, Inc.

Gary R. Christopher
Christopher Energy

Wade Edmundson
Commerce Bank

Dr. John R. Frame
Breast Health Specialists of Oklahoma

Gip Gibson
Commerce Bank

Kent J. Harrell
Harrell Energy

Ed Keller
Titan Properties

Teresa L. Knox
Community HigherEd

Ken Lackey
The NORDAM Group, Inc.

Tom E. Maxwell
Retired, Flintco, LLC

Sanjay Meshri
Advanced Research Chemicals, Inc.

John Neas
Neas Investments

Shannon O'Doherty
Commerce Bank

John Peters
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Tracy A. Poole
McAfee Taft

Dr. Andy Revelis
Tulsa Pain Consultants

Daryl Woodard
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Colorado

DENVER

Robert L. Cohen
The IMA Financial Group, Inc.

Joseph Freund, Jr.
Running Creek Ranch

R. Allan Fries
i2 Construction, LLP

Darren Lemkau
Commerce Bank

James C. Lewien
Retired, Commerce Bank

Randall H. Lortscher, M.D.
Rocky Mountain Gamma Knife Center, LLC

Alek Orloff
Alpine Waste & Recycling

David Schunk
Volunteers of America, Colorado Branch

Olivia Thompson
Retired, AlloSource

Jason Zickerman
The Alternative Board

Officers

David W. Kemper
Executive Chairman

John W. Kemper
President and
Chief Executive Officer

Charles G. Kim
Chief Financial Officer
and Executive Vice President

Kevin G. Barth
Executive Vice President

Daniel D. Callahan
Chief Credit Officer
and Executive Vice President

Sara E. Foster
Executive Vice President

John K. Handy
Executive Vice President

Robert S. Holmes
Executive Vice President

Jeffrey M. Burik
Senior Vice President

Patricia R. Kellerhals
Senior Vice President

Douglas D. Neff
Senior Vice President

Paula S. Petersen
Senior Vice President

David L. Roller
Senior Vice President

Thomas J. Noack
Senior Vice President,
Secretary and General Counsel

B. Lynn Tankesley
Chief Risk Officer
and Senior Vice President

Paul A. Steiner
Controller

Aaron C. Meinert
Auditor

Directors

Terry D. Bassham*
Chief Executive Officer
and President,
Evergy, Inc.

John R. Capps*
Vice President,
Weiss Toyota

Karen L. Daniel*
Retired, Chief Financial Officer
and Executive Director,
Black & Veatch

Earl H. Devanny, III
Chief Executive Officer,
Tract Manager

W. Thomas Grant, II
Vice Chairman,
SelectQuote Senior
Insurance Services

David W. Kemper
Executive Chairman,
Commerce Bancshares, Inc.

John W. Kemper
President and
Chief Executive Officer,
Commerce Bancshares, Inc.

Jonathan M. Kemper
Chairman Emeritus,
Commerce Bank,
Kansas City Region

Benjamin F. Rassieur, III*
President,
Paulo Products Company

Todd R. Schnuck*
Chairman of the Board and
Chief Executive Officer,
Schnuck Markets, Inc.

Andrew C. Taylor
Executive Chairman,
Enterprise Holdings, Inc.

Kimberly G. Walker*
Retired,
Chief Investment Officer,
Washington University
in St. Louis

*Audit and Risk Committee Member

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

☑ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2019
OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission File No. 0-2989

COMMERCE BANCSHARES, INC.
(Exact name of registrant as specified in its charter)

Missouri	**43-0889454**
(State of Incorporation)	(IRS Employer Identification No.)
1000 Walnut, Kansas City, MO	**64106**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(816) 234-2000**

Securities registered pursuant to Section 12(b) of the Act:

Title of class	Trading symbol(s)	Name of exchange on which registered
$5 Par Value Common Stock	CBSH	NASDAQ Global Select Market
Depositary Shrs, each representing a 1/1000th intrst in a shr of 6.0% Non-Cum. Perp Pref Stock, Srs B	CBSHP	NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: NONE

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☑ No ☐

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☑

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☑ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☑ Accelerated Filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☑

As of June 30, 2019, the aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately $6,067,000,000.

As of February 14, 2020, there were 112,086,942 shares of Registrant’s $5 Par Value Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant’s definitive proxy statement for its 2020 annual meeting of shareholders, which will be filed within 120 days of December 31, 2019, are incorporated by reference into Part III of this Report.

Commerce Bancshares, Inc.

Form 10-K

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PART I

Item 1. BUSINESS

General

Commerce Bancshares, Inc., a bank holding company as defined in the Bank Holding Company Act of 1956, as amended, was incorporated under the laws of Missouri on August 4, 1966. Through a second tier wholly-owned bank holding company, it owns all the outstanding capital stock of Commerce Bank (the “Bank”), which is headquartered in Missouri. The Bank engages in general banking business, providing a broad range of retail, mortgage banking, corporate, investment, trust, and asset management products and services to individuals and businesses. Commerce Bancshares, Inc. also owns, directly or through the Bank, various non-banking subsidiaries. Their activities include private equity investment, securities brokerage, insurance agency, and leasing activities. A list of Commerce Bancshares, Inc.'s subsidiaries is included as Exhibit 21.

Commerce Bancshares, Inc. and its subsidiaries (collectively, the "Company") is one of the nation’s top 50 bank holding companies, based on asset size. At December 31, 2019, the Company had consolidated assets of $26.1 billion, loans of $14.8 billion, deposits of $20.5 billion, and equity of $3.1 billion. The Company’s operations are consolidated for purposes of preparing the Company’s consolidated financial statements. The Company's principal markets, which are served by 164 branch facilities, are located throughout Missouri, Kansas, and central Illinois, as well as Tulsa and Oklahoma City, Oklahoma and Denver, Colorado. Its two largest markets are St. Louis and Kansas City, which serve as central hubs for the Company. The Company also has offices supporting its commercial customers in Dallas, Houston, Cincinnati, Nashville, Des Moines, Indianapolis, and Grand Rapids, and operates a commercial payments business with sales representatives covering the continental United States of America (“U.S.”).

The Company’s goal is to be the preferred provider of financial services in its communities, based on strong customer relationships built through providing top quality service with a strong risk management culture, and employing a strong balance sheet with exceptional capital levels. The Company operates under a super-community banking format which incorporates large bank product offerings coupled with deep local market knowledge, augmented by experienced, centralized support in select, critical areas. The Company’s focus on local markets is supported by an experienced team of bankers assigned to each market coupled with industry specialists. The Company also uses regional advisory boards, comprised of local business persons, professionals and other community representatives, who assist the Company in responding to local banking needs. In addition to this local market, community-based focus, the Company offers sophisticated financial products usually only available at much larger financial institutions.

The markets the Bank serves are mainly located in the lower Midwest, which provides natural sites for production and distribution facilities and serve as transportation hubs. The economy has been well-diversified in these markets with many major industries represented, including telecommunications, automobile, technology, financial services, aircraft and general manufacturing, health care, numerous service industries, and food and agricultural production. The real estate lending operations of the Bank are predominantly centered in its lower Midwestern markets. Historically, these markets have tended to be less volatile than in other parts of the country. Management believes the diversity and nature of the Bank’s markets has a mitigating effect on real estate loan losses in these markets.

From time to time, the Company evaluates the potential acquisition of various financial institutions. In addition, the Company regularly considers the purchase and disposition of real estate assets and branch locations. The Company seeks merger or acquisition partners that are culturally similar, have experienced management and either possess significant market presence or have potential for improved profitability through financial management, economies of scale and expanded services. The Company has not completed any bank acquisitions since 2013.

Employees

The Company employed 4,576 persons on a full-time basis and 259 persons on a part-time basis at December 31, 2019. The Company provides a comprehensive array of flexible benefit programs to its employees with a focus on financial and physical wellness. The Company's financial benefits package includes a company-matching 401(k) savings plan, a 529 college savings plan, and employee educational and adoption assistance programs. The Company's health and wellness package includes health, dental, vision, life and various other insurances, as well as a wellness program that incentivizes employees to live a healthy and balanced lifestyle. The Company has developed several training and development programs designed to challenge and develop the management and leadership skills of employees, promote collaboration amongst various internal departments and geographic locations, and share best-practices to meet the needs of customers and communities. The Company has also developed numerous training courses targeted to develop interpersonal and technical skills, as well as, to provide training on new banking regulations. None of the Company's employees are represented by collective bargaining agreements.

Competition

The Company operates in the highly competitive environment of financial services. The Company regularly faces competition from banks, savings and loan associations, credit unions, brokerage companies, mortgage companies, insurance companies, trust companies, credit card companies, private equity firms, leasing companies, securities brokers and dealers, financial technology companies, e-commerce companies, mutual fund companies, and other companies providing financial services. Some of these competitors are not subject to the same regulatory restrictions as domestic banks and bank holding companies. Some other competitors are significantly larger than the Company, and therefore have greater economies of scale, greater financial resources, higher lending limits, and may offer products and services that the Company does not provide. The Company competes by providing a broad offering of products and services to support the needs of customers, matched with a strong commitment to customer service. The Company also competes based on quality, innovation, convenience, reputation, industry knowledge, and price. In its two largest markets, the Company has approximately 12% of the deposit market share in Kansas City and approximately 8% of the deposit market share in St. Louis.

Operating Segments

The Company is managed in three operating segments: Commercial, Consumer, and Wealth. The Commercial segment provides a full array of corporate lending, merchant and commercial bank card products, leasing, and international services, as well as business and government deposit, investment, and cash management services. The Consumer segment includes the retail branch network, consumer installment lending, personal mortgage banking, and consumer debit and credit bank card activities. The Wealth segment provides traditional trust and estate planning services, brokerage services, and advisory and discretionary investment portfolio management services to both personal and institutional corporate customers. In 2019, the Commercial, Consumer and Wealth segments contributed 52%, 24% and 24% of total segment pre-tax income, respectively. See the section captioned "Operating Segments" in Item 7, Management's Discussion and Analysis, of this report and Note 13 to the consolidated financial statements for additional discussion on operating segments.

Government Policies

The Company's operations are affected by federal and state legislative changes, by the United States government, and by policies of various regulatory authorities, including those of the numerous states in which they operate. These include, for example, the statutory minimum legal lending rates, domestic monetary policies of the Board of Governors of the Federal Reserve System, United States fiscal policy, international currency regulations and monetary policies, the U.S. Patriot Act, and capital adequacy and liquidity constraints imposed by federal and state bank regulatory agencies.

Supervision and Regulation

The following information summarizes existing laws and regulations that materially affect the Company's operations. It does not discuss all provisions of these laws and regulations, and it does not include all laws and regulations that affect the Company presently or may affect the Company in the future.

General

The Company, as a bank holding company, is primarily regulated by the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956, as amended (BHC Act). Under the BHC Act, the Federal Reserve Board’s prior approval is required in any case in which the Company proposes to acquire all or substantially all the assets of any bank, acquire direct or indirect ownership or control of more than 5% of the voting shares of any bank, or merge or consolidate with any other bank holding company. With certain exceptions, the BHC Act also prohibits the Company from acquiring direct or indirect ownership or control of more than 5% of any class of voting shares of any non-banking company. Under the BHC Act, the Company may not engage in any business other than managing and controlling banks or furnishing certain specified services to subsidiaries, and may not acquire voting control of non-banking companies unless the Federal Reserve Board determines such businesses and services to be closely related to banking. When reviewing bank acquisition applications for approval, the Federal Reserve Board considers, among other things, the Bank’s record in meeting the credit needs of the communities it serves in accordance with the Community Reinvestment Act of 1977, as amended (CRA). Under the terms of the CRA, banks have a continuing obligation, consistent with safe and sound operation, to help meet the credit needs of their communities, including providing credit to individuals residing in low- and moderate-income areas. The Bank has a current CRA rating of “outstanding.”

The Company is required to file various reports and additional information with the Federal Reserve Board. The Federal Reserve Board regularly performs examinations of the Company. The Bank is a state-chartered Federal Reserve member bank and is subject to regulation, supervision and examination by the Federal Reserve Bank of Kansas City and the Missouri Division of Finance. The Bank is also subject to regulation by the Federal Deposit Insurance Corporation (FDIC). In addition, there are numerous other federal and state laws and regulations which control the activities of the Company, including requirements and limitations relating to capital and reserve requirements, permissible investments and lines of business, transactions with affiliates, loan limits, mergers and acquisitions, issuance of securities, dividend payments, and extensions of credit. The Bank is subject to federal and state consumer protection laws, including laws designed to protect customers and promote fair lending. These laws include the Equal Credit Opportunity Act, the Fair Credit Reporting Act, the Truth in Lending Act, the Home Mortgage Disclosure Act, the Real Estate Settlement Procedures Act, and their respective state law counterparts. If the Company fails to comply with these or other applicable laws and regulations, it may be subject to civil monetary penalties, imposition of cease and desist orders or other written directives, removal of management and, in certain circumstances, criminal penalties. This regulatory framework is intended primarily for the protection of depositors and the preservation of the federal deposit insurance funds. Statutory and regulatory controls increase a bank holding company's cost of doing business and limit the options of its management to employ assets and maximize income.

In addition to its regulatory powers, the Federal Reserve Bank affects the conditions under which the Company operates by its influence over the national supply of bank credit. The Federal Reserve Board employs open market operations in U.S. government securities and oversees changes in the discount rate on bank borrowings, changes in the federal funds rate on overnight inter-bank borrowings, and changes in reserve requirements on bank deposits in implementing its monetary policy objectives. These methods are used in varying combinations to influence the overall level of the interest rates charged on loans and paid for deposits, the price of the dollar in foreign exchange markets, and the level of inflation. The monetary policies of the Federal Reserve have a significant effect on the operating results of financial institutions, most notably on the interest rate environment. In view of changing conditions in the national economy and in the money markets, as well as the effect of credit policies of monetary and fiscal authorities, the Company makes no prediction as to possible future changes in interest rates, deposit levels or loan demand, or their effect on the financial statements of the Company.

The financial industry operates under laws and regulations that are under regular review by various agencies and legislatures and are subject to change. The Company currently operates as a bank holding company, as defined by the Gramm-Leach-Bliley Financial Modernization Act of 1999 (GLB Act), and the Bank qualifies as a financial subsidiary under the GLB Act, which allows it to engage in investment banking, insurance agency, brokerage, and underwriting activities that were not available to banks prior to the GLB Act. The GLB Act also included privacy provisions that limit banks' abilities to disclose non-public information about customers to non-affiliated entities.

The Company must also comply with the requirements of the Bank Secrecy Act (BSA). The BSA is designed to help fight drug trafficking, money laundering, and other crimes. Compliance is monitored by the Federal Reserve. The BSA was enacted to prevent banks and other financial service providers from being used as intermediaries for, or to hide the transfer or deposit of money derived from, criminal activity. Since its passage, the BSA has been amended several times. These amendments include the Money Laundering Control Act of 1986 which made money laundering a criminal act, as well as the Money Laundering Suppression Act of 1994 which required regulators to develop enhanced examination procedures and increased examiner training to improve the identification of money laundering schemes in financial institutions.

The USA PATRIOT Act, established in 2001, substantially broadened the scope of U.S. anti-money laundering laws and regulations by imposing significant new compliance and due diligence obligations, creating new crimes and penalties and expanding the extra-territorial jurisdiction of the U.S. The regulations impose obligations on financial institutions to maintain appropriate policies, procedures and controls to detect, prevent, and report money laundering and terrorist financing. The regulations include significant penalties for non-compliance.

The Company is subject to regulation under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2011 (Dodd-Frank Act). Among its many provisions, the Dodd-Frank Act required stress-testing for certain financial services companies and established a new council of "systemic risk" regulators. The Dodd Frank Act also established the Consumer Financial Protection Bureau (CFPB) which is authorized to supervise certain financial services companies and has responsibility to implement, examine for compliance with, and enforce "Federal consumer financial law." The Company is subject to examinations by the CFPB. The Dodd-Frank Act, through Title VI, commonly known as the Volcker Rule, placed trading restrictions on financial institutions and separated investment banking, private equity and proprietary trading (hedge fund) sections of financial institutions from their consumer lending arms. The Volcker Rule also restricts financial institutions from investing in and sponsoring certain types of investments.

In May 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act was signed into law which provides a number of limited amendments to the Dodd-Frank Act. Notable provisions of the legislation include: an increase in the asset threshold from $50 billion to $250 billion, above which the Federal Reserve is required to apply enhanced prudential standards; an exemption from the Volker Rule for insured depository institutions with less than $10 billion in consolidated assets; modifications to the Liquidity Coverage and Supplementary Leverage ratios; and the elimination of Dodd-Frank company-run stress tests for banks and bank holding companies with less than $250 billion in assets. While most of these provisions affect institutions larger than the Company, the Company is no longer required to prepare stress testing as specified by the Dodd-Frank Act.

Subsidiary Bank

Under Federal Reserve policy, the bank holding company, Commerce Bancshares, Inc. (the "Parent"), is expected to act as a source of financial strength to its bank subsidiary and to commit resources to support it in circumstances when it might not otherwise do so. In addition, loans by a bank holding company to any of its subsidiary banks are subordinate in right of payment to deposits and to certain other indebtedness of such subsidiary banks. In the event of a bank holding company's bankruptcy, any commitment by the bank holding company to a federal bank regulatory agency to maintain the capital of a subsidiary bank will be assumed by the bankruptcy trustee and entitled to a priority of payment.

Deposit Insurance

Substantially all of the deposits held by the Bank are insured up to applicable limits (generally $250,000 per depositor for each account ownership category) by the FDIC's Deposit Insurance Fund (DIF) and are subject to deposit insurance assessments to maintain the DIF. In 2011, the FDIC released a final rule to implement provisions of the Dodd-Frank Act that affect deposit insurance assessments. Among other things, the Dodd-Frank Act raised the minimum designated reserve ratio from 1.15% to 1.35% of estimated insured deposits, removed the upper limit of the designated reserve ratio, required that the designated reserve ratio reach 1.35% by September 30, 2020, and required the FDIC to offset the effect of increasing the minimum designated reserve ratio on depository institutions with total assets of less than $10 billion. The Dodd-Frank Act provided the FDIC flexibility in the implementation of the increase in the designated reserve ratio and also required that the FDIC redefine the assessment base to average consolidated assets minus average tangible equity.

On June 30, 2016, the DIF rose above 1.15%, resulting in a reduction of the initial assessment rate for all banks and implementing a 4.5 basis point surcharge on insured depository institutions with total consolidated assets of $10 billion or more. Effective October 1, 2018, this surcharge was eliminated as the DIF reached its required level of 1.35% of estimated insured deposits. This had the effect of reducing the Company's insurance costs by $1.5 million in the fourth quarter of 2018. The Company's deposit insurance expense was $6.7 million in 2019 and $11.5 million in 2018.

Payment of Dividends

The Federal Reserve Board may prohibit the payment of cash dividends to shareholders by bank holding companies if their actions constitute unsafe or unsound practices. The principal source of the Parent's cash revenues is cash dividends paid by the Bank. The amount of dividends paid by the Bank in any calendar year is limited to the net profit of the current year combined with the retained net profits of the preceding two years, and permission must be obtained from the Federal Reserve Board for dividends exceeding these amounts. The payment of dividends by the Bank may also be affected by factors such as the maintenance of adequate capital.

Capital Adequacy

The Company is required to comply with the capital adequacy standards established by the Federal Reserve, which are based on the risk levels of assets and off-balance sheet financial instruments. Capital adequacy guidelines and prompt corrective action regulations involve quantitative measures of assets, liabilities, and certain off-balance sheet items calculated under regulatory accounting practices. Capital amounts and classifications are also subject to judgments by regulators regarding qualitative components, risk weightings, and other factors.

A new comprehensive capital framework was established by the Basel Committee on Banking Supervision, which was effective for large and internationally active U.S. banks and bank holding companies on January 1, 2015. A key goal of the new framework, known as "Basel III," was to strengthen the capital resources of banking organizations during normal and challenging business environments. Basel III increased minimum requirements for both the quantity and quality of capital held by banking organizations. The rule includes a new minimum ratio of common equity Tier 1 capital to risk-weighted assets of 4.5% and a common equity Tier 1 capital conservation buffer of 2.5% of risk-weighted assets. The capital conservation buffer is intended to absorb losses during periods of economic stress. Failure to maintain the buffer will result in constraints on dividends, stock repurchases and executive compensation. The rule also adjusted the methodology for calculating risk-weighted assets to enhance risk sensitivity. At December 31, 2019, the Company's capital ratios are well in excess of those minimum ratios required by Basel III.

The Federal Deposit Insurance Corporation Improvement Act (FDICIA) requires each federal banking agency to take prompt corrective action to resolve the problems of insured depository institutions, including but not limited to those that fall below one or more prescribed minimum capital ratios. Pursuant to FDICIA, the FDIC promulgated regulations defining the following five categories in which an insured depository institution will be placed, based on the level of its capital ratios: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized. Under the prompt corrective action provisions of FDICIA, an insured depository institution generally will be classified as well-capitalized (under the Basel III rules mentioned above) if it has a Tier 1 capital ratio of at least 8%, a common equity Tier 1 capital ratio of at least

6.5%, a total capital ratio of at least 10%, and a Tier 1 leverage ratio of at least 5%. An institution that, based upon its capital levels, is classified as “well-capitalized,” “adequately capitalized,” or “undercapitalized,” may be treated as though it were in the next lower capital category if the appropriate federal banking agency, after notice and opportunity for hearing, determines that an unsafe or unsound condition, or an unsafe or unsound practice warrants such treatment. At each successive lower capital category, an insured depository institution is subject to more restrictions and prohibitions, including restrictions on growth, restrictions on interest rates paid on deposits, restrictions or prohibitions on payment of dividends, and restrictions on the acceptance of brokered deposits. Furthermore, if a bank is classified in one of the undercapitalized categories, it is required to submit a capital restoration plan to the federal bank regulator, and the holding company must guarantee the performance of that plan. The Bank has consistently maintained regulatory capital ratios above the “well-capitalized” standards.

Stress Testing

As required by the Dodd-Frank Act, the Company performed stress tests as specified by the Federal Reserve requirement and published results beginning in 2014 through 2017. On May 24, 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act was enacted, which eliminated the required stress testing under the Dodd-Frank Act for banks with consolidated assets of less than $250 billion. The Company continues to perform periodic stress-testing based on its own internal criteria.

Executive and Incentive Compensation

Guidelines adopted by federal banking agencies prohibit excessive compensation as an unsafe and unsound practice, and describe compensation as "excessive" when the amounts paid are unreasonable or disproportionate to the services performed by an executive officer, employee, director or principal shareholder. The Federal Reserve Board has issued comprehensive guidance on incentive compensation intended to ensure that the incentive compensation policies do not undermine safety and soundness by encouraging excessive risk taking. This guidance covers all employees that have the ability to materially affect the risk profile of an organization, either individually or as part of a group, based on key principles that (i) incentives do not encourage risk-taking beyond the organization's ability to identify and manage risk, (ii) compensation arrangements are compatible with effective internal controls and risk management, and (iii) compensation arrangements are supported by strong corporate governance, including active and effective board oversight. Deficiencies in compensation practices may affect supervisory ratings and enforcement actions may be taken if incentive compensation arrangements pose a risk to safety and soundness.

Transactions with Affiliates

The Federal Reserve Board regulates transactions between the Bank and its subsidiaries. Generally, the Federal Reserve Act and Regulation W, as amended by the Dodd-Frank Act, limit the Company’s banking subsidiary and its subsidiaries to lending and other “covered transactions” with affiliates. The aggregate amount of covered transactions a banking subsidiary or its subsidiaries may enter into with an affiliate may not exceed 10% of the capital stock and surplus of the banking subsidiary. The aggregate amount of covered transactions with all affiliates may not exceed 20% of the capital stock and surplus of the banking subsidiary.

Covered transactions with affiliates are also subject to collateralization requirements and must be conducted on arm’s length terms. Covered transactions include (a) a loan or extension of credit by the banking subsidiary, including derivative contracts, (b) a purchase of securities issued to a banking subsidiary, (c) a purchase of assets by the banking subsidiary unless otherwise exempted by the Federal Reserve, (d) acceptance of securities issued by an affiliate to the banking subsidiary as collateral for a loan, and (e) the issuance of a guarantee, acceptance or letter of credit by the banking subsidiary on behalf of an affiliate.

Certain transactions with the Company's directors, officers or controlling persons are also subject to conflicts of interest regulations. Among other things, these regulations require that loans to such persons and their related interests be made on terms substantially the same as for loans to unaffiliated individuals, and must not create an abnormal risk of repayment or other unfavorable features for the financial institution. See Note 2 to the consolidated financial statements for additional information on loans to related parties.

Available Information

The Company’s principal offices are located at 1000 Walnut Street, Kansas City, Missouri (telephone number 816-234-2000). The Company makes available free of charge, through its website at www.commercebank.com, reports filed with the Securities and Exchange Commission as soon as reasonably practicable after the electronic filing. Additionally, a copy of our electronically filed materials can be found at www.sec.gov. These filings include the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports.

Statistical Disclosure

The information required by Securities Act Guide 3 — "Statistical Disclosure by Bank Holding Companies" is located on the pages noted below.

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Item 1a. RISK FACTORS

Making or continuing an investment in securities issued by the Company, including its common and preferred stock, involves certain risks that you should carefully consider. If any of the following risks actually occur, the Company's business, financial condition or results of operations could be negatively affected, the market price for your securities could decline, and you could lose all or a part of your investment. Further, to the extent that any of the information contained in this Annual Report on Form 10-K constitutes forward-looking statements, the risk factors set forth below also are cautionary statements identifying important factors that could cause the Company's actual results to differ materially from those expressed in any forward-looking statements made by or on behalf of Commerce Bancshares, Inc.

Difficult market conditions may affect the Company's industry.

The concentration of the Company's banking business in the United States particularly exposes it to downturns in the U.S. economy. While current economic conditions are favorable, there remain risks in that environment.

In particular, the Company may face the following risks in connection with market conditions:

- In 2019, the United States economy entered the longest expansion in its history. Despite some weakness in consumer confidence in late 2019, the expansion keeps progressing, seemingly boosted by tax reform in 2018 and a lower interest rate environment. Unemployment levels remain low and the stock market has performed well in 2019 and early 2020.
- The U.S. economy is affected by global events and conditions, including U.S. trade disputes and renewed trade agreements with various countries. Although the Company does not directly hold foreign debt or have significant activities with foreign customers, the global economy, the strength of the U.S. dollar, international trade conditions, and oil prices may ultimately affect interest rates, business import/export activity, capital expenditures by businesses, and investor confidence. Unfavorable changes in these factors may result in declines in consumer credit usage, adverse changes in payment patterns, reduced loan demand, and higher loan delinquencies and default rates. These could impact the Company's future loan losses and provision for loan losses, as a significant part of the Company's business includes consumer and credit card lending.
- In addition to the results above, a slowdown in economic activity may cause declines in financial services activity, including declines in bank card, corporate cash management and other fee businesses, as well as the fees earned by the Company on such transactions.
- The process used to estimate losses inherent in the Company's loan portfolio requires difficult, subjective, and complex judgments, including consideration of economic conditions and how these economic predictions might impair the ability of its borrowers to repay their loans. If an instance occurs that renders these predictions no longer capable of accurate estimation, this may in turn impact the reliability of the process.
- Competition in the industry could intensify as a result of the increasing consolidation of financial services companies in connection with current market conditions, thereby reducing market prices for various products and services which could in turn reduce the Company's revenues.

The performance of the Company is dependent on the economic conditions of the markets in which the Company operates.

The Company’s success is heavily influenced by the general economic conditions of the specific markets in which it operates. Unlike larger national or other regional banks that are more geographically diversified, the Company provides financial services primarily throughout the states of Missouri, Kansas, central Illinois, Oklahoma, and Colorado. It also has a growing presence in additional states through its commercial banking offices in: Texas, Iowa, Indiana, Michigan, Ohio, and Tennessee. As the Company does not have a significant banking presence in other parts of the country, a prolonged economic downturn in these markets could have a material adverse effect on the Company’s financial condition and results of operations.

The Company operates in a highly competitive industry and market area.

The Company operates in the financial services industry and has numerous competitors including other banks and insurance companies, securities dealers, brokers, trust and investment companies, mortgage bankers, and financial technology companies. Consolidation among financial service providers and new changes in technology, product offerings and regulation continue to challenge the Company's marketplace position. As consolidation occurs, larger regional and national banks may enter the Company's markets and add to existing competition. Large, national financial institutions have substantial capital, technology and marketing resources. These new competitors may lower fees to grow market share, which could result in a loss of customers and lower fee revenue for the Company. They may have greater access to capital at a lower cost than the Company, and may have higher loan limits, both of which may adversely affect the Company’s ability to compete effectively. The Company must continue to make investments in its products and delivery systems to stay competitive with the industry, or its financial performance may suffer.

The soundness of other financial institutions could adversely affect the Company.

The Company’s ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institution counterparties. Financial services institutions are interrelated because of trading, clearing, counterparty or other relationships. The Company has exposure to many different industries and counterparties and routinely executes transactions with counterparties in the financial industry, including brokers and dealers, commercial banks, investment banks, mutual funds, and other institutional clients. Transactions with these institutions include overnight and term borrowings, interest rate swap agreements, securities purchased and sold, short-term investments, and other such transactions. Because of this exposure, defaults by, or rumors or questions about, one or more financial services institutions or the financial services industry in general, could lead to market-wide liquidity problems and defaults by other institutions. Many of these transactions expose the Company to credit risk in the event of default of its counterparty or client, while other transactions expose the Company to liquidity risks should funding sources quickly disappear. In addition, the Company’s credit risk may be exacerbated when the collateral held cannot be realized or is liquidated at prices not sufficient to recover the full amount of the exposure due to the Company. Any such losses could materially and adversely affect results of operations.

The Company is subject to extensive government regulation and supervision.

As part of the financial services industry, the Company is subject to extensive federal and state regulation and supervision. Banking regulations are primarily intended to protect depositors’ funds, federal deposit insurance funds, and the banking system, not shareholders. These regulations affect the Company’s lending practices, capital structure, investment practices, dividend policy, and growth, among other things. Congress and federal regulatory agencies continually review banking laws, regulations, and policies for possible changes. Changes to statutes, regulations, or regulatory policies, including changes in interpretation or implementation of statutes, regulations, or policies, could affect the Company in substantial and unpredictable ways. Such changes could subject the Company to additional costs, limit the types of financial services and products it may offer, and/or increase the ability of non-banks to offer competing financial services and products, among other things. Failure to comply with laws, regulations, or policies could result in sanctions by regulatory agencies, civil money penalties, and/or reputation damage, which could have a material adverse effect on the Company’s business, financial condition, and results of operations. While the Company has policies and procedures designed to prevent any such violations, there can be no assurance that such violations will not occur.

Significant changes in federal monetary policy could materially affect the Company’s business.

The Federal Reserve System regulates the supply of money and credit in the United States. Its policies determine in large part the cost of funds for lending and interest rates earned on loans and paid on borrowings and interest-bearing deposits. Credit conditions are influenced by its open market operations in U.S. government securities, changes in the member bank discount rate, and bank reserve requirements. Changes in Federal Reserve Board policies are beyond the Company’s control and difficult to predict, and such changes may result in lower interest margins and a lack of demand for credit products.

The Company is subject to both interest rate and liquidity risk.

With oversight from its Asset-Liability Management Committee, the Company devotes substantial resources to monitoring its liquidity and interest rate risk on a monthly basis. The Company's net interest income is the largest source of overall revenue to the Company, representing 61% of total revenue for the year ended December 31, 2019. The interest rate environment in which the Company operates fluctuates in response to general economic conditions and policies of various governmental and regulatory agencies, particularly the Federal Reserve Board, which regulates the supply of money and credit in the U.S. Changes in monetary policy, including changes in interest rates, will influence loan originations, deposit generation, demand for investments and revenues, and costs for earning assets and liabilities, and could significantly impact the Company's net interest income.

After raising rates four times in 2018, the Federal Reserve Board lowered the benchmark interest rate three times during 2019 for a total of 75 basis points. Future economic conditions or other factors could shift monetary policy resulting in increases or additional decreases in the benchmark rate. Furthermore, changes in interest rates could result in unanticipated changes to customer deposit balances and funding costs and affect the Company's source of funds for future loan growth.

The impact of the phase-out of LIBOR is uncertain.

In 2017, the United Kingdom Financial Conduct Authority, which regulates LIBOR, announced that LIBOR would likely be discontinued at the end of 2021 as panel banks would no longer be required to submit estimates that are used to construct LIBOR. U.S. regulatory authorities have voiced similar support for phasing out LIBOR. The Company has a significant number of loans, derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on LIBOR. The impact of alternatives to LIBOR on the valuations, pricing and operation of the Company's financial instruments is not yet known. The Company is coordinating with industry groups to identify an appropriate replacement rate for contracts expiring after 2021, as well as preparing for this transition as it relates to new and existing contracts and customers. The Company has established a LIBOR Transition Program, which is lead by the LIBOR Transition Steering Committee (Committee) whose purpose is to guide the overall transition process for the Company. The Committee is an internal, cross-functional team with representatives from all relevant business lines, support functions and legal counsel. An initial LIBOR impact and risk assessment has been performed, which identified the associated risks across products, systems, models, and processes. The Committee is assessing the results of the assessment and developing and prioritizing actions. Additionally, LIBOR fallback language has been included in key loan provisions of new and renewed loans in preparation for transition from LIBOR to the new benchmark rate when such transition occurs.

The Company may be adversely affected if the interest rates currently tied to LIBOR on the Company's loans, derivatives, and other financial instruments are not able to be transitioned to an alternative rate. Furthermore, the Company may be faced with disputes or litigation with counterparties regarding interpretation and enforcement of fallback language in new and renewed loans as the transition to a new benchmark rate continues to evolve.

The Company's asset valuation may include methodologies, models, estimations and assumptions which are subject to differing interpretations and could result in changes to asset valuations that may materially adversely affect its results of operations or financial condition.

The Company uses estimates, assumptions, and judgments when certain financial assets and liabilities are measured and reported at fair value. Assets and liabilities carried at fair value inherently result in greater financial statement volatility. Fair values and the information used to record valuation adjustments for certain assets and liabilities are based on quoted market prices and/or other observable inputs provided by independent third-party sources, when available. When such third-party information is not available, fair value is estimated primarily by using cash flow and other financial modeling techniques utilizing assumptions such as credit quality, liquidity, interest rates and other relevant inputs. Changes in underlying factors, assumptions, or estimates in any of these areas could materially impact the Company's future financial condition and results of operations. Furthermore, if models used to calculate fair value of financial instruments are inadequate or inaccurate due to flaws in their design or execution, upon sale, the Company may not realize the cash flows of a financial instrument as modeled and could incur material, unexpected losses.

During periods of market disruption, including periods of significantly rising or high interest rates, rapidly widening credit spreads or illiquidity, it may be difficult to value certain assets if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes in active markets with significant observable data that become illiquid due to the current financial environment. In such cases, certain asset valuations may require more subjectivity and management judgment. As such, valuations may include inputs and assumptions that are less observable or require greater estimation. Further, rapidly changing and unprecedented credit and equity market conditions could materially impact the valuation of assets as reported within the Company's consolidated financial statements, and the period-to-period changes in value could vary significantly. Decreases in value may have a material adverse effect on results of operations or financial condition.

The Company's investment portfolio values may be adversely impacted by deterioration in the credit quality of underlying collateral within the various categories of investment securities it owns.

The Company generally invests in securities issued by municipal entities, government-backed agencies or privately issued securities, with collateral that are highly rated and evaluated at the time of purchase, however, these securities are subject to changes in market value due to changing interest rates and implied credit spreads. While the Company maintains prudent risk management practices over bonds issued by municipalities, credit deterioration in these bonds could occur and result in losses. Certain mortgage and asset-backed securities (which are collateralized by residential mortgages, credit cards, automobiles, mobile homes or other assets) may decline in value due to actual or expected deterioration in the underlying collateral. Under accounting rules, when the impairment is due to declining expected cash flows, some portion of the impairment, depending on the Company's intent to sell and the likelihood of being required to sell before recovery, must be recognized in current earnings. This could result in significant losses.

The allowance for credit losses may be insufficient or future credit losses could increase.

The allowance for loan losses at December 31, 2019 reflects management's best estimate of probable loan losses that have been incurred within the existing loan portfolio as of the balance sheet date. See the section captioned "Allowance for Loan Losses" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, of this report for further discussion related to the Company's process for determining the appropriate level of the allowance for probable loan losses at December 31, 2019.

In 2016, the Financial Accounting Standards Board (FASB) issued a new accounting standard "Measurement of Credit Losses on Financial Instruments" (ASU 2016-13), which became effective January 1, 2020 and was adopted by the Company at that time. This new standard significantly altered the way the allowance for credit losses is determined. The new standard utilizes a life of loan loss concept and required significant operational changes, especially in data collection and analysis. The level of the allowance will be based on management's methodology that utilizes historical net charge-off rates, and adjusts for the impacts in the reasonable and supportable forecast and other qualitative factors. Key assumptions include the application of historical loss rates, prepayment speeds, forecast results of a reasonable and supportable period, the period to revert to historical loss rates, and qualitative factors. Although credit losses have been stable during the past several years, an unforeseen deterioration of financial market conditions could result in larger credit losses, which may negatively affect the Company's results of operations and could significantly increase its allowance for credit losses. The Company's allowance level is subject to review by regulatory agencies, and that review could also result in adjustments to the allowance for credit losses. Additionally, the Company's provision for credit losses may be more volatile in the future under the new standard, due to macroeconomic variables that influence the Company's loss estimates, and the volatility in credit losses may be material to the Company's earnings.

New lines of business or new products and services may subject the Company to additional risk.

From time to time, the Company may implement new lines of business or offer new products and services within existing lines of business. There are substantial risks and uncertainties associated with these efforts, particularly in instances where the markets are not fully developed. In developing and marketing new lines of business and new products or services, the Company may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and new products or services may not be achieved and price and profitability targets may not prove feasible. External factors, such as compliance with regulations, competitive alternatives and shifting market preferences may also impact the successful implementation of a new line of business or a new product or service. Furthermore, any new line of business, or new product or service, could have a significant impact on the effectiveness of the Company's system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business and new products or services could have a material adverse effect on the Company's financial condition and results of operations.

A successful cyber attack or other computer system breach could significantly harm the Company, its reputation and its customers.

The Company relies heavily on communications and information systems to conduct its business, and as part of its business, the Company maintains significant amounts of data about its customers and the products they use. Information security risks continue to increase due to new technologies, the increasing use of the Internet and telecommunication technologies (including mobile devices) to conduct financial and other business transactions, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, and others. The Company makes significant investments in various technology to identify and prevent intrusions into its information system. The Company also has policies and procedures designed to prevent or limit the effect of failure, interruption or security breach of its information systems, offers ongoing training to employees, hosts tabletop exercises to test response readiness, and performs regular audits using both internal and outside resources. However, there can be no assurances that any such failures, interruptions or security breaches will not occur, or if they do occur, that they will be adequately addressed. In addition to unauthorized access, denial-of-service attacks or other operational disruptions could overwhelm Company websites and prevent the Company from adequately serving customers. Should any of the Company's systems become compromised or customer information be obtained by unauthorized parties, the reputation of the Company could be damaged, relationships with existing customers may be impaired, and the Company could be subject to lawsuits, all of which could result in lost business and have a material adverse effect on the Company's business, financial condition and results of operations.

The Company's operations rely on certain external vendors.

The Company relies on third-party vendors to provide products and services necessary to maintain day-to-day operations. For example, the Company outsources a portion of its information systems, communication, data management, and transaction processing to third parties. Accordingly, the Company is exposed to the risk that these vendors might not perform in accordance with the contracted arrangements or service level agreements because of changes in the vendor's organizational structure, financial condition, support for existing products and services, or strategic focus. Such failure to perform could be disruptive to the Company's operations, which could have a materially adverse impact on its business, financial condition and results of operations. These third parties are also sources of risk associated with operational errors, system interruptions or breaches and unauthorized disclosure of confidential information. If the vendors encounter any of these issues, the Company could be exposed to disruption of service, damage to reputation and litigation. Because the Company is an issuer of both debit and credit cards, it is periodically exposed to losses related to security breaches which occur at retailers that are unaffiliated with the Company (e.g., customer card data being compromised at retail stores). These losses include, but are not limited to, costs and expenses for card reissuance as well as losses resulting from fraudulent card transactions.

The Company continually encounters technological change.

The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services, including the entrance of financial technology companies offering new financial service products. The Company regularly upgrades or replaces technological systems to increase efficiency, enhance product and service capabilities, eliminate risks of end-of-lifecycle products, reduce costs, and better serve our customers. The Company's future success depends, in part, upon its ability to address the needs of its customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in the Company's operations. Many of the Company's competitors have substantially greater resources to invest in technological improvements. The Company may encounter significant problems and may not be able to effectively implement new technology-driven products and services and may not be successful in marketing the new products and services to its customers. These problems might include significant time delays, cost overruns, loss of key people, and technological system failures. Failure to successfully keep pace with technological change affecting the financial services industry or failure to successfully complete the replacement of technological systems could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company plans to convert its core customer and deposit systems during 2020 and may encounter significant adverse developments.

The Company will replace its core customer and deposit systems and other ancillary systems (collectively referred to as core system). The core system is used to track customer relationships and deposit accounts. The core system is integrated with channel applications that are used to service customer requests by bank personnel or directly by customers (such as online banking and mobile applications). The new core system will provide a new platform based on current technology and will enable the Company to integrate other systems more efficiently, and is a significant improvement compared to our current core system. However, changing the core system will subject the Company to operational risks during and after the conversion, including disruptions to our technology systems, which may adversely impact our customers. We have plans, policies and procedures designed to prevent or limit the risks of a failure during or after the conversion of our core system. However, there can be no assurance that any such adverse development will not occur or, if they do occur, that they will be timely and adequately remediated. The ultimate impact of any adverse development could damage our reputation, result in a loss of customer business, subject us to regulatory scrutiny, or expose us to civil litigation and possibly financial liability, any of which could have a material effect on the Company's business, financial condition, and results of operations.

Commerce Bancshares, Inc. relies on dividends from its subsidiary bank for most of its revenue.

Commerce Bancshares, Inc. is a separate and distinct legal entity from its banking and other subsidiaries. It receives substantially all of its revenue from dividends from its subsidiary bank. These dividends, which are limited by various federal and state regulations, are the principal source of funds to pay dividends on its preferred and common stock and to meet its other cash needs. In the event the subsidiary bank is unable to pay dividends, the Company may not be able to pay dividends or other obligations, which would have a material adverse effect on the Company's financial condition and results of operations.

The Company must attract and retain skilled employees.

The Company's success depends, in large part, on its ability to attract and retain key people. Competition for the best people can be intense, and the Company spends considerable time and resources attracting, hiring, and retaining qualified people for its various business lines and support units. The unexpected loss of the services of one or more of the Company's key personnel could have a material adverse impact on the Company's business because of their skills, knowledge of the Company's market, and years of industry experience, as well as the difficulty of promptly finding qualified replacement personnel.

Item 1b. UNRESOLVED STAFF COMMENTS

None

Item 2. PROPERTIES

The main offices of the Company are located in Kansas City and St. Louis, Missouri. The Company owns its main offices and leases unoccupied premises to the public. The larger office buildings include:

Building	Net rentable square footage	% occupied in total	% occupied by Bank
1000 Walnut Kansas City, MO	391,000	97%	52%
922 Walnut Kansas City, MO	256,000	95	93
811 Main Kansas City, MO	237,000	100	100
8000 Forsyth Clayton, MO	178,000	100	100

The Company has an additional 159 branch locations in Missouri, Illinois, Kansas, Oklahoma and Colorado which are owned or leased.

Item 3. LEGAL PROCEEDINGS

The information required by this item is set forth in Item 8 under Note 21, Commitments, Contingencies and Guarantees on page 121.

Item 4. MINE SAFETY DISCLOSURES

Not applicable

Information about the Company's Executive Officers

The following are the executive officers of the Company as of February 25, 2020, each of whom is designated annually. There are no arrangements or understandings between any of the persons so named and any other person pursuant to which such person was designated an executive officer.

Name and Age	Positions with Registrant
Kevin G. Barth, 59	Executive Vice President of the Company since April 2005, and Community President and Chief Executive Officer of Commerce Bank since October 1998. Senior Vice President of the Company and Officer of Commerce Bank prior thereto.
Jeffrey M. Burik, 61	Senior Vice President of the Company since February 2013. Executive Vice President of Commerce Bank since November 2007.
Daniel D. Callahan, 63	Executive Vice President and Chief Credit Officer of the Company since December 2010 and Senior Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since May 2003.
Sara E. Foster, 59	Executive Vice President of the Company since February 2012 and Senior Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since January 2016 and Senior Vice President of Commerce Bank prior thereto.
John K. Handy, 56	Executive Vice President of the Company since January 2018 and Senior Vice President of the Company prior thereto. Community President and Chief Executive Officer of Commerce Bank since January 2018 and Senior Vice President of Commerce Bank prior thereto.
Robert S. Holmes, 56	Executive Vice President of the Company since April 2015, and Community President and Chief Executive Officer of Commerce Bank since January 2016. Prior to his employment with Commerce Bank in March 2015, he was employed at a Midwest regional bank where he served as managing director and head of Regional Banking.
Patricia R. Kellerhals, 62	Senior Vice President of the Company since February 2016 and Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since 2005.
David W. Kemper, 69	Executive Chairman of the Company and of the Board of Directors of the Company since August 2018. Prior thereto, he was Chief Executive Officer of the Company and Chairman of the Board of Directors of the Company. He was President of the Company from April 1982 until February 2013. He is the brother of Jonathan M. Kemper (a former Vice Chairman of the Company), and father of John W. Kemper, President and Chief Executive Officer of the Company.
John W. Kemper, 42	Chief Executive Officer of the Company and Chairman and Chief Executive Officer of Commerce Bank since August 2018. Prior thereto, he was Chief Operating Officer of the Company. President of the Company since February 2013 and President of Commerce Bank since March 2013. Member of Board of Directors since September 2015. He is the son of David W. Kemper, Executive Chairman of the Company and nephew of Jonathan M. Kemper (a former Vice Chairman of the Company).
Charles G. Kim, 59	Chief Financial Officer of the Company since July 2009. Executive Vice President of the Company since April 1995 and Executive Vice President of Commerce Bank since January 2004. Prior thereto, he was Senior Vice President of Commerce Bank.
Douglas D. Neff, 51	Senior Vice President of the Company since January 2019 and Chairman and Chief Executive Officer of Commerce Bank Southwest Region since 2013.
Paula S. Petersen, 53	Senior Vice President of the Company since July 2016 and Executive Vice President of Commerce Bank since March 2012.
David L. Roller, 49	Senior Vice President of the Company since July 2016 and Senior Vice President of Commerce Bank since September 2010.
Paul A. Steiner, 48	Controller of the Company since April 2019. He is also Controller of the Company's subsidiary bank, Commerce Bank. Assistant Controller and Director of Tax of the Company prior thereto.

PART II

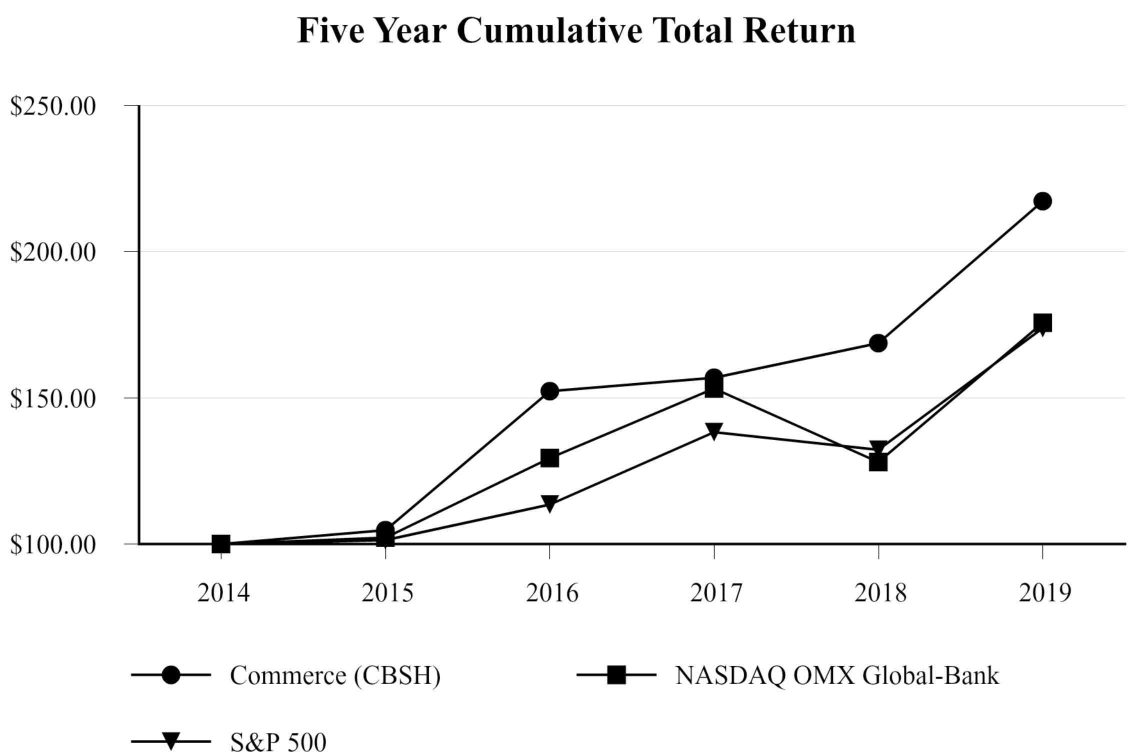
Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Commerce Bancshares, Inc.
Common Stock Data

Commerce Bancshares, Inc. common shares are listed on the Nasdaq Global Select Market (NASDAQ) under the symbol CBSH. The Company had 3,557 common shareholders of record as of December 31, 2019. Certain of the Company's shares are held in "nominee" or "street" name and the number of beneficial owners of such shares is approximately 92,000.

Performance Graph

The following graph presents a comparison of Company (CBSH) performance to the indices named below. It assumes $100 invested on December 31, 2014 with dividends invested on a cumulative total shareholder return basis.



	2014	2015	2016	2017	2018	2019
Commerce (CBSH)	100.00	104.77	152.23	156.84	168.70	217.13
NASDAQ OMX Global-Bank	100.00	102.21	129.34	153.13	128.02	175.61
S&P 500	100.00	101.37	113.46	138.22	132.15	173.74

The Company has a long history of paying dividends. 2019 marked the 51st consecutive year of growth in our regular common dividend, and the Company has also issued an annual 5% common stock dividend for the past 26 years. However, payment of future dividends is within the discretion of the Board of Directors and will depend, among other factors, on earnings, capital requirements, and the operating and financial condition of the Company. The Board of Directors makes the dividend determination quarterly.

The following table sets forth information about the Company's purchases of its $5 par value common stock, its only class of common stock registered pursuant to Section 12 of the Exchange Act, during the fourth quarter of 2019.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number that May Yet Be Purchased Under the Program
October 1—31, 2019	92,536	$64.05	92,536	2,533,045
November 1—30, 2019	103,858	$66.31	103,858	4,901,886
December 1—31, 2019	470,928	$84.13	470,928	4,430,958
Total	**667,322**	**$78.57**	**667,322**	**4,430,958**

The Company's stock purchases shown above were made under authorizations by the Board of Directors. December purchases include 438,009 shares purchased under the accelerated share repurchase ("ASR") program discussed in Note 14 to the consolidated financial statements. Under the most recent authorization in November 2019 of 5,000,000 shares, 4,430,958 shares remained available for purchase at December 31, 2019.

Item 6. SELECTED FINANCIAL DATA

The required information is set forth below in Item 7.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This report may contain "forward-looking statements" that are subject to risks and uncertainties and include information about possible or assumed future results of operations. Many possible events or factors could affect the future financial results and performance of Commerce Bancshares, Inc. and its subsidiaries (the "Company"). This could cause results or performance to differ materially from those expressed in the forward-looking statements. Words such as "expects", "anticipates", "believes", "estimates", variations of such words and other similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in, or implied by, such forward-looking statements. Readers should not rely solely on the forward-looking statements and should consider all uncertainties and risks discussed throughout this report. Forward-looking statements speak only as of the date they are made. The Company does not undertake to update forward-looking statements to reflect circumstances or events that occur after the date the forward-looking statements are made or to reflect the occurrence of unanticipated events. Such possible events or factors include the risk factors identified in Item 1a Risk Factors and the following: changes in economic conditions in the Company's market area; changes in policies by regulatory agencies, governmental legislation and regulation; fluctuations in interest rates; changes in liquidity requirements; demand for loans in the Company's market area; changes in accounting and tax principles; estimates made on income taxes; failure of litigation settlement agreements to become final in accordance with their terms; and competition with other entities that offer financial services.

Overview

The Company operates as a super-community bank and offers a broad range of financial products to consumer and commercial customers, delivered with a focus on high-quality, personalized service. It is the largest bank holding company headquartered in Missouri, with its principal offices in Kansas City and St. Louis, Missouri. Customers are served from 316 locations in Missouri, Kansas, Illinois, Oklahoma and Colorado and commercial offices throughout the nation's midsection. A variety of delivery platforms are utilized, including an extensive network of branches and ATM machines, full-featured online banking, a mobile application, and a centralized contact center.

The core of the Company's competitive advantage is its focus on the local markets in which it operates, its offering of competitive, sophisticated financial products, and its concentration on relationship banking and high-touch service. In order to enhance shareholder value, the Company targets core revenue growth. To achieve this growth, the Company focuses on strategies that will expand new and existing customer relationships, offer opportunities for controlled expansion in additional markets, utilize improved technology, and enhance customer satisfaction.

Various indicators are used by management in evaluating the Company's financial condition and operating performance. Among these indicators are the following:

- Net income and earnings per share — Net income attributable to Commerce Bancshares, Inc. was $421.2 million, a decrease of 2.8% compared to the previous year. The return on average assets was 1.67% in 2019, and the return on average common equity was 14.06%. Diluted earnings per share decreased 0.6% in 2019 compared to 2018.
- Total revenue — Total revenue is comprised of net interest income and non-interest income. Total revenue in 2019 increased $20.8 million, or 1.6% over 2018, driven by growth in non-interest income of $23.4 million. Growth in non-interest income resulted principally from an increase in trust fees and a one-time gain of $11.5 million resulting from the sale of our corporate trust business.
- Non-interest expense — Total non-interest expense increased 4.0% this year compared to 2018, mainly due to higher expense for salaries and benefits.
- Asset quality — Net loan charge-offs totaled $49.7 million in 2019, an increase of $7.4 million over those recorded in 2018, and averaged .35% of loans compared to .30% in the previous year. Total non-performing assets, which include non-accrual loans and foreclosed real estate, amounted to $10.6 million at December 31, 2019, compared to $13.9 million at December 31, 2018, and represented .07% of loans outstanding at December 31, 2019.
- Shareholder return — During 2019, the Company paid cash dividends of $.99 per share on its common stock, representing an increase of 16.1% over the previous year, and paid dividends of 6% on its preferred stock. In 2019, the Company issued its 26th consecutive annual 5% common stock dividend, and in January 2020, the Company's Board of Directors authorized an increase of 8.9% in the common cash dividend. The Company purchased 4,670,114 shares of treasury stock in 2019. Total shareholder return, including the change in stock price and dividend reinvestment, was 16.8%, 13.7%, and 9.6% over the past 5, 10, and 15 years, respectively.

The following discussion and analysis should be read in conjunction with the consolidated financial statements and related notes. The historical trends reflected in the financial information presented below are not necessarily reflective of anticipated future results.

Key Ratios

	2019	2018	2017	2016	2015
(Based on average balances)					
Return on total assets	**1.67%**	1.76%	1.28%	1.12%	1.11%
Return on common equity	**14.06**	16.16	12.46	11.33	11.43
Equity to total assets	**12.20**	11.24	10.53	10.16	10.00
Loans to deposits *(1)*	**71.54**	69.27	66.18	63.71	61.44
Non-interest bearing deposits to total deposits	**32.03**	33.43	34.85	34.67	35.12
Net yield on interest earning assets (tax equivalent basis)	**3.48**	3.53	3.20	3.04	2.94
(Based on end of period data)					
Non-interest income to revenue *(2)*	**38.98**	37.83	39.88	41.09	41.40
Efficiency ratio *(3)*	**56.87**	55.58	62.18	61.04	61.42
Tier I common risk-based capital ratio *(4)*	**13.93**	14.22	12.65	11.62	11.52
Tier I risk-based capital ratio *(4)*	**14.66**	14.98	13.41	12.38	12.33
Total risk-based capital ratio *(4)*	**15.48**	15.82	14.35	13.32	13.28
Tier I leverage ratio *(4)*	**11.38**	11.52	10.39	9.55	9.23
Tangible common equity to tangible assets ratio *(5)*	**10.99**	10.45	9.84	8.66	8.48
Common cash dividend payout ratio	**27.52**	23.61	29.52	32.69	33.35

(1) Includes loans held for sale.

(2) Revenue includes net interest income and non-interest income.

(3) The efficiency ratio is calculated as non-interest expense (excluding intangibles amortization) as a percent of revenue.

(4) Risk-based capital information was prepared under Basel III requirements, which were effective January 1, 2015.

(5) The tangible common equity to tangible assets ratio is a measurement which management believes is a useful indicator of capital adequacy and utilization. It provides a meaningful basis for period to period and company to company comparisons, and also assist regulators, investors and analysts in analyzing the financial position of the Company. Tangible common equity and tangible assets are non-GAAP measures and should not be viewed as substitutes for, or superior to, data prepared in accordance with GAAP.

The following table is a reconciliation of the GAAP financial measures of total equity and total assets to the non-GAAP measures of total tangible common equity and total tangible assets.

(Dollars in thousands)	**2019**	2018	2017	2016	2015
Total equity	**$ 3,138,472**	$ 2,937,149	$ 2,718,184	$ 2,501,132	$ 2,367,418
Less non-controlling interest	**3,788**	5,851	1,624	5,349	5,428
Less preferred stock	**144,784**	144,784	144,784	144,784	144,784
Less goodwill	**138,921**	138,921	138,921	138,921	138,921
Less core deposit premium	**1,785**	2,316	2,965	3,841	5,031
Total tangible common equity (a)	**$ 2,849,194**	$ 2,645,277	$ 2,429,890	$ 2,208,237	$ 2,073,254
Total assets	**$26,065,789**	$ 25,463,842	$ 24,833,415	$ 25,641,424	$ 24,604,962
Less goodwill	**138,921**	138,921	138,921	138,921	138,921
Less core deposit premium	**1,785**	2,316	2,965	3,841	5,031
Total tangible assets (b)	**$25,925,083**	$ 25,322,605	$ 24,691,529	$ 25,498,662	$ 24,461,010
Tangible common equity to tangible assets ratio (a)/(b)	**10.99%**	10.45%	9.84%	8.66%	8.48%

Selected Financial Data

(In thousands, except per share data)	**2019**	2018	2017	2016	2015
Net interest income	**$ 821,293**	$ 823,825	$ 733,679	$ 680,049	$ 634,320
Provision for loan losses	**50,438**	42,694	45,244	36,318	28,727
Non-interest income	**524,703**	501,341	461,263	446,556	422,444
Investment securities gains (losses), net	**3,626**	(488)	25,051	(53)	6,320
Non-interest expense	**767,398**	737,821	744,343	689,229	650,792
Net income attributable to Commerce Bancshares, Inc.	**421,231**	433,542	319,383	275,391	263,730
Net income available to common shareholders	**412,231**	424,542	310,383	266,391	254,730
Net income per common share-basic*	**3.59**	3.61	2.63	2.26	2.11
Net income per common share-diluted*	**3.58**	3.60	2.62	2.26	2.10
Cash dividends on common stock	**113,466**	100,238	91,619	87,070	84,961
Cash dividends per common share*	**.990**	.853	.777	.740	.705
Market price per common share*	**67.94**	53.69	50.65	49.94	35.00
Book value per common share*	**26.70**	23.93	21.89	20.06	18.81
Common shares outstanding*	**112,132**	116,685	117,543	117,454	118,179
Total assets	**26,065,789**	25,463,842	24,833,415	25,641,424	24,604,962
Loans, including held for sale	**14,751,626**	14,160,992	14,005,072	13,427,192	12,444,299
Investment securities	**8,741,888**	8,698,666	8,893,307	9,770,986	9,901,680
Deposits	**20,520,415**	20,323,659	20,425,446	21,101,095	19,978,853
Long-term debt	**2,418**	8,702	1,758	102,049	103,818
Equity	**3,138,472**	2,937,149	2,718,184	2,501,132	2,367,418
Non-performing assets	**10,585**	13,949	12,664	14,649	29,394

* *Restated for the 5% stock dividend distributed in December 2019.*

Results of Operations

(Dollars in thousands)	2019	2018	2017	$ Change '19-'18	$ Change '18-'17	% Change '19-'18	% Change '18-'17
Net interest income	**$ 821,293**	$ 823,825	$ 733,679	**$ (2,532)**	$ 90,146	(.3)%	12.3%
Provision for loan losses	**(50,438)**	(42,694)	(45,244)	**7,744**	(2,550)	18.1	(5.6)
Non-interest income	**524,703**	501,341	461,263	**23,362**	40,078	4.7	8.7
Investment securities gains (losses), net	**3,626**	(488)	25,051	**4,114**	(25,539)	N.M.	N.M.
Non-interest expense	**(767,398)**	(737,821)	(744,343)	**29,577**	(6,522)	4.0	(.9)
Income taxes	**(109,074)**	(105,949)	(110,506)	**3,125**	(4,557)	2.9	(4.1)
Non-controlling interest expense	**(1,481)**	(4,672)	(517)	**(3,191)**	4,155	(68.3)	N.M.
Net income attributable to Commerce Bancshares, Inc.	**421,231**	433,542	319,383	**(12,311)**	114,159	(2.8)	35.7
Preferred stock dividends	**(9,000)**	(9,000)	(9,000)	**—**	—	N.M.	N.M.
Net income available to common shareholders	**$ 412,231**	$ 424,542	$ 310,383	**$ (12,311)**	$ 114,159	(2.9)%	36.8%

N.M. - Not meaningful.

Net income attributable to Commerce Bancshares, Inc. (net income) for 2019 was $421.2 million, a decrease of $12.3 million, or 2.8%, compared to $433.5 million in 2018. Diluted income per common share was $3.58 in 2019, compared to $3.60 in 2018. The decline in net income resulted from a decrease of $2.5 million in net interest income, as well as increases of $29.6 million in non-interest expense, $7.7 million in the provision for loan losses and $3.1 million in income taxes. These decreases in net income were partly offset by increases of $23.4 million in non-interest income and $4.1 million in investment securities gains, coupled with a decrease of $3.2 million in non-controlling interest expense. The return on average assets was 1.67% in 2019 compared to 1.76% in 2018, and the return on average common equity was 14.06% in 2019 compared to 16.16% in 2018. At December 31, 2019, the ratio of tangible common equity to assets increased to 10.99%, compared to 10.45% at year end 2018.

During 2019, net interest income declined mainly due to an increase of $38.0 million in interest expense on interest-bearing deposits and borrowings, largely due to higher rates paid, while lower average balances on investment securities also resulted in lower interest income this year. These decreases in interest income were partly offset by growth of $38.3 million in interest earned on loans, resulting from higher loan yields and average balances. Total rates earned on average earning assets grew 10 basis points this year, while funding costs for deposits and borrowings increased 23 basis points. The provision for loan losses totaled $50.4 million, an increase of $7.7 million over the previous year and exceeded net loan charge-offs by $750 thousand. Net loan charge-offs increased $7.4 million in 2019 compared to 2018, mainly due to higher credit card and business loan net charge-offs. The increase in business loan net charge-offs was primarily the result of a loan charge-off related to a single leasing customer.

Non-interest income grew 4.7% in 2019, mainly due to growth in trust fees, loan fees and sales, and gains on sales of assets. Net investment securities gains of $3.6 million were recorded in 2019 and were mainly comprised of net gains realized on sales of equity investments. Non-interest expense grew $29.6 million in 2019 compared to 2018, largely due to higher salaries and benefits and data processing and software expense, which increased $24.7 million and $6.9 million, respectively.

Net income attributable to Commerce Bancshares, Inc. for 2018 was $433.5 million, an increase of $114.2 million, or 35.7%, compared to $319.4 million in 2017. Diluted income per common share increased 37.0% to $3.60 in 2018, compared to $2.62 in 2017. The growth in net income resulted from increases of $90.1 million in net interest income and $40.1 million in non-interest income, as well as decreases of $6.5 million in non-interest expense, $4.6 million in income tax expense and $2.6 million in the provision for loan losses. These increases in net income were partly offset by a $25.5 million decrease in investment securities gains. The return on average assets was 1.76% in 2018 compared to 1.28% in 2017, and the return on average common equity was 16.16% in 2018 compared to 12.46% in 2017. At December 31, 2018, the ratio of tangible common equity to assets increased to 10.45%, compared to 9.84% at year end 2017.

As compared to 2017, the increase in net interest income in 2018 resulted mainly from increased rates on the Company's loan and investment portfolios, partially offset by higher rates paid on interest-bearing deposits and borrowings. Total rates earned on average earning assets grew 44 basis points in 2018, while funding costs for deposits and borrowings increased 15 basis points. Non-interest income grew 8.7% in 2018, primarily from growth in bank card, trust and deposit fee income. Investment securities net losses in 2018 were mainly comprised of net losses on sales of available for sale debt securities of $9.7 million and an $8.9 million adjustment to recognize dividend income on a liquidated equity security. These losses were offset by realized and unrealized net gains on the Company's portfolio of private equity securities of $13.8 million, as well as gains of $4.3 million on sales and fair value adjustments on equity securities. Additionally, net securities gains in 2017 included a gain of $32.0 million on the appreciation of securities donated to a related foundation, which did not recur in 2018.

Non-interest expense declined $6.5 million in 2018 compared to 2017, with the decrease resulting from a $32.0 million donation of appreciated securities to a charitable organization in 2017 that did not recur in 2018. This decrease in non-interest expense was partly offset by increases in salaries and benefits, data processing and software, and marketing expense, which increased $19.9 million, $5.0 million, and $4.2 million, respectively. The provision for loan losses totaled $42.7 million, a decrease of $2.6 million from 2017.

The Company distributed a 5% stock dividend for the 26th consecutive year on December 18, 2019. All per share and average share data in this report has been restated for the 2019 stock dividend.

Critical Accounting Policies

The Company's consolidated financial statements are prepared based on the application of certain accounting policies, the most significant of which are described in Note 1 to the consolidated financial statements. Certain of these policies require numerous estimates and strategic or economic assumptions that may prove inaccurate or be subject to variations which may significantly affect the Company's reported results and financial position for the current period or future periods. The use of estimates, assumptions, and judgments are necessary when financial assets and liabilities are required to be recorded at, or adjusted to reflect, fair value. Current economic conditions may require the use of additional estimates, and some estimates may be subject to a greater degree of uncertainty due to the current instability of the economy. The Company has identified several policies as being critical because they require management to make particularly difficult, subjective and/or complex judgments about matters that are inherently uncertain and because of the likelihood that materially different amounts would be reported under different conditions or using different assumptions. These policies relate to the allowance for loan losses and fair value measurement.

Allowance for Loan Losses

The Company performs periodic and systematic detailed reviews of its loan portfolio to assess overall collectability. The level of the allowance for loan losses reflects the Company's estimate of the losses inherent in the loan portfolio at any point in time. While these estimates are based on substantive methods for determining allowance requirements, actual outcomes may differ significantly from estimated results, especially when determining allowances for business, construction and business real estate loans. These loans are normally larger and more complex, and their collection rates are harder to predict. Personal banking loans, including personal real estate, credit card and consumer loans, are individually smaller and perform in a more homogenous manner, making loss estimates more predictable. Further discussion of the methodology used in establishing the allowance is provided in the Allowance for Loan Losses section of Item 7 and in Note 1 to the consolidated financial statements.

Fair Value Measurement

Investment securities, including available-for-sale, trading, equity and other securities, residential mortgage loans held for sale, derivatives and deferred compensation plan assets and associated liabilities are recorded at fair value on a recurring basis. Additionally, from time to time, other assets and liabilities may be recorded at fair value on a nonrecurring basis, such as impaired loans that have been reduced based on the fair value of the underlying collateral, other real estate (primarily foreclosed property), non-marketable equity securities and certain other assets and liabilities. These nonrecurring fair value adjustments typically involve write-downs of individual assets or application of lower of cost or fair value accounting.

Fair value is an estimate of the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced transaction, such as a liquidation or distressed sale) between market participants at the measurement date and is based on the assumptions market participants would use when pricing an asset or liability. Fair value measurement and disclosure guidance establishes a three-level hierarchy for disclosure of assets and liabilities recorded at fair value. The fair value hierarchy, the extent to which fair value is used to measure assets and liabilities and the valuation methodologies and key inputs used are discussed in Note 17 on Fair Value Measurements.

At December 31, 2019, assets and liabilities measured using observable inputs that are classified as either Level 1 or Level 2 represented 98.8% and 99.1% of total assets and liabilities recorded at fair value, respectively. Valuations generated from model-based techniques that use at least one significant assumption not observable in the market are considered Level 3, and the Company's Level 3 assets totaled $104.6 million, or 1.2% of total assets recorded at fair value on a recurring basis. Unobservable assumptions reflect estimates of assumptions market participants would use in pricing the asset or liability. Fair value measurements for assets and liabilities where limited or no observable market data exists often involves significant judgments about assumptions, such as determining an appropriate discount rate that factors in both liquidity and risk premiums, and in many cases may not reflect amounts exchanged in a current sale of the financial instrument. In addition, changes in market conditions may reduce the availability of quoted prices or observable data. For example, reduced liquidity in the capital markets or changes in secondary market activities could result in observable market inputs becoming unavailable. Therefore, when market data is not available, the Company would use valuation techniques requiring more management judgment to estimate the appropriate fair value.

Net Interest Income

Net interest income, the largest source of revenue, results from the Company's lending, investing, borrowing, and deposit gathering activities. It is affected by both changes in the level of interest rates and changes in the amounts and mix of interest earning assets and interest bearing liabilities. The following table summarizes the changes in net interest income on a fully taxable equivalent basis, by major category of interest earning assets and interest bearing liabilities, identifying changes related to volumes and rates. Changes not solely due to volume or rate changes are allocated to rate.

	2019			2018		
	Change due to			Change due to		
(In thousands)	**Average Volume**	**Average Rate**	**Total**	Average Volume	Average Rate	Total
Interest income, fully taxable equivalent basis						
Loans:						
Business	**$ 9,730**	**$ 7,741**	**$ 17,471**	$ 4,235	$ 25,921	$ 30,156
Real estate- construction and land	**(2,961)**	**3,223**	**262**	3,614	8,511	12,125
Real estate - business	**5,199**	**4,920**	**10,119**	1,637	13,870	15,507
Real estate - personal	**3,261**	**1,978**	**5,239**	2,765	2,333	5,098
Consumer	**(3,541)**	**6,881**	**3,340**	(1,018)	9,027	8,009
Revolving home equity	**(979)**	**1,670**	**691**	(735)	2,732	1,997
Consumer credit card	**(475)**	**1,960**	**1,485**	2,956	984	3,940
Total interest on loans	**10,234**	**28,373**	**38,607**	13,454	63,378	76,832
Loans held for sale	**(33)**	**(56)**	**(89)**	154	144	298
Investment securities:						
U.S. government and federal agency obligations	**(1,667)**	**915**	**(752)**	146	1,877	2,023
Government-sponsored enterprise obligations	**(2,319)**	**778**	**(1,541)**	(2,331)	1,108	(1,223)
State and municipal obligations	**(5,766)**	**1,261**	**(4,505)**	(11,184)	(8,022)	(19,206)
Mortgage-backed securities	**10,400**	**1,720**	**12,120**	9,931	12,132	22,063
Asset-backed securities	**(1,953)**	**5,208**	**3,255**	(11,051)	8,517	(2,534)
Other securities	**(7,684)**	**(6,054)**	**(13,738)**	734	11,382	12,116
Total interest on investment securities	**(8,989)**	**3,828**	**(5,161)**	(13,755)	26,994	13,239
Federal funds sold and short-term securities purchased under agreements to resell	**(480)**	**16**	**(464)**	105	184	289
Long-term securities purchased under agreements to resell	**1,018**	**(1,001)**	**17**	186	255	441
Interest earning deposits with banks	**(71)**	**536**	**465**	1,206	2,804	4,010
Total interest income	**1,679**	**31,696**	**33,375**	1,350	93,759	95,109
Interest expense						
Interest bearing deposits:						
Savings	**57**	**(9)**	**48**	57	(65)	(8)
Interest checking and money market	**(369)**	**12,230**	**11,861**	328	10,174	10,502
Certificates of deposit of less than $100,000	**(16)**	**3,169**	**3,153**	(264)	834	570
Certificates of deposit of $100,000 and over	**4,336**	**7,951**	**12,287**	(2,393)	6,192	3,799
Federal funds purchased and securities sold under agreements to repurchase	**4,985**	**4,775**	**9,760**	48	9,778	9,826
Other borrowings	**920**	**(13)**	**907**	(3,041)	—	(3,041)
Total interest expense	**9,913**	**28,103**	**38,016**	(5,265)	26,913	21,648
Net interest income, fully taxable equivalent basis	**$ (8,234)**	**$ 3,593**	**$ (4,641)**	$ 6,615	$ 66,846	$ 73,461

Net interest income totaled $821.3 million in 2019, decreasing $2.5 million compared to $823.8 million in 2018. On a tax equivalent (T/E) basis, net interest income totaled $835.4 million, and decreased $4.6 million from 2018. This decrease included combined growth of $38.0 million in interest expense on deposits and borrowings, due to higher average rates paid and higher average balances. In addition, interest earned on investment securities decreased $5.2 million, mainly due to lower average balances, while loan interest income (T/E) grew $38.6 million due to higher rates earned and higher average balances. The net yield on earning assets (T/E) was 3.48% in 2019 compared with 3.53% in 2018.

During 2019, loan interest income (T/E) grew $38.6 million over 2018 mainly due to higher rates earned coupled with increased average balances for business, business real estate and personal real estate loan categories. The average tax equivalent rate earned on the loan portfolio increased 18 basis points to 4.71% in 2019 compared to 4.53% in 2018. In addition, average loan balances increased 2.1%, or $298.6 million, this year. Increased interest of $17.5 million earned on business loans was the main driver of overall higher loan interest income, due to growth of $251.1 million in average business loan balances and a 16 basis point increase in the average rate. While higher rates also contributed to the increase in interest income, rates were impacted by actions taken by the Federal Reserve during the second half of 2019 to lower short-term interest rates, as many of these loans contain variable interest rate terms. Business real estate interest was higher by $10.1 million as a result of an increase in average balances of $121.2 million, along with an increase in the average rate of 17 basis points. Personal real estate loan interest income increased $5.2 million and resulted from growth in average balances of $84.9 million and a nine basis point increase in the average rate earned. Interest on consumer loans increased $3.3 million as the average rate grew 36 basis points, but was partly offset by a decline in average balances of $79.9 million, or 4.0%. Interest on consumer credit card loans grew $1.5 million over the prior year as the average rate earned increased 26 basis points, while average balances declined $4.0 million.

Tax equivalent interest income on total investment securities decreased $5.2 million during 2019, as average balances declined $74.4 million and the average rate earned decreased three basis points. The average rate on the total investment portfolio was 2.81% in 2019 compared to 2.84% in 2018, while the average balance of the total investment securities portfolio (excluding unrealized fair value adjustments on available for sale debt securities) was $8.7 billion in 2019 compared to an average balance of $8.8 billion in 2018. The decrease in interest income was mainly due to lower interest and dividend income earned on equity and other securities, coupled with decreases in interest earned on state and municipal obligations, government-sponsored enterprise (GSE) obligations and U.S. government securities. Interest income on equity securities decreased $10.0 million, due to the receipt of $8.9 million in dividend income in the second quarter of 2018, which was related to a liquidated equity security that was carried at fair value. Interest on other securities decreased $3.9 million mainly due to receipts of non-recurring equity investment dividends in 2018, but was partly offset by higher average balances. Interest income on state and municipal obligations decreased $4.5 million, due to lower average balances of $189.7 million, partly offset by an increase of 10 basis points in the average rate earned. Interest income on GSE's decreased $1.5 million, due to a decline in average balances of $117.1 million, partly offset by an increase of 40 basis points in the average rate earned. Interest earned on U.S. government securities fell $752 thousand and was mainly impacted by a decline of $3.0 million in inflation income on treasury inflation-protected securities (TIPS). In addition, average balances declined $70.6 million, while the average rate earned increased 10 basis points. Partly offsetting these decreases in interest income was growth of $12.1 million and $3.3 million in interest earned on mortgage-backed and asset-backed securities, respectively. The growth in mortgage-backed interest resulted mainly from an increase of $391.0 million in average balances, coupled with a three basis point increase in the average rate earned. Asset-backed securities interest increased due to growth of 38 basis points in the average rate earned, partly offset by a decline of $83.1 million in average balances.

During 2019, interest expense on deposits increased $27.3 million over 2018 and resulted mainly from a 20 basis point increase in the overall average rate paid on deposits. Interest expense on interest checking and money market accounts increased $11.9 million due to higher rates paid, which rose 11 basis points. The growth in interest expense on certificates of deposit was due to both higher rates paid on all certificates of deposit and higher average balances in certificates of deposit over $100,000, which grew $281.9 million, or 25.3%. The overall rate paid on total deposits increased from .34% in 2018 to .54% in the current year. Interest expense on borrowings increased $10.7 million due to both higher rates paid and higher average balances of federal funds purchased and customer repurchase agreements. The overall average rate incurred on all interest bearing liabilities was .67% in 2019, compared to .44% in 2018.

Net interest income totaled $823.8 million in 2018, increasing $90.1 million, or 12.3%, compared to $733.7 million in 2017. On a tax equivalent (T/E) basis, net interest income totaled $840.1 million, and increased $73.5 million over 2017. This increase included growth of $76.8 million in loan interest income (T/E), resulting from higher average balances and higher rates earned. In addition, interest earned on investment securities increased $13.2 million, mainly due to higher rates earned and the receipt of $8.9 million in dividend income during the second quarter of 2018, as mentioned above. Interest expense on deposits and borrowings combined was $65.4 million and increased $21.6 million, mostly due to higher rates paid. The net yield on earning assets (T/E) was 3.53% in 2018 compared with 3.19% in 2017.

During 2018, loan interest income (T/E) grew $76.8 million over 2017 mainly due to higher rates earned coupled with increased average balances for most loan categories. The average tax equivalent rate earned on the loan portfolio increased 46 basis points to 4.53% in 2018 compared to 4.07% in 2017. The higher rates earned on the loan portfolio in 2018 were partly related to short-term increases in interest rates, which enabled much of the Company's loan portfolio to re-price higher than 2017. In addition, average loan balances increased 2.3%, or $314.4 million, in 2018. Increased interest on business loans was the main driver of overall higher loan interest income, mostly due to higher rates, as many of these loans contain variable interest rate terms. Average business loan balances also grew $131.0 million in 2018. Increases in average balances and rates on construction and business real estate loans drove interest income growth a combined $27.6 million in 2018. Interest on personal real estate loans increased $5.1 million as average balances were higher by $74.1 million or 3.7%, and the average rate grew 11 basis points. Interest on consumer loans grew $8.0 million over 2017 as the average rate earned increased 45 basis points, but was partly offset by a decline in average balances of $25.6 million. Consumer credit card loan interest was higher by $3.9 million due to growth of $24.9 million in average balances, coupled with a 13 basis point increase in the average rate earned.

Tax equivalent interest income on total investment securities increased $13.2 million during 2018, as the average rate earned increased 33 basis points, while average balances declined $661.6 million. The average rate on the total investment portfolio was 2.84% in 2018 compared to 2.51% in 2017, while the average balance of the total investment securities portfolio (excluding unrealized fair value adjustments on available for sale debt securities) was $8.8 billion in 2018 compared to an average balance of $9.5 billion in 2017. The increase in interest income was mainly due to higher interest earned on mortgage-backed securities, coupled with increased interest and dividend income on equity and other securities. These increases were partly offset lower interest earned on state and municipal securities. Interest income on mortgage-backed securities increased $22.1 million, due to an increase in average balances of $419.0 million and an increase of 29 basis points in the average rate earned. Interest income on equity securities increased due to dividend income of $8.9 million recorded in 2018 (mentioned previously), while interest on other securities increased $1.9 million due to an increase in receipts of non-recurring equity investment dividends during 2018. Interest earned on U.S. government securities grew $2.0 million, which included growth of $2.1 million in inflation-adjusted interest on TIPS. Partly offsetting these increases in interest income were declines of $19.2 million, $2.5 million and $1.2 million in interest earned on state and municipal, asset-backed and GSE securities, respectively. The decline in state and municipal interest resulted from a decline of $310.0 million in average balances coupled with a lower tax equivalent rate due to tax law changes in 2018. Asset-backed securities interest decreased mainly due to a decline of $627.9 million in average balances, partly offset by higher average rates. Interest earned on GSE's declined mainly due to lower average balances, partly offset by growth in the average rate. Interest earned on deposits with banks increased $4.0 million mainly due to an 88 basis point increase in average rates earned and an increase of $112.7 million in average balances.

During 2018, interest expense on deposits increased $14.9 million over 2017 and resulted mainly from an 11 basis point increase in the overall average rate paid on deposits. Interest expense on interest checking and money market accounts increased $10.5 million due to higher rates paid, which rose nine basis points. The growth in interest expense on certificates of deposit was largely due to higher rates paid on certificates of deposit over $100,000, which increased 54 basis points, partly offset by lower total average certificate of deposit balances, which fell $363.3 million, or 17.5%. The overall rate paid on total deposits increased from .23% in 2017 to .34% in 2018. Interest expense on borrowings increased due to higher rates paid on customer repurchase agreements, partly offset by the elimination of all Federal Home Loan Bank (FHLB) borrowings in 2018. The overall average rate incurred on all interest bearing liabilities was .44% in 2018, compared to .29% in 2017.

Provision for Loan Losses

The provision for loan losses is recorded to bring the allowance for loan losses to a level deemed adequate by management based on the factors mentioned in the "Allowance for Loan Losses" section of this discussion. The provision for loan losses totaled $50.4 million in 2019, an increase of $7.7 million from the 2018 provision of $42.7 million. In 2018, the provision exceeded net loan charge-offs by $400 thousand, increasing the allowance for loan losses by the same amount, whereas the 2019 provision was $750 thousand greater than net loan charge-offs for the year.

Net loan charge-offs for the year totaled $49.7 million and increased $7.4 million compared to $42.3 million in 2018. The increase in net loan charge-offs over the previous year was mainly the result of higher net charge-offs on credit card loans and business loans, which increased $4.8 million and $2.0 million, respectively. In addition, personal real estate loan net charge-offs increased $391 thousand, while construction loan and business real estate loan net recoveries decreased $518 thousand and $318 thousand, respectively. Partly offsetting these increases in net charge-offs were lower net charge-offs on consumer loans, which decreased $732 thousand from the prior year. The allowance for loan losses totaled $160.7 million at December 31, 2019, an increase of $750 thousand compared to the prior year, and represented 1.09% of outstanding loans at year end 2019, compared to 1.13% at December 31, 2018.

Non-Interest Income

(Dollars in thousands)	**2019**	2018	2017	% Change **'19-'18**	% Change '18-'17
Bank card transaction fees	**$ 167,879**	$ 171,576	$ 155,100	**(2.2)%**	10.6%
Trust fees	**155,628**	147,964	135,159	**5.2**	9.5
Deposit account charges and other fees	**95,983**	94,517	90,060	**1.6**	4.9
Capital market fees	**8,146**	7,721	7,996	**5.5**	(3.4)
Consumer brokerage services	**15,804**	15,807	14,630	**—**	8.0
Loan fees and sales	**15,767**	12,723	13,948	**23.9**	(8.8)
Other	**65,496**	51,033	44,370	**28.3**	15.0
Total non-interest income	**$ 524,703**	$ 501,341	$ 461,263	**4.7 %**	8.7%
Non-interest income as a % of total revenue*	**39.0%**	37.8%	38.6%		
Total revenue per full-time equivalent employee	**$ 277.1**	$ 276.4	$ 248.9		

* *Total revenue is calculated as net interest income plus non-interest income.*

The table below is a summary of net bank card transaction fees for the years ended December 31, 2019, 2018 and 2017, respectively.

(Dollars in thousands)	**2019**	2018	2017	% Change **'19-'18**	% Change '18-'17
Net debit card fees	**$ 40,025**	$ 39,738	$ 35,636	**0.7 %**	11.5%
Net credit card fees	**14,177**	12,965	14,576	**9.3**	(11.1)
Net merchant fees	**19,289**	19,233	20,069	**.3**	(4.2)
Net corporate card fees	**94,388**	99,640	84,819	**(5.3)**	17.5
Total bank card transaction fees	**$ 167,879**	$ 171,576	$ 155,100	**(2.2)%**	10.6%

Non-interest income totaled $524.7 million, an increase of $23.4 million, or 4.7%, compared to $501.3 million in 2018. Bank card fees decreased $3.7 million, or 2.2%, from the prior year, largely due to a decline in net corporate card fees of $5.3 million. This decline was partly offset by growth in net credit card fees of $1.2 million and net debit card fees of $287 thousand. The decline in net corporate card from the prior year was due to lower interchange income and higher network and rewards expense, while the growth in net credit and debit card fees was mainly due to higher interchange income. Net credit card revenue also grew due to lower rewards expense. Trust fee income increased $7.7 million, or 5.2%, as a result of continued growth in private client trust fees (up 6.5%), which comprised 76.4% of trust fee income in 2019. The market value of total customer trust assets totaled $56.7 billion at year end 2019, which was an increase of 13.3% over year end 2018 balances. Deposit account fees increased $1.5 million, or 1.6%, mainly due to growth of $3.0 million in corporate cash management fees. This increase was partly offset by declines of $872 thousand in overdraft and return item fees and $636 thousand in deposit account service charges. In 2019, corporate cash management fees comprised 43.2% of total deposit fees, while overdraft fees comprised 31.9% of total deposit fees. Capital market fees grew $425 thousand, or 5.5%, compared to the prior year, while loan fees and sales increased $3.0 million, or 23.9%, mainly due to growth in mortgage banking revenue. Total mortgage banking revenue totaled $10.8 million in 2019 compared to $8.2 million in 2018 and increased as a result of higher loan originations in 2019. Other non-interest income increased $14.5 million, or 28.3%, mainly due to a one-time gain of $11.5 million resulting from the sale of the Company's corporate trust business in the fourth quarter of 2019. In addition, cash sweep commissions increased $2.7 million and higher gains of $2.4 million were recorded on sales of leased assets to customers upon lease termination. These increases were partly offset by gains of $6.6 million recorded on the sales of branch properties in 2018.

During 2018, non-interest income increased $40.1 million, or 8.7%, to $501.3 million compared to $461.3 million in 2017. Bank card fees increased $16.5 million over 2017. This growth included increases of $4.1 million in net debit card fees and $14.8 million in net corporate card fees, partly offset by a decline of $1.6 million, or 11.1%, in net credit card fees, and $836 thousand, or 4.2%, in net merchant fees. Trust fee income increased $12.8 million, or 9.5%, as a result of growth in both private client (up 11.1%) and institutional trust (up 6.4%) fees. The market value of total customer trust assets totaled $50.0 billion at year end 2018, which was an increase of 2.7% over year end 2017 balances. Deposit account fees increased $4.5 million, or 4.9%, due to growth of $2.4 million in corporate cash management fees, $1.1 million in deposit account service charges and $892 thousand in overdraft and return item fees. Capital market fees declined $275 thousand, or 3.4%, due to lower sales volumes, while consumer brokerage services revenue increased $1.2 million, or 8.0%, mainly due to growth in advisory and fixed annuity fees. Loan fees and sales decreased $1.2 million in 2018 compared to 2017, mainly due to declines in mortgage banking revenue as a result of lower originations of fixed-rate loans in 2018. Other non-interest income increased $6.7 million, or 15.0%, over 2017 mainly due to gains of $6.6 million recorded on the sales of branch properties in 2018. In addition, cash sweep commissions, interest rate swap fees, and fees from sales of tax credits increased $1.6 million, $2.1 million, and $1.6 million, respectively, over 2017. These increases were partly offset by lower gains of $1.1 million on sales of leased assets to customers upon lease termination.

Investment Securities Gains (Losses), Net

(In thousands)	**2019**	2018	2017
Net losses on sales of available for sale debt securities	**$ (214)**	$ (9,653)	$ (9,695)
Net gains on sales of equity securities	**3,262**	1,759	10,643
Fair value adjustments on equity securities	**344**	2,542	—
Adjustment for dividend income on a liquidated equity investment	**—**	(8,917)	—
Donations of equity securities	**—**	—	31,074
Net gains (losses) on sales and fair value adjustments of private equity investments	**367**	13,849	(6,332)
Other	**(133)**	(68)	(639)
Total investment securities gains (losses), net	**$ 3,626**	$ (488)	$ 25,051

Net gains and losses on investment securities during 2019, 2018 and 2017 are shown in the table above. Included in these amounts are gains and losses arising from sales of securities from the Company's available for sale debt portfolio, including credit-related losses on debt securities identified as other-than-temporarily impaired. Also shown are gains and losses relating to private equity investments, which are primarily held by the Parent's majority-owned private equity subsidiaries. These include fair value adjustments, in addition to gains and losses realized upon disposition. The portions of private equity investment gains and losses that are attributable to minority interests are reported as non-controlling interest in the consolidated statements of income, and resulted in expense of $348 thousand in 2019, compared to expense of $2.8 million in 2018 and income of $575 thousand in 2017.

Net securities gains of $3.6 million were recorded in 2019, which included $214 thousand in net losses realized on bond sales resulting from the Company's sale of approximately $400 million (book value) of bonds, mainly municipal securities, treasuries and asset-backed securities. Net securities gains also included $3.3 million in gains from sales of equity investments and a $1.1 million in gain from the sale of a private equity investment. These gains were offset by net losses totaling $727 thousand of fair value adjustments on private equity investments, in addition to net gains totaling $344 thousand of fair value adjustments on equity investments.

Net securities losses of $488 thousand were recorded in 2018, which included $9.7 million in net losses realized on bond sales resulting from the Company's sale of approximately $680 million (book value) of bonds, mainly mortgage and asset-backed securities. Net securities losses also included $8.9 million in losses related to an adjustment for dividend income on a liquidated investment. These losses were offset by net gains totaling $13.8 million of fair value adjustments on private equity investments, in addition to fair value adjustments and net gains realized on sales of equity investments.

Net securities gains of $25.1 million were recorded in 2017, which included $31.1 million in gains realized upon donation of appreciated stock and $10.6 million in net gains realized on sales of equity securities. These gains were offset by net losses of $9.7 million realized on sales of available for sale debt securities, resulting from the Company's sale of approximately $790 million of bonds, mainly mortgage and asset-backed securities. Additionally, net securities losses included $499 thousand in net losses realized on the sale of private equity investments and $5.8 million in losses related to fair value adjustments on private equity investments.

Non-Interest Expense

(Dollars in thousands)		**2019**		2018		2017	**% Change '19-'18**	% Change '18-'17
Salaries	**$**	**416,869**	$	396,897	$	380,945	**5.0%**	4.2 %
Employee benefits		**76,058**		71,297		67,376	**6.7**	5.8
Net occupancy		**47,157**		46,044		45,612	**2.4**	.9
Equipment		**19,061**		18,125		18,568	**5.2**	(2.4)
Supplies and communication		**20,394**		20,637		22,790	**(1.2)**	(9.4)
Data processing and software		**92,899**		85,978		80,998	**8.0**	6.1
Marketing		**21,914**		20,548		16,325	**6.6**	25.9
Deposit insurance		**6,676**		11,546		13,986	**(42.2)**	(17.4)
Community service		**2,446**		2,445		34,377	**—**	(92.9)
Other		**63,924**		64,304		63,366	**(0.6)**	1.5
Total non-interest expense	**$**	**767,398**	$	737,821	$	744,343	**4.0%**	(.9)%
Efficiency ratio		**56.9%**		55.6%		62.2%		
Salaries and benefits as a % of total non-interest expense		**64.2%**		63.5%		60.2%		
Number of full-time equivalent employees		**4,858**		4,795		4,800		

Non-interest expense was $767.4 million in 2019, an increase of $29.6 million, or 4.0%, over the previous year. Salaries and benefits expense increased $24.7 million, or 5.3%, mainly due to higher full-time salaries and medical expense. Full-time salaries expense increased due to growth in consumer, commercial, information technology and other support unit salaries expense. Full-time equivalent employees totaled 4,858 at December 31, 2019, reflecting a 1.3% increase over 2018. Occupancy expense increased $1.1 million, or 2.4%, mainly due to higher real estate taxes and building depreciation expense, partly offset by a decline in utilities expense. Equipment expense increased $936 thousand, or 5.2%, due to higher equipment depreciation expense. Data processing and software expense increased $6.9 million, or 8.0%, primarily due to higher costs for service providers and higher bank card processing expense. Marketing expense increased $1.4 million, or 6.6%, due to increased marketing efforts to support consumer and healthcare banking initiatives, partly offset by bank card marketing initiatives in the prior year. Deposit insurance expense declined $4.9 million, or 42.2%, from the prior year mainly due to reduced FDIC insurance rates.

In 2018, non-interest expense was $737.8 million, a decrease of $6.5 million, or .9%, from 2017. Salaries and benefits expense increased $19.9 million, or 4.4%, mainly due to higher full-time salaries and medical expense. Growth in salaries expense was driven by increases in full-time salaries in information technology, consumer, wealth, commercial and other support units, while incentive compensation expense declined slightly from 2017. Full-time equivalent employees totaled 4,795 at December 31, 2018, reflecting a small decrease from 2017. Occupancy expense increased $432 thousand, or .9%, mainly due to higher rent, utilities and building services expense, while equipment expense decreased $443 thousand, or 2.4%, due to lower equipment depreciation. Supplies and communication expense decreased $2.2 million, or 9.4%, mainly due to lower voice and data network costs. Data processing and software expense increased $5.0 million, or 6.1%, primarily due to higher third party processing costs. Marketing expense increased $4.2 million, or 25.9%, due to new bank card initiatives and consumer marketing initiatives in 2018. Deposit insurance expense declined $2.4 million, or 17.4%, from the prior year mainly due to decreases in average assets, a lower assessment rate, and the elimination of the special FDIC surcharge in the fourth quarter of 2018. Community service costs decreased $31.9 million due to the contribution of appreciated securities to a related foundation during 2017, which did not recur in 2018. Other non-interest expense increased $938 thousand, or 1.5%, over the prior year mainly due to higher costs for professional fees (up $2.4 million) and directors fees (up $936 thousand). These increases were partly offset by lower bank card fraud losses (down $961 thousand).

Income Taxes

Income tax expense was $109.1 million in 2019, compared to $105.9 million in 2018 and $110.5 million in 2017. The effective tax rate, including the effect of non-controlling interest, was 20.6% in 2019 compared to 19.6% in 2018 and 25.7% in 2017.

Due to the enactment of new federal tax reform legislation in December 2017, federal tax rates were lowered from 35% to 21%, which lowered the Company's effective tax rate for years 2018 and after. The Company's effective tax rate in the years noted above were lower than the federal statutory rates mainly due to tax-exempt interest on state and local municipal obligations. Additional information about income tax expense is provided in Note 9 to the consolidated financial statements.

Financial Condition

Loan Portfolio Analysis

Classifications of consolidated loans by major category at December 31 for each of the past five years are shown in the table below. This portfolio consists of loans which were acquired or originated with the intent of holding to their maturity. Loans held for sale are separately discussed in a following section. A schedule of average balances invested in each loan category below is disclosed within the Average Balance Sheets section of Management's Discussion and Analysis of Financial Condition and Results of Operations below.

	Balance at December 31				
(In thousands)	**2019**	2018	2017	2016	2015
Commercial:					
Business	**$ 5,565,449**	$ 5,106,427	$ 4,958,554	$ 4,776,365	$ 4,397,893
Real estate — construction and land	**899,377**	869,659	968,820	791,236	624,070
Real estate — business	**2,833,554**	2,875,788	2,697,452	2,643,374	2,355,544
Personal banking:					
Real estate — personal	**2,354,760**	2,127,083	2,062,787	2,010,397	1,915,953
Consumer	**1,964,145**	1,955,572	2,104,487	1,990,801	1,924,365
Revolving home equity	**349,251**	376,399	400,587	413,634	432,981
Consumer credit card	**764,977**	814,134	783,864	776,465	779,744
Overdrafts	**6,304**	15,236	7,123	10,464	6,142
Total loans	**$ 14,737,817**	$ 14,140,298	$ 13,983,674	$ 13,412,736	$ 12,436,692

The contractual maturities of business and real estate loan categories at December 31, 2019, and a breakdown of those loans between fixed rate and floating rate loans are as follows.

	Principal Payments Due			
(In thousands)	In One Year or Less	After One Year Through Five Years	After Five Years	Total
Business	$ 2,716,246	$ 2,369,727	$ 479,476	$ 5,565,449
Real estate — construction and land	525,774	327,895	45,708	899,377
Real estate — business	560,407	1,703,895	569,252	2,833,554
Real estate — personal	178,280	525,640	1,650,840	2,354,760
Total business and real estate loans	$ 3,980,707	$ 4,927,157	$ 2,745,276	$ 11,653,140
Business and real estate loans:				
Loans with fixed rates	21.3%	49.2%	57.2%	41.6%
Loans with floating rates	78.7%	50.8%	42.8%	58.4%
Total business and real estate loans	100.0%	100.0%	100.0%	100.0%

The following table shows loan balances at December 31, 2019, segregated between those with fixed interest rates and those with variable rates that fluctuate with an index.

(In thousands)	Fixed Rate Loans	Variable Rate Loans	Total	% Variable Rate Loans
Business	$ 1,950,291	$ 3,615,158	$ 5,565,449	65.0%
Real estate — construction and land	38,414	860,963	899,377	95.7
Real estate — business	1,258,254	1,575,300	2,833,554	55.6
Real estate — personal	1,598,280	756,480	2,354,760	32.1
Consumer	1,342,175	621,970	1,964,145	31.7
Revolving home equity	5,572	343,679	349,251	98.4
Consumer credit card	51,622	713,355	764,977	93.3
Overdrafts	6,304	—	6,304	—
Total loans	$ 6,250,912	$ 8,486,905	$ 14,737,817	57.6%

Total loans at December 31, 2019 were $14.7 billion, an increase of $597.5 million, or 4.2%, over balances at December 31, 2018. The growth in loans during 2019 occurred in the business, construction, personal real estate and consumer loan categories, while business real estate, consumer credit card, revolving home equity and overdraft loan categories declined from the prior year. Business loans increased $459.0 million, or 9.0%, reflecting growth in lease lending and commercial and industrial loans, while commercial card and tax-advantaged lending declined. Construction loans increased $29.7 million, or 3.4% mainly due to growth in commercial construction lending. Business real estate loans decreased $42.2 million, or 1.5%, due mainly to decreases in multi-family real estate lending. Personal real estate loans increased $227.7 million, or 10.8%, due to increased loan originations. The Company sells certain long-term fixed rate mortgage loans to the secondary market, and loan sales in 2019 totaled $239.0 million, compared to $193.5 million in 2018. Consumer loans increased $8.6 million, or .4%, mainly due to an increase in health service financing loans, offset by a decline in fixed rate home equity loans and the continued run off of marine and recreational vehicle loan balances. Consumer credit card loans decreased $49.2 million, or 6.0% and revolving home equity loan balances declined $27.1 million, or 7.2%, compared to balances at year end 2018.

The Company currently holds approximately 28% of its loan portfolio in the Kansas City market, 29% in the St. Louis market, and 43% in other regional markets. The portfolio is diversified from a business and retail standpoint, with 63% in loans to businesses and 37% in loans to consumers. The Company believes a diversified approach to loan portfolio management, strong underwriting criteria and an aversion toward credit concentrations, from an industry, geographic and product perspective, have contributed to low levels of problem loans and loan losses experienced over the last several years.

The Company participates in credits of large, publicly traded companies which are defined by regulation as shared national credits, or SNCs. Regulations define SNCs as loans exceeding $100 million that are shared by three or more financial institutions. The Company typically participates in these loans when business operations are maintained in the local communities or regional markets and opportunities to provide other banking services are present. At December 31, 2019, the balance of SNC loans totaled approximately $1.1 billion, with an additional $1.4 billion in unfunded commitments, compared to a balance of $830.2 million, with an additional $1.3 billion in unfunded commitments, at year end 2018.

Commercial Loans

Business

Total business loans amounted to $5.6 billion at December 31, 2019 and include loans used mainly to fund customer accounts receivable, inventories, and capital expenditures. The business loan portfolio includes tax-advantaged loans and leases which carry tax free interest rates. These loans totaled $858.1 million at December 31, 2019, a decline of $44.4 million, or 4.9%, from December 31, 2018 balances. The business loan portfolio also includes direct financing and sales type leases totaling $584.3 million, which are used by commercial customers to finance capital purchases ranging from computer equipment to office and transportation equipment. These leases increased $26.9 million, or 4.8%, over 2018. The Company has outstanding energy-related loans totaling $197.4 million at December 31, 2019, which are further discussed within the Energy Lending section of the Risk Elements of Loan Portfolio section located within Management's Discussion and Analysis of Financial Condition and Results of Operations. Also included in the business portfolio are corporate card loans, which totaled $293.7 million at December 31, 2019 and are made in conjunction with the Company's corporate card business for corporate trade purchases. Corporate card loans are made to corporate, non-profit and government customers nationwide, but have very short-term maturities, which limits credit risk.

Business loans, excluding corporate card loans, are made primarily to customers in the regional trade area of the Company, generally the central Midwest, encompassing the states of Missouri, Kansas, Illinois, and nearby Midwestern markets, including Iowa, Oklahoma, Colorado, Texas and Ohio. This portfolio is diversified from an industry standpoint and includes businesses engaged in manufacturing, wholesaling, retailing, agribusiness, insurance, financial services, public utilities, health care, and other service businesses. Emphasis is upon middle-market and community businesses with known local management and financial stability. Consistent with management's strategy and emphasis upon relationship banking, most borrowing customers also maintain deposit accounts and utilize other banking services. Net loan charge-offs in this category totaled $4.1 million in 2019 (mainly representing a charge-off related to the bankruptcy of a single leasing customer), compared to net loan charge-offs of $2.1 million recorded in 2018. Non-accrual business loans were $7.5 million (.1% of business loans) at December 31, 2019 compared to $9.0 million at December 31, 2018.

Real Estate-Construction and Land

The portfolio of loans in this category amounted to $899.4 million at December 31, 2019, which was an increase of $29.7 million, or 3.4%, from the prior year and comprised 6.1% of the Company's total loan portfolio. Commercial construction and land development loans totaled $705.1 million, or 78.4% of total construction loans at December 31, 2019. These loans increased $40.6 million from 2018 year end balances, driving the growth in the total construction portfolio. Commercial construction loans are made during the construction phase for small and medium-sized office and medical buildings, manufacturing and warehouse facilities, apartment complexes, shopping centers, hotels and motels, and other commercial properties. Commercial land development loans relate to land owned or developed for use in conjunction with business properties. Residential construction and land development loans at December 31, 2019 totaled $194.3 million, or 21.6% of total construction loans. A stable construction market has contributed to low loss rates on these loans, with net loan recoveries of $117 thousand and $635 thousand recorded in 2019 and 2018, respectively.

Real Estate-Business

Total business real estate loans were $2.8 billion at December 31, 2019 and comprised 19.2% of the Company's total loan portfolio. This category includes mortgage loans for small and medium-sized office and medical buildings, manufacturing and warehouse facilities, multi-family housing, farms, shopping centers, hotels and motels, churches, and other commercial properties. The business real estate borrowers and/or properties are generally located in local and regional markets where Commerce does business, and emphasis is placed on owner-occupied lending (37.0% of this portfolio), which presents lower risk levels. Additional information about business real estate loans by borrower is disclosed within the Real Estate - Business Loans section of the Risk Elements of Loan Portfolio section located within Management's Discussion and Analysis of Financial Condition and Results of Operations. At December 31, 2019, balances of non-accrual loans amounted to $1.0 million, or less than .1% of business real estate loans, down from $1.7 million at year end 2018. The Company experienced net loan recoveries of $60 thousand in 2019, compared to net loan recoveries of $378 thousand in 2018.

Personal Banking Loans

Real Estate-Personal

At December 31, 2019, there were $2.4 billion in outstanding personal real estate loans, which comprised 16.0% of the Company's total loan portfolio. The mortgage loans in this category are mainly for owner-occupied residential properties. The Company originates both adjustable and fixed rate mortgage loans, and at December 31, 2019, 32% of the portfolio was comprised of adjustable rate loans, while 68% was comprised of fixed rate loans. The Company does not purchase any loans from outside parties or brokers, and has never maintained no-document products. Levels of mortgage loan origination activity increased in 2019, with originations of $871.6 million in 2019 compared to $563.0 million in 2018. Net loans retained by the Company increased $227.7 million, driven by growth in new loan production due to the lower interest rate environment. Loans sold to the secondary market increased $45.5 million. The loan sales were made under an initiative to originate and sell certain long term fixed rate loans, resulting in sales of $239.0 million in 2019 compared to $193.5 million in 2018. The Company has experienced lower loan losses in this category than many others in the industry and believes this is partly because of its conservative underwriting culture, stable markets, and the fact that it does not purchase loans from brokers. Net loan charge-offs in 2019 totaled $56 thousand, a slight increase from net loan recoveries of $335 thousand in 2018. Balances of non-accrual loans in this category decreased to $1.7 million at December 31, 2019, compared to $1.8 million at year end 2018.

Consumer

Consumer loans consist of private banking, automobile, motorcycle, marine, tractor/trailer, recreational vehicle (RV), fixed rate home equity, patient health care financing and other types of consumer loans. These loans totaled $2.0 billion at year end 2019. Approximately 46% of the consumer portfolio consists of automobile loans, 21% in private banking loans, 4% in motorcycle loans, 14% in fixed rate home equity loans, 10% in healthcare financing loans and 2% in marine and RV loans. Total consumer loans increased $8.6 million at year end 2019 compared to year end 2018. Growth of $28.9 million in patient healthcare financing and $21.3 million in private banking loans was partially offset by declines of $14.7 million in fixed rate home equity loans, $15.6 million in marine and RV loans, and $17.5 million in motorcycle loans. Net charge-offs on total consumer loans were $8.6 million in 2019, compared to $9.3 million in 2018, averaging .4% and .5% of consumer loans in 2019 and 2018, respectively. Consumer loan net charge-offs included marine and RV loan net charge-offs of $393 thousand, which were 1.0% of average marine and RV loans in 2019, compared to 1.2% in 2018.

Revolving Home Equity

Revolving home equity loans, of which 98% are adjustable rate loans, totaled $349.3 million at year end 2019. An additional $750.9 million was available in unused lines of credit, which can be drawn at the discretion of the borrower. Home equity loans are secured mainly by second mortgages (and less frequently, first mortgages) on residential property of the borrower. The underwriting terms for the home equity line product permit borrowing availability, in the aggregate, generally up to 80% or 90% of the appraised value of the collateral property at the time of origination. Net charge-offs totaled $209 thousand in 2019, compared to $55 thousand in 2018.

Consumer Credit Card

Total consumer credit card loans amounted to $765.0 million at December 31, 2019 and comprised 5.2% of the Company's total loan portfolio. The credit card portfolio is concentrated within regional markets served by the Company. The Company offers a variety of credit card products, including affinity cards, rewards cards, and standard and premium credit cards, and emphasizes its credit card relationship product, Special Connections. Approximately 40% of the households that own a Commerce credit card product also maintain a deposit relationship with the subsidiary bank. At December 31, 2019, approximately 93% of the outstanding credit card loan balances had a floating interest rate, compared to 92% in the prior year. Net charge-offs amounted to $35.4 million in 2019, an increase of $4.8 million over $30.6 million in 2018.

Loans Held for Sale

At December 31, 2019, loans held for sale were comprised of certain long-term fixed rate personal real estate loans and loans extended to students while attending colleges and universities. The personal real estate loans are carried at fair value and totaled $9.2 million at December 31, 2019. The student loans, carried at the lower of cost or fair value, totaled $4.6 million at December 31, 2019. Both of these portfolios are further discussed in Note 2 to the consolidated financial statements.

Allowance for Loan Losses

The Company has an established process to determine the amount of the allowance for loan losses which assesses the risks and losses inherent in its portfolio. This process provides an allowance consisting of a specific allowance component based on certain individually evaluated loans and a general component based on estimates of reserves needed for pools of loans.

Loans subject to individual evaluation generally consist of business, construction, business real estate and personal real estate loans on non-accrual status, and include troubled debt restructurings that are on non-accrual status. These non-accrual loans are evaluated individually for impairment based on factors such as payment history, borrower financial condition and collateral. For collateral dependent loans, appraisals of collateral (including exit costs) are normally obtained annually but discounted based on date last received and market conditions. From these evaluations of expected cash flows and collateral values, specific allowances are determined.

Loans which are not individually evaluated are segregated by loan type and sub-type and are collectively evaluated. These loans consist of commercial loans (business, construction and business real estate) which have been graded pass, special mention, or substandard, and also include all personal banking loans except personal real estate loans on non-accrual status. Collectively-evaluated loans include certain troubled debt restructurings with similar risk characteristics. Allowances for both personal banking and commercial loans use methods which consider historical and current loss trends, loss emergence periods, delinquencies, industry concentrations and unique risks. Economic conditions throughout the Company's markets, as monitored by Company credit officers, are also considered in the allowance determination process.

The Company's estimate of the allowance for loan losses and the corresponding provision for loan losses rest upon various judgments and assumptions made by management. In addition to past loan loss experience, various qualitative factors are considered, such as current loan portfolio composition and characteristics, trends in delinquencies, portfolio risk ratings, levels of non-performing assets, credit concentrations, collateral values, and prevailing regional and national economic conditions. The Company has internal credit administration and loan review staff that continuously review loan quality and report the results of their reviews and examinations to the Company's senior management and Board of Directors. Such reviews also assist management in establishing the level of the allowance. In using this process and the information available, management must consider various assumptions and exercise considerable judgment to determine the overall level of the allowance for loan losses. Because of these subjective factors, actual outcomes of inherent losses can differ from original estimates. The Company's subsidiary bank continues to be subject to examination by several regulatory agencies, and examinations are conducted throughout the year, targeting various segments of the loan portfolio for review. Refer to Note 1 to the consolidated financial statements for additional discussion on the allowance and charge-off policies.

At December 31, 2019, the allowance for loan losses was $160.7 million, compared to $159.9 million at December 31, 2018. The percentage of allowance to loans decreased to 1.09% at December 31, 2019 compared to 1.13% at year end 2018. Total loans delinquent 90 days or more and still accruing were $19.9 million at December 31, 2019, an increase of $3.2 million compared to year end 2018, mainly driven by a $3.5 million increase in construction loan delinquencies on one larger loan and a $955 thousand increase in consumer credit card loans delinquent 90 days or more, partly offset by a decrease of $1.6 million in consumer loan delinquencies. Non-accrual loans at December 31, 2019 were $10.2 million, a decrease of $2.3 million over the prior year, mainly due to a decrease in business and business real-estate non-accrual loans of $1.5 million and $685 thousand, respectively. The 2019 year end balance of non-accrual loans was comprised of $7.5 million of business loans, $1.0 million of business real estate loans and $1.7 million of personal real estate loans.

Net loan charge-offs totaled $49.7 million in 2019, representing a $7.4 million increase compared to net charge-offs of $42.3 million in 2018. The increase was largely due to higher credit card loan and business loan charge-offs of $4.8 million and $2.0 million, respectively. In addition, personal real estate loan net charge-offs increased $391 thousand, while construction loan and business real estate net recoveries decreased $518 thousand and $318 thousand, respectively. Partly offsetting these increases in net charge-offs were lower net loan charge-offs of $732 thousand on consumer loans. Consumer credit card net charge-offs were 4.63% of average consumer credit card loans in 2019 compared to 3.98% in 2018. Consumer credit card loan net charge-offs as a percentage of total net charge-offs decreased to 71.3% in 2019 compared to 72.3% in 2018. Consumer loan net charge-offs were .44% of average consumer loans in 2019, compared to .46% in 2018, and represented 17.2% of total net loan charge-offs in 2019.

The ratio of net charge-offs to total average loans outstanding in 2019 was .35%, compared to .30% in 2018 and .31% in 2017. The provision for loan losses in 2019 was $50.4 million, compared to provisions of $42.7 million in 2018 and $45.2 million in 2017.

The Company considers the allowance for loan losses of $160.7 million adequate to cover losses inherent in the loan portfolio at December 31, 2019.

The schedules which follow summarize the relationship between loan balances and activity in the allowance for loan losses:

	Years Ended December 31				
(Dollars in thousands)	**2019**	2018	2017	2016	2015
Loans outstanding at end of year[(A)]	**$ 14,737,817**	$ 14,140,298	$ 13,983,674	$ 13,412,736	$ 12,436,692
Average loans outstanding[(A)]	**$ 14,224,637**	$ 13,926,079	$ 13,611,699	$ 12,927,778	$ 11,869,276
Allowance for loan losses:					
Balance at beginning of year	**$ 159,932**	$ 159,532	$ 155,932	$ 151,532	$ 156,532
Additions to allowance through charges to expense	**50,438**	42,694	45,244	36,318	28,727
Loans charged off:					
Business	**4,622**	3,144	2,410	2,549	2,295
Real estate — construction and land	**7**	—	1	515	499
Real estate — business	**82**	20	127	194	1,263
Real estate — personal	**294**	176	417	556	1,037
Consumer	**12,048**	12,897	13,415	12,711	11,708
Revolving home equity	**487**	357	488	860	722
Consumer credit card	**42,254**	36,931	36,114	31,616	31,326
Overdrafts	**2,086**	2,296	2,207	1,977	2,200
Total loans charged off	**61,880**	55,821	55,179	50,978	51,050
Recoveries of loans previously charged off:					
Business	**520**	1,042	1,032	1,933	2,683
Real estate — construction and land	**124**	635	1,192	4,227	1,761
Real estate — business	**142**	398	330	1,475	1,396
Real estate — personal	**238**	511	722	562	596
Consumer	**3,494**	3,611	3,436	3,664	3,430
Revolving home equity	**278**	302	303	375	320
Consumer credit card	**6,833**	6,353	5,861	6,186	6,287
Overdrafts	**563**	675	659	638	850
Total recoveries	**12,192**	13,527	13,535	19,060	17,323
Net loans charged off	**49,688**	42,294	41,644	31,918	33,727
Balance at end of year	**$ 160,682**	$ 159,932	$ 159,532	$ 155,932	$ 151,532
Ratio of allowance to loans at end of year	**1.09%**	1.13%	1.14%	1.16%	1.22%
Ratio of provision to average loans outstanding	**.35%**	.31%	.33%	.28%	.24%

(A) Net of unearned income, before deducting allowance for loan losses, excluding loans held for sale.

	Years Ended December 31				
	2019	2018	2017	2016	2015
Ratio of net charge-offs (recoveries) to average loans outstanding, by loan category:					
Business	**.08%**	.04%	.03%	.01%	(.01)%
Real estate — construction and land	**(.01)**	(.07)	(.14)	(.48)	(.26)
Real estate — business	—	(.01)	(.01)	(.05)	(.01)
Real estate — personal	—	(.02)	(.02)	—	.02
Consumer	**.44**	.46	.49	.46	.45
Revolving home equity	**.06**	.01	.05	.12	.09
Consumer credit card	**4.63**	3.98	4.07	3.39	3.35
Overdrafts	**16.55**	33.93	33.71	28.42	24.93
Ratio of total net charge-offs to total average loans outstanding	**.35%**	.30%	.31%	.25%	.28 %

The following schedule provides a breakdown of the allowance for loan losses by loan category and the percentage of each loan category to total loans outstanding at year end.

(Dollars in thousands)	**2019**		2018		2017		2016		2015	
	Loan Loss Allowance Allocation	**% of Loans to Total Loans**	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans
Business	**$ 44,268**	**37.8%**	$ 42,890	36.1%	$ 44,462	35.4%	$ 43,910	35.6%	$ 43,617	35.4%
RE — construction and land	**21,589**	**6.1**	22,515	6.2	24,432	6.9	21,841	5.9	16,312	5.0
RE — business	**25,903**	**19.2**	27,717	20.3	24,810	19.3	25,610	19.7	22,157	18.9
RE — personal	**3,125**	**16.0**	3,250	15.0	4,201	14.8	4,110	15.0	6,680	15.4
Consumer	**15,932**	**13.3**	18,007	13.8	19,509	15.0	18,935	14.8	21,717	15.5
Revolving home equity	**638**	**2.4**	825	2.7	1,189	2.9	1,164	3.1	1,393	3.5
Consumer credit card	**47,997**	**5.2**	43,755	5.8	40,052	5.6	39,530	5.8	38,764	6.3
Overdrafts	**1,230**	**—**	973	.1	877	.1	832	.1	892	—
Total	**$ 160,682**	**100.0%**	$ 159,932	100.0%	$ 159,532	100.0%	$ 155,932	100.0%	$ 151,532	100.0%

Risk Elements of Loan Portfolio

Management reviews the loan portfolio continuously for evidence of problem loans. During the ordinary course of business, management becomes aware of borrowers that may not be able to meet the contractual requirements of loan agreements. Such loans are placed under close supervision with consideration given to placing the loan on non-accrual status, the need for an additional allowance for loan loss, and (if appropriate) partial or full loan charge-off. Loans are placed on non-accrual status when management does not expect to collect payments consistent with acceptable and agreed upon terms of repayment. After a loan is placed on non-accrual status, any interest previously accrued but not yet collected is reversed against current income. Interest is included in income only as received and only after all previous loan charge-offs have been recovered, so long as management is satisfied there is no impairment of collateral values. The loan is returned to accrual status only when the borrower has brought all past due principal and interest payments current, and, in the opinion of management, the borrower has demonstrated the ability to make future payments of principal and interest as scheduled. Loans that are 90 days past due as to principal and/or interest payments are generally placed on non-accrual, unless they are both well-secured and in the process of collection, or they are comprised of those personal banking loans that are exempt under regulatory rules from being classified as non-accrual. Consumer installment loans and related accrued interest are normally charged down to the fair value of related collateral (or are charged off in full if no collateral) once the loans are more than 120 days delinquent. Credit card loans and the related accrued interest are charged off when the receivable is more than 180 days past due.

The following schedule shows non-performing assets and loans past due 90 days and still accruing interest.

	December 31				
(Dollars in thousands)	**2019**	2018	2017	2016	2015
Total non-accrual loans	**$ 10,220**	$ 12,536	$ 11,983	$ 14,283	$ 26,575
Real estate acquired in foreclosure	**365**	1,413	681	366	2,819
Total non-performing assets	**$ 10,585**	$ 13,949	$ 12,664	$ 14,649	$ 29,394
Non-performing assets as a percentage of total loans	**.07%**	.10%	.09%	.11%	.24%
Non-performing assets as a percentage of total assets	**.04%**	.05%	.05%	.06%	.12%
Loans past due 90 days and still accruing interest	**$ 19,859**	$ 16,658	$ 18,127	$ 16,396	$ 16,467

The table below shows the effect on interest income in 2019 of loans on non-accrual status at year end.

(In thousands)	
Gross amount of interest that would have been recorded at original rate	$ 1,543
Interest that was reflected in income	369
Interest income not recognized	$ 1,174

Non-accrual loans, which are also classified as impaired, totaled $10.2 million at year end 2019, a decrease of $2.3 million from the balance at year end 2018. The decrease from December 31, 2018 occurred mainly in business loans, which decreased $1.5 million, and business real estate loans, which decreased $685 thousand. At December 31, 2019, non-accrual loans were comprised primarily of business (73.3%), personal real estate (16.6%), and business real estate (10.1%) loans. Foreclosed real estate totaled $365 thousand at December 31, 2019, a decrease of $1.0 million when compared to December 31, 2018. Total non-performing assets remain low compared to the overall banking industry in 2019, with the non-performing assets to total loans ratio at .07% at December 31, 2019. Total loans past due 90 days or more and still accruing interest were $19.9 million as of December 31, 2019, an increase of $3.2 million when compared to December 31, 2018. Balances by class for non-accrual loans and loans past due 90 days and still accruing interest are shown in the *"Delinquent and non-accrual loans"* section of Note 2 to the consolidated financial statements.

In addition to the non-performing and past due loans mentioned above, the Company also has identified loans for which management has concerns about the ability of the borrowers to meet existing repayment terms. They are classified as substandard under the Company's internal rating system. The loans are generally secured by either real estate or other borrower assets, reducing the potential for loss should they become non-performing. Although these loans are generally identified as potential problem loans, they may never become non-performing. Such loans totaled $164.8 million at December 31, 2019, compared with $145.7 million at December 31, 2018, resulting in an increase of $19.1 million or 13.1%. The increase in potential problem loans was largely driven by a $35.2 million increase in business real estate loans, which was partly offset by a $14.1 million decrease in business loans.

	December 31	
(In thousands)	**2019**	2018
Potential problem loans:		
Business	**$ 83,943**	$ 98,009
Real estate – construction and land	**470**	1,211
Real estate – business	**80,071**	44,854
Real estate – personal	**283**	1,586
Total potential problem loans	**$ 164,767**	$ 145,660

At December 31, 2019, the Company had $79.5 million of loans whose terms have been modified or restructured, meeting the definition of a troubled debt restructuring. These loans have been extended to borrowers who are experiencing financial difficulty and who have been granted a concession, as defined by accounting guidance, and are further discussed in the *"Troubled debt restructurings"* section in Note 2 to the consolidated financial statements. This balance includes certain commercial loans totaling $55.9 million, which are classified as substandard and included in the table above because of this classification.

Loans with Special Risk Characteristics

Management relies primarily on an internal risk rating system, in addition to delinquency status, to assess risk in the loan portfolio, and these statistics are presented in Note 2 to the consolidated financial statements. However, certain types of loans are considered at high risk of loss due to their terms, location, or special conditions. Construction and land loans and business real estate loans are subject to higher risk because of the impact that volatile interest rates and a changing economy can have on real estate value, and because of the potential volatility of the real estate industry. Certain home equity loans have contractual features that could increase credit exposure in a market of declining real estate prices, when interest rates are steadily increasing, or when a geographic area experiences an economic downturn. For these home equity loans, higher risks could exist when 1) loan terms require a minimum monthly payment that covers only interest, or 2) loan-to-collateral value (LTV) ratios at origination are above 80%, with no private mortgage insurance. Information presented below for home equity loans is based on LTV ratios which were calculated with valuations at loan origination date. The Company does not attempt to obtain updated appraisals or valuations unless the loans become significantly delinquent or are in the process of being foreclosed upon. For credit monitoring purposes, the Company analyzes delinquency information, current FICO scores, and line utilization. This has remained an effective means of evaluating credit trends and identifying problem loans, partly because the Company offers standard, conservative lending products.

Real Estate - Construction and Land Loans

The Company's portfolio of construction and land loans, as shown in the table below, amounted to 6.1% of total loans outstanding at December 31, 2019. The largest component of construction and land loans was commercial construction, which increased $51.2 million during the year ended December 31, 2019. At December 31, 2019, multi-family residential construction loans totaled approximately $213.4 million, or 31.8%, of the commercial construction loan portfolio.

(Dollars in thousands)		**December 31, 2019**	**% of Total**	**% of Total Loans**		December 31, 2018	% of Total	% of Total Loans
Commercial construction	**$**	**670,590**	**74.6%**	**4.6%**	$	619,370	71.2%	4.4%
Residential construction		**128,575**	**14.3**	**.9**		123,369	14.2	.9
Residential land and land development		**65,687**	**7.3**	**.4**		81,740	9.4	.6
Commercial land and land development		**34,525**	**3.8**	**.2**		45,180	5.2	.3
Total real estate – construction and land loans	**$**	**899,377**	**100.0%**	**6.1%**	$	869,659	100.0%	6.2%

Real Estate – Business Loans

Total business real estate loans were $2.8 billion at December 31, 2019 and comprised 19.2% of the Company's total loan portfolio. These loans include properties such as manufacturing and warehouse buildings, small office and medical buildings, churches, hotels and motels, shopping centers, and other commercial properties. Approximately 37.0% of these loans were for owner-occupied real estate properties, which present lower risk profiles.

(Dollars in thousands)		**December 31, 2019**	**% of Total**	**% of Total Loans**		December 31, 2018	% of Total	% of Total Loans
Owner-occupied	**$**	**1,048,716**	**37.0%**	**7.1%**	$	1,038,589	36.1%	7.3%
Retail		**383,234**	**13.5**	**2.6**		307,915	10.7	2.2
Multi-family		**306,577**	**10.8**	**2.1**		408,151	14.2	2.9
Office		**297,278**	**10.5**	**2.0**		356,733	12.4	2.5
Hotels		**210,557**	**7.4**	**1.4**		209,693	7.3	1.5
Farm		**177,669**	**6.3**	**1.2**		160,935	5.6	1.1
Senior living		**164,000**	**5.8**	**1.1**		117,635	4.1	.8
Industrial		**108,285**	**3.8**	**.7**		109,391	3.8	.8
Other		**137,238**	**4.9**	**1.0**		166,746	5.8	1.2
Total real estate - business loans	**$**	**2,833,554**	**100.0%**	**19.2%**	$	2,875,788	100.0%	20.3%

Revolving Home Equity Loans

The Company has revolving home equity loans that are generally collateralized by residential real estate. Most of these loans (91.9%) are written with terms requiring interest-only monthly payments. These loans are offered in three main product lines: LTV up to 80%, 80% to 90%, and 90% to 100%. As shown in the following tables, the percentage of loans with LTV ratios greater than 80% has remained a small segment of this portfolio, and delinquencies have been low and stable. The weighted average FICO score for the total portfolio balance at December 31, 2019 was 792. At maturity, the accounts are re-underwritten and if they qualify under the Company's credit, collateral and capacity policies, the borrower is given the option to renew the line of credit or to convert the outstanding balance to an amortizing loan. If criteria are not met, amortization is required, or the borrower may pay off the loan. Over the next three years, approximately 12.5% of the Company's current outstanding balances are expected to mature. Of these balances, 92.9% have a FICO score above 700. The Company does not expect a significant increase in losses as these loans mature, due to their high FICO scores, low LTVs, and low historical loss levels.

(Dollars in thousands)	Principal Outstanding at December 31, 2019	*	New Lines Originated During 2019	*	Unused Portion of Available Lines at December 31, 2019	*	Balances Over 30 Days Past Due	*
Loans with interest-only payments	$ 321,126	91.9%	$173,969	49.8%	$725,187	207.6%	$1,422	.4%
Loans with LTV:								
Between 80% and 90%	37,347	10.7	22,603	6.5	43,313	12.4	213	.1
Over 90%	3,775	1.1	1,643	.4	4,969	1.4	23	—
Over 80% LTV	41,122	11.8	24,246	6.9	48,282	13.8	236	.1
Total loan portfolio from which above loans were identified	349,251		184,085		751,283			

** Percentage of total principal outstanding of $349.3 million at December 31, 2019.*

(Dollars in thousands)	Principal Outstanding at December 31, 2018	*	New Lines Originated During 2018	*	Unused Portion of Available Lines at December 31, 2018	*	Balances Over 30 Days Past Due	*
Loans with interest-only payments	$ 345,302	91.7%	$198,875	52.8%	$692,293	183.9%	$1,274	.3%
Loans with LTV:								
Between 80% and 90%	40,327	10.7	19,608	5.2	38,960	10.4	375	.1
Over 90%	4,785	1.3	675	.2	4,176	1.1	56	—
Over 80% LTV	45,112	12.0	20,283	5.4	43,136	11.5	431	.1
Total loan portfolio from which above loans were identified	376,399		209,569		725,733			

** Percentage of total principal outstanding of $376.4 million at December 31, 2018.*

Other Consumer Loans

Within the consumer loan portfolio are several direct and indirect product lines comprised mainly of loans secured by automobiles, motorcycles, marine, and RVs. Outstanding balances for auto loans were $908.3 million and $910.5 million at December 31, 2019 and 2018, respectively. The balances over 30 days past due amounted to $13.2 million at December 31, 2019, compared to $17.8 million at the end of 2018, and comprised 1.5% of the outstanding balances of these loans at December 31, 2019 compared to 2.0% at December 31, 2018. For the year ended December 31, 2019, $414.9 million of new auto loans were originated, compared to $365.0 million during 2018. At December 31, 2019, the automobile loan portfolio had a weighted average FICO score of 756.

Outstanding balances for motorcycle loans were $71.9 million at December 31, 2019, compared to $89.4 million at December 31, 2018. The balances over 30 days past due amounted to $1.3 million and $2.1 million at December 31, 2019 and 2018, respectively, and comprised 1.9% of the outstanding balances of these loans at December 31, 2019, compared to 2.4% at December 31, 2018. For the year ended December 31, 2019, $26.5 million of new motorcycle loans were originated, compared to $15.0 million during 2018.

Marine and RV loan production has been significantly curtailed since 2008 with few new originations. While loss rates have remained low over the last five years, the loss ratios experienced for marine and RV loans in 2019 decreased over the prior year but have been higher than for other consumer loan products, at 1.0% and 1.2% in 2019 and 2018, respectively. Balances over 30 days past due for marine and RV loans decreased $1.1 million at year end 2019 compared to 2018.

The table below provides the total outstanding principal and other data for this group of direct and indirect lending products at December 31, 2019 and 2018.

	2019			2018		
(In thousands)	**Principal Outstanding at December 31**	**New Loans Originated**	**Balances Over 30 Days Past Due**	Principal Outstanding at December 31	New Loans Originated	Balances Over 30 Days Past Due
Automobiles	**$ 908,260**	**$ 414,885**	**$ 13,233**	$ 910,478	$ 364,955	$ 17,790
Motorcycles	**71,927**	**26,459**	**1,338**	89,443	14,992	2,109
RV	**26,121**	**1,124**	**1,184**	37,914	1,276	1,887
Marine	**9,243**	**1,577**	**302**	13,003	1,603	647
Total	**$ 1,015,551**	**$ 444,045**	**$ 16,057**	$ 1,050,838	$ 382,826	$ 22,433

Consumer Credit Card Loans

Additionally, the Company offers low introductory rates on selected consumer credit card products. Out of a portfolio at December 31, 2019 of $765.0 million in consumer credit card loans outstanding, approximately $144.8 million, or 18.9%, carried a low promotional rate. Within the next six months, $64.9 million of these loans are scheduled to convert to the ongoing higher contractual rate. To mitigate some of the risk involved with this credit card promotional feature, the Company performs credit checks and detailed analysis of the customer borrowing profile before approving the loan application. Management believes that the risks in the consumer loan portfolio are reasonable and the anticipated loss ratios are within acceptable parameters.

Energy Lending

The Company's energy lending portfolio was comprised of lending to the petroleum and natural gas sectors and totaled $197.4 million at December 31, 2019, an increase of $53.6 million from year end 2018, as shown in the table below.

(In thousands)	**December 31, 2019**	December 31, 2018	**Unfunded commitments at December 31, 2019**
Extraction	**$ 177,903**	$ 114,152	**$ 62,996**
Downstream distribution and refining	**7,168**	17,300	**19,271**
Mid-stream shipping and storage	**4,763**	3,483	**54,761**
Support activities	**7,598**	8,892	**27,667**
Total energy lending portfolio	**$ 197,432**	$ 143,827	**$ 164,695**

Investment Securities Analysis

Investment securities are comprised of securities that are classified as available for sale, equity, trading or other. The largest component, available for sale debt securities, decreased 1.9% during 2019 to $8.4 billion (excluding unrealized gains/losses in fair value) at year end 2019. During 2019, debt securities of $1.8 billion were purchased, which included $167.1 million in state and municipal securities, $1.4 billion in agency mortgage-backed securities, $55.7 million in non-agency mortgage-based securities, and $106.6 million in asset-backed securities. Total sales, maturities and pay downs were $1.9 billion during 2019. During 2020, maturities and pay downs of approximately $1.3 billion are expected to occur. The average tax equivalent yield earned on total investment securities was 2.81% in 2019 and 2.84% in 2018.

At December 31, 2019, the fair value of available for sale securities was $8.6 billion, which included a net unrealized gain in fair value of $136.1 million, compared to a net unrealized loss of $64.6 million at December 31, 2018. The overall unrealized gain in fair value at December 31, 2019 included net gains of $42.4 million in state and municipal securities and net gains of $63.4 million in mortgage and asset-backed securities. The portfolio also included unrealized net gains of $23.9 million and $5.9 million on U.S. government and federal agency obligations and other debt securities, respectively.

Available for sale investment securities at year end for the past two years are shown below:

(In thousands)	December 31 **2019**	2018
Amortized Cost		
U.S. government and federal agency obligations	**$ 827,861**	$ 914,486
Government-sponsored enterprise obligations	**138,734**	199,470
State and municipal obligations	**1,225,532**	1,322,785
Agency mortgage-backed securities	**3,893,247**	3,253,433
Non-agency mortgage-backed securities	**796,451**	1,053,854
Asset-backed securities	**1,228,151**	1,518,976
Other debt securities	**325,555**	339,595
Total available for sale debt securities	**$ 8,435,531**	$ 8,602,599
Fair Value		
U.S. government and federal agency obligations	**$ 851,776**	$ 907,652
Government-sponsored enterprise obligations	**139,277**	195,778
State and municipal obligations	**1,267,927**	1,328,039
Agency mortgage-backed securities	**3,937,964**	3,214,985
Non-agency mortgage-backed securities	**809,782**	1,047,716
Asset-backed securities	**1,233,489**	1,511,614
Other debt securities	**331,411**	332,257
Total available for sale debt securities	**$ 8,571,626**	$ 8,538,041

At December 31, 2019, the available for sale portfolio included $3.9 billion of agency mortgage-backed securities, which are collateralized bonds issued by agencies including FNMA, GNMA, FHLMC, FHLB, Federal Farm Credit Banks and FDIC. Non-agency mortgage-backed securities totaled $809.8 million and included $526.0 million collateralized by commercial mortgages and $283.8 million collateralized by residential mortgages at December 31, 2019. Certain non-agency mortgage-backed securities are other-than-temporarily impaired, and the processes for determining impairment and the related losses are discussed in Note 3 to the consolidated financial statements.

At December 31, 2019, U.S. government obligations included TIPS of $461.8 million, at fair value. Other debt securities include corporate bonds, notes and commercial paper.

The types of securities held in the available for sale security portfolio at year end 2019 are presented in the table below. Additional detail by maturity category is provided in Note 3 to the consolidated financial statements.

	December 31, 2019 Percent of Total Debt Securities	Weighted Average Yield	Estimated Average Maturity*
Available for sale debt securities:			
U.S. government and federal agency obligations	9.9%	1.54%	4.2 years
Government-sponsored enterprise obligations	1.6	2.26	6.0
State and municipal obligations	14.9	2.49	5.0
Agency mortgage-backed securities	45.9	2.87	4.8
Non-agency mortgage-backed securities	9.4	2.98	2.3
Asset-backed securities	14.4	2.61	3.0
Other debt securities	3.9	2.66	3.0

**Based on call provisions and estimated prepayment speeds.*

Equity securities include common and preferred stock with readily determinable fair values that totaled $2.9 million at December 31, 2019, compared to $2.6 million at December 31, 2018.

Other securities totaled $137.9 million at December 31, 2019 and $129.2 million at December 31, 2018. These include Federal Reserve Bank stock and Federal Home Loan Bank (Des Moines) stock held by the bank subsidiary in accordance with debt and regulatory requirements. These are restricted securities and are carried at cost. Also included are private equity investments which are held by a subsidiary qualified as a Small Business Investment Company. These investments are carried at estimated fair value, but are not readily marketable. While the nature of these investments carries a higher degree of risk than the normal lending portfolio, this risk is mitigated by the overall size of the investments and oversight provided by management, and management believes the potential for long-term gains in these investments outweighs the potential risks.

Other securities at year end for the past two years are shown below:

	December 31	
(In thousands)	**2019**	2018
Federal Reserve Bank stock	**$ 33,770**	$ 33,498
Federal Home Loan Bank stock	**10,000**	10,000
Private equity investments in debt securities	**44,635**	39,831
Private equity investments in equity securities	**49,487**	45,828
Total other securities	**$ 137,892**	$ 129,157

In addition to its holdings in the investment securities portfolio, the Company invests in long-term securities purchased under agreements to resell, which totaled $850.0 million at December 31, 2019 and $700.0 million at December 31, 2018. These investments mature in 2020 through 2023 and have fixed rates or variable rates that fluctuate with published indices. The counterparties to these agreements are other financial institutions from whom the Company has accepted collateral of $886.3 million in marketable investment securities at December 31, 2019. The average rate earned on these agreements during 2019 was 1.99%.

The Company also holds offsetting repurchase and resale agreements totaling $200.0 million at December 31, 2019 and $450.0 million at December 31, 2018, which are further discussed in Note 20 to the consolidated financial statements. These agreements involve the exchange of collateral under simultaneous repurchase and resale agreements with the same financial institution counterparty. These repurchase and resale agreements have been offset against each other in the balance sheet, as permitted under current accounting guidance. The agreements mature in 2020 and earned an average of 45 basis points during 2019.

Deposits and Borrowings

Deposits, including both individual and corporate customers, are the primary funding source for the Bank and are acquired from a broad base of local markets. Total period-end deposits were $20.5 billion at December 31, 2019, compared to $20.3 billion last year, reflecting an increase of $196.8 million, or 1.0%.

Average deposits declined by $221.4 million, or 1.1%, in 2019 compared to 2018, resulting from declines in average demand deposits, which decreased $352.8 million, primarily driven by lower balances in business demand deposits. Additionally, average money market deposit account balances decreased $734.0 million in 2019. Partially offsetting these decreases in deposit balances was growth in average certificates of deposit balances, which increased $289.6 million, and in average interest checking balances, which increased $524.0 million in 2019.

The following table shows year end deposit balances by type, as a percentage of total deposits.

	December 31	
	2019	2018
Non-interest bearing	**33.6%**	34.3%
Savings, interest checking and money market	**56.6**	57.5
Certificates of deposit of less than $100,000	**3.1**	2.9
Certificates of deposit of $100,000 and over	**6.7**	5.3
Total deposits	**100.0%**	100.0%

Core deposits, which include non-interest bearing, interest checking, savings, and money market deposits, supported 75% and 77% of average earning assets in 2019 and 2018, respectively. Average balances by major deposit category for the last six years are disclosed in the Average Balance Sheets section of Management's Discussion and Analysis of Financial Condition and results of Operations below. A maturity schedule of certificates of deposits outstanding at December 31, 2019 is included in Note 7 on Deposits in the consolidated financial statements.

The Company's primary sources of overnight borrowings are federal funds purchased and securities sold under agreements to repurchase (repurchase agreements). Balances in these accounts can fluctuate significantly on a day-to-day basis and generally have one day maturities. Total balances of federal funds purchased and repurchase agreements outstanding at December 31, 2019 were $1.9 billion, a $105.6 million decrease from the $2.0 billion balance outstanding at year end 2018. On an average basis, these borrowings increased $308.0 million, or 20.3%, during 2019, due to an increase of $143.0 million in repurchase agreements, and an increase of $165.0 million in federal funds purchased. The average rate paid on total federal funds purchased and repurchase agreements was 1.61% during 2019 and 1.30% during 2018.

Historically, the majority of the Company's long-term debt has been comprised of fixed rate advances from the FHLB. During 2019, the Company borrowed $250.0 million of short-term funds from the FHLB, and those borrowings were repaid by the Company in October 2019. The average rate paid on FHLB advances was 2.19% during 2019. No advances were taken in 2018.

Liquidity and Capital Resources

Liquidity Management

Liquidity is managed within the Company in order to satisfy cash flow requirements of deposit and borrowing customers while at the same time meeting its own cash flow needs. The Company has taken numerous steps to address liquidity risk and has developed a variety of liquidity sources which it believes will provide the necessary funds for future growth. The Company manages its liquidity position through a variety of sources including:

- A portfolio of liquid assets including marketable investment securities and overnight investments,
- A large customer deposit base and limited exposure to large, volatile certificates of deposit,
- Lower long-term borrowings that might place demands on Company cash flow,
- Relatively low loan to deposit ratio promoting strong liquidity,
- Excellent debt ratings from both Standard & Poor's and Moody's national rating services, and
- Available borrowing capacity from outside sources.

The Company’s most liquid assets include available for sale debt securities, federal funds sold, balances at the Federal Reserve Bank, and securities purchased under agreements to resell. At December 31, 2019 and 2018, such assets were as follows:

(In thousands)		**2019**		2018
Available for sale debt securities	**$**	**8,571,626**	$	8,538,041
Federal funds sold		**—**		3,320
Long-term securities purchased under agreements to resell		**850,000**		700,000
Balances at the Federal Reserve Bank		**395,850**		689,876
Total	**$**	**9,817,476**	$	9,931,237

There were no federal funds sold at December 31, 2019, which are funds lent to the Company’s correspondent bank customers with overnight maturities. At December 31, 2019, the Company had lent funds totaling $850.0 million under long-term resale agreements to other large financial institutions. The agreements mature in years 2020 through 2023. Under these agreements, the Company holds marketable securities, safekept by a third-party custodian, as collateral. This collateral totaled $886.3 million in fair value at December 31, 2019. Interest earning balances at the Federal Reserve Bank, which have overnight maturities and are used for general liquidity purposes, totaled $395.9 million at December 31, 2019. The Company’s available for sale investment portfolio includes scheduled maturities and expected pay downs of approximately $1.3 billion during 2020, and these funds offer substantial resources to meet either new loan demand or help offset reductions in the Company’s deposit funding base. The Company pledges portions of its investment securities portfolio to secure public fund deposits, repurchase agreements, trust funds, letters of credit issued by the FHLB, and borrowing capacity at the Federal Reserve Bank. At December 31, 2019 and 2018, total investment securities pledged for these purposes were as follows:

(In thousands)		**2019**		2018
Investment securities pledged for the purpose of securing:				
Federal Reserve Bank borrowings	**$**	**48,304**	$	67,675
FHLB borrowings and letters of credit		**7,637**		9,974
Repurchase agreements *		**2,083,716**		2,469,432
Other deposits		**2,149,575**		1,784,020
Total pledged securities		**4,289,232**		4,331,101
Unpledged and available for pledging		**3,029,268**		2,872,562
Ineligible for pledging		**1,253,126**		1,334,378
Total available for sale debt securities, at fair value	**$**	**8,571,626**	$	8,538,041

** Includes securities pledged for collateral swaps, as discussed in Note 20 to the consolidated financial statements*

The average loans to deposits ratio is a measure of a bank's liquidity, and the Company’s average loans to deposits ratio was 71.5% at December 31, 2019. Core customer deposits, defined as non-interest bearing, interest checking, savings, and money market deposit accounts, totaled $18.5 billion and represented 90.2% of the Company’s total deposits at December 31, 2019. These core deposits are normally less volatile, often with customer relationships tied to other products offered by the Company promoting long lasting relationships and stable funding sources. Total core deposits decreased $153.1 million at year end 2019 compared to year end 2018, with declines in wealth management and commercial deposits of $104.7 million and $101.8 million, respectively. This decrease was partially offset by growth of $51.8 million in consumer deposits. While the Company considers core consumer and wealth management deposits less volatile, corporate deposits could decline if interest rates increase significantly or if corporate customers increase investing activities and reduce deposit balances. If these corporate deposits decline, the Company's funding needs can be met by liquidity supplied by investment security maturities and pay downs expected to total $1.3 billion over the next year, as noted above. In addition, as shown in the table of collateral available for future advances below, the Company has borrowing capacity of $3.6 billion through advances from the FHLB and the Federal Reserve.

(In thousands)		**2019**		2018
Core deposit base:				
Non-interest bearing	**$**	**6,890,687**	$	6,980,298
Interest checking		**2,130,591**		2,090,936
Savings and money market		**9,491,125**		9,594,303
Total	**$**	**18,512,403**	$	18,665,537

Certificates of deposit of $100,000 or greater totaled $1.4 billion at December 31, 2019. These deposits are normally considered more volatile and higher costing, and comprised 6.7% of total deposits at December 31, 2019.

Other important components of liquidity are the level of borrowings from third party sources and the availability of future credit. The Company's outside borrowings are mainly comprised of federal funds purchased, and repurchase agreements, as follows:

(In thousands)	**2019**	2018
Borrowings:		
Federal funds purchased	**$ 20,035**	$ 13,170
Securities sold under agreements to repurchase	**1,830,737**	1,943,219
Other debt	**2,418**	8,702
Total	**$ 1,853,190**	$ 1,965,091

Federal funds purchased, which totaled $20.0 million at December 31, 2019, are unsecured overnight borrowings obtained mainly from upstream correspondent banks with which the Company maintains approved lines of credit. Retail repurchase agreements are offered to customers wishing to earn interest in highly liquid balances and are used by the Company as a funding source considered to be stable, but short-term in nature. Repurchase agreements are collateralized by securities in the Company's investment portfolio. Total repurchase agreements at December 31, 2019 were comprised of non-insured customer funds totaling $1.8 billion, and securities pledged for these retail agreements totaled $1.9 billion.

The Company pledges certain assets, including loans and investment securities to both the Federal Reserve Bank and the FHLB as security to establish lines of credit and borrow from these entities. Based on the amount and type of collateral pledged, the FHLB establishes a collateral value from which the Company may draw advances against the collateral. Additionally, this collateral is used to enable the FHLB to issue letters of credit in favor of public fund depositors of the Company. The Federal Reserve Bank also establishes a collateral value of assets pledged and permits borrowings from the discount window. The following table reflects the collateral value of assets pledged, borrowings, and letters of credit outstanding, in addition to the estimated future funding capacity available to the Company at December 31, 2019.

	December 31, 2019		
(In thousands)	FHLB	Federal Reserve	Total
Total collateral value pledged	$ 2,668,773	$ 1,280,434	$ 3,949,207
Letters of credit issued	(396,608)	—	(396,608)
Available for future advances	**$ 2,272,165**	**$ 1,280,434**	**$ 3,552,599**

The Company receives outside ratings from both Standard & Poor's and Moody's on both the consolidated company and its subsidiary bank, Commerce Bank. These ratings are as follows:

	Standard & Poor's	Moody's
Commerce Bancshares, Inc.		
Issuer rating	A-	
Preferred stock	BBB-	Baa1
Rating outlook	Stable	Stable
Commerce Bank		
Issuer rating	A	A2
Baseline credit assessment		a1
Short-term rating	A-1	P-1
Rating outlook	Stable	Stable

The Company considers these ratings to be indications of a sound capital base and strong liquidity and believes that these ratings would help ensure the ready marketability of its commercial paper, should the need arise. No commercial paper has been outstanding during the past ten years. The Company has no subordinated or hybrid debt instruments which would affect future borrowing capacity. Because of its lack of significant long-term debt, the Company believes that, through its Capital Markets Group or in other public debt markets, it could generate additional liquidity from sources such as jumbo certificates of deposit, privately-placed corporate notes or other forms of debt.

The cash flows from the operating, investing and financing activities of the Company resulted in a net decrease in cash, cash equivalents and restricted cash of $301.4 million in 2019, as reported in the consolidated statements of cash flows. Operating activities, consisting mainly of net income adjusted for certain non-cash items, provided cash flow of $512.8 million and has historically been a stable source of funds. Investing activities used cash of $730.2 million, mainly from an increase in the loan portfolio, partly offset by activity in the investment securities portfolio. Growth in the loan portfolio used cash of $647.9 million, purchases of long-term resale agreements used cash of $150.0 million, and net purchases of land, buildings and equipment used $40.5 million, while sales and maturities (net of purchases) of investment securities provided cash of $108.3 million. Investing activities are somewhat unique to financial institutions in that, while large sums of cash flow are normally used to fund growth in investment securities, loans, or other bank assets, they are normally dependent on the financing activities described below.

During 2019, financing activities used cash of $84.1 million. The Company paid cash dividends of $122.5 million on common and preferred stock, and federal funds purchases and short-term securities sold under agreements to repurchase used cash in the amount of $105.6 million. Treasury stock purchases used cash of $284.9 million during 2019 and included a cash outflow of $150.0 million related to the Company's accelerated share repurchase agreement. Growth in deposits partially offset these cash outflows by providing cash of $435.3 million. Future short-term liquidity needs for daily operations are not expected to vary significantly, and the Company believes it maintains adequate liquidity to meet these cash flows. The Company's sound equity base, along with its long-term low debt level, common and preferred stock availability, and excellent debt ratings, provide several alternatives for future financing. Future acquisitions may utilize partial funding through one or more of these options.

Cash outflows resulting from the Company's transactions in its common and preferred stock were as follows:

(In millions)	**2019**	2018	2017
Purchases of treasury stock	**$ 134.9**	$ 75.2	$ 17.8
Accelerated share repurchase agreements	**150.0**	—	—
Common cash dividends paid	**113.5**	100.2	91.6
Preferred cash dividends paid	**9.0**	9.0	9.0
Cash used	**$ 407.4**	$ 184.4	$ 118.4

The Parent faces unique liquidity constraints due to legal limitations on its ability to borrow funds from its bank subsidiary. The Parent obtains funding to meet its obligations from two main sources: dividends received from bank and non-bank subsidiaries (within regulatory limitations) and management fees charged to subsidiaries as reimbursement for services provided by the Parent, as presented below:

(In millions)	**2019**	2018	2017
Dividends received from subsidiaries	**$ 500.0**	$ 200.0	$ 160.0
Management fees	**36.8**	37.7	30.4
Total	**$ 536.8**	$ 237.7	$ 190.4

These sources of funds are used mainly to pay cash dividends on outstanding stock, pay general operating expenses, and purchase treasury stock. At December 31, 2019, the Parent's investment securities totaled $4.4 million at fair value, consisting mainly of preferred stock and non-agency mortgage-backed securities. To support its various funding commitments, the Parent maintains a $20.0 million line of credit with its subsidiary bank. There were no borrowings outstanding under the line during 2019 or 2018.

Company senior management is responsible for measuring and monitoring the liquidity profile of the organization with oversight by the Company's Asset/Liability Committee. This is done through a series of controls, including a written Contingency Funding Policy and risk monitoring procedures, which include daily, weekly and monthly reporting. In addition, the Company prepares forecasts to project changes in the balance sheet affecting liquidity and to allow the Company to better plan for forecasted changes.

Capital Management

Under Basel III capital guidelines, at December 31, 2019 and 2018, the Company met all capital adequacy requirements and had regulatory capital ratios in excess of the levels established for well-capitalized institutions, as shown in the following table.

(Dollars in thousands)	**2019**	2018	Minimum Ratios under Capital Adequacy Guidelines	Minimum Ratios for Well-Capitalized Banks*
Risk-adjusted assets	**$ 19,713,813**	$ 19,103,966		
Tier I common risk-based capital	**2,745,538**	2,716,232		
Tier I risk-based capital	**2,890,322**	2,861,016		
Total risk-based capital	**3,052,079**	3,022,023		
Tier I common risk-based capital ratio	**13.93%**	14.22%	7.00%	6.50%
Tier I risk-based capital ratio	**14.66**	14.98	8.50	8.00
Total risk-based capital ratio	**15.48**	15.82	10.50	10.00
Tier I leverage ratio	**11.38**	11.52	4.00	5.00
Tangible common equity to tangible assets	**10.99**	10.45		
Dividend payout ratio	**27.52**	23.61		

**under Prompt Corrective Action requirements*

The Company maintains a treasury stock buyback program under authorizations by its Board of Directors and periodically purchases stock in the open market. During 2018, the Company purchased 1.2 million shares through market purchases. During 2019, the Company purchased 4.7 million shares, including 2.4 million shares purchased under an accelerated share repurchase (ASR) agreement. The ASR agreement is further discussed in Note 14 to the consolidated financial statements. At December 31, 2019, 4.4 million shares remained available for purchase under the current Board authorization.

The Company's common stock dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain adequate capital levels and alternative investment options. Per share cash dividends paid by the Company increased 16.1% in 2019 compared with 2018, and the Company increased its first quarter 2020 cash dividend 8.9%, making 2020 the Company's 52nd consecutive year of regular cash dividend increases. The Company also distributed its 26th consecutive annual 5% stock dividend in December 2019.

Commitments, Contractual Obligations, and Off-Balance Sheet Arrangements

In the normal course of business, various commitments and contingent liabilities arise that are not required to be recorded on the balance sheet. The most significant of these are loan commitments totaling $11.2 billion (including approximately $5.1 billion in unused, approved credit card lines) and the contractual amount of standby letters of credit totaling $377.3 million at December 31, 2019. As many commitments expire unused or only partially used, these totals do not necessarily reflect future cash requirements. Management does not anticipate any material losses arising from commitments or contingent liabilities and believes there are no material commitments to extend credit that represent risks of an unusual nature.

A table summarizing contractual cash obligations of the Company at December 31, 2019 and the expected timing of these payments follows:

	Payments Due by Period				
(In thousands)	In One Year or Less	After One Year Through Three Years	After Three Years Through Five Years	After Five Years	Total
Operating lease obligations*	6,213	10,605	7,690	16,113	40,621
Purchase obligations	231,336	349,100	103,185	42,013	725,634
Certificates of Deposit**	1,727,042	256,692	24,225	53	2,008,012
Total	**$ 1,964,591**	**$ 616,397**	**$ 135,100**	**$ 58,179**	**$ 2,774,267**

** Includes operating leases signed but not yet commenced.*

*** Includes principal payments only.*

The Company funds a defined benefit pension plan for a portion of its employees. Under the funding policy for the plan, contributions are made as necessary to provide for current service and for any unfunded accrued actuarial liabilities over a reasonable period. No contributions to the defined benefit plan were made in 2019 or 2018, and the Company is not required nor does it expect to make a contribution in 2020.

The Company has investments in low-income housing partnerships generally within the areas it serves. These partnerships supply funds for the construction and operation of apartment complexes that provide affordable housing to that segment of the population with lower family income. If these developments successfully attract a specified percentage of residents falling in that lower income range, federal (and sometimes state) income tax credits are made available to the partners. The tax credits are normally recognized over ten years, and they play an important part in the anticipated yield from these investments. In order to continue receiving the tax credits each year over the life of the partnership, the low-income residency targets must be maintained. Under the terms of the partnership agreements, the Company has a commitment to fund a specified amount that will be due in installments over the life of the agreements, which ranges from 8 to 17 years. At December 31, 2019, the investments totaled $37.3 million and are recorded as other assets in the Company's consolidated balance sheet. Unfunded commitments, which are recorded as liabilities, amounted to $19.4 million at December 31, 2019.

The Company regularly purchases various state tax credits arising from third-party property redevelopment. These credits are either resold to third parties or retained for use by the Company. During 2019, purchases and sales of tax credits amounted to $90.6 million and $84.9 million, respectively. Fees from the sales of tax credits were $3.5 million, $4.9 million and $3.3 million in 2019, 2018 and 2017, respectively. At December 31, 2019, the Company had outstanding purchase commitments totaling $160.9 million that it expects to fund in 2020. These commitments, along with the commitments for the next five years, are included in the table above.

Interest Rate Sensitivity

The Company's Asset/Liability Management Committee (ALCO) measures and manages the Company's interest rate risk on a monthly basis to identify trends and establish strategies to maintain stability in net interest income throughout various rate environments. Analytical modeling techniques provide management insight into the Company's exposure to changing rates. These techniques include net interest income simulations and market value analysis. Management has set guidelines specifying acceptable limits within which net interest income and market value may change under various rate change scenarios. These measurement tools indicate that the Company is currently within acceptable risk guidelines as set by management.

The Company's main interest rate measurement tool, income simulation, projects net interest income under various rate change scenarios in order to quantify the magnitude and timing of potential rate-related changes. Income simulations are able to capture option risks within the balance sheet where expected cash flows may be altered under various rate environments. Modeled rate movements include "shocks, ramps and twists." Shocks are intended to capture interest rate risk under extreme conditions by immediately shifting rates up and down, while ramps measure the impact of gradual changes and twists measure yield curve risk. The size of the balance sheet is assumed to remain constant so that results are not influenced by growth predictions.

The Company also employs a sophisticated simulation technique known as a stochastic income simulation. This technique allows management to see a range of results from hundreds of income simulations. The stochastic simulation creates a vector of potential rate paths around the market's best guess (forward rates) concerning the future path of interest rates and allows rates to randomly follow paths throughout the vector. This allows for the modeling of non-biased rate forecasts around the market consensus. Results give management insight into a likely range of rate-related risk as well as worst and best-case rate scenarios.

Additionally, the Company uses market value analyses to help identify longer-term risks that may reside on the balance sheet. This is considered a secondary risk measurement tool by management. The Company measures the market value of equity as the net present value of all asset and liability cash flows discounted along the current swap curve plus appropriate market risk spreads. It is the change in the market value of equity under different rate environments, or effective duration, that gives insight into the magnitude of risk to future earnings due to rate changes. Market value analyses also help management understand the price sensitivity of non-marketable bank products under different rate environments.

The tables below show the effects of gradual shifts in interest rates over a twelve month period on the Company's net interest income versus the Company's net interest income in a flat rate scenario. Simulation A presents two rising rate scenarios and a falling rate scenario, and in each scenario, rates are assumed to change evenly over 12 months. In these scenarios, the balance sheet remains flat with the exception of deposit balances, which may fluctuate based on changes in rates. For instance, the Company may experience deposit disintermediation if the spread between market rates and bank deposit rates widens as rates rise.

The sensitivity of deposit balances to changes in rates is particularly difficult to estimate in exceptionally low rate environments. Since the future effects of changes in rates on deposit balances cannot be known with certainty, the Company conservatively models alternate scenarios with greater deposit attrition as rates rise. Simulation B illustrates results from these higher attrition scenarios to provide added perspective on potential effects of higher rates.

The Company utilizes these simulations both for monitoring interest rate risk and for liquidity planning purposes. While the future effects of rising rates on deposit balances cannot be known, the Company maintains a practice of running multiple rate scenarios to better understand interest rate risk and its effect on the Company's performance.

Simulation A	**December 31, 2019**			September 30, 2019		
(Dollars in millions)	**$ Change in Net Interest Income**	**% Change in Net Interest Income**	**Assumed Deposit Attrition**	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition
200 basis points rising	**$ 7.8**	**.95%**	**$ (281.9)**	$ 10.7	1.35%	$ (262.4)
100 basis points rising	**1.1**	**.14**	**(146.5)**	7.3	.92	(138.2)
100 basis points falling	**(3.0)**	**(0.36)**	**154.8**	1.1	0.14	148.6

Simulation B	**December 31, 2019**			September 30, 2019		
(Dollars in millions)	**$ Change in Net Interest Income**	**% Change in Net Interest Income**	**Assumed Deposit Attrition**	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition
200 basis points rising	**(6.0)**	**(.74)**	**(795.2)**	(.1)	(.02)	(662.2)
100 basis points rising	**(10.5)**	**(1.29)**	**(664.8)**	(2.0)	(.25)	(542.4)

Under Simulation A, in the two rising rate scenarios, higher variable rate loan volumes and a slight decline in deposit sensitivity contributed to increases in income if rates rise relative to the previous period. However, this was more than offset by changes in rates earned on the Company's long-term structured repurchase agreements. In the fourth quarter of 2019, lower market rates increased structured repurchase agreement rates and income in the Base scenario which are expected to decline again if rates rise, reducing the benefit of higher rates.

In Simulation B, the assumed higher levels of deposit attrition were modeled to be replaced by wholesale borrowed funds with higher costs than in Simulation A and resulted in a reduction in net interest income under both rising rate scenarios. In the 100 basis point falling scenario shown in Simulation A, it is assumed that deposits would increase $154.8 million along with an increase in earning assets, but rates on loans would fall faster than deposit rates. Additionally, this scenario results in lower net interest income than in the base calculation. The 100 basis point falling scenario is presented only in Simulation A as the results would be the same under Simulation B.

Projecting deposit activity in a historically low interest rate environment is difficult, and the Company cannot predict how deposits will react to shifting rates. The comparison provided above provides insight into potential effects of changes in rates and deposit levels on net interest income. The Company believes that its approach to interest rate risk has appropriately considered its susceptibility to both rising and falling rates and has adopted strategies which minimize the impact of interest rate risk.

Derivative Financial Instruments

The Company maintains an overall interest rate risk management strategy that permits the use of derivative instruments to modify exposure to interest rate risk. Such instruments include interest rate swaps, interest rate floors, interest rate caps, credit risk participation agreements, foreign exchange contracts, mortgage loan commitments, forward sale contracts, and forward to-be-announced (TBA) contracts. The Company's interest rate risk management strategy includes the ability to modify the re-pricing characteristics of certain assets and liabilities so that changes in interest rates do not adversely affect the net interest margin and cash flows. Interest rate floors with a total notional amount of $1.5 billion have been entered into since the beginning of 2018 as part of this strategy to manage interest rate risk. All of these derivative instruments utilized by the Company are further discussed in Note 19 on Derivative Instruments.

In all of these contracts, the Company is exposed to credit risk in the event of nonperformance by counterparties, who may be bank customers or other financial institutions. The Company controls the credit risk of its financial contracts through credit approvals, limits and monitoring procedures. Because the Company generally enters into transactions only with high quality counterparties, there have been no losses associated with counterparty nonperformance on derivative financial instruments.

The following table summarizes the notional amounts and estimated fair values of the Company's derivative instruments at December 31, 2019 and 2018. Notional amount, along with the other terms of the derivative, is used to determine the amounts to be exchanged between the counterparties. Because the notional amount does not represent amounts exchanged by the parties, it is not a measure of loss exposure related to the use of derivatives nor of exposure to liquidity risk.

	2019			2018		
(In thousands)	**Notional Amount**	**Positive Fair Value**	**Negative Fair Value**	Notional Amount	Positive Fair Value	Negative Fair Value
Interest rate swaps	**$ 2,606,181**	**$ 37,774**	**$ (9,916)**	$ 2,006,280	$ 11,537	$ (13,110)
Interest rate floors	**1,500,000**	**67,192**	**—**	1,000,000	29,031	—
Interest rate caps	**59,316**	**4**	**(4)**	62,163	24	(24)
Credit risk participation agreements	**316,225**	**140**	**(230)**	143,460	47	(93)
Foreign exchange contracts	**10,936**	**97**	**(32)**	6,206	20	(8)
Mortgage loan commitments	**13,755**	**459**	**—**	14,544	536	—
Mortgage loan forward sale contracts	**1,943**	**6**	**(2)**	5,768	15	(8)
Forward TBA contracts	**17,500**	**2**	**(35)**	16,500	—	(178)
Total at December 31	**$ 4,525,856**	**$ 105,674**	**$ (10,219)**	$ 3,254,921	$ 41,210	$ (13,421)

Operating Segments

The Company segregates financial information for use in assessing its performance and allocating resources among three operating segments. The results are determined based on the Company's management accounting process, which assigns balance sheet and income statement items to each responsible segment. These segments are defined by customer base and product type. The management process measures the performance of the operating segments based on the management structure of the Company and is not necessarily comparable with similar information for any other financial institution. Each segment is managed by executives who, in conjunction with the Chief Executive Officer, make strategic business decisions regarding that segment. The three reportable operating segments are Consumer, Commercial, and Wealth. Additional information is presented in Note 13 on Segments in the consolidated financial statements.

The Company uses a funds transfer pricing method to value funds used (e.g., loans, fixed assets, cash, etc.) and funds provided (deposits, borrowings, and equity) by the business segments and their components. This process assigns a specific value to each new source or use of funds with a maturity, based on current swap rates, thus determining an interest spread at the time of the transaction. Non-maturity assets and liabilities are valued using weighted average pools. The funds transfer pricing process attempts to remove interest rate risk from valuation, allowing management to compare profitability under various rate environments. The Company also assigns loan charge-offs and recoveries (labeled in the table below as "provision for loan losses") directly to each operating segment instead of allocating an estimated loan loss provision. The operating segments also include a number of allocations of income and expense from various support and overhead centers within the Company.

The table below is a summary of segment pre-tax income results for the past three years.

(Dollars in thousands)	Consumer	Commercial	Wealth	Segment Totals	Other/ Elimination	Consolidated Totals
Year ended December 31, 2019:						
Net interest income	**$ 315,782**	**$ 342,736**	**$ 48,058**	**$ 706,576**	**$ 114,717**	**$ 821,293**
Provision for loan losses	**(44,987)**	**(4,204)**	**(174)**	**(49,365)**	**(1,073)**	**(50,438)**
Non-interest income	**135,257**	**203,952**	**183,589**	**522,798**	**1,905**	**524,703**
Investment securities gains, net	**—**	**—**	**—**	**—**	**3,626**	**3,626**
Non-interest expense	**(297,581)**	**(308,686)**	**(124,123)**	**(730,390)**	**(37,008)**	**(767,398)**
Income before income taxes	**$ 108,471**	**$ 233,798**	**$ 107,350**	**$ 449,619**	**$ 82,167**	**$ 531,786**
Year ended December 31, 2018:						
Net interest income	$ 294,798	$ 344,972	$ 46,946	$ 686,716	$ 137,109	$ 823,825
Provision for loan losses	(40,571)	(1,134)	32	(41,673)	(1,021)	(42,694)
Non-interest income	126,253	202,527	173,026	501,806	(465)	501,341
Investment securities losses, net	—	—	—	—	(488)	(488)
Non-interest expense	(286,181)	(297,847)	(123,568)	(707,596)	(30,225)	(737,821)
Income before income taxes	$ 94,299	$ 248,518	$ 96,436	$ 439,253	$ 104,910	$ 544,163
2019 vs 2018						
Increase in income before income taxes:						
Amount	**$ 14,172**	**$ (14,720)**	**$ 10,914**	**$ 10,366**	**$ (22,743)**	**$ (12,377)**
Percent	**15.0%**	**(5.9)%**	**11.3%**	**2.4%**	**(21.7)%**	**(2.3)%**
Year ended December 31, 2017:						
Net interest income	$ 276,891	$ 329,087	$ 47,264	$ 653,242	$ 80,437	$ 733,679
Provision for loan losses	(40,619)	205	(41)	(40,455)	(4,789)	(45,244)
Non-interest income	121,362	184,577	158,175	464,114	(2,851)	461,263
Investment securities gains, net	—	—	—	—	25,051	25,051
Non-interest expense	(274,225)	(281,845)	(120,461)	(676,531)	(67,812)	(744,343)
Income before income taxes	$ 83,409	$ 232,024	$ 84,937	$ 400,370	$ 30,036	$ 430,406
2018 vs 2017						
Increase in income before income taxes:						
Amount	$ 10,890	$ 16,494	$ 11,499	$ 38,883	$ 74,874	$ 113,757
Percent	13.1 %	7.1 %	13.5 %	9.7 %	N.M.	26.4 %

Consumer

The Consumer segment includes consumer deposits, consumer finance, and consumer debit and credit cards. During 2019, income before income taxes for the Consumer segment increased $14.2 million, or 15.0%, compared to 2018. This increase was due to growth of $21.0 million, or 7.1%, in net interest income and an increase in non-interest income of $9.0 million, or 7.1%. Net interest income increased due to a $27.8 million increase in net allocated funding credits assigned to the Consumer segment's loan and deposit portfolios and growth of $3.4 million in loan interest income, partly offset by an increase of $10.1 million in deposit interest expense. Non-interest income increased mainly due to growth in mortgage banking revenue and net credit card fees, (mainly higher interchange fees and lower rewards expense), partly offset by a decline in deposit fees (mainly overdraft and deposit account service fees). These increases to income were partly offset by growth of $11.4 million, or 4.0%, in non-interest expense. Non-interest expense increased over the prior year due to higher salaries expense, data processing and software expense and allocated servicing and support costs (mainly teller services, online banking, installment loan and management fees). The provision for loan losses totaled $45.0 million, a $4.4 million increase over the prior year, which was mainly due to higher net charge-offs on consumer credit card loans. Total average loans in this segment decreased $107.1 million, or 4.6%, in 2019 compared to 2018 mainly due to a decline in auto and other consumer loans. Average deposits increased $25.8 million over the prior year, resulting from growth in interest checking, savings, and certificate of deposit balances, partly offset by a decline in money market deposit accounts.

During 2018, income before income taxes for the Consumer segment increased $10.9 million, or 13.1%, compared to 2017. This increase was mainly due to growth of $17.9 million, or 6.5%, in net interest income and an increase in non-interest income of $4.9 million, or 4.0%. Net interest income increased due to a $14.2 million increase in net allocated funding credits and growth of $5.3 million in loan interest income, partly offset by an increase of $1.6 million in deposit interest expense. Non-interest income increased mainly due to growth in net debit card fees, (mainly lower network expense and higher interchange fees), deposit fees (mainly deposit account service fees and overdraft and return item fees) and mortgage banking revenue, partly offset by higher credit card rewards expense. These increases to income were partly offset by growth of $12.0 million, or 4.4%, in non-interest expense. Non-interest expense increased over 2017 due to an increase in full-time salaries expense and higher allocated servicing and support costs, mainly marketing, information technology and management fees. The provision for loan losses totaled $40.6 million, a slight decrease from 2017, which was mainly due to lower net charge-offs on home equity loans, partly offset by higher consumer credit card loan net charge-offs. Total average loans in this segment decreased $45.1 million, or 1.9%, in 2018 compared to 2017 mainly due to a decline in auto and other personal loans. Average deposits increased $19.9 million over 2017, resulting from growth in interest checking and savings accounts, partly offset by declines in demand, money market deposit accounts, and certificate of deposit balances.

Commercial

The Commercial segment provides corporate lending (including the Small Business Banking product line within the branch network), leasing, international services, and business, government deposit, and related commercial cash management services, as well as merchant and commercial bank card products. The segment includes the Capital Markets Group, which sells fixed-income securities to correspondent banks, corporations, public institutions, municipalities, and individuals and also provides securities safekeeping and bond accounting services. Pre-tax income for 2019 decreased $14.7 million, or 5.9%, compared to 2018, mainly due to a decrease in net interest income and increases in non-interest expense and the provision for loan losses. Net interest income decreased $2.2 million, or .6%, due to a decline of $13.2 million in net allocated funding credits and higher interest expense of $18.4 million on deposits and customer repurchase agreements, partly offset by an increase of $29.3 million in loan interest income. The provision for loan losses increased $3.1 million over last year, due to higher lease loan net charge-offs (related to a charge-off on a single lease loan), partly offset by lower business loan net charge-offs. Non-interest income increased $1.4 million, or .7%, over 2018 due to higher deposit account fees (mainly corporate cash management), cash sweep commissions, and gains on sales of leased assets to customers upon lease termination. These increases were partly offset by lower net corporate card fees (driven by lower interchange income and higher network and rewards expense) and lower tax credit sales fees. Non-interest expense increased $10.8 million, or 3.6%, during 2019, mainly due to increases in salaries expense and allocated support costs (mainly information technology, marketing and commercial sales and product support). These increases were partly offset by lower deposit insurance expense and allocated servicing costs (mainly teller services and deposit operations). Average segment loans increased $310.9 million, or 3.5%, compared to 2018, with growth occurring in business and business real estate loans. Average deposits decreased $180.9 million, or 2.3%, due to declines in business demand and money market deposit accounts, partly offset by growth in certificate of deposit balances.

Pre-tax income for 2018 increased $16.5 million, or 7.1%, compared to 2017, mainly due to increases in net interest income and non-interest income, partly offset by higher non-interest expense. Net interest income increased $15.9 million, or 4.8%, due to growth of $70.6 million in loan interest income, partly offset by a decline of $32.3 million in net allocated funding credits and higher interest expense of $22.5 million on deposits and customer repurchase agreements. The provision for loan losses increased $1.3 million over 2017, due to higher net charge-offs on business loans and lower recoveries on construction loans, partly offset by lower commercial card loan net charge-offs. Non-interest income increased $18.0 million, or 9.7%, over 2017 due to higher net corporate card fees (driven by higher fees), swap fees, tax credit sales fees and deposit account fees (mainly corporate cash management). These increases were partly offset by lower gains on sales of leased assets to customers upon lease termination. Non-interest expense increased $16.0 million, or 5.7%, during 2018, mainly due to increases in salaries expense and allocated support and service costs (mainly information technology and commercial sales and product support fees). Average segment loans increased $304.7 million, or 3.5%, compared to 2017, with growth occurring in commercial and industrial, construction, and healthcare loans. Average deposits decreased $271.8 million, or 3.3%, due to declines in business demand deposits, money market deposit accounts, and certificates of deposit, partly offset by growth in interest checking deposits.

Wealth

The Wealth segment provides traditional trust and estate planning, advisory and discretionary investment management services, brokerage services, and includes Private Banking accounts. At December 31, 2019, the Trust group managed investments with a market value of $34.4 billion and administered an additional $22.3 billion in non-managed assets. It also provides investment management services to The Commerce Funds, a series of mutual funds with $2.9 billion in total assets at December 31, 2019. In 2019, pre-tax income for the Wealth segment was $107.4 million, compared to $96.4 million in 2018, an increase of $10.9 million, or 11.3%. Net interest income increased $1.1 million, or 2.4%, due to a $4.3 million increase in loan interest income and a $1.7 million increase in net allocated funding credits, partly offset by higher interest expense of $4.9 million. Non-interest income increased $10.6 million, or 6.1%, over the prior year largely due to higher private client fund trust fees and cash sweep commissions. Non-interest expense increased $555 thousand, or .4%, resulting from higher salaries and benefits expense and higher allocated costs for information technology. The provision for loan losses increased $206 thousand, mainly due to higher revolving home equity loan net charge-offs. Average assets increased $45.0 million, or 3.6%, during 2019 mainly due to growth in personal real estate and consumer loan balances. Average deposits decreased $39.2 million, or 2.1%, due to declines in interest checking account balances, partially offset by higher balances of demand deposits. During the fourth quarter of 2019, the Company sold its corporate trust business, which was included in the Wealth segment.

In 2018, pre-tax income for the Wealth segment was $96.4 million, compared to $84.9 million in 2017, an increase of $11.5 million, or 13.5%. Net interest income decreased $318 thousand, or .7%, due to a $5.3 million decrease in net allocated funding credits, partly offset by a $5.5 million increase in loan interest income. Non-interest income increased $14.9 million, or 9.4%, over 2017 largely due to higher private client and institutional trust fees, brokerage fees and cash sweep commissions. These increases were partly offset by write downs on software costs. Non-interest expense increased $3.1 million, or 2.6%, resulting from higher salary and benefit costs, data processing expense and allocated support and corporate management fee costs, partly offset by lower trust losses. The provision for loan losses decreased $73 thousand, mainly due to personal real estate loan net recoveries. Average assets increased $25.2 million, or 2.1%, during 2018 mainly due to higher personal real estate and consumer loans. Average deposits decreased $219.0 million, or 10.5%, due to declines in money market deposit accounts and long-term certificates of deposit over $100,000.

The segment activity, as shown above, includes both direct and allocated items. Amounts in the “Other/Elimination” column include activity not related to the segments, such as certain administrative functions, the investment securities portfolio, and the effect of certain expense allocations to the segments. Also included in this category is the difference between the Company’s provision for loan losses and net loan charge-offs, which are generally assigned directly to the segments. In 2019, the pre-tax income in this category was $82.2 million, compared to $104.9 million in 2018. This decrease was due to lower unallocated net interest income of $22.4 million and higher unallocated non-interest expense of $6.8 million. Unallocated securities gains were $3.6 million in 2019, compared to securities losses of $488 thousand in 2018. Also, the unallocated loan loss provision increased $52 thousand, as the provision was $1.1 million in excess of charge-offs in 2019, while the provision was $1.0 million in excess of charge offs in 2018. Additionally in 2019, a $11.5 million gain on the sale of Company's corporate trust business, mentioned above, was also recorded in the Other segment.

Impact of Recently Issued Accounting Standards

Leases In February 2016, the FASB issued ASU 2016-02, "Leases", in order to increase transparency and comparability by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The ASU primarily affects lessee accounting, which requires the lessee to recognize a right-of-use (ROU) asset and a liability to make lease payments for those leases classified as operating leases under previous GAAP. The ASU provides guidance as to the definition of a lease, identification of lease components, and sale and leaseback transactions. The FASB issued elections and expedients within the original ASU and additional amendments, clarifying the lease guidance for certain implementation issues. The Company has adopted the package of expedients, the lease component expedient as well as the disclosure expedient. Additionally, for leases with a term of 12 months or less, an election was made not to recognize lease assets and lease liabilities. The Company adopted the new accounting standard as of January 1, 2019, and a lease liability of $28.1 million and a ROU asset of $27.5 million were recognized. The impact of the adoption and required disclosures are discussed in Note 6 to the consolidated financial statements.

Premium Amortization The FASB issued ASU 2017-08, "Premium Amortization on Purchased Callable Debt Securities", in March 2017. Under former guidance, many entities amortize the premium on purchased callable debt securities over the contractual life of the instrument. As a result, upon the exercise of a call on a callable debt security held at a premium, the unamortized premium is recorded as a loss in earnings. The amendments in this ASU shorten the amortization period for certain callable debt securities held at a premium to the earliest call date, and more closely align the amortization period to expectations incorporated in market pricing of the instrument. The amendments were effective January 1, 2019 and did not have a significant effect on the Company's consolidated financial statements.

Financial Instruments ASU 2016-13, "Measurement of Credit Losses on Financial Instruments", known as the current expected credit loss (CECL) model, was issued in June 2016, and has been followed by additional clarifying guidance on specified implementation issues. This new standard is effective for fiscal years beginning after December 15, 2019 and was adopted by the Company on January 1, 2020 using the modified retrospective method.

This new measurement approach requires the calculation of expected lifetime credit losses and is applied to financial assets measured at amortized cost, including loans and held-to-maturity securities, as well as certain off-balance sheet credit exposures such as loan commitments. The standard also changes the impairment model of available for sale debt securities.

The allowance for loan losses under the previously required incurred loss model that is reported on the Company's consolidated balance sheets is different under the requirements of the CECL model. Upon adoption in the first quarter of 2020, a cumulative-effect adjustment for the change in the allowance for credit losses will be recognized in retained earnings. The cumulative-effect adjustment to retained earnings, net of taxes, will be comprised of the impact to the allowance for credit losses on outstanding loans and leases and the impact to the liability for off-balance sheet commitments. There is no implementation impact on held-to-maturity debt securities as the Company does not hold any debt securities within the scope of CECL.

The new accounting standard does not require the use of a specific loss estimation method for purposes of determining the allowance for credit losses. The Company selected a methodology that uses historical net charge-off rates, adjusted by the impacts of a reasonable and supportable forecast and the impacts of other qualitative factors to determine the expected credit losses. Key assumptions include the application of historical loss rates, prepayment speeds, forecast results of a reasonable and supportable period, the period to revert to historical loss rates, and qualitative factors. The forecast is determined using projections of certain macroeconomic variables, such as, unemployment rate, prime rate, BBB corporate yield, and housing price index. The model design and methodology requires management judgment.

The allowance for credit losses on the commercial portfolio is expected to decrease due to the relatively short contractual lives of the commercial loan portfolios coupled with an economic forecast predicting stable macroeconomic factors similar to the current environment. The allowance for credit losses on the personal banking loan portfolio is expected to increase due to the relatively longer contractual lives of certain portfolios, primarily those collateralized with personal real estate. Because the commercial loan portfolio represents 63% of total loans at December 31, 2019, the change in its allowance for credit losses will have a more significant impact on the total allowance for credit losses, resulting in a potential net reduction in the allowance for credit losses. Based on preliminary results, the Company expects its allowance for loan losses to total loans ratio to decline from 1.09% at December 31, 2019, to within a range of approximately 0.85% to 1.05% upon adoption. Offsetting the overall reduction in the allowance for credit losses for outstanding loans and leases is an expected increase in the liability for off-balance sheet loan commitments. The liability will increase as the loss estimation is required to expand over the contractual commitment period.

Preliminary results indicate the adoption adjustment will result in an immaterial impact to retained earnings. The Company is currently performing quality reviews on preliminary results and is planning to finalize the impact in the 1st quarter of 2020. The adoption adjustment is subject to the completion of the Company’s governance and quality review processes that are in process.

Moving beyond the impact of the adoption of CECL, volatility in the allowance for credit losses, and therefore earnings, will likely be experienced due to changes in the relevant forward-looking information including forecasts of macroeconomic conditions utilized in the CECL model and other key assumptions that are applied to the remaining life of the loan and lease portfolios.

Intangible Assets The FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment", in January 2017. Under current guidance, a goodwill impairment loss is measured by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill by following procedures that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Under the new amendments, the goodwill impairment test compares the fair value of a reporting unit with its carrying amount and an impairment charge is measured as the amount by which the carrying amount exceeds the reporting unit's fair value. The amendments were effective for impairment tests beginning January 1, 2020 and did not have a significant effect on the Company's consolidated financial statements.

Financial Instruments The FASB issued ASU 2018-13, "Changes to the Disclosure Requirements of Fair Value Measurement", in August 2018. The amendments in the ASU eliminate or modify certain disclosure requirements for fair value measurements in Topic 820, *Fair Value Measurement*. In addition, the amendments in the ASU also require the addition of new disclosure requirements on fair value measurement, including the disclosure of changes in unrealized gains and losses for the period included in AOCI for recurring Level 3 fair value measurements and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. The guidance was effective January 1, 2020 and did not have a significant effect on the Company's consolidated financial statements.

Retirement Benefits The FASB issued ASU 2018-14, "Compensation - Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20)", in August 2018. The amendments in the ASU eliminate disclosures that are no longer considered cost beneficial and clarify specific requirements of disclosures. In addition, the amendments in the ASU also add new disclosures, including the explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. The amendments were effective January 1, 2020 and did not have a significant effect on the Company's consolidated financial statements.

Intangible Assets The FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract", in August 2018. Under current guidance the accounting for implementation costs of a hosting arrangement that is a service contract is not specifically addressed. Under the new amendments, the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract are aligned with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software or hosting arrangements that include internal-use software license. The guidance was effective January 1, 2020 and did not have a significant effect on the Company's consolidated financial statements.

Income Taxes The FASB issued ASU 2019-12, "Simplifying the Accounting for Income Taxes", in December 2019. The amendments in the ASU eliminate certain exceptions under current guidance for investments, intraperiod allocations, and the methodology for calculating interim income tax. In addition, the amendments also add new guidance to simplify accounting for income taxes. The amendments are effective January 1, 2021, but early adoption is permitted. The Company is still assessing the impact on the Company's consolidated financial statements.

Corporate Governance

The Company has adopted a number of corporate governance measures. These include corporate governance guidelines, a code of ethics that applies to its senior financial officers and the charters for its audit and risk committee, its committee on compensation and human resources, and its committee on governance/directors. This information is available on the Company’s Web site www.commercebank.com under Social Responsibility.

SUMMARY OF QUARTERLY STATEMENTS OF INCOME

Year ended December 31, 2019	For the Quarter Ended			
(In thousands, except per share data)	12/31/2019	9/30/2019	6/30/2019	3/31/2019
Interest income	$ 226,665	$ 231,743	$ 238,412	$ 227,865
Interest expense	(24,006)	(28,231)	(26,778)	(24,377)
Net interest income	202,659	203,512	211,634	203,488
Non-interest income	143,461	132,743	127,259	121,240
Investment securities gains (losses), net	(248)	4,909	(110)	(925)
Salaries and employee benefits	(126,901)	(123,836)	(120,062)	(122,128)
Other expense	(68,273)	(67,184)	(69,717)	(69,297)
Provision for loan losses	(15,206)	(10,963)	(11,806)	(12,463)
Income before income taxes	135,492	139,181	137,198	119,915
Income taxes	(28,214)	(29,101)	(28,899)	(22,860)
Non-controlling interest	(398)	(838)	(328)	83
Net income attributable to Commerce Bancshares, Inc.	$ 106,880	$ 109,242	$ 107,971	$ 97,138
Net income per common share — basic*	$ .94	$ .93	$ .91	$ .81
Net income per common share — diluted*	$ .93	$ .93	$ .91	$ .81
Weighted average shares — basic*	111,730	112,982	114,961	115,511
Weighted average shares — diluted*	112,011	113,249	115,240	115,816

Year ended December 31, 2018	For the Quarter Ended			
(In thousands, except per share data)	12/31/2018	9/30/2018	6/30/2018	3/31/2018
Interest income	$ 232,832	$ 224,751	$ 225,623	$ 205,995
Interest expense	(20,612)	(16,997)	(14,664)	(13,103)
Net interest income	212,220	207,754	210,959	192,892
Non-interest income	133,087	123,714	124,850	119,690
Investment securities gains (losses), net	(7,129)	4,306	(3,075)	5,410
Salaries and employee benefits	(120,517)	(116,194)	(115,589)	(115,894)
Other expense	(68,108)	(68,865)	(66,271)	(66,383)
Provision for loan losses	(12,256)	(9,999)	(10,043)	(10,396)
Income before income taxes	137,297	140,716	140,831	125,319
Income taxes	(26,537)	(26,647)	(29,507)	(23,258)
Non-controlling interest	(1,108)	(1,493)	(994)	(1,077)
Net income attributable to Commerce Bancshares, Inc.	$ 109,652	$ 112,576	$ 110,330	$ 100,984
Net income per common share — basic*	$ .92	$ .93	$ .92	$ .84
Net income per common share — diluted*	$ .91	$ .94	$ .91	$ .84
Weighted average shares — basic*	116,000	116,434	116,519	116,462
Weighted average shares — diluted*	116,309	116,823	116,897	116,827

Year ended December 31, 2017	For the Quarter Ended			
(In thousands, except per share data)	12/31/2017	9/30/2017	6/30/2017	3/31/2017
Interest income	$ 201,572	$ 194,244	$ 193,594	$ 187,997
Interest expense	(11,564)	(11,653)	(10,787)	(9,724)
Net interest income	190,008	182,591	182,807	178,273
Non-interest income	119,383	116,887	115,380	109,613
Investment securities gains (losses), net	27,209	(3,037)	1,651	(772)
Salaries and employee benefits	(115,741)	(111,382)	(108,829)	(112,369)
Other expense	(93,118)	(67,835)	(68,061)	(67,008)
Provision for loan losses	(12,654)	(10,704)	(10,758)	(11,128)
Income before income taxes	115,087	106,520	112,190	96,609
Income taxes	(20,104)	(32,294)	(33,201)	(24,907)
Non-controlling interest	(628)	338	(29)	(198)
Net income attributable to Commerce Bancshares, Inc.	$ 94,355	$ 74,564	$ 78,960	$ 71,504
Net income per common share — basic*	$ .78	$ .61	$ .65	$ .59
Net income per common share — diluted*	$ .78	$ .61	$ .65	$ .58
Weighted average shares — basic*	116,445	116,455	116,405	116,191
Weighted average shares — diluted*	116,839	116,844	116,803	116,650

** Restated for the 5% stock dividend distributed in 2019.*

AVERAGE BALANCE SHEETS — AVERAGE RATES AND YIELDS

	Years Ended December 31								
	2019			2018			2017		
(Dollars in thousands)	Average Balance	Interest Income/ Expense	Average Rates Earned/Paid	Average Balance	Interest Income/ Expense	Average Rates Earned/Paid	Average Balance	Interest Income/ Expense	Average Rates Earned/Paid
ASSETS									
Loans:[A]									
Business[B]	**$ 5,214,158**	**$ 202,308**	**3.88 %**	$ 4,963,029	$ 184,837	3.72%	$ 4,832,045	$ 154,681	3.20 %
Real estate – construction and land	**909,367**	**49,702**	**5.47**	967,320	49,440	5.11	881,879	37,315	4.23
Real estate – business	**2,859,008**	**127,635**	**4.46**	2,737,820	117,516	4.29	2,694,620	102,009	3.79
Real estate – personal	**2,178,716**	**85,604**	**3.93**	2,093,802	80,365	3.84	2,019,674	75,267	3.73
Consumer	**1,930,883**	**92,414**	**4.79**	2,010,826	89,074	4.43	2,036,393	81,065	3.98
Revolving home equity	**358,474**	**18,204**	**5.08**	379,715	17,513	4.61	398,611	15,516	3.89
Consumer credit card	**764,828**	**93,754**	**12.26**	768,789	92,269	12.00	743,885	88,329	11.87
Overdrafts	**9,203**	**—**	**—**	4,778	—	—	4,592	—	—
Total loans	**14,224,637**	**669,621**	**4.71**	13,926,079	631,014	4.53	13,611,699	554,182	4.07
Loans held for sale	**18,577**	**1,209**	**6.51**	19,493	1,298	6.66	17,452	1,000	5.73
Investment securities:									
U.S. government & federal agency obligations	**851,124**	**20,968**	**2.46**	921,759	21,720	2.36	914,961	19,697	2.15
Government-sponsored enterprise obligations	**191,406**	**4,557**	**2.38**	308,520	6,098	1.98	452,422	7,321	1.62
State & municipal obligations[B]	**1,220,958**	**38,362**	**3.14**	1,410,700	42,867	3.04	1,720,723	62,073	3.61
Mortgage-backed securities	**4,594,576**	**123,806**	**2.69**	4,203,625	111,686	2.66	3,784,602	89,623	2.37
Asset-backed securities	**1,372,574**	**37,478**	**2.73**	1,455,690	34,223	2.35	2,083,611	36,757	1.76
Other debt securities	**333,105**	**9,017**	**2.71**	340,458	8,912	2.62	330,365	8,410	2.55
Trading debt securities[B]	**29,450**	**886**	**3.01**	24,731	759	3.07	21,929	583	2.66
Equity securities[B]	**4,547**	**1,792**	**39.41**	26,459	11,816	44.66	60,772	2,283	3.76
Other securities[B]	**134,255**	**8,466**	**6.31**	114,438	12,412	10.85	98,564	10,507	10.66
Total investment securities	**8,731,995**	**245,332**	**2.81**	8,806,380	250,493	2.84	9,467,949	237,254	2.51
Federal funds sold and short-term securities purchased under agreements to resell	**2,034**	**55**	**2.70**	27,026	519	1.92	18,518	230	1.24
Long-term securities purchased under agreements to resell	**741,089**	**15,898**	**2.15**	696,438	15,881	2.28	688,147	15,440	2.24
Interest earning deposits with banks	**316,299**	**6,698**	**2.12**	319,948	6,233	1.95	207,269	2,223	1.07
Total interest earning assets	**24,034,631**	**938,813**	**3.91**	23,795,364	905,438	3.81	24,011,034	810,329	3.37
Allowance for loan losses	**(160,212)**			(158,791)			(156,572)		
Unrealized gain (loss) on debt securities	**74,605**			(113,068)			45,760		
Cash and due from banks	**370,709**			360,732			361,414		
Land, buildings and equipment - net	**380,350**			343,636			345,639		
Other assets	**513,442**			438,362			424,333		
Total assets	**$ 25,213,525**			$ 24,666,235			$ 25,031,608		
LIABILITIES AND EQUITY									
Interest bearing deposits:									
Savings	**$ 918,896**	**1,021**	**.11**	$ 867,150	973	.11	$ 819,558	981	.12
Interest checking and money market	**10,607,224**	**38,691**	**.36**	10,817,169	26,830	.25	10,517,741	16,328	.16
Certificates of deposit of less than $100,000	**610,807**	**6,368**	**1.04**	603,137	3,215	.53	676,272	2,645	.39
Certificates of deposit of $100,000 and over	**1,396,760**	**26,945**	**1.93**	1,114,825	14,658	1.31	1,404,960	10,859	.77
Total interest bearing deposits	**13,533,687**	**73,025**	**.54**	13,402,281	45,676	.34	13,418,531	30,813	.23
Borrowings:									
Federal funds purchased and securities sold under agreements to repurchase	**1,822,098**	**29,415**	**1.61**	1,514,144	19,655	1.30	1,462,387	9,829	.67
Other borrowings	**43,919**	**952**	**2.17**	1,747	45	2.58	87,696	3,086	3.52
Total borrowings	**1,866,017**	**30,367**	**1.63**	1,515,891	19,700	1.30	1,550,083	12,915	.83
Total interest bearing liabilities	**15,399,704**	**103,392**	**.67 %**	14,918,172	65,376	.44%	14,968,614	43,728	.29 %
Non-interest bearing deposits	**6,376,204**			6,728,971			7,176,255		
Other liabilities	**360,587**			247,520			250,510		
Equity	**3,077,030**			2,771,572			2,636,229		
Total liabilities and equity	**$ 25,213,525**			$ 24,666,235			$ 25,031,608		
Net interest margin (T/E)		**$ 835,421**			$ 840,062			$ 766,601	
Net yield on interest earning assets			**3.48 %**			3.53%			3.19 %
Percentage increase (decrease) in net interest margin (T/E) compared to the prior year			**(.55)%**			9.58%			7.75 %

(A) Loans on non-accrual status are included in the computation of average balances. Included in interest income above are loan fees and late charges, net of amortization of deferred loan origination fees and costs, which are immaterial. Credit card income from merchant discounts and net interchange fees are not included in loan income.

Years Ended December 31									
2016			2015			2014			
Average Balance	Interest Income/ Expense	Average Rates Earned/Paid	Average Balance	Interest Income/ Expense	Average Rates Earned/Paid	Average Balance	Interest Income/ Expense	Average Rates Earned/Paid	Average Balance Five Year Compound Growth Rate
$ 4,652,526	$ 134,438	2.89%	$ 4,186,101	$ 116,455	2.78%	$ 3,919,421	$ 110,791	2.83%	5.87%
778,822	27,452	3.52	477,320	17,075	3.58	418,702	15,826	3.78	16.78
2,440,955	89,305	3.66	2,293,839	85,751	3.74	2,300,855	88,206	3.83	4.44
1,936,420	72,417	3.74	1,899,234	71,666	3.77	1,818,125	69,054	3.80	3.68
1,947,240	75,076	3.86	1,829,830	72,625	3.97	1,617,039	68,434	4.23	3.61
417,514	14,797	3.54	431,033	15,262	3.54	426,720	16,188	3.79	(3.43)
749,589	86,008	11.47	746,503	86,162	11.54	754,482	86,298	11.44	.27
4,712	—	—	5,416	—	—	4,889	—	—	13.49
12,927,778	499,493	3.86	11,869,276	464,996	3.92	11,260,233	454,797	4.04	4.78
25,710	1,317	5.12	4,115	191	4.64	—	—	—	—
735,081	15,628	2.13	466,135	5,180	1.11	497,271	13,750	2.77	11.35
591,785	13,173	2.23	938,589	17,319	1.85	794,752	13,211	1.66	(24.78)
1,753,727	63,261	3.61	1,786,235	63,054	3.53	1,715,493	61,593	3.59	(6.58)
3,460,821	82,888	2.40	3,164,447	80,936	2.56	2,981,225	80,229	2.69	9.04
2,418,118	35,346	1.46	2,773,069	29,558	1.07	2,834,013	24,976	.88	(13.50)
331,289	8,382	2.53	255,558	6,191	2.42	141,266	3,287	2.33	18.72
19,722	489	2.48	20,517	562	2.74	18,423	411	2.23	9.84
47,763	2,208	4.62	45,200	1,805	3.99	48,847	1,448	2.96	(37.80)
112,888	7,656	6.78	108,061	8,582	7.94	100,399	9,885	9.85	5.98
9,471,194	229,031	2.42	9,557,811	213,187	2.23	9,131,689	208,790	2.29	(.89)
12,660	78	.62	16,184	60	.37	31,817	101	.32	(42.30)
791,392	13,544	1.71	1,002,053	13,172	1.31	985,205	12,473	1.27	(5.54)
188,581	973	.52	206,115	528	.26	220,876	555	.25	7.45
23,417,315	744,436	3.18	22,655,554	692,134	3.06	21,629,820	676,716	3.13	2.13
(152,628)			(152,690)			(160,828)			(.08)
143,842			112,352			90,392			(3.77)
381,822			378,803			382,207			(.61)
350,443			359,773			354,899			1.39
415,677			383,810			376,433			6.40
$ 24,556,471			$ 23,737,602			$ 22,672,923			2.15
$ 775,121	923	.12	$ 729,311	876	.12	$ 670,650	855	.13	6.50
10,285,288	13,443	.13	9,752,794	12,498	.13	9,477,947	12,667	.13	2.28
749,261	2,809	.37	832,343	3,236	.39	935,387	4,137	.44	(8.17)
1,471,610	8,545	.58	1,224,402	6,051	.49	1,372,509	5,926	.43	.35
13,281,280	25,720	.19	12,538,850	22,661	.18	12,456,493	23,585	.19	1.67
1,266,093	3,315	.26	1,654,860	1,861	.11	1,257,660	1,019	.08	7.70
171,255	3,968	2.32	103,884	3,574	3.44	104,896	3,484	3.32	(15.98)
1,437,348	7,283	.51	1,758,744	5,435	.31	1,362,556	4,503	.33	6.49
14,718,628	33,003	.22%	14,297,594	28,096	.20%	13,819,049	28,088	.20%	2.19
7,049,633			6,786,741			6,339,183			.12
292,145			280,231			225,554			9.84
2,496,065			2,373,036			2,289,137			6.09
$ 24,556,471			$ 23,737,602			$ 22,672,923			2.15%
	$ 711,433			$ 664,038			$ 648,628		
		3.04%			2.93%			3.00%	
		7.14%			2.38%			.42%	

(B) *Interest income and yields are presented on a fully-taxable equivalent basis using a federal income tax rate of 21% in 2019 and 2018, and 35% in prior periods. Loan interest income includes tax free loan income (categorized as business loan income) which includes tax equivalent adjustments of $6,282,000 in 2019, $5,931,000 in 2018, $10,357,000 in 2017, $9,537,000 in 2016, $8,332,000 in 2015 and $7,640,000 in 2014. Investment securities interest income includes tax equivalent adjustments of $7,845,000 in 2019, $10,306,000 in 2018, $22,565,000 in 2017, $21,847,000 in 2016, $21,386,000 in 2015 and $20,784,000 in 2014. These adjustments relate to state and municipal obligations, trading securities, equity securities, and other securities.*

QUARTERLY AVERAGE BALANCE SHEETS — AVERAGE RATES AND YIELDS

	Year ended December 31, 2019							
	Fourth Quarter		Third Quarter		Second Quarter		First Quarter	
(Dollars in millions)	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid
ASSETS								
Loans:								
Business[(A)]	$ 5,362	3.59%	$ 5,265	3.85%	$ 5,142	4.02%	$ 5,086	4.07%
Real estate – construction and land	901	5.05	920	5.46	909	5.63	907	5.73
Real estate – business	2,820	4.22	2,883	4.42	2,869	4.60	2,864	4.61
Real estate – personal	2,284	3.85	2,175	3.91	2,135	3.97	2,119	4.00
Consumer	1,962	4.76	1,924	4.88	1,908	4.77	1,929	4.73
Revolving home equity	348	4.76	354	5.17	362	5.20	371	5.17
Consumer credit card	749	12.11	763	12.42	766	12.33	781	12.18
Overdrafts	18	—	9	—	5	—	4	—
Total loans	14,444	4.47	14,293	4.71	14,096	4.82	14,061	4.85
Loans held for sale	15	5.32	20	6.15	21	6.98	18	7.38
Investment securities:								
U.S. government & federal agency obligations	826	2.16	824	2.36	844	4.66	910	.78
Government-sponsored enterprise obligations	185	2.17	182	2.69	200	2.32	199	2.35
State & municipal obligations[(A)]	1,208	3.05	1,172	3.14	1,222	3.18	1,283	3.19
Mortgage-backed securities	4,686	2.72	4,713	2.61	4,615	2.70	4,360	2.76
Asset-backed securities	1,258	2.62	1,298	2.80	1,412	2.79	1,526	2.70
Other debt securities	331	2.82	334	2.63	331	2.68	336	2.69
Trading debt securities[(A)]	33	2.81	30	2.91	30	3.14	25	3.24
Equity securities[(A)]	4	49.40	5	35.67	5	35.97	5	37.55
Other securities[(A)]	142	6.58	135	6.19	130	6.69	130	5.73
Total investment securities	8,673	2.78	8,693	2.76	8,789	3.04	8,774	2.66
Federal funds sold and short-term securities purchased under agreements to resell	1	2.22	1	2.57	2	2.76	5	2.79
Long-term securities purchased under agreements to resell	850	2.26	713	2.01	700	2.11	700	2.18
Interest earning deposits with banks	390	1.61	227	2.17	332	2.40	317	2.42
Total interest earning assets	24,373	3.75	23,947	3.90	23,940	4.05	23,875	3.93
Allowance for loan losses	(160)		(160)		(161)		(159)	
Unrealized gain (loss) on debt securities	150		153		42		(49)	
Cash and due from banks	379		367		369		367	
Land, buildings and equipment – net	387		380		378		376	
Other assets	549		545		504		454	
Total assets	$ 25,678		$ 25,232		$ 25,072		$ 24,864	
LIABILITIES AND EQUITY								
Interest bearing deposits:								
Savings	$ 924	.11	$ 925	.11	$ 930	.11	$ 896	.11
Interest checking and money market	10,619	.35	10,409	.38	10,643	.38	10,763	.35
Certificates of deposit under $100,000	627	1.16	620	1.11	605	1.01	590	.87
Certificates of deposit $100,000 & over	1,434	1.79	1,504	1.99	1,378	2.02	1,268	1.92
Total interest bearing deposits	13,604	.52	13,458	.58	13,556	.55	13,517	.51
Borrowings:								
Federal funds purchased and securities sold under agreements to repurchase	1,837	1.20	1,885	1.74	1,794	1.80	1,772	1.72
Other borrowings	94	2.05	77	2.33	2	1.52	1	1.62
Total borrowings	1,931	1.25	1,962	1.76	1,796	1.80	1,773	1.72
Total interest bearing liabilities	15,535	.61%	15,420	.73%	15,352	.70%	15,290	.65%
Non-interest bearing deposits	6,553		6,290		6,336		6,325	
Other liabilities	459		391		307		283	
Equity	3,131		3,131		3,077		2,966	
Total liabilities and equity	$ 25,678		$ 25,232		$ 25,072		$ 24,864	
Net interest margin (T/E)	$ 206		$ 207		$ 215		$ 207	
Net yield on interest earning assets		3.36%		3.43%		3.61%		3.52%

(A) Includes tax equivalent calculations.

	Year ended December 31, 2018							
	Fourth Quarter		Third Quarter		Second Quarter		First Quarter	
(Dollars in millions)	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid	Average Balance	Average Rates Earned/Paid
ASSETS								
Loans:								
Business[(A)]	$ 5,030	3.93%	$ 4,925	3.80%	$ 4,962	3.69%	$ 4,934	3.48%
Real estate – construction and land	953	5.47	992	5.21	972	5.06	952	4.69
Real estate – business	2,758	4.53	2,733	4.35	2,727	4.22	2,734	4.06
Real estate – personal	2,122	3.87	2,111	3.83	2,079	3.84	2,062	3.80
Consumer	1,962	4.62	1,985	4.46	2,026	4.39	2,072	4.25
Revolving home equity	374	4.98	374	4.72	378	4.51	393	4.25
Consumer credit card	788	11.91	775	11.99	754	12.05	758	12.06
Overdrafts	5	—	5	—	4	—	5	—
Total loans	13,992	4.72	13,900	4.59	13,902	4.49	13,910	4.33
Loans held for sale	18	6.59	18	6.87	22	6.72	19	6.45
Investment securities:								
U.S. government & federal agency obligations	923	1.90	925	2.23	924	3.18	916	2.12
Government-sponsored enterprise obligations	215	2.24	262	2.10	354	1.88	406	1.84
State & municipal obligations[(A)]	1,361	3.06	1,376	2.98	1,395	3.06	1,513	3.06
Mortgage-backed securities	4,380	2.75	4,434	2.65	4,067	2.60	3,926	2.62
Asset-backed securities	1,519	2.55	1,427	2.42	1,407	2.32	1,469	2.11
Other debt securities	340	2.60	340	2.59	340	2.63	342	2.65
Trading debt securities[(A)]	26	3.21	24	3.13	26	3.15	22	2.73
Equity securities[(A)]	4	39.92	4	32.69	47	89.68	51	3.64
Other securities[(A)]	128	15.51	120	13.00	109	6.68	101	6.73
Total investment securities	8,896	2.86	8,912	2.76	8,669	3.19	8,746	2.58
Federal funds sold and short-term securities purchased under agreements to resell	14	2.56	13	2.10	37	1.93	44	1.65
Long-term securities purchased under agreements to resell	700	2.31	686	2.26	700	2.17	700	2.38
Interest earning deposits with banks	353	2.28	299	1.96	354	1.80	274	1.69
Total interest earning assets	23,973	3.92	23,828	3.80	23,684	3.90	23,693	3.59
Allowance for loan losses	(159)		(159)		(159)		(159)	
Unrealized loss on debt securities	(166)		(119)		(122)		(43)	
Cash and due from banks	365		357		357		364	
Land, buildings and equipment – net	343		344		343		345	
Other assets	452		445		419		437	
Total assets	$ 24,808		$ 24,696		$ 24,522		$ 24,637	
LIABILITIES AND EQUITY								
Interest bearing deposits:								
Savings	$ 871	.11	$ 877	.11	$ 881	.11	$ 839	.12
Interest checking and money market	10,839	.30	10,840	.26	10,850	.23	10,738	.20
Certificates of deposit under $100,000	585	.70	594	.56	609	.46	625	.43
Certificates of deposit $100,000 & over	1,091	1.61	1,100	1.41	1,135	1.23	1,134	1.02
Total interest bearing deposits	13,386	.41	13,411	.35	13,475	.32	13,336	.28
Borrowings:								
Federal funds purchased and securities sold under agreements to repurchase	1,656	1.60	1,500	1.33	1,339	1.18	1,560	1.04
Other borrowings	1	2.67	2	2.60	3	2.52	2	2.54
Total borrowings	1,657	1.60	1,502	1.33	1,342	1.19	1,562	1.04
Total interest bearing liabilities	15,043	.54%	14,913	.45%	14,817	.40%	14,898	.36%
Non-interest bearing deposits	6,667		6,678		6,749		6,825	
Other liabilities	265		296		228		199	
Equity	2,833		2,809		2,728		2,715	
Total liabilities and equity	$ 24,808		$ 24,696		$ 24,522		$ 24,637	
Net interest margin (T/E)	$ 216		$ 211		$ 216		$ 197	
Net yield on interest earning assets		3.58%		3.52%		3.65%		3.37%

(A) Includes tax equivalent calculations.

Item 7a. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information required by this item is disclosed within the Interest Rate Sensitivity section of Management's Discussion and Analysis of Financial Condition and Results of Operations.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Commerce Bancshares, Inc.:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Commerce Bancshares, Inc. and subsidiaries (the Company) as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated February 25, 2020 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgment. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Assessment of the allowance for loan losses related to loans collectively evaluated for impairment

As discussed in Notes 1 and 2 to the consolidated financial statements, the Company's allowance for loan losses related to loans collectively evaluated for impairment (ASC 450 ALL) was $157.9 million of a total allowance for loan losses of $160.7 million as December 31, 2019, or 1.07% of total loans. The Company estimated the ASC 450 ALL using a historical loss methodology utilizing a loss emergence period, which is applied to loans based on loan risk ratings. Such amounts are adjusted for certain qualitative factors which include an evaluation of the performance and status of loans, current loan portfolio composition and characteristics, trends in delinquencies, portfolio risk ratings, levels of non-performing assets, and prevailing regional and national economic and business conditions.

We identified the assessment of the ASC 450 ALL as a critical audit matter because it involved significant measurement uncertainty requiring complex auditor judgment, and knowledge and experience in the industry. In addition, auditor judgment was required to evaluate the sufficiency of audit evidence obtained. This assessment encompassed the evaluation of the process used to estimate the ASC 450 ALL, including the following key factors and assumptions (1) historical losses in the Company's portfolio over time, (2) an estimate of the length of time between a specific loss event and when the first loss is identified (known as the estimated loss emergence period), and (3) loan risk ratings; and the development and evaluation of qualitative adjustments.

The primary procedures we performed to address the critical audit matter included the following. We tested certain internal controls related to the Company's ASC 450 ALL process, including controls related to the (1) development and approval of the ASC 450 ALL methodology, (2) determination of the key factors and assumptions used to estimate the ASC 450 ALL, (3) determination of qualitative adjustments, and (4) analysis of the ASC 450 ALL results, trends, and ratios. We evaluated the Company's process to develop the ASC 450 ALL estimate by testing certain sources of data, factors, and assumptions, and considered the relevance and reliability of such data, factors, and assumptions. We evaluated that the historical losses in the Company's portfolio are representative of the credit characteristics of the current portfolio. We tested the estimated loss emergence period based on historical loss data, including the relevance of the parameters used in the estimate. We involved credit risk professionals with specialized industry knowledge and experience, who assisted in:

- evaluating the Company's ASC 450 ALL methodology for compliance with U.S. generally accepted accounting principles,
- assessing the structured process for the determination of the magnitude of the qualitative adjustments,
- evaluating the qualitative factors and the effect of those factors on the ASC 450 ALL compared with relevant credit factors and consistency with credit trends, and
- testing individual loan grades for a selection of commercial loans by evaluating the financial performance of the borrower and the underlying collateral.

We evaluated the collective results of the procedures performed to assess the sufficiency of the audit evidence obtained related to the Company's ASC 450 ALL.

KPMG LLP

We have served as the Company's auditor since 1971.

Kansas City, Missouri
February 25, 2020

Commerce Bancshares, Inc. and Subsidiaries
CONSOLIDATED BALANCE SHEETS

	December 31	
	2019	2018
	(In thousands)	
ASSETS		
Loans	**$ 14,737,817**	$ 14,140,298
Allowance for loan losses	**(160,682)**	(159,932)
Net loans	**14,577,135**	13,980,366
Loans held for sale (including $9,181,000 and $13,529,000 of residential mortgage loans carried at fair value at December 31, 2019 and 2018, respectively)	**13,809**	20,694
Investment securities:		
Available for sale debt ($204,942,000 and $463,325,000 pledged at December 31, 2019 and 2018, respectively, to secure swap and repurchase agreements)	**8,571,626**	8,538,041
Trading debt	**28,161**	27,059
Equity	**4,209**	4,409
Other	**137,892**	129,157
Total investment securities	**8,741,888**	8,698,666
Federal funds sold and short-term securities purchased under agreements to resell	**—**	3,320
Long-term securities purchased under agreements to resell	**850,000**	700,000
Interest earning deposits with banks	**395,850**	689,876
Cash and due from banks	**491,615**	507,892
Premises and equipment – net	**370,637**	333,119
Goodwill	**138,921**	138,921
Other intangible assets – net	**9,534**	8,794
Other assets	**476,400**	382,194
Total assets	**$ 26,065,789**	$ 25,463,842
LIABILITIES AND STOCKHOLDERS' EQUITY		
Deposits:		
Non-interest bearing	**$ 6,890,687**	$ 6,980,298
Savings, interest checking and money market	**11,621,716**	11,685,239
Certificates of deposit of less than $100,000	**626,157**	586,091
Certificates of deposit of $100,000 and over	**1,381,855**	1,072,031
Total deposits	**20,520,415**	20,323,659
Federal funds purchased and securities sold under agreements to repurchase	**1,850,772**	1,956,389
Other borrowings	**2,418**	8,702
Other liabilities	**553,712**	237,943
Total liabilities	**22,927,317**	22,526,693
Commerce Bancshares, Inc. stockholders' equity:		
Preferred stock, $1 par value Authorized 2,000,000 shares; issued 6,000 shares at December 31, 2019 and 2018	**144,784**	144,784
Common stock, $5 par value Authorized 140,000,000 shares at December 31, 2019 and 120,000,000 shares at December 31, 2018; issued 112,795,605 shares at December 31, 2019 and 111,886,450 shares at December 31, 2018	**563,978**	559,432
Capital surplus	**2,151,464**	2,084,824
Retained earnings	**201,562**	241,163
Treasury stock of 445,952 shares at December 31, 2019 and 555,100 shares at December 31, 2018, at cost	**(37,548)**	(34,236)
Accumulated other comprehensive income (loss)	**110,444**	(64,669)
Total Commerce Bancshares, Inc. stockholders' equity	**3,134,684**	2,931,298
Non-controlling interest	**3,788**	5,851
Total equity	**3,138,472**	2,937,149
Total liabilities and equity	**$ 26,065,789**	$ 25,463,842

See accompanying notes to consolidated financial statements.

Commerce Bancshares, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF INCOME

(In thousands, except per share data)	For the Years Ended December 31 2019	2018	2017
INTEREST INCOME			
Interest and fees on loans	**$ 663,338**	$ 625,083	$ 543,825
Interest on loans held for sale	**1,209**	1,298	1,000
Interest on investment securities	**237,487**	240,187	214,689
Interest on federal funds sold and short-term securities purchased under agreements to resell	**55**	519	230
Interest on long-term securities purchased under agreements to resell	**15,898**	15,881	15,440
Interest on deposits with banks	**6,698**	6,233	2,223
Total interest income	**924,685**	889,201	777,407
INTEREST EXPENSE			
Interest on deposits:			
Savings, interest checking and money market	**39,712**	27,803	17,309
Certificates of deposit of less than $100,000	**6,368**	3,215	2,645
Certificates of deposit of $100,000 and over	**26,945**	14,658	10,859
Interest on federal funds purchased and securities sold under agreements to repurchase	**29,415**	19,655	9,829
Interest on other borrowings	**952**	45	3,086
Total interest expense	**103,392**	65,376	43,728
Net interest income	**821,293**	823,825	733,679
Provision for loan losses	**50,438**	42,694	45,244
Net interest income after provision for loan losses	**770,855**	781,131	688,435
NON-INTEREST INCOME			
Bank card transaction fees	**167,879**	171,576	155,100
Trust fees	**155,628**	147,964	135,159
Deposit account charges and other fees	**95,983**	94,517	90,060
Capital market fees	**8,146**	7,721	7,996
Consumer brokerage services	**15,804**	15,807	14,630
Loan fees and sales	**15,767**	12,723	13,948
Other	**65,496**	51,033	44,370
Total non-interest income	**524,703**	501,341	461,263
INVESTMENT SECURITIES GAINS (LOSSES), NET	**3,626**	(488)	25,051
NON-INTEREST EXPENSE			
Salaries and employee benefits	**492,927**	468,194	448,321
Net occupancy	**47,157**	46,044	45,612
Equipment	**19,061**	18,125	18,568
Supplies and communication	**20,394**	20,637	22,790
Data processing and software	**92,899**	85,978	80,998
Marketing	**21,914**	20,548	16,325
Deposit insurance	**6,676**	11,546	13,986
Community service	**2,446**	2,445	34,377
Other	**63,924**	64,304	63,366
Total non-interest expense	**767,398**	737,821	744,343
Income before income taxes	**531,786**	544,163	430,406
Less income taxes	**109,074**	105,949	110,506
Net income	**422,712**	438,214	319,900
Less non-controlling interest expense	**1,481**	4,672	517
Net income attributable to Commerce Bancshares, Inc.	**421,231**	433,542	319,383
Less preferred stock dividends	**9,000**	9,000	9,000
Net income available to common shareholders	**$ 412,231**	$ 424,542	$ 310,383
Net income per common share - basic	**$ 3.59**	$ 3.61	$ 2.63
Net income per common share - diluted	**$ 3.58**	$ 3.60	$ 2.62

See accompanying notes to consolidated financial statements.

Commerce Bancshares, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Net income	**$ 422,712**	$ 438,214	$ 319,900
Other comprehensive income (loss):			
Net unrealized gains (losses) on securities for which a portion of an other-than-temporary impairment has been recorded in earnings	**(632)**	(277)	412
Net unrealized gains (losses) on other securities	**151,122**	(55,631)	3,022
Change in pension loss	**1,167**	664	(301)
Unrealized gains on cash flow hedge derivatives	**23,456**	6,855	—
Other comprehensive income (loss)	**175,113**	(48,389)	3,133
Comprehensive income	**597,825**	389,825	323,033
Less non-controlling interest expense	**1,481**	4,672	517
Comprehensive income attributable to Commerce Bancshares, Inc.	**$ 596,344**	$ 385,153	$ 322,516

See accompanying notes to consolidated financial statements.

Commerce Bancshares, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
OPERATING ACTIVITIES			
Net income	**$ 422,712**	$ 438,214	$ 319,900
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for loan losses	**50,438**	42,694	45,244
Provision for depreciation and amortization	**41,145**	38,679	39,732
Amortization of investment security premiums, net	**27,631**	26,224	35,423
Deferred income tax expense	**14,195**	5,336	13,617
Investment securities (gains) losses, net (A)	**(3,626)**	488	(25,051)
Net gains on sales of loans held for sale	**(10,127)**	(6,370)	(8,008)
Proceeds from sales of loans held for sale	**259,153**	208,431	215,373
Originations of loans held for sale	**(244,976)**	(203,775)	(216,064)
Net (increase) decrease in trading securities, excluding unsettled transactions	**3,863**	(14,277)	7,585
Stock-based compensation	**13,854**	12,841	12,105
(Increase) decrease in interest receivable	**3,316**	(4,258)	(4,459)
Increase in interest payable	**5,586**	2,137	38
Increase (decrease) in income taxes payable	**14,465**	12,288	(27,685)
Donation of securities	**—**	—	32,036
Gain on sale of Corporate Trust business	**(11,472)**	—	—
Other changes, net	**(73,363)**	(5,992)	(13,259)
Net cash provided by operating activities	**512,794**	552,660	426,527
INVESTING ACTIVITIES			
Proceeds from sales of investment securities (A)	**413,203**	708,864	792,380
Proceeds from maturities/pay downs of investment securities (A)	**1,558,244**	1,510,985	1,899,640
Purchases of investment securities (A)	**(1,863,180)**	(2,090,333)	(1,853,817)
Net increase in loans	**(647,890)**	(200,673)	(614,849)
Long-term securities purchased under agreements to resell	**(150,000)**	(100,000)	(75,000)
Repayments of long-term securities purchased under agreements to resell	**—**	100,000	100,000
Purchases of land, buildings and equipment	**(42,575)**	(33,294)	(30,824)
Sales of land, buildings and equipment	**2,033**	13,427	3,190
Net cash provided by (used in) investing activities	**(730,165)**	(91,024)	220,720
FINANCING ACTIVITIES			
Net increase (decrease) in non-interest bearing, savings, interest checking and money market deposits	**85,438**	60,278	(15,036)
Net increase (decrease) in certificates of deposit	**349,890**	(108,742)	(474,044)
Net increase (decrease) in federal funds purchased and short-term securities sold under agreements to repurchase	**(105,617)**	449,251	(216,767)
Net increase (decrease) in other borrowings	**(6,394)**	6,944	(100,291)
Purchases of treasury stock	**(134,904)**	(75,231)	(17,771)
Accelerated share repurchase agreement	**(150,000)**	—	—
Issuance of stock under equity compensation plans	**(8)**	(10)	(8)
Cash dividends paid on common stock	**(113,466)**	(100,238)	(91,619)
Cash dividends paid on preferred stock	**(9,000)**	(9,000)	(9,000)
Net cash provided by (used in) financing activities	**(84,061)**	223,252	(924,536)
Increase (decrease) in cash, cash equivalents and restricted cash	**(301,432)**	684,888	(277,289)
Cash, cash equivalents and restricted cash at beginning of year	**1,209,240**	524,352	801,641
Cash, cash equivalents and restricted cash at end of year	**$ 907,808**	$ 1,209,240	$ 524,352
Income tax payments, net	**$ 76,168**	$ 84,172	$ 120,744
Interest paid on deposits and borrowings	**97,806**	63,239	43,690
Loans transferred to foreclosed real estate	**581**	1,551	2,063

(A) Available for sale debt securities, equity securities, and other securities.
See accompanying notes to consolidated financial statements.

Commerce Bancshares, Inc. and Subsidiaries
CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

	Commerce Bancshares, Inc. Shareholders							
(In thousands, except per share data)	Preferred Stock	Common Stock	Capital Surplus	Retained Earnings	Treasury Stock	Accumulated Other Comprehensive Income (Loss)	Non-Controlling Interest	Total
Balance, December 31, 2016	$ 144,784	$ 510,015	$ 1,552,454	$ 292,849	$ (15,294)	$ 10,975	$ 5,349	$ 2,501,132
Adoption of ASU 2016-09			3,441	(2,144)				1,297
Net income				319,383			517	319,900
Other comprehensive income						3,133		3,133
Distributions to non-controlling interest							(1,293)	(1,293)
Sale of non-controlling interest of subsidiary			2,950				(2,949)	1
Purchases of treasury stock					(17,771)			(17,771)
Cash dividends paid on common stock ($.777 per share)				(91,619)				(91,619)
Cash dividends paid on preferred stock ($1.500 per depositary share)				(9,000)				(9,000)
Stock-based compensation			12,105					12,105
Issuance under stock purchase and equity compensation plans			(17,734)		18,592			858
5% stock dividend, net		25,392	262,144	(288,095)				(559)
Balance, December 31, 2017	144,784	535,407	1,815,360	221,374	(14,473)	14,108	1,624	2,718,184
Adoption of ASU 2018-02				(2,932)		2,932		—
Adoption of ASU 2016-01				33,320		(33,320)		—
Net income				433,542			4,672	438,214
Other comprehensive loss						(48,389)		(48,389)
Distributions to non-controlling interest							(445)	(445)
Purchases of treasury stock					(75,231)			(75,231)
Cash dividends paid on common stock ($.853 per share)				(100,238)				(100,238)
Cash dividends paid on preferred stock ($1.500 per depositary share)				(9,000)				(9,000)
Stock-based compensation			12,841					12,841
Issuance under stock purchase and equity compensation plans			(21,632)		23,424			1,792
5% stock dividend, net		24,025	278,255	(334,903)	32,044			(579)
Balance, December 31, 2018	144,784	559,432	2,084,824	241,163	(34,236)	(64,669)	5,851	2,937,149
Net income				421,231			1,481	422,712
Other comprehensive income						175,113		175,113
Distributions to non-controlling interest							(3,544)	(3,544)
Purchases of treasury stock					(134,904)			(134,904)
Accelerated share repurchase agreement					(150,000)			(150,000)
Cash dividends paid on common stock ($.990 per share)				(113,466)				(113,466)
Cash dividends paid on preferred stock ($1.500 per depositary share)				(9,000)				(9,000)
Stock-based compensation			13,854					13,854
Issuance under stock purchase and equity compensation plans			(19,293)		20,644			1,351
5% stock dividend, net		4,546	72,079	(338,366)	260,948			(793)
Balance, December 31, 2019	**$ 144,784**	**$ 563,978**	**$ 2,151,464**	**$ 201,562**	**$ (37,548)**	**$ 110,444**	**$ 3,788**	**$ 3,138,472**

See accompanying notes to consolidated financial statements.

1. Summary of Significant Accounting Policies

Nature of Operations

Commerce Bancshares, Inc. and its subsidiaries (the Company) conducts its principal activities from approximately 316 branch and ATM locations throughout Missouri, Kansas, Illinois, Oklahoma and Colorado. Principal activities include retail and commercial banking, investment management, securities brokerage, mortgage banking, trust, and private banking services. The Company also maintains commercial banking offices in Dallas, Houston, Cincinnati, Nashville, Des Moines, Indianapolis, and Grand Rapids.

Basis of Presentation

The Company follows accounting principles generally accepted in the United States of America (GAAP) and reporting practices applicable to the banking industry. The preparation of financial statements under GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and notes. These estimates are based on information available to management at the time the estimates are made. While the consolidated financial statements reflect management's best estimates and judgments, actual results could differ from those estimates. The consolidated financial statements include the accounts of the Company and its majority-owned subsidiaries (after elimination of all material intercompany balances and transactions). Certain prior year amounts have been reclassified to conform to the current year presentation. Such reclassifications had no effect on net income or total assets. Management has evaluated subsequent events for potential recognition or disclosure through the date these consolidated financial statements were issued.

The Company, in the normal course of business, engages in a variety of activities that involve variable interest entities (VIEs). A VIE is a legal entity that lacks equity investors or whose equity investors do not have a controlling financial interest in the entity through their equity investments. However, an enterprise is deemed to have a controlling financial interest and is the primary beneficiary of a VIE if it has both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and an obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. An enterprise that is the primary beneficiary must consolidate the VIE. The Company's interests in VIEs are evaluated to determine if the Company is the primary beneficiary both at inception and when there is a change in circumstances that requires a reconsideration.

The Company is considered to be the primary beneficiary in a rabbi trust related to a deferred compensation plan offered to certain employees. The assets and liabilities of this trust, which are included in the accompanying consolidated balance sheets, are not significant. The Company also has variable interests in certain entities in which it is not the primary beneficiary. These entities are not consolidated. These interests include affordable housing limited partnership interests, holdings in its investment portfolio of various asset and mortgage-backed bonds that are issued by securitization trusts, and managed discretionary trust assets that are not included in the accompanying consolidated balance sheets.

Cash, Cash Equivalents and Restricted Cash

In the accompanying consolidated statements of cash flows, cash and cash equivalents include "Cash and due from banks", "Federal funds sold and short-term securities purchased under agreements to resell", and "Interest earning deposits with banks" as segregated in the accompanying consolidated balance sheets. Restricted cash is comprised of cash collateral on deposit with another financial institution to secure interest rate swap transactions. Restricted cash is included in other assets in the consolidated balance sheets and totaled $20.3 million and $8.2 million at December 31, 2019 and 2018, respectively.

Regulations of the Federal Reserve System require cash balances to be maintained at the Federal Reserve Bank, based on certain deposit levels. The minimum reserve requirement for the Bank at December 31, 2019 totaled $160.7 million. Other interest earning cash balances held at the Federal Reserve Bank totaled $395.9 million.

Loans and Related Earnings

Loans that management has the intent and ability to hold for the foreseeable future or until maturity or pay-off are reported at their outstanding principal balances, net of undisbursed loan proceeds, the allowance for loan losses, and any deferred fees and costs on originated loans. Origination fee income received on loans and amounts representing the estimated direct costs of origination are deferred and amortized to interest income over the life of the loan using the interest method.

Interest on loans is accrued based upon the principal amount outstanding. Interest income is recognized primarily on the level yield method. Loan and commitment fees, net of costs, are deferred and recognized in income over the term of the loan or commitment as an adjustment of yield. Annual fees charged on credit card loans are capitalized to principal and amortized over 12 months to loan fees and sales. Other credit card fees, such as cash advance fees and late payment fees, are recognized in income as an adjustment of yield when charged to the cardholder's account.

Non-Accrual Loans

Loans are placed on non-accrual status when management does not expect to collect payments consistent with acceptable and agreed upon terms of repayment. Business, construction real estate, business real estate, and personal real estate loans that are contractually 90 days past due as to principal and/or interest payments are generally placed on non-accrual, unless they are both well-secured and in the process of collection. Consumer, revolving home equity and credit card loans are exempt under regulatory rules from being classified as non-accrual. When a loan is placed on non-accrual status, any interest previously accrued but not collected is reversed against current income, and the loan is charged off to the extent uncollectible. Principal and interest payments received on non-accrual loans are generally applied to principal. Interest is included in income only after all previous loan charge-offs have been recovered and is recorded only as received. The loan is returned to accrual status only when the borrower has brought all past due principal and interest payments current, and, in the opinion of management, the borrower has demonstrated the ability to make future payments of principal and interest as scheduled. A six month history of sustained payment performance is generally required before reinstatement of accrual status.

Troubled Debt Restructurings

A loan is accounted for as a troubled debt restructuring if the Company, for economic or legal reasons related to the borrower's financial difficulties, grants a concession to the borrower that it would not otherwise consider. A troubled debt restructuring typically involves (1) modification of terms such as a reduction of the stated interest rate, loan principal, or accrued interest, (2) a loan renewal at a stated interest rate lower than the current market rate for a new loan with similar risk, or (3) debt that was not reaffirmed in bankruptcy. Business, business real estate, construction real estate and personal real estate troubled debt restructurings with impairment charges are placed on non-accrual status. The Company measures the impairment loss of a troubled debt restructuring in the same manner as described below. Troubled debt restructurings which are performing under their contractual terms continue to accrue interest which is recognized in current earnings.

Impaired Loans

Loans are evaluated regularly by management for impairment. Included in impaired loans are all non-accrual loans, as well as loans that have been classified as troubled debt restructurings. Once a loan has been identified as impaired, impairment is measured based on either the present value of the expected future cash flows at the loan's initial effective interest rate or the fair value of the collateral if collateral dependent. Factors considered in determining impairment include delinquency status, cash flow analysis, credit analysis, and collateral value and availability.

Loans Held For Sale

Loans held for sale include student loans and certain fixed rate residential mortgage loans. These loans are typically classified as held for sale upon origination based upon management's intent to sell the production of these loans. The student loans are carried at the lower of aggregate cost or fair value, and their fair value is determined based on sale contract prices. The mortgage loans are carried at fair value under the elected fair value option. Their fair value is based on secondary market prices for loans with similar characteristics, including an adjustment for embedded servicing value. Changes in fair value and gains and losses on sales are included in loan fees and sales. Deferred fees and costs related to these loans are not amortized but are recognized as part of the cost basis of the loan at the time it is sold. Interest income related to loans held for sale is accrued based on the principal amount outstanding and the loan's contractual interest rate.

Occasionally, other types of loans may be classified as held for sale in order to manage credit concentration. These loans are carried at the lower of cost or fair value with gains and losses on sales recognized in loan fees and sales.

Allowance/Provision for Loan Losses

The allowance for loan losses is maintained at a level believed to be appropriate by management to provide for probable loan losses inherent in the portfolio as of the balance sheet date, including losses on known or anticipated problem loans as well as for loans which are not currently known to require specific allowances. Management has established a process to determine the amount of the allowance for loan losses which assesses the risks and losses inherent in its portfolio. Business, construction real estate and business real estate loans are normally larger and more complex, and their collection rates are harder to predict. These loans are more likely to be collateral dependent and are allocated a larger reserve, due to their potential volatility. Personal real estate, credit card, consumer and revolving home equity loans are individually smaller and perform in a more homogenous manner, making loss estimates more predictable. Management's process provides an allowance consisting of a specific allowance component based on certain individually evaluated loans and a general component based on estimates of reserves needed for pools of loans.

Loans subject to individual evaluation generally consist of business, construction real estate, business real estate and personal real estate loans on non-accrual status. These impaired loans are evaluated individually for the impairment of repayment potential and collateral adequacy. Other impaired loans identified as performing troubled debt restructurings are collectively evaluated because they have similar risk characteristics. Loans which have not been identified as impaired are segregated by loan type and sub-type and are collectively evaluated. Reserves calculated for these loan pools are estimated using a consistent methodology that considers historical loan loss experience by loan type, loss emergence periods, delinquencies, current economic factors, loan risk ratings and industry concentrations.

The Company's estimate of the allowance for loan losses and the corresponding provision for loan losses is based on various judgments and assumptions made by management. The amount of the allowance for loan losses is influenced by several qualitative factors which include collateral valuation, evaluation of performance and status, current loan portfolio composition and characteristics, trends in delinquencies, portfolio risk ratings, levels of non-performing assets, and prevailing regional and national economic and business conditions.

The estimates, appraisals, evaluations, and cash flows utilized by management may be subject to frequent adjustments due to changing economic prospects of borrowers or properties. These estimates are reviewed periodically and adjustments, if necessary, are recorded in the provision for loan losses in the periods in which they become known.

Loans, or portions of loans, are charged off to the extent deemed uncollectible. Loan charge-offs reduce the allowance for loan losses, and recoveries of loans previously charged off are added back to the allowance. Business, business real estate, construction real estate and personal real estate loans are generally charged down to estimated collectible balances when they are placed on non-accrual status. Consumer loans and related accrued interest are normally charged down to the fair value of related collateral (or are charged off in full if no collateral) once the loans are more than 120 days delinquent. Credit card loans are charged off against the allowance for loan losses when the receivable is more than 180 days past due. The interest and fee income previously capitalized but not collected on credit card charge-offs is reversed against interest income.

Direct Financing and Sales Type Leases

The net investment in direct financing and sales type leases is included in loans on the Company's consolidated balance sheets and consists of the present values of the sum of the future minimum lease payments and estimated residual value of the leased asset. Revenue consists of interest earned on the net investment and is recognized over the lease term as a constant percentage return thereon.

Investments in Debt and Equity Securities

The majority of the Company's investment portfolio is comprised of debt securities that are classified as available for sale. From time to time, the Company sells securities and utilizes the proceeds to reduce borrowings, fund loan growth, or modify its interest rate profile. Securities classified as available for sale are carried at fair value. Changes in fair value, excluding certain losses associated with other-than-temporary impairment (OTTI), are reported in other comprehensive income (loss), a component of stockholders' equity. Securities are periodically evaluated for OTTI in accordance with guidance provided in ASC 320-10-35. For securities with OTTI, the entire loss in fair value is required to be recognized in current earnings if the Company intends to sell the securities or believes it likely that it will be required to sell the security before the anticipated recovery. If neither condition is met, but the Company does not expect to recover the amortized cost basis, the Company determines whether a credit loss has occurred, and the loss is then recognized in current earnings. The noncredit-related portion of the overall loss is reported in other comprehensive income (loss). Gains and losses realized upon sales of securities are calculated using the specific identification method and are included in investment securities gains (losses), net, in the consolidated statements of income. Purchase premiums and discounts are amortized to interest income using a level yield method over the estimated lives of the securities. For certain callable debt securities purchased at a premium, the amortization is instead recorded to the earliest call date. For mortgage and asset-backed securities, prepayment experience is evaluated quarterly to determine if a change in a bond's estimated remaining life is necessary. A corresponding adjustment is then made in the related amortization of premium or discount accretion.

Equity securities include common and preferred stock with readily determinable fair values. These are also carried at fair value. Prior to January 1, 2018, changes in fair value were recorded in other comprehensive income. The Company's adoption of ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities", effective January 1, 2018, required that all subsequent changes in fair value be recorded in current earnings. The adoption also required a reclassification of the unrealized gain in fair value on equity securities (recorded in accumulated other comprehensive income at December 31, 2017) to retained earnings. The amount of this reclassification was $33.3 million, net of tax.

Certain equity securities do not have readily determinable fair values. The Company has elected under ASU 2016-01 to measure these at cost minus impairment, if any, plus or minus changes resulting from observable price changes for the identical or similar investment of the same issuer. The Company has not recorded any impairment or other adjustments to the carrying amount of these investments.

Other securities include Federal Reserve Bank stock and Federal Home Loan Bank stock, which are held for debt and regulatory purposes. They are carried at cost and periodically evaluated for other-than-temporary impairment. Also included are investments in portfolio concerns held by the Company's private equity subsidiaries, which consist of both debt and equity instruments. Private equity investments are carried at fair value in accordance with ASC 946-10-15, with changes in fair value reported in current earnings. In the absence of readily ascertainable market values, fair value is estimated using internally developed methods. Changes in fair value which are recognized in current earnings and gains and losses from sales are included in investment securities gains (losses), net in the consolidated statements of income.

Trading account securities, which are debt securities bought and held principally for the purpose of resale in the near term, are carried at fair value. Gains and losses, both realized and unrealized, are recorded in non-interest income.

Purchases and sales of securities are recognized on a trade date basis. A receivable or payable is recognized for pending transaction settlements.

Securities Purchased under Agreements to Resell and Securities Sold under Agreements to Repurchase

Securities purchased under agreements to resell and securities sold under agreements to repurchase are treated as collateralized financing transactions, not as purchases and sales of the underlying securities. The agreements are recorded at the amount of cash advanced or received.

The Company periodically enters into securities purchased under agreements to resell with large financial institutions. Securities pledged by the counterparties to secure these agreements are delivered to a third party custodian.

Securities sold under agreements to repurchase are a source of funding to the Company and are offered to cash management customers as an automated, collateralized investment account. From time to time, securities sold may also be used by the Bank to obtain additional borrowed funds at favorable rates. These borrowings are secured by a portion of the Company's investment security portfolio and delivered either to the dealer custody account at the FRB or to the applicable counterparty.

The fair value of collateral either received from or provided to a counterparty is monitored daily, and additional collateral is obtained, returned, or provided by the Company in order to maintain full collateralization for these transactions.

As permitted by current accounting guidance, the Company offsets certain securities purchased under agreements to resell against securities sold under agreements to repurchase in its balance sheet presentation. These agreements are further discussed in Note 20, Resale and Repurchase Agreements.

Premises and Equipment

Land is stated at cost, and buildings and equipment are stated at cost, including capitalized interest when appropriate, less accumulated depreciation. Depreciation is computed using a straight-line method, utilizing estimated useful lives; generally 30 years for buildings, 10 years for building improvements, and 3 to 10 years for equipment. Leasehold improvements are amortized over the shorter of 10 years or the remaining lease term. Maintenance and repairs are charged to non-interest expense as incurred.

Premises and equipment also includes the Company's right-of-use leased assets, which is mainly comprised of operating leases for branches, office space, ATM locations, and certain equipment.

Foreclosed Assets

Foreclosed assets consist of property that has been repossessed and is comprised of commercial and residential real estate and other non-real estate property, including auto and recreational and marine vehicles. The assets are initially recorded at fair value less estimated selling costs, establishing a new cost basis. Initial valuation adjustments are charged to the allowance for loan losses. Fair values are estimated primarily based on appraisals, third-party price opinions, or internally developed pricing models. After initial recognition, fair value estimates are updated periodically. Declines in fair value below cost are recognized through valuation allowances which may be reversed when supported by future increases in fair value. These valuation adjustments, in addition to gains and losses realized on sales and net operating expenses, are recorded in other non-interest expense.

Goodwill and Intangible Assets

Goodwill is not amortized but is assessed for impairment on an annual basis or more frequently in certain circumstances. When testing for goodwill impairment, the Company may initially perform a qualitative assessment. Based on the results of this qualitative assessment, if the Company concludes it is more likely than not that a reporting unit's fair value is less than its carrying amount, a quantitative analysis is performed. Quantitative valuation methodologies include a combination of formulas using current market multiples, based on recent sales of financial institutions within the Company's geographic marketplace. If the fair value of a reporting unit is less than the carrying amount, additional analysis is required to measure the amount of impairment. The Company has not recorded impairment resulting from goodwill impairment tests. However, adverse changes in the economic environment, operations of the reporting unit, or other factors could result in a decline in fair value.

Intangible assets that have finite useful lives, such as core deposit intangibles and mortgage servicing rights, are amortized over their estimated useful lives. Core deposit intangibles are amortized over periods of 8 to 14 years, representing their estimated lives, using accelerated methods. Mortgage servicing rights are amortized in proportion to and over the period of estimated net servicing income, considering appropriate prepayment assumptions. Core deposit intangibles are reviewed for impairment whenever events or changes in circumstances indicate their carrying amount may not be recoverable. Impairment is indicated if the sum of the undiscounted estimated future net cash flows is less than the carrying value of the intangible asset. Mortgage servicing rights, while initially recorded at fair value, are subsequently amortized and carried at the lower of the initial capitalized amount (net of accumulated amortization), or estimated fair value. The Company evaluates its mortgage servicing rights for impairment on a quarterly basis, using estimated prepayment speeds of the underlying mortgage loans serviced and stratifications based on the risk characteristics of the underlying loans. A valuation allowance has been established, through a charge to earnings, to the extent the amortized cost exceeds the estimated fair value. However, the Company has not recorded other-than-temporary impairment losses on either of these types of intangible assets.

Income Taxes

Amounts provided for income tax expense are based on income reported for financial statement purposes and do not necessarily represent amounts currently payable under tax laws. Deferred income taxes are provided for temporary differences between the financial reporting bases and income tax bases of the Company’s assets and liabilities, net operating losses, and tax credit carryforwards. Deferred tax assets and liabilities are measured using the enacted tax rates that are expected to apply to taxable income when such assets and liabilities are anticipated to be settled or realized. The effect on deferred tax assets and liabilities of a change in tax rates is recognized as tax expense or benefit in the period that includes the enactment date of the change. In determining the amount of deferred tax assets to recognize in the financial statements, the Company evaluates the likelihood of realizing such benefits in future periods. A valuation allowance is established if it is more likely than not that all or some portion of the deferred tax asset will not be realized. The Company recognizes interest and penalties related to income taxes within income tax expense in the consolidated statements of income.

The Company and its eligible subsidiaries file a consolidated federal income tax return. State and local income tax returns are filed on a combined, consolidated or separate return basis based upon each jurisdiction’s laws and regulations.

In December 2017, tax reform legislation was enacted that changed the maximum corporate tax rate for years 2018 and beyond. As such, deferred tax assets and liabilities were revalued in 2017 to account for the change in future tax rates. Additional information about current and deferred income taxes is provided in Note 9, Income Taxes.

Non-Interest Income

Non-interest income is mainly comprised of revenue from contracts with customers. For that revenue (excluding certain revenue associated with financial instruments, derivative and hedging instruments, guarantees, lease contracts, transferring and servicing of financial assets, and other specific revenue transactions), the Company applies the following five-step approach when recognizing revenue: (i) identify the contract with the customer, (ii) identify the performance obligations, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations, and (v) recognize revenue when (or as) the performance obligation is satisfied. The Company’s contracts with customers are generally short term in nature, with a duration of one year or less, and most contracts are cancellable by either the Company or its customer without penalty. Performance obligations for customer contracts are generally satisfied at a single point in time, typically when the transaction is complete and the customer has received the goods or service, or over time. For performance obligations satisfied over time, the Company recognizes the value of the goods or services transferred to the customer when the performance obligations have been transferred and received by the customer. Payments for satisfied performance obligations are typically due when or as the goods or services are completed, or shortly thereafter, which usually occurs within a single financial reporting period.

In situations where payment is made before the performance obligation is satisfied, the fees are deferred until the performance obligations pertaining to those goods or services are completed. In cases where payment has not been received despite satisfaction of its performance obligations, the Company accrues an estimate of the amount due in the period that the performance obligations have been satisfied. For contracts with variable components, the Company only recognizes revenue to the extent that it is probable that the cumulative amount recognized will not be subject to a significant reversal in future periods. Generally, the Company’s contracts do not include terms that require significant judgment to determine whether a variable component is included within the transaction price. The Company generally acts in a principal capacity, on its own behalf, in most of its contracts with customers. For these transactions, revenue and the related costs to provide the goods or services are presented on a gross basis in the financial statements. In some cases, the Company acts in an agent capacity, deriving revenue through assisting third parties in transactions with the Company’s customers. In such transactions, revenue and the related costs to provide services is presented on a net basis in the financial statements. These transactions primarily relate to fees earned from bank card and related network and rewards costs and the sales of annuities and certain limited insurance products.

Derivatives

Most of the Company's derivative contracts are accounted for as free-standing instruments. These instruments are carried at fair value, and changes in fair value are recognized in current earnings. They include interest rate swaps and caps, which are offered to customers to assist in managing their risks of adverse changes in interest rates. Each contract between the Company and a customer is offset by a contract between the Company and an institutional counterparty, thus minimizing the Company's exposure to rate changes. The Company also enters into certain contracts, known as credit risk participation agreements, to buy or sell credit protection on specific interest rate swaps. It also purchases and sells forward foreign exchange contracts, either in connection with customer transactions, or for its own trading purposes. In 2015, the Company began an origination and sales program of certain personal real estate mortgages. Derivative instruments under this program include mortgage loan commitments, forward loan sale contracts, and forward contracts to sell certain to-be-announced (TBA) securities.

The Company's interest rate risk management policy permits the use of hedge accounting for derivatives, and the Company has entered into interest rate floor contracts as protection from the potential for declining interest rates in the commercial loan portfolio. These floors were designated and qualified as cash flow hedges. In a cash flow hedge, the changes in fair value are recorded in accumulated other comprehensive income and recognized in the income statement when the hedged cash flows affect earnings. Both at hedge inception and on an ongoing basis, the Company assesses whether the interest rate floors used in the hedging relationships are highly effective in offsetting changes in the cash flows of the hedged items.

The Company has master netting arrangements with various counterparties but does not offset derivative assets and liabilities under these arrangements in its consolidated balance sheets. However, interest rate swaps that are executed under central clearing requirements are presented net of variation margin as mandated by the statutory terms of the Company's contract with its clearing counterparty.

Additional information about derivatives held by the Company and valuation methods employed is provided in Note 17, Fair Value Measurements and Note 19, Derivative Instruments.

Pension Plan

The Company’s pension plan is described in Note 10, Employee Benefit Plans. Historically, the Company has reported all components of net periodic pension cost in salaries and employee benefits in its consolidated statements of income. Upon the adoption of ASU 2017-07 "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost", in 2018, only the service cost component of net periodic pension cost is reported in salaries and employee benefits in the accompanying consolidated statements of income, while the other components are reported in other non-interest expense. The funded status of the plan is recognized as an asset or liability in the consolidated balance sheets, and changes in that funded status are recognized in the year in which the changes occur through other comprehensive income. Plan assets and benefit obligations are measured as of the fiscal year end of the plan. The measurement of the projected benefit obligation and pension expense involve actuarial valuation methods and the use of various actuarial and economic assumptions. The Company monitors the assumptions and updates them periodically. Due to the long-term nature of the pension plan obligation, actual results may differ significantly from estimations. Such differences are adjusted over time as the assumptions are replaced by facts and values are recalculated.

Stock-Based Compensation

The Company's stock-based employee compensation plan is described in Note 11, Stock-Based Compensation and Directors Stock Purchase Plan. In accordance with the requirements of ASC 718-10-30-3 and 35-2, the Company measures the cost of stock-based compensation based on the grant-date fair value of the award, recognizing the cost over the requisite service period, which is generally the vesting period. The fair value of an option award is estimated using the Black-Scholes option-pricing model while the fair value of a nonvested stock award is the common stock (CBSH) market price. The expense recognized for stock-based compensation is included in salaries and benefits in the accompanying consolidated statements of income. The Company recognizes forfeitures as a reduction to expense only when they have occurred.

Treasury Stock

Purchases of the Company's common stock are recorded at cost. Upon re-issuance for acquisitions, exercises of stock-based awards or other corporate purposes, treasury stock is reduced based upon the average cost basis of shares held.

Income per Share

Basic income per share is computed using the weighted average number of common shares outstanding during each year. Diluted income per share includes the effect of all dilutive potential common shares (primarily stock appreciation rights) outstanding during each year. The Company applies the two-class method of computing income per share. The two-class method is an earnings allocation formula that determines income per share for common stock and for participating securities, according to dividends declared and participation rights in undistributed earnings. The Company's nonvested stock awards are considered to be a class of participating security. All per share data has been restated to reflect the 5% stock dividend distributed in December 2019.

2. Loans and Allowance for Loan Losses

Major classifications within the Company's held for investment loan portfolio at December 31, 2019 and 2018 are as follows:

(In thousands)	**2019**	2018
Commercial:		
Business	**$ 5,565,449**	$ 5,106,427
Real estate — construction and land	**899,377**	869,659
Real estate — business	**2,833,554**	2,875,788
Personal Banking:		
Real estate — personal	**2,354,760**	2,127,083
Consumer	**1,964,145**	1,955,572
Revolving home equity	**349,251**	376,399
Consumer credit card	**764,977**	814,134
Overdrafts	**6,304**	15,236
Total loans	**$ 14,737,817**	$ 14,140,298

Loans to directors and executive officers of the Parent and the Bank, and to their affiliates, are summarized as follows:

(In thousands)	
Balance at January 1, 2019	$ 46,728
Additions	133,607
Amounts collected	(123,956)
Amounts written off	—
Balance, December 31, 2019	$ 56,379

Management believes all loans to directors and executive officers have been made in the ordinary course of business with normal credit terms, including interest rate and collateral considerations, and do not represent more than a normal risk of collection. The activity in the table above includes draws and repayments on several lines of credit with business entities. There were no outstanding loans at December 31, 2019 to principal holders (over 10% ownership) of the Company's common stock.

The Company's lending activity is generally centered in Missouri, Kansas, Illinois and other nearby states including Oklahoma, Colorado, Iowa, Ohio, Texas, and others. The Company maintains a diversified portfolio with limited industry concentrations of credit risk. Loans and loan commitments are extended under the Company's normal credit standards, controls, and monitoring features. Most loan commitments are short or intermediate term in nature. Commercial loan maturities generally range from one to seven years. Collateral is commonly required and would include such assets as marketable securities and cash equivalent assets, accounts receivable and inventory, equipment, other forms of personal property, and real estate. At December 31, 2019, unfunded loan commitments totaled $11.2 billion (which included $5.1 billion in unused approved lines of credit related to credit card loan agreements) which could be drawn by customers subject to certain review and terms of agreement. At December 31, 2019, loans totaling $4.0 billion were pledged at the FHLB as collateral for borrowings and letters of credit obtained to secure public deposits. Additional loans of $1.6 billion were pledged at the Federal Reserve Bank as collateral for discount window borrowings.

The Company has a net investment in direct financing and sales type leases to commercial and industrial and tax-exempt entities of $795.8 million and $752.2 million at December 31, 2019 and 2018, respectively, which is included in business loans on the Company's consolidated balance sheets. This investment includes deferred income of $71.8 million and $62.6 million at December 31, 2019 and 2018, respectively. The net investment in operating leases amounted to $14.7 million and $16.1 million at December 31, 2019 and 2018, respectively, and is included in other assets on the Company's consolidated balance sheets.

Allowance for loan losses

A summary of the activity in the allowance for losses during the previous three years follows:

(In thousands)	Commercial	Personal Banking	Total
Balance at December 31, 2016	$ 91,361	$ 64,571	$ 155,932
Provision for loan losses	2,327	42,917	45,244
Deductions:			
Loans charged off	2,538	52,641	55,179
Less recoveries	2,554	10,981	13,535
Net loans charged off (recoveries)	(16)	41,660	41,644
Balance at December 31, 2017	93,704	65,828	159,532
Provision for loan losses	254	42,440	42,694
Deductions:			
Loans charged off	3,164	52,657	55,821
Less recoveries	2,075	11,452	13,527
Net loans charged off	1,089	41,205	42,294
Balance at December 31, 2018	92,869	67,063	159,932
Provision for loan losses	**2,816**	**47,622**	**50,438**
Deductions:			
Loans charged off	**4,711**	**57,169**	**61,880**
Less recoveries	**786**	**11,406**	**12,192**
Net loans charged off	**3,925**	**45,763**	**49,688**
Balance at December 31, 2019	**$ 91,760**	**$ 68,922**	**$ 160,682**

The following table shows the balance in the allowance for loan losses and the related loan balance at December 31, 2019 and 2018, disaggregated on the basis of impairment methodology. Impaired loans evaluated under ASC 310-10-35 include loans on non-accrual status which are individually evaluated for impairment and other impaired loans deemed to have similar risk characteristics, which are collectively evaluated. All other loans are collectively evaluated for impairment under ASC 450-20.

	Impaired Loans		All Other Loans	
(In thousands)	Allowance for Loan Losses	Loans Outstanding	Allowance for Loan Losses	Loans Outstanding
December 31, 2019				
Commercial	**$ 1,629**	**$ 64,500**	**$ 90,131**	**$ 9,233,880**
Personal Banking	**1,117**	**17,232**	**67,805**	**5,422,205**
Total	**$ 2,746**	**$ 81,732**	**$ 157,936**	**$ 14,656,085**
December 31, 2018				
Commercial	$ 1,780	$ 61,496	$ 91,089	$ 8,790,378
Personal Banking	916	17,120	66,147	5,271,304
Total	$ 2,696	$ 78,616	$ 157,236	$ 14,061,682

Impaired loans

The table below shows the Company's investment in impaired loans at December 31, 2019 and 2018. These loans consist of all loans on non-accrual status and other restructured loans whose terms have been modified and classified as troubled debt restructurings. These restructured loans are performing in accordance with their modified terms, and because the Company believes it probable that all amounts due under the modified terms of the agreements will be collected, interest on these loans is being recognized on an accrual basis. They are discussed further in the *"Troubled debt restructurings"* section below.

(In thousands)	**2019**	2018
Non-accrual loans	**$ 10,220**	$ 12,536
Restructured loans (accruing)	**71,512**	66,080
Total impaired loans	**$ 81,732**	$ 78,616

The following table provides additional information about impaired loans held by the Company at December 31, 2019 and 2018, segregated between loans for which an allowance for credit losses has been provided and loans for which no allowance has been provided.

(In thousands)	Recorded Investment	Unpaid Principal Balance	Related Allowance
December 31, 2019			
With no related allowance recorded:			
Business	**$ 7,054**	**$ 13,738**	**$ —**
	$ 7,054	**$ 13,738**	**$ —**
With an allowance recorded:			
Business	**$ 30,437**	**$ 30,487**	**$ 837**
Real estate – construction and land	**46**	**51**	**1**
Real estate – business	**26,963**	**27,643**	**791**
Real estate – personal	**4,729**	**5,968**	**258**
Consumer	**4,421**	**4,421**	**35**
Revolving home equity	**35**	**35**	**1**
Consumer credit card	**8,047**	**8,047**	**823**
	$ 74,678	**$ 76,652**	**$ 2,746**
Total	**$ 81,732**	**$ 90,390**	**$ 2,746**
December 31, 2018			
With no related allowance recorded:			
Business	$ 8,725	$ 14,477	$ —
	$ 8,725	$ 14,477	$ —
With an allowance recorded:			
Business	$ 40,286	$ 40,582	$ 1,223
Real estate – construction and land	416	421	11
Real estate – business	12,069	12,699	546
Real estate – personal	4,461	6,236	266
Consumer	5,510	5,510	38
Revolving home equity	40	40	1
Consumer credit card	7,109	7,109	611
	$ 69,891	$ 72,597	$ 2,696
Total	$ 78,616	$ 87,074	$ 2,696

Total average impaired loans during 2019 and 2018 are shown in the table below.

	2019			2018		
(In thousands)	Commercial	Personal Banking	Total	Commercial	Personal Banking	Total
Average impaired loans:						
Non-accrual loans	**$ 9,892**	**$ 2,031**	**$ 11,923**	$ 7,619	$ 2,122	$ 9,741
Restructured loans (accruing)	**49,544**	**15,667**	**65,211**	73,261	16,526	89,787
Total	**$ 59,436**	**$ 17,698**	**$ 77,134**	$ 80,880	$ 18,648	$ 99,528

The table below shows interest income recognized during the years ended December 31, 2019, 2018 and 2017 for impaired loans held at the end of each respective period. This interest all relates to accruing restructured loans, as discussed in the *"Troubled debt restructurings"* section below.

	Years Ended December 31		
(In thousands)	**2019**	2018	2017
Interest income recognized on impaired loans:			
Business	**$ 1,329**	$ 2,219	$ 3,135
Real estate – construction and land	**2**	25	41
Real estate – business	**1,456**	558	514
Real estate – personal	**136**	139	402
Consumer	**286**	305	307
Revolving home equity	**3**	3	10
Consumer credit card	**828**	746	673
Total	**$ 4,040**	$ 3,995	$ 5,082

Delinquent and non-accrual loans

The following table provides aging information on the Company's past due and accruing loans, in addition to the balances of loans on non-accrual status, at December 31, 2019 and 2018.

(In thousands)	Current or Less Than 30 Days Past Due	30 – 89 Days Past Due	90 Days Past Due and Still Accruing	Non-accrual	Total
December 31, 2019					
Commercial:					
Business	**$ 5,545,104**	**$ 12,064**	**$ 792**	**$ 7,489**	**$ 5,565,449**
Real estate – construction and land	**882,826**	**13,046**	**3,503**	**2**	**899,377**
Real estate – business	**2,830,494**	**2,030**	**—**	**1,030**	**2,833,554**
Personal Banking:					
Real estate – personal	**2,345,243**	**6,129**	**1,689**	**1,699**	**2,354,760**
Consumer	**1,928,082**	**34,053**	**2,010**	**—**	**1,964,145**
Revolving home equity	**347,258**	**1,743**	**250**	**—**	**349,251**
Consumer credit card	**742,659**	**10,703**	**11,615**	**—**	**764,977**
Overdrafts	**5,972**	**332**	**—**	**—**	**6,304**
Total	**$ 14,627,638**	**$ 80,100**	**$ 19,859**	**$ 10,220**	**$ 14,737,817**
December 31, 2018					
Commercial:					
Business	$ 5,086,912	$ 10,057	$ 473	$ 8,985	$ 5,106,427
Real estate – construction and land	867,692	1,963	—	4	869,659
Real estate – business	2,867,347	6,704	22	1,715	2,875,788
Personal Banking:					
Real estate – personal	2,118,045	6,041	1,165	1,832	2,127,083
Consumer	1,916,320	35,608	3,644	—	1,955,572
Revolving home equity	374,830	875	694	—	376,399
Consumer credit card	792,334	11,140	10,660	—	814,134
Overdrafts	14,937	299	—	—	15,236
Total	$ 14,038,417	$ 72,687	$ 16,658	$ 12,536	$ 14,140,298

Credit quality

The following table provides information about the credit quality of the Commercial loan portfolio, using the Company's internal rating system as an indicator. The internal rating system is a series of grades reflecting management's risk assessment, based on its analysis of the borrower's financial condition. The "pass" category consists of a range of loan grades that reflect increasing, though still acceptable, risk. Movement of risk through the various grade levels in the "pass" category is monitored for early identification of credit deterioration. The "special mention" rating is applied to loans where the borrower exhibits material negative financial trends due to borrower specific or systemic conditions that, if left uncorrected, threaten its capacity to meet its debt obligations. The borrower is believed to have sufficient financial flexibility to react to and resolve its negative financial situation. It is a transitional grade that is closely monitored for improvement or deterioration. The "substandard" rating is applied to loans where the borrower exhibits well-defined weaknesses that jeopardize its continued performance and are of a severity that the distinct possibility of default exists. Loans are placed on "non-accrual" when management does not expect to collect payments consistent with acceptable and agreed upon terms of repayment.

(In thousands)	Commercial Loans Business	Real Estate - Construction	Real Estate - Business	Total
December 31, 2019				
Pass	**$ 5,393,928**	**$ 856,364**	**$ 2,659,827**	**$ 8,910,119**
Special mention	**80,089**	**42,541**	**92,626**	**215,256**
Substandard	**83,943**	**470**	**80,071**	**164,484**
Non-accrual	**7,489**	**2**	**1,030**	**8,521**
Total	**$ 5,565,449**	**$ 899,377**	**$ 2,833,554**	**$ 9,298,380**
December 31, 2018				
Pass	$ 4,915,042	$ 866,527	$ 2,777,374	$ 8,558,943
Special mention	84,391	1,917	51,845	138,153
Substandard	98,009	1,211	44,854	144,074
Non-accrual	8,985	4	1,715	10,704
Total	$ 5,106,427	$ 869,659	$ 2,875,788	$ 8,851,874

The credit quality of Personal Banking loans is monitored primarily on the basis of aging/delinquency, and this information is provided in the table in the above section on *"Delinquent and non-accrual loans"*. In addition, FICO scores are obtained and updated on a quarterly basis for most of the loans in the Personal Banking portfolio. This is a published credit score designed to measure the risk of default by taking into account various factors from a borrower's financial history. The bank normally obtains a FICO score at the loan's origination and renewal dates, and updates are obtained on a quarterly basis. Excluded from the table below are certain personal real estate loans for which FICO scores are not obtained because the loans generally pertain to commercial customer activities and are often underwritten with other collateral considerations. These loans totaled $198.2 million at December 31, 2019 and $201.7 million at December 31, 2018. The table also excludes consumer loans related to the Company's patient healthcare loan program, which totaled $199.2 million at December 31, 2019 and $170.3 million at December 31, 2018. As the healthcare loans are guaranteed by the hospital, customer FICO scores are not obtained for these loans. The personal real estate loans and consumer loans excluded below totaled less than 8% of the Personal Banking portfolio. For the remainder of loans in the Personal Banking portfolio, the table below shows the percentage of balances outstanding at December 31, 2019 and 2018 by FICO score.

	Personal Banking Loans			
	% of Loan Category			
	Real Estate - Personal	Consumer	Revolving Home Equity	Consumer Credit Card
December 31, 2019				
FICO score:				
Under 600	**1.0%**	**3.0%**	**1.7%**	**5.6%**
600 – 659	**1.9**	**5.2**	**1.9**	**14.3**
660 – 719	**9.2**	**15.4**	**9.0**	**32.2**
720 – 779	**25.7**	**27.0**	**21.5**	**26.6**
780 and over	**62.2**	**49.4**	**65.9**	**21.3**
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**
December 31, 2018				
FICO score:				
Under 600	1.1 %	3.1 %	0.8 %	4.4 %
600 – 659	1.8	4.8	1.7	14.0
660 – 719	9.4	16.1	9.1	34.8
720 – 779	24.7	25.7	24.0	26.4
780 and over	63.0	50.3	64.4	20.4
Total	100.0 %	100.0 %	100.0 %	100.0 %

Troubled debt restructurings

As mentioned previously, the Company's impaired loans include loans which have been classified as troubled debt restructurings, as shown in the table below. Restructured loans are those extended to borrowers who are experiencing financial difficulty and who have been granted a concession. Restructured loans are placed on non-accrual status if the Company does not believe it probable that amounts due under the contractual terms will be collected. Commercial performing restructured loans are primarily comprised of certain business, construction and business real estate loans classified as substandard, but renewed at rates judged to be non-market. These loans are performing in accordance with their modified terms, and because the Company believes it probable that all amounts due under the modified terms of the agreements will be collected, interest on these loans is being recognized on an accrual basis. Troubled debt restructurings also include certain credit card and other small consumer loans under various debt management and assistance programs. Modifications to these loans generally involve removing the available line of credit, placing loans on amortizing status, and lowering the contractual interest rate. Certain personal real estate, revolving home equity, and consumer loans were classified as consumer bankruptcy troubled debt restructurings because they were not reaffirmed by the borrower in bankruptcy proceedings. Interest on these loans is being recognized on an accrual basis, as the borrowers are continuing to make payments. Other consumer loans classified as troubled debt restructurings consist of various other workout arrangements with consumer customers.

	December 31	
(In thousands)	**2019**	2018
Accruing loans:		
Commercial	**$ 55,934**	$ 50,904
Assistance programs	**8,365**	7,410
Consumer bankruptcy	**3,592**	4,103
Other consumer	**3,621**	3,663
Non-accrual loans	**7,938**	9,759
Total troubled debt restructurings	**$ 79,450**	$ 75,839

The table below shows the balance of troubled debt restructurings by loan classification at December 31, 2019, in addition to the outstanding balances of these restructured loans which the Company considers to have been in default at any time during the past twelve months. For purposes of this disclosure, the Company considers "default" to mean 90 days or more past due as to interest or principal.

(In thousands)	December 31, 2019	Balance 90 days past due at any time during previous 12 months
Commercial:		
Business	$ 37,055	$ —
Real estate – construction and land	44	—
Real estate – business	25,933	—
Personal Banking:		
Real estate – personal	3,915	347
Consumer	4,421	83
Revolving home equity	35	—
Consumer credit card	8,047	987
Total troubled debt restructurings	$ 79,450	$ 1,417

For those loans on non-accrual status also classified as restructured, the modification did not create any further financial effect on the Company as those loans were already recorded at net realizable value. For those performing commercial loans classified as restructured, there were no concessions involving forgiveness of principal or interest and, therefore, there was no financial impact to the Company as a result of modification to these loans. No financial impact resulted from those performing loans where the debt was not reaffirmed in bankruptcy, as no changes to loan terms occurred in that process. However, the effects of modifications to loans under various debt management and assistance programs were estimated to decrease interest income by approximately $1.2 million on an annual, pre-tax basis, compared to amounts contractually owed. Other modifications to consumer loans mainly involve extensions and other small modifications that did not include the forgiveness of principal or interest.

The allowance for loan losses related to troubled debt restructurings on non-accrual status is determined by individual evaluation, including collateral adequacy, using the same process as loans on non-accrual status which are not classified as troubled debt restructurings. Those performing loans classified as troubled debt restructurings are accruing loans which management expects to collect under contractual terms. Performing commercial loans having no other concessions granted other than being renewed at non-market interest rates are judged to have similar risk characteristics as non-troubled debt commercial loans and are collectively evaluated based on internal risk rating, loan type, delinquency, historical experience and current economic factors. Performing personal banking loans classified as troubled debt restructurings resulted from the borrower not reaffirming the debt during bankruptcy and have had no other concession granted, other than the Bank's future limitations on collecting payment deficiencies or in pursuing foreclosure actions. As such, they have similar risk characteristics as non-troubled debt personal banking loans and are evaluated collectively based on loan type, delinquency, historical experience and current economic factors.

If a troubled debt restructuring defaults and is already on non-accrual status, the allowance for loan losses continues to be based on individual evaluation, using discounted expected cash flows or the fair value of collateral. If an accruing, troubled debt restructuring defaults, the loan's risk rating is downgraded to non-accrual status and the loan's related allowance for loan losses is determined based on individual evaluation, or if necessary, the loan is charged off and collection efforts begin.

The Company had commitments of $4.7 million at December 31, 2019 to lend additional funds to borrowers with restructured loans, compared to $1.8 million at December 31, 2018.

Loans held for sale

The Company designates certain long-term fixed rate personal real estate loans as held for sale, and the Company has elected the fair value option for these loans. The election of the fair value option aligns the accounting for these loans with the related economic hedges discussed in Note 19. The loans are primarily sold to FNMA, FHLMC, and GNMA. At December 31, 2019, the fair value of these loans was $9.2 million, and the unpaid principal balance was $8.9 million.

The Company also designates certain student loan originations as held for sale. The borrowers are credit-worthy students who are attending colleges and universities. The loans are intended to be sold in the secondary market, and the Company maintains contracts with Sallie Mae to sell the loans within 210 days after the last disbursement to the student. These loans are carried at lower of cost or fair value, which totaled $4.6 million at December 31, 2019.

At December 31, 2019, none of the loans held for sale were on non-accrual status or 90 days past due and still accruing.

Foreclosed real estate/repossessed assets

The Company’s holdings of foreclosed real estate totaled $365 thousand and $1.4 million at December 31, 2019 and 2018, respectively. Personal property acquired in repossession, generally autos and marine and recreational vehicles (RV), totaled $5.5 million and $2.0 million at December 31, 2019 and 2018, respectively. The December 31, 2019 balance of repossessed assets also included trailers with an asset value of $3.4 million, which were acquired due to the bankruptcy of a single leasing customer. Upon acquisition, these assets are recorded at fair value less estimated selling costs at the date of foreclosure, establishing a new cost basis. They are subsequently carried at the lower of this cost basis or fair value less estimated selling costs.

3. Investment Securities

Investment securities, at fair value, consisted of the following at December 31, 2019 and 2018:

(In thousands)	**2019**	2018
Available for sale debt securities	**$ 8,571,626**	$ 8,538,041
Trading debt securities	**28,161**	27,059
Equity securities:		
Readily determinable fair value	**2,929**	2,585
No readily determinable fair value	**1,280**	1,824
Other:		
Federal Reserve Bank stock	**33,770**	33,498
Federal Home Loan Bank stock	**10,000**	10,000
Private equity investments	**94,122**	85,659
Total investment securities	**$ 8,741,888**	$ 8,698,666

The Company has elected to measure equity securities with no readily determinable fair value at cost minus impairment, if any, plus or minus changes resulting from observable price changes for the identical or similar investment of the same issuer. This portfolio includes the Company's holdings of Visa Class B shares, which have a carrying value of zero, as there have not been observable price changes in orderly transactions for identical or similar investments of the same issuer. During the year-ended December 31, 2019, the Company did not record any impairment or other adjustments to the carrying amount of its portfolio of equity securities with no readily determinable fair value.

Other investment securities include Federal Reserve Bank (FRB) stock, Federal Home Loan Bank (FHLB) stock, and investments in portfolio concerns held by the Company's private equity subsidiaries. FRB stock and FHLB stock are held for debt and regulatory purposes. Investment in FRB stock is based on the capital structure of the investing bank, and investment in FHLB stock is tied to the level of borrowings from the FHLB. These holdings are carried at cost. The private equity investments, in the absence of readily ascertainable market values, are carried at estimated fair value.

The majority of the Company's investment portfolio is comprised of available for sale debt securities, which are carried at fair value with changes in fair value reported in accumulated other comprehensive income (AOCI). A summary of the available for sale debt securities by maturity groupings as of December 31, 2019 is shown in the following table. The weighted average yield for each range of maturities was calculated using the yield on each security within that range weighted by the amortized cost of each security at December 31, 2019. Yields on tax exempt securities have not been adjusted for tax exempt status. The investment portfolio includes agency mortgage-backed securities, which are guaranteed by agencies such as FHLMC, FNMA, GNMA and FDIC, in addition to non-agency mortgage-backed securities, which have no guarantee but are collateralized by residential and commercial mortgages. Also included are certain other asset-backed securities, which are primarily collateralized by credit cards, automobiles, student loans, and commercial loans. These securities differ from traditional debt securities primarily in that they may have uncertain maturity dates and are priced based on estimated prepayment rates on the underlying collateral.

(Dollars in thousands)	Amortized Cost	Fair Value	Weighted Average Yield
U.S. government and federal agency obligations:			
Within 1 year	$ 57,234	$ 57,192	(.01)*%
After 1 but within 5 years	518,035	533,805	2.17*
After 5 but within 10 years	252,592	260,779	.59*
Total U.S. government and federal agency obligations	827,861	851,776	1.54*
Government-sponsored enterprise obligations:			
Within 1 year	81,616	81,830	1.99
After 10 years	57,118	57,447	2.65
Total government-sponsored enterprise obligations	138,734	139,277	2.26
State and municipal obligations:			
Within 1 year	51,230	51,540	2.55
After 1 but within 5 years	740,283	763,396	2.42
After 5 but within 10 years	377,009	395,014	2.56
After 10 years	57,010	57,977	2.92
Total state and municipal obligations	1,225,532	1,267,927	2.49
Mortgage and asset-backed securities:			
Agency mortgage-backed securities	3,893,247	3,937,964	2.87
Non-agency mortgage-backed securities	796,451	809,782	2.98
Asset-backed securities	1,228,151	1,233,489	2.61
Total mortgage and asset-backed securities	5,917,849	5,981,235	2.83
Other debt securities:			
Within 1 year	51,998	52,180	
After 1 but within 5 years	218,950	222,770	
After 5 but within 10 years	54,607	56,461	
Total other debt securities	325,555	331,411	
Total available for sale debt securities	$ 8,435,531	$ 8,571,626	

** Rate does not reflect inflation adjustment on inflation-protected securities*

Investments in U.S. government and federal agency obligations include U.S. Treasury inflation-protected securities, which totaled $461.8 million, at fair value, at December 31, 2019. Interest paid on these securities increases with inflation and decreases with deflation, as measured by the Consumer Price Index. At maturity, the principal paid is the greater of an inflation-adjusted principal or the original principal. Included in state and municipal obligations are $9.9 million, at fair value, of auction rate securities, which were purchased from bank customers in 2008. Interest on these bonds is currently being paid at the maximum failed auction rates.

For debt securities classified as available for sale, the following table shows the unrealized gains and losses (pre-tax) in AOCI, by security type.

(In thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 31, 2019				
U.S. government and federal agency obligations	**$ 827,861**	**$ 23,957**	**$ (42)**	**$ 851,776**
Government-sponsored enterprise obligations	**138,734**	**730**	**(187)**	**139,277**
State and municipal obligations	**1,225,532**	**42,427**	**(32)**	**1,267,927**
Mortgage and asset-backed securities:				
Agency mortgage-backed securities	**3,893,247**	**50,890**	**(6,173)**	**3,937,964**
Non-agency mortgage-backed securities	**796,451**	**14,036**	**(705)**	**809,782**
Asset-backed securities	**1,228,151**	**11,056**	**(5,718)**	**1,233,489**
Total mortgage and asset-backed securities	**5,917,849**	**75,982**	**(12,596)**	**5,981,235**
Other debt securities	**325,555**	**5,863**	**(7)**	**331,411**
Total	**$ 8,435,531**	**$ 148,959**	**$ (12,864)**	**$ 8,571,626**
December 31, 2018				
U.S. government and federal agency obligations	$ 914,486	$ 4,545	$ (11,379)	$ 907,652
Government-sponsored enterprise obligations	199,470	55	(3,747)	195,778
State and municipal obligations	1,322,785	10,284	(5,030)	1,328,039
Mortgage and asset-backed securities:				
Agency mortgage-backed securities	3,253,433	9,820	(48,268)	3,214,985
Non-agency mortgage-backed securities	1,053,854	6,641	(12,779)	1,047,716
Asset-backed securities	1,518,976	3,849	(11,211)	1,511,614
Total mortgage and asset-backed securities	5,826,263	20,310	(72,258)	5,774,315
Other debt securities	339,595	72	(7,410)	332,257
Total	$ 8,602,599	$ 35,266	$ (99,824)	$ 8,538,041

The Company's impairment policy requires a review of all securities for which fair value is less than amortized cost. Special emphasis is placed on securities whose credit rating has fallen below Baa3 (Moody's) or BBB- (Standard & Poor's), whose fair values have fallen more than 20% below purchase price for an extended period of time, or those which have been identified based on management's judgment. These securities are placed on a watch list and cash flow analyses are prepared on an individual security basis. Inputs to these models include factors such as cash flow projections, contractual payments required, expected delinquency rates, credit support from other tranches, prepayment speeds, collateral loss severity rates (including loan to values), and various other information related to the underlying collateral (including current delinquencies). Stress tests are performed at varying levels of delinquency rates, prepayment speeds and loss severities in order to gauge probable ranges of credit loss. At December 31, 2019, the fair value of securities on this watch list was $51.6 million compared to $57.7 million at December 31, 2018.

As of December 31, 2019, the Company had recorded other-than-temporary impairment (OTTI) on certain non-agency mortgage-backed securities with a current par value of $17.5 million. These securities, which are part of the watch list mentioned above, had an aggregate fair value of $13.1 million at December 31, 2019. The cumulative credit-related portion of the impairment on these securities, which was recorded in earnings, totaled $13.3 million. The Company does not intend to sell these securities and believes it is not likely that it will be required to sell the securities before the recovery of their amortized cost.

The credit-related portion of the loss on these securities was based on the cash flows projected to be received over the estimated life of the securities, discounted to present value, and compared to the current amortized cost bases of the securities. Significant inputs to the cash flow models used to calculate the credit losses on these securities at December 31, 2019 included the following:

Significant Inputs	Range
Prepayment CPR	0% - 25%
Projected cumulative default	9% - 52%
Credit support	0% - 20%
Loss severity	8% - 63%

The following table presents a rollforward of the cumulative OTTI credit losses recognized in earnings on all available for sale debt securities.

(In thousands)	**2019**	2018	2017
Cumulative OTTI credit losses at January 1	**$ 14,092**	$ 14,199	$ 14,080
Credit losses on debt securities for which impairment was not previously recognized	**48**	58	111
Credit losses on debt securities for which impairment was previously recognized	**85**	10	274
Increase in expected cash flows that are recognized over remaining life of security	**(950)**	(175)	(266)
Cumulative OTTI credit losses at December 31	**$ 13,275**	$ 14,092	$ 14,199

Debt securities with unrealized losses recorded in AOCI are shown in the table below, along with the length of the impairment period.

	Less than 12 months		12 months or longer		Total	
(In thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
December 31, 2019						
U.S. government and federal agency obligations	**$ 31,787**	**$ 21**	**$ 25,405**	**$ 21**	**$ 57,192**	**$ 42**
Government-sponsored enterprise obligations	**6,155**	**187**	**—**	**—**	**6,155**	**187**
State and municipal obligations	**6,700**	**31**	**1,554**	**1**	**8,254**	**32**
Mortgage and asset-backed securities:						
Agency mortgage-backed securities	**652,352**	**5,306**	**147,653**	**867**	**800,005**	**6,173**
Non-agency mortgage-backed securities	**102,931**	**254**	**189,747**	**451**	**292,678**	**705**
Asset-backed securities	**330,876**	**3,610**	**152,461**	**2,108**	**483,337**	**5,718**
Total mortgage and asset-backed securities	**1,086,159**	**9,170**	**489,861**	**3,426**	**1,576,020**	**12,596**
Other debt securities	**5,496**	**4**	**997**	**3**	**6,493**	**7**
Total	**$ 1,136,297**	**$ 9,413**	**$ 517,817**	**$ 3,451**	**$ 1,654,114**	**$ 12,864**
December 31, 2018						
U.S. government and federal agency obligations	$ 317,699	$ 6,515	$ 116,728	$ 4,864	$ 434,427	$ 11,379
Government-sponsored enterprise obligations	—	—	188,846	3,747	188,846	3,747
State and municipal obligations	157,838	704	257,051	4,326	414,889	5,030
Mortgage and asset-backed securities:						
Agency mortgage-backed securities	330,933	1,502	1,927,268	46,766	2,258,201	48,268
Non-agency mortgage-backed securities	207,506	1,085	657,685	11,694	865,191	12,779
Asset-backed securities	147,997	728	813,427	10,483	961,424	11,211
Total mortgage and asset-backed securities	686,436	3,315	3,398,380	68,943	4,084,816	72,258
Other debt securities	51,836	564	260,682	6,846	312,518	7,410
Total	$ 1,213,809	$ 11,098	$ 4,221,687	$ 88,726	$ 5,435,496	$ 99,824

The available for sale debt portfolio included $1.7 billion of securities that were in a loss position at December 31, 2019, compared to $5.4 billion at December 31, 2018. The total amount of unrealized loss on these securities was $12.9 million at December 31, 2019, a decrease of $87.0 million compared to the unrealized loss at December 31, 2018. This decrease in losses was mainly due to a declining interest rate environment.

The following table presents proceeds from sales of securities and the components of investment securities gains and losses which have been recognized in earnings.

	For the Year Ended December 31		
(In thousands)	**2019**	2018	2017
Proceeds from sales of securities:			
Available for sale debt securities	**$ 402,103**	$ 667,227	$ 779,793
Equity securities	**3,856**	41,637	10,953
Other	**7,244**	—	1,634
Total proceeds	**$ 413,203**	$ 708,864	$ 792,380
Investment securities gains (losses), net:			
Available for sale debt securities:			
Losses realized on called bonds	**$ —**	$ —	$ (254)
Gains realized on sales	**2,354**	448	592
Losses realized on sales	**(2,568)**	(10,101)	(10,287)
Other-than-temporary impairment recognized on debt securities	**(133)**	(68)	(385)
Equity securities:			
Gains realized on donations of securities	**—**	—	31,074
Gains realized on sales	**3,262**	1,759	10,653
Losses realized on sales	—	(8,917)	(10)
Fair value adjustments, net	**344**	2,542	—
Other:			
Gains realized on sales	**1,094**	—	381
Losses realized on sales	—	—	(880)
Fair value adjustments, net	**(727)**	13,849	(5,833)
Total investment securities gains (losses), net	**$ 3,626**	$ (488)	$ 25,051

Investment securities with a fair value of $4.3 billion were pledged at both December 31, 2019 and 2018 to secure public deposits, securities sold under repurchase agreements, trust funds, and borrowings at the Federal Reserve Bank. Securities pledged under agreements pursuant to which the collateral may be sold or re-pledged by the secured parties approximated $204.9 million, while the remaining securities were pledged under agreements pursuant to which the secured parties may not sell or re-pledge the collateral. Except for obligations of various government-sponsored enterprises such as FNMA, FHLB and FHLMC, no investment in a single issuer exceeds 10% of stockholders' equity.

4. Premises and Equipment

Premises and equipment consist of the following at December 31, 2019 and 2018:

(In thousands)	**2019**	2018
Land	**$ 91,678**	$ 91,603
Buildings and improvements	**566,177**	545,510
Equipment	**237,047**	226,666
Right of use leased assets	**28,195**	—
Total	**923,097**	863,779
Less accumulated depreciation	**552,460**	530,660
Net premises and equipment	**$ 370,637**	$ 333,119

Depreciation expense of $30.8 million in 2019, $28.6 million in 2018 and $29.1 million in 2017, was included in occupancy expense and equipment expense in the consolidated statements of income. Repairs and maintenance expense of $17.0 million, $16.9 million and $16.4 million for 2019, 2018 and 2017, respectively, was included in occupancy expense and equipment expense. There has been no interest expense capitalized on construction projects in the past three years.

Right of use leased assets are comprised mainly of operating leases for branches, office space, ATM locations, and certain equipment, as described in Note 6.

5. Goodwill and Other Intangible Assets

The following table presents information about the Company's intangible assets which have estimable useful lives.

	December 31, 2019				December 31, 2018			
(In thousands)	**Gross Carrying Amount**	**Accumulated Amortization**	**Valuation Allowance**	**Net Amount**	Gross Carrying Amount	Accumulated Amortization	Valuation Allowance	Net Amount
Amortizable intangible assets:								
Core deposit premium	**$ 31,270**	**$ (29,485)**	**$ —**	**$ 1,785**	$ 31,270	$ (28,954)	$ —	$ 2,316
Mortgage servicing rights	**12,942**	**(4,866)**	**(327)**	**7,749**	10,339	(3,861)	—	6,478
Total	**$ 44,212**	**$ (34,351)**	**$ (327)**	**$ 9,534**	$ 41,609	$ (32,815)	$ —	$ 8,794

The carrying amount of goodwill and its allocation among segments at December 31, 2019 and 2018 is shown in the table below. As a result of ongoing assessments, no impairment of goodwill was recorded in 2019, 2018 or 2017. Further, the annual assessment of qualitative factors on January 1, 2020 revealed no likelihood of impairment as of that date.

(In thousands)	**December 31, 2019**	December 31, 2018
Consumer segment	**$ 70,721**	$ 70,721
Commercial segment	**67,454**	67,454
Wealth segment	**746**	746
Total goodwill	**$ 138,921**	$ 138,921

Changes in the net carrying amount of goodwill and other net intangible assets for the years ended December 31, 2019 and 2018 are shown in the following table.

(In thousands)	Goodwill	Core Deposit Premium	Mortgage Servicing Rights
Balance at December 31, 2017	$ 138,921	$ 2,965	$ 4,653
Originations	—	—	2,433
Amortization	—	(649)	(617)
Impairment reversal	—	—	9
Balance at December 31, 2018	138,921	2,316	6,478
Originations	—	—	**2,603**
Amortization	—	**(531)**	**(1,005)**
Impairment	—	—	**(327)**
Balance at December 31, 2019	**$ 138,921**	**$ 1,785**	**$ 7,749**

Mortgage servicing rights (MSRs) are initially recorded at fair value and subsequently amortized over the period of estimated servicing income. They are periodically reviewed for impairment at a tranche level, and if impairment is indicated, recorded at fair value. Temporary impairment, including impairment recovery, is effected through a change in a valuation allowance. At December 31, 2019, temporary impairment of $327 thousand had been recognized. The fair value of the MSRs is based on the present value of expected future cash flows, as further discussed in Note 17 on Fair Value Measurements.

Aggregate amortization expense on intangible assets for the years ended December 31, 2019, 2018 and 2017 was $1.5 million, $1.3 million and $1.3 million, respectively. The following table shows the estimated future amortization expense based on existing asset balances and the interest rate environment as of December 31, 2019. The Company’s actual amortization expense in any given period may be different from the estimated amounts depending upon the acquisition of intangible assets, changes in mortgage interest rates, prepayment rates and other market conditions.

(In thousands)	
2020	$ 1,507
2021	1,286
2022	1,099
2023	919
2024	770

6. Leases

The Company adopted ASU 2016-02, "Leases", and its related amendments on January 1, 2019 using a modified retrospective approach. The Company's leasing activities include leasing certain real estate and equipment, providing lease financing to commercial customers, and leasing office space to third parties. The Company adopted the package of practical expedients permitted within the new standard, along with the lease component expedient for all lease classes and the disclosure expedient. The Company uses the FHLB fixed-advance rate at lease commencement or at any subsequent remeasurement event date based on the remaining lease term to calculate the liability for each lease.

Lessee

The Company primarily has operating leases for branches, office space, ATM locations, and certain equipment. As of December 31, 2019, the right-of-use asset for operating leases, reported within premises and equipment, net, and lease liability, reported within other liabilities, recognized on the Company's consolidated balance sheets totaled $26.3 million and $27.0 million, respectively. Total lease cost for the year ended December 31, 2019 was $7.3 million. For leases with a term of 12 months or less, an election was made not to recognize lease assets and lease liabilities for all asset classes, and to recognize lease expense for these leases on a straight-line basis over the lease term. The Company's leases have remaining terms of 1 month to 34 years, most of which contain renewal options. However, the renewal options are generally not included in the leased asset or liability because the option exercises are uncertain.

The maturities of operating leases are included in the table below.

(in thousands)		**Operating Leases**[(1)]
2020	**$**	**5,913**
2021		**5,001**
2022		**4,304**
2023		**3,802**
2024		**2,530**
After 2024		**12,600**
Total lease payments	**$**	**34,150**
Less: Interest[(2)]		**7,126**
Present value of lease liabilities	**$**	**27,024**

(1) Excludes $6.5 million of legally binding minimum lease payments for operating leases signed but not yet commenced.
(2) Calculated using the interest rate for each lease.

The following table presents the average lease term and discount rate of operating leases.

	December 31, 2019
Weighted-average remaining lease term	**11.7 years**
Weighted-average discount rate	**3.67%**

Supplemental cash flow information related to operating leases is included in the table below.

(in thousands)		**For the Year Ended December 31 2019**
Operating cash paid toward lease liabilities	**$**	**5,989**
Leased assets obtained in exchange for new lease liabilities	**$**	**3,958**

The Company adopted the new lease standard using the effective date as the date of initial application as noted above, and as required, the table below provides the disclosure for periods prior to adoption. Under ASC Topic 840, *Leases*, rent expense amounted to $7.7 million and $7.3 million in 2018 and 2017, respectively. Future minimum lease payments as of December 31, 2018 are shown below, which include leases that have not yet commenced.

(in thousands) Year Ended December 31		Total
2019	$	5,763
2020		4,817
2021		4,055
2022		3,598
2023		3,273
After		15,161
Total minimum lease payments	$	36,667

Lessor

The Company has net investments in direct financing and sales-type leases to commercial, industrial, and tax-exempt entities. These leases are included within business loans on the Company's consolidated balance sheets. The Company primarily leases various types of equipment, trucks and trailers, and office furniture and fixtures. Lease agreements may include options for the lessee to renew or purchase the leased equipment at the end of the lease term. The Company has elected to adopt the lease component expedient in which the lease and nonlease components are combined into the total lease receivable. The Company also leases office space to third parties, and these leases are classified as operating leases. The leases may include options to renew or to expand the leased space, and currently the leases have remaining terms of 1 month to 8 years.

The following table provides the components of lease income.

	For the Year Ended December 31	
(in thousands)	**2019**	
Direct financing and sales-type leases		24,062
Operating leases[1]		7,951
Total lease income	**$**	**32,013**

(1) Includes rent of $75 thousand from Tower Properties Company, a related party.

The following table presents the components of the net investments in direct financing and sales-type leases.

(in thousands)	**December 31, 2019**	
Lease payment receivable	$	738,809
Unguaranteed residual assets		53,408
Total net investments in direct financing and sales-type leases	**$**	**792,217**
Deferred origination cost		3,609
Total net investment included within business loans	**$**	**795,826**

The maturities of lease receivables are included in the table below.

(in thousands)		Direct Financing and Sale-Type Leases		Operating Leases		Total
2020	$	224,297	$	7,564	$	231,861
2021		177,143		7,511		184,654
2022		136,787		13,816		150,603
2023		92,813		5,536		98,349
2024		58,773		4,811		63,584
After 2024		114,188		8,643		122,831
Total lease receipts		**804,001**	**$**	**47,881**	**$**	**851,882**
Less: Net present value adjustment		65,192				
Present value of lease receipts	**$**	**738,809**				

7. Deposits

At December 31, 2019, the scheduled maturities of certificates of deposit were as follows:

(In thousands)		
Due in 2020	$	1,727,042
Due in 2021		229,487
Due in 2022		27,205
Due in 2023		14,387
Due in 2024		9,838
Thereafter		53
Total	**$**	**2,008,012**

The following table shows a detailed breakdown of the maturities of certificates of deposit, by size category, at December 31, 2019.

(In thousands)		Certificates of Deposit under $100,000		Certificates of Deposit over $100,000		Total
Due in 3 months or less	$	117,635	$	632,064	$	749,699
Due in over 3 through 6 months		144,309		286,240		430,549
Due in over 6 through 12 months		223,756		323,038		546,794
Due in over 12 months		140,457		140,513		280,970
Total	**$**	**626,157**	**$**	**1,381,855**	**$**	**2,008,012**

The aggregate amount of certificates of deposit that exceeded the $250,000 FDIC insurance limit totaled $1.1 billion at December 31, 2019.

8. Borrowings

At December 31, 2019, the Company's borrowings primarily consisted of federal funds purchased and securities sold under agreements to repurchase (repurchase agreements). The following table sets forth selected information for federal funds purchased and repurchase agreements.

(Dollars in thousands)	Year End Weighted Rate	Average Weighted Rate		Average Balance Outstanding		Maximum Outstanding at any Month End		Balance at December 31
Federal funds purchased and repurchase agreements:								
2019	**.8%**	**1.6%**	**$**	**1,822,098**	**$**	**2,394,294**	**$**	**1,850,772**
2018	.9	1.3		1,514,144		1,981,761		1,956,389
2017	.8	.7		1,462,387		1,984,071		1,507,138

Federal funds purchased and repurchase agreements comprised the majority of the Company's short-term borrowings (borrowings with an original maturity of less than one year) at December 31, 2019, and $1.8 billion of these borrowings were repurchase agreements, which generally have one day maturities and are mainly comprised of non-insured customer funds secured by a portion of the Company's investment portfolio. Additional information about the securities pledged for repurchase agreements is provided in Note 20 on Resale and Repurchase Agreements.

The Bank is a member of the Des Moines FHLB and has access to term financing from the FHLB. These borrowings are secured under a blanket collateral agreement including primarily residential mortgages as well as all unencumbered assets and stock of the borrowing bank. At December 31, 2019, the Bank had no outstanding advances from the FHLB. The FHLB also issues letters of credit to secure the Bank's obligations to certain depositors of public funds, which totaled $396.6 million at December 31, 2019.

9. Income Taxes

The components of income tax expense from operations for the years ended December 31, 2019, 2018 and 2017 were as follows:

(In thousands)	Current	Deferred	Total
Year ended December 31, 2019:			
U.S. federal	**$ 82,556**	**$ 11,388**	**$ 93,944**
State and local	**12,323**	**2,807**	**15,130**
Total	**$ 94,879**	**$ 14,195**	**$ 109,074**
Year ended December 31, 2018:			
U.S. federal	$ 90,390	$ 3,220	$ 93,610
State and local	10,223	2,116	12,339
Total	$ 100,613	$ 5,336	$ 105,949
Year ended December 31, 2017:			
U.S. federal	$ 89,154	$ 12,190	$ 101,344
State and local	7,735	1,427	9,162
Total	$ 96,889	$ 13,617	$ 110,506

The components of income tax (benefit) expense recorded directly to stockholders' equity for the years ended December 31, 2019, 2018 and 2017 were as follows:

(In thousands)	**2019**	2018	2017
Unrealized gain (loss) on available for sale debt securities	**$ 50,163**	$ (18,634)	$ 2,104
Change in fair value on cash flow hedges	**7,818**	2,286	—
Accumulated pension (benefit) loss	**389**	222	(184)
Income tax (benefit) expense allocated to stockholders' equity	**$ 58,370**	$ (16,126)	$ 1,920

Significant components of the Company's deferred tax assets and liabilities at December 31, 2019 and 2018 were as follows:

(In thousands)	**2019**	2018
Deferred tax assets:		
Loans, principally due to allowance for loan losses	**$ 39,130**	$ 39,169
Unrealized loss on available for sale debt securities	—	16,140
Equity-based compensation	**7,554**	7,609
Deferred compensation	**6,662**	5,911
Unearned fee income	**5,053**	4,125
Accrued expenses	**4,270**	2,152
Other	**4,057**	4,640
Total deferred tax assets	**66,726**	79,746
Deferred tax liabilities:		
Equipment lease financing	**68,814**	55,738
Unrealized gain on available for sale debt securities	**34,024**	—
Land, buildings and equipment	**17,202**	14,207
Cash flow hedges	**9,015**	2,104
Intangibles	**6,491**	5,973
Other	**7,331**	5,309
Total deferred tax liabilities	**142,877**	83,331
Net deferred tax liabilities	**$ (76,151)**	$ (3,585)

Management believes it is more likely than not that the results of future operations will generate sufficient taxable income to realize the total deferred tax assets.

A reconciliation between the expected federal income tax expense using the federal statutory tax rate and the Company's actual income tax expense is provided below. The federal statutory tax rate was 21% in 2019 and 2018, and 35% in 2017. The effective tax rate is calculated by dividing income taxes by income before income taxes less the non-controlling interest expense.

(In thousands)	**2019**	2018	2017
Computed "expected" tax expense	**$ 111,364**	$ 113,293	$ 150,461
Increase (decrease) in income taxes resulting from:			
Tax-exempt interest, net of cost to carry	**(10,973)**	(11,502)	(20,295)
Contribution of appreciated securities	**—**	—	(10,864)
State and local income taxes, net of federal tax benefit	**11,953**	9,748	5,955
Tax reform enactment	**—**	—	(6,753)
Share-based award payments	**(3,337)**	(3,928)	(6,613)
Other	**67**	(1,662)	(1,385)
Total income tax expense	**$ 109,074**	$ 105,949	$ 110,506

The gross amount of unrecognized tax benefits was $1.4 million and $1.3 million at December 31, 2019 and 2018, respectively, and the total amount of unrecognized tax benefits that would impact the effective tax rate, if recognized, was $1.1 million and $993 thousand, respectively. The activity in the accrued liability for unrecognized tax benefits for the years ended December 31, 2019 and 2018 was as follows:

(In thousands)	**2019**	2018
Unrecognized tax benefits at beginning of year	**$ 1,257**	$ 1,208
Gross increases – tax positions in prior period	**18**	31
Gross decreases – tax positions in prior period	**(4)**	—
Gross increases – current-period tax positions	**361**	322
Lapse of statute of limitations	**(260)**	(304)
Unrecognized tax benefits at end of year	**$ 1,372**	$ 1,257

The Company and its subsidiaries are subject to income tax by federal, state and local government taxing authorities. Tax years 2016 through 2019 remain open to examination for U.S. federal income tax and for major state taxing jurisdictions.

10. Employee Benefit Plans

Employee benefits charged to operating expenses are summarized in the table below. Substantially all of the Company's employees are covered by a defined contribution (401(k)) plan, under which the Company makes matching contributions.

(In thousands)	**2019**	2018	2017
Payroll taxes	**$ 26,959**	$ 25,712	$ 24,402
Medical plans	**29,635**	27,030	25,143
401(k) plan	**15,810**	14,986	14,244
Pension plans	**605**	651	704
Other	**3,049**	2,918	2,883
Total employee benefits	**$ 76,058**	$ 71,297	$ 67,376

A portion of the Company's employees are covered by a noncontributory defined benefit pension plan, however, participation in the pension plan is not available to employees hired after June 30, 2003. All participants are fully vested in their benefit payable upon normal retirement date, which is based on years of participation and compensation. Since January 2011, all benefits accrued under the pension plan have been frozen. However, the accounts continue to accrue interest at a stated annual rate. Certain key executives also participate in a supplemental executive retirement plan (the CERP) that the Company funds only as retirement benefits are disbursed. The CERP carries no segregated assets. The CERP continues to provide credits based on hypothetical contributions in excess of those permitted under the 401(k) plan. In the tables presented below, the pension plan and the CERP are presented on a combined basis.

Under the Company's funding policy for the defined benefit pension plan, contributions are made to a trust as necessary to satisfy the statutory minimum required contribution as defined by the Pension Protection Act, which is intended to provide for current service accruals and for any unfunded accrued actuarial liabilities over a reasonable period. To the extent that these requirements are fully covered by assets in the trust, a contribution might not be made in a particular year. No contributions to the defined benefit plan were made in 2019 or 2018. The Company made a discretionary contribution of $5.5 million to its defined benefit pension plan in 2017 in order to reduce pension guarantee premiums. The minimum required contribution for 2020 is expected to be zero. The Company does not expect to make any further contributions in 2020 other than the necessary funding contributions to the CERP. Contributions to the CERP were $25 thousand, $24 thousand and $439 thousand during 2019, 2018 and 2017, respectively.

The following items are components of the net pension cost for the years ended December 31, 2019, 2018 and 2017.

(In thousands)		**2019**		2018		2017
Service cost-benefits earned during the year	**$**	**607**	$	651	$	621
Interest cost on projected benefit obligation		**4,198**		3,756		3,826
Expected return on plan assets		**(4,842)**		(5,255)		(5,785)
Amortization of prior service cost		**(271)**		(271)		(271)
Amortization of unrecognized net loss		**2,288**		2,267		2,313
Net periodic pension cost	**$**	**1,980**	$	1,148	$	704

The following table sets forth the pension plans' funded status, using valuation dates of December 31, 2019 and 2018.

(In thousands)		**2019**		2018
Change in projected benefit obligation				
Projected benefit obligation at prior valuation date	**$**	**112,063**	$	120,667
Service cost		**607**		651
Interest cost		**4,198**		3,756
Benefits paid		**(7,016)**		(6,622)
Actuarial (gain) loss		**10,750**		(6,389)
Projected benefit obligation at valuation date		**120,602**		112,063
Change in plan assets				
Fair value of plan assets at prior valuation date		**99,418**		108,260
Actual return on plan assets		**15,129**		(2,244)
Employer contributions		**25**		24
Benefits paid		**(7,016)**		(6,622)
Fair value of plan assets at valuation date		**107,556**		99,418
Funded status and net amount recognized at valuation date	**$**	**(13,046)**	$	(12,645)

The accumulated benefit obligation, which represents the liability of a plan using only benefits as of the measurement date, was $120.6 million and $112.1 million for the combined plans on December 31, 2019 and 2018, respectively.

Amounts not yet reflected in net periodic benefit cost and included in accumulated other comprehensive income (loss) at December 31, 2019 and 2018 are shown below, including amounts recognized in other comprehensive income during the periods. All amounts are shown on a pre-tax basis.

(In thousands)		**2019**		2018
Prior service cost	**$**	**1,265**	$	1,535
Accumulated loss		**(30,516)**		(32,342)
Accumulated other comprehensive loss		**(29,251)**		(30,807)
Cumulative employer contributions in excess of net periodic benefit cost		**16,205**		18,162
Net amount recognized as an accrued benefit liability on the December 31 balance sheet	**$**	**(13,046)**	$	(12,645)
Net loss arising during period		**(461)**		(1,110)
Amortization of net loss		**2,288**		2,267
Amortization of prior service cost		**(271)**		(271)
Total recognized in other comprehensive income	**$**	**1,556**	$	886
Total expense recognized in net periodic pension cost and other comprehensive income	**$**	**(424)**	$	(262)

The estimated net loss and prior service cost to be amortized from accumulated other comprehensive income into net periodic pension cost in 2020 is $1.9 million.

The following assumptions, on a weighted average basis, were used in accounting for the plans.

	2019	2018	2017
Determination of benefit obligation at year end:			
Effective discount rate for benefit obligations	**3.07%**	4.14%	3.57%
Assumed credit on cash balance accounts	**5.00%**	5.00%	5.00%
Determination of net periodic benefit cost for year ended:			
Effective discount rate for benefit obligations	**4.13%**	3.57%	3.95%
Effective rate for interest on benefit obligations	**3.81%**	3.28%	3.28%
Long-term rate of return on assets	**5.00%**	5.00%	6.00%
Assumed credit on cash balance accounts	**5.00%**	5.00%	5.00%

The following table shows the fair values of the Company's pension plan assets by asset category at December 31, 2019 and 2018. Information about the valuation techniques and inputs used to measure fair value are provided in Note 17 on Fair Value Measurements.

		Fair Value Measurements		
(In thousands)	Total Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2019				
Assets:				
U.S. government obligations	**$ 4,746**	**$ 4,746**	**$ —**	**$ —**
Government-sponsored enterprise obligations [a]	**1,302**	**—**	**1,302**	**—**
State and municipal obligations	**8,612**	**—**	**8,612**	**—**
Agency mortgage-backed securities [b]	**8,892**	**—**	**8,892**	**—**
Non-agency mortgage-backed securities	**3,919**	**—**	**3,919**	**—**
Asset-backed securities	**5,093**	**—**	**5,093**	**—**
Corporate bonds [c]	**39,663**	**—**	**39,663**	**—**
Equity securities and mutual funds: [d]				
Mutual funds	**6,315**	**6,315**	**—**	**—**
Common stocks	**22,552**	**22,552**	**—**	**—**
International developed markets funds	**4,674**	**4,674**	**—**	**—**
Emerging markets funds	**1,788**	**1,788**	**—**	**—**
Total	**$ 107,556**	**$ 40,075**	**$ 67,481**	**$ —**
December 31, 2018				
Assets:				
U.S. government obligations	$ 2,994	$ 2,994	$ —	$ —
Government-sponsored enterprise obligations [a]	1,200	—	1,200	—
State and municipal obligations	8,299	—	8,299	—
Agency mortgage-backed securities [b]	8,209	—	8,209	—
Non-agency mortgage-backed securities	4,398	—	4,398	—
Asset-backed securities	3,520	—	3,520	—
Corporate bonds [c]	37,207	—	37,207	—
Equity securities and mutual funds: [d]				
Mutual funds	8,645	8,645	—	—
Common stocks	18,173	18,173	—	—
International developed markets funds	5,046	5,046	—	—
Emerging markets funds	1,727	1,727	—	—
Total	$ 99,418	$ 36,585	$ 62,833	$ —

(a) This category represents bonds (excluding mortgage-backed securities) issued by agencies such as the Federal Home Loan Bank, the Federal Home Loan Mortgage Corp and the Federal National Mortgage Association.

(b) This category represents mortgage-backed securities issued by the agencies mentioned in (a).

(c) This category represents investment grade bonds issued in the U.S., primarily by domestic issuers, representing diverse industries.

(d) This category represents investments in individual common stocks and equity funds. These holdings are diversified, largely across the financial services, technology services, healthcare, electronic technology, and producer manufacturing industries.

The investment policy of the pension plan is designed for growth in principal, within limits designed to safeguard against significant losses within the portfolio. The policy sets guidelines, which may change from time to time, regarding the types and percentages of investments held. Currently, the policy includes guidelines such as holding bonds rated investment grade or better and prohibiting investment in Company stock. The plan does not utilize derivatives. Management believes there are no significant concentrations of risk within the plan asset portfolio at December 31, 2019. Under the current policy, the long-term investment target mix for the plan is 35% equity securities and 65% fixed income securities. The Company regularly reviews its policies on investment mix and may make changes depending on economic conditions and perceived investment risk.

The assumed overall expected long-term rate of return on pension plan assets used in calculating 2019 pension plan expense was 5.0%. Determination of the plan's expected rate of return is based upon historical and anticipated returns of the asset classes invested in by the pension plan and the allocation strategy currently in place among those classes. The rate used in plan calculations may be adjusted by management for current trends in the economic environment. The 10-year annualized return for the Company's pension plan was 7.3%. During 2019, the plan's assets gained 14.8% of their value, compared to a loss of 1.7% in 2018. Returns for any plan year may be affected by changes in the stock market and interest rates. The Company expects to incur pension expense of $402 thousand in 2020, compared to $2.0 million in 2019.

The Company utilizes mortality tables published by the Society of Actuaries to incorporate mortality assumptions into the measurement of the pension benefit obligation. At December 31, 2019, the Company utilized an updated mortality table and projection scale, which decreased the pension benefit obligation on that date by approximately $1.1 million.

The following future benefit payments are expected to be paid:

(In thousands)	
2020	$ 7,281
2021	7,430
2022	7,409
2023	7,467
2024	7,371
2025 - 2029	35,721

11. Stock-Based Compensation and Directors Stock Purchase Plan*

The Company's stock-based compensation is provided under a stockholder-approved plan that allows for issuance of various types of awards, including stock options, stock appreciation rights, restricted stock and restricted stock units, performance awards and stock-based awards. During the past three years, stock-based compensation has been issued in the form of nonvested stock awards and stock appreciation rights. At December 31, 2019, 2,249,326 shares remained available for issuance under the plan. The stock-based compensation expense that was charged against income was $13.9 million, $12.8 million and $12.1 million for the years ended December 31, 2019, 2018 and 2017, respectively. The total income tax benefit recognized in the income statement for share-based compensation arrangements was $3.0 million, $3.2 million and $4.5 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Nonvested Restricted Stock Awards

Nonvested stock is awarded to key employees by action of the Company's Compensation and Human Resources Committee and Board of Directors. These awards generally vest after 4 to 7 years of continued employment, but vesting terms may vary according to the specifics of the individual grant agreement. There are restrictions as to transferability, sale, pledging, or assigning, among others, prior to the end of the vesting period. Dividend and voting rights are conferred upon grant of restricted stock awards. A summary of the status of the Company's nonvested share awards as of December 31, 2019 and changes during the year then ended is presented below.

	Shares	Weighted Average Grant Date Fair Value
Nonvested at January 1, 2019	1,239,970	$ 41.18
Granted	217,182	58.82
Vested	(339,618)	31.33
Forfeited	(13,323)	47.41
Nonvested at December 31, 2019	1,104,211	$ 47.57

The total fair value (at vest date) of shares vested during 2019, 2018 and 2017 was $19.9 million, $21.5 million and $23.8 million, respectively.

Stock Appreciation Rights

Stock appreciation rights (SARs) are granted with exercise prices equal to the market price of the Company's stock at the date of grant. SARs generally vest ratably over 4 years of continuous service and have 10-year contractual terms. All SARs must be settled in stock under provisions of the plan. A summary of SAR activity during 2019 is presented below.

(Dollars in thousands, except per share data)	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2019	1,119,405	$ 38.30		
Granted	196,129	58.82		
Forfeited	(5,935)	49.67		
Expired	(1,917)	37.00		
Exercised	(257,866)	32.30		
Outstanding at December 31, 2019	1,049,816	$ 43.55	6.6 years	$ 25,601
Exercisable at December 31, 2019	557,763	$ 36.16	5.3 years	$ 17,728

In determining compensation cost, the Black-Scholes option-pricing model is used to estimate the fair value of SARs on date of grant. The Black-Scholes model is a closed-end model that uses various assumptions as shown in the following table. Expected volatility is based on historical volatility of the Company's stock. The Company uses historical exercise behavior and other factors to estimate the expected term of the SARs, which represents the period of time that the SARs granted are expected to be outstanding. The risk-free rate for the expected term is based on the U.S. Treasury zero coupon spot rates in effect at the time of grant. The per share average fair value and the model assumptions for SARs granted during the past three years are shown in the table below.

	2019	2018	2017
Weighted per share average fair value at grant date	**$11.35**	$11.28	$10.83
Assumptions:			
Dividend yield	**1.7%**	1.6%	1.6%
Volatility	**19.8%**	20.6%	21.1%
Risk-free interest rate	**2.6%**	2.7%	2.4%
Expected term	**6.0 years**	6.6 years	7.0 years

Additional information about stock options and SARs exercised is presented below.

(In thousands)	**2019**	2018	2017
Intrinsic value of options and SARs exercised	**$ 7,109**	$ 9,632	$ 9,310
Tax benefit realized from options and SARs exercised	**$ 1,385**	$ 1,928	$ 2,698

As of December 31, 2019, there was $27.7 million of unrecognized compensation cost related to unvested SARs and stock awards. This cost is expected to be recognized over a weighted average period of approximately 3.0 years.

Directors Stock Purchase Plan

The Company has a directors stock purchase plan whereby outside directors of the Company and its subsidiaries may elect to use their directors' fees to purchase Company stock at market value each month end. Remaining shares available for issuance under this plan were 33,914 at December 31, 2019. In 2019, 21,904 shares were purchased at an average price of $61.14, and in 2018, 32,454 shares were purchased at an average price of $54.92.

** All share and per share amounts in this note have been restated for the 5% common stock dividend distributed in 2019.*

12. Accumulated Other Comprehensive Income (Loss)

The table below shows the activity and accumulated balances for components of other comprehensive income (loss). The largest component is the unrealized holding gains and losses on available for sale debt securities. Unrealized gains and losses on debt securities for which an other-than-temporary impairment (OTTI) has been recorded in current earnings are shown separately below. Another component is the amortization from other comprehensive income of losses associated with pension benefits, which occurs as the losses are included in current net periodic pension cost. The remaining component is gains in fair value on certain interest rate floors that have been designated as cash flow hedging instruments.

	Unrealized Gains (Losses) on Securities (1)				
(In thousands)	OTTI	Other	Pension Loss	Unrealized Gains on Cash Flow Hedge Derivatives (2)	Total Accumulated Other Comprehensive Income (Loss)
Balance January 1, 2019	**$ 3,861**	**$ (52,278)**	**$ (23,107)**	**$ 6,855**	**$ (64,669)**
Other comprehensive income (loss) before reclassifications	**(975)**	**201,280**	**(461)**	**27,481**	**227,325**
Amounts reclassified from accumulated other comprehensive income	**133**	**215**	**2,017**	**3,793**	**6,158**
Current period other comprehensive income (loss), before tax	**(842)**	**201,495**	**1,556**	**31,274**	**233,483**
Income tax (expense) benefit	**210**	**(50,373)**	**(389)**	**(7,818)**	**(58,370)**
Current period other comprehensive income (loss), net of tax	**(632)**	**151,122**	**1,167**	**23,456**	**175,113**
Transfer of unrealized gain on securities for which impairment was not previously recognized	**35**	**(35)**	**—**	**—**	**—**
Balance December 31, 2019	**$ 3,264**	**$ 98,809**	**$ (21,940)**	**$ 30,311**	**$ 110,444**
Balance January 1, 2018	$ 3,411	$ 30,326	$ (19,629)	$ —	$ 14,108
ASU 2018-02 Reclassification of tax rate change	715	6,359	(4,142)	—	2,932
ASU 2016-01 Reclassification of unrealized gain on equity securities	—	(33,320)	—	—	(33,320)
Other comprehensive income (loss) before reclassifications	(438)	(73,725)	(1,110)	8,381	(66,892)
Amounts reclassified from accumulated other comprehensive income	68	(447)	1,996	760	2,377
Current period other comprehensive income (loss), before tax	(370)	(74,172)	886	9,141	(64,515)
Income tax (expense) benefit	93	18,541	(222)	(2,286)	16,126
Current period other comprehensive income (loss), net of tax	(277)	(55,631)	664	6,855	(48,389)
Transfer of unrealized gain on securities for which impairment was not previously recognized	12	(12)	—	—	—
Balance December 31, 2018	$ 3,861	$ (52,278)	$ (23,107)	$ 6,855	$ (64,669)

(1) The pre-tax amounts reclassified from accumulated other comprehensive income to current earnings are included in "investment securities gains (losses), net" in the consolidated statements of income.
(2) The pre-tax amounts reclassified from accumulated other comprehensive income to current earnings are included in "interest and fees on loans" in the consolidated statements of income.

The requirement to revalue deferred tax assets and liabilities in the period of enactment stranded the effects of the tax rate change, mandated by the Tax Cuts and Jobs Act, in accumulated other comprehensive income. In response, the FASB issued ASU 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income", which the Company adopted on January 1, 2018. This ASU allowed the reclassification of the stranded tax effects from accumulated other comprehensive income (loss) (as shown in the table above) to retained earnings.

New accounting guidance, which was effective January 1, 2018, required the reclassification of unrealized gains on equity securities from accumulated other comprehensive income (loss) to retained earnings (also shown above).

13. Segments

The Company segregates financial information for use in assessing its performance and allocating resources among three operating segments: Consumer, Commercial, and Wealth. The Consumer segment includes the consumer portion of the retail branch network (loans, deposits and other personal banking services), indirect and other consumer financing, and consumer debit and credit card loan and fee businesses. Residential mortgage origination, sales and servicing functions are included in this consumer segment, but residential mortgage loans retained by the Company are not considered part of this segment. The Commercial segment provides corporate lending (including the Small Business Banking product line within the branch network), leasing, international services, and business, government deposit, and related commercial cash management services, as well as merchant and commercial bank card products. The Commercial segment also includes the Capital Markets Group, which sells fixed income securities and provides securities safekeeping and bond accounting services. The Wealth segment provides traditional trust and estate planning, advisory and discretionary investment management, and brokerage services. This segment also provides various loan and deposit related services to its private banking customers.

The Company's business line reporting system derives segment information from the internal profitability reporting system used by management to monitor and manage the financial performance of the Company. This information is based on internal management accounting procedures and methods, which have been developed to reflect the underlying economics of the businesses. These methodologies are applied in connection with funds transfer pricing and assignment of overhead costs among segments. Funds transfer pricing was used in the determination of net interest income by assigning a standard cost (credit) for funds used for (provided by) assets and liabilities based on their maturity, prepayment and/or repricing characteristics. Income and expense that directly relate to segment operations are recorded in the segment when incurred. Expenses that indirectly support the segments are allocated based on the most appropriate method available.

The Company uses a funds transfer pricing method to value funds used (e.g., loans, fixed assets, and cash) and funds provided (e.g., deposits, borrowings, and equity) by the business segments and their components. This process assigns a specific value to each new source or use of funds with a maturity, based on current swap rates, thus determining an interest spread at the time of the transaction. Non-maturity assets and liabilities are valued using weighted average pools. The funds transfer pricing process attempts to remove interest rate risk from valuation, allowing management to compare profitability under various rate environments.

The following tables present selected financial information by segment and reconciliations of combined segment totals to consolidated totals. There were no material intersegment revenues between the three segments. Management periodically makes changes to methods of assigning costs and income to its business segments to better reflect operating results. If appropriate, these changes are reflected in prior year information presented below.

Segment Income Statement Data

(In thousands)	Consumer	Commercial	Wealth	Segment Totals	Other/ Elimination	Consolidated Totals
Year ended December 31, 2019:						
Net interest income	**$ 315,782**	**$ 342,736**	**$ 48,058**	**$ 706,576**	**$ 114,717**	**$ 821,293**
Provision for loan losses	**(44,987)**	**(4,204)**	**(174)**	**(49,365)**	**(1,073)**	**(50,438)**
Non-interest income	**135,257**	**203,952**	**183,589**	**522,798**	**1,905**	**524,703**
Investment securities gains, net	**—**	**—**	**—**	**—**	**3,626**	**3,626**
Non-interest expense	**(297,581)**	**(308,686)**	**(124,123)**	**(730,390)**	**(37,008)**	**(767,398)**
Income before income taxes	**$ 108,471**	**$ 233,798**	**$ 107,350**	**$ 449,619**	**$ 82,167**	**$ 531,786**
Year ended December 31, 2018:						
Net interest income	$ 294,798	$ 344,972	$ 46,946	$ 686,716	$ 137,109	$ 823,825
Provision for loan losses	(40,571)	(1,134)	32	(41,673)	(1,021)	(42,694)
Non-interest income	126,253	202,527	173,026	501,806	(465)	501,341
Investment securities losses, net	—	—	—	—	(488)	(488)
Non-interest expense	(286,181)	(297,847)	(123,568)	(707,596)	(30,225)	(737,821)
Income before income taxes	$ 94,299	$ 248,518	$ 96,436	$ 439,253	$ 104,910	$ 544,163
Year ended December 31, 2017:						
Net interest income	$ 276,891	$ 329,087	$ 47,264	$ 653,242	$ 80,437	$ 733,679
Provision for loan losses	(40,619)	205	(41)	(40,455)	(4,789)	(45,244)
Non-interest income	121,362	184,577	158,175	464,114	(2,851)	461,263
Investment securities gains, net	—	—	—	—	25,051	25,051
Non-interest expense	(274,225)	(281,845)	(120,461)	(676,531)	(67,812)	(744,343)
Income before income taxes	$ 83,409	$ 232,024	$ 84,937	$ 400,370	$ 30,036	$ 430,406

The segment activity, as shown above, includes both direct and allocated items. Amounts in the "Other/Elimination" column include activity not related to the segments, such as that relating to administrative functions, the investment securities portfolio, and the effect of certain expense allocations to the segments. The provision for loan losses in this category contains the difference between net loan charge-offs assigned directly to the segments and the recorded provision for loan loss expense. Included in this category's net interest income are earnings of the investment portfolio, which are not allocated to a segment.

Segment Balance Sheet Data

(In thousands)	Consumer	Commercial	Wealth	Segment Totals	Other/ Elimination	Consolidated Totals
Average balances for 2019:						
Assets	**$ 2,375,326**	**$ 9,486,074**	**$ 1,288,806**	**$ 13,150,206**	**$ 12,063,319**	**$ 25,213,525**
Loans, including held for sale	**2,239,100**	**9,250,645**	**1,276,839**	**12,766,584**	**1,476,630**	**14,243,214**
Goodwill and other intangible assets	**79,055**	**68,109**	**746**	**147,910**	**—**	**147,910**
Deposits	**10,236,257**	**7,848,367**	**1,832,418**	**19,917,042**	**(7,151)**	**19,909,891**
Average balances for 2018:						
Assets	$ 2,481,060	$ 9,115,738	$ 1,243,806	$ 12,840,604	$ 11,825,631	$ 24,666,235
Loans, including held for sale	2,346,166	8,939,696	1,233,780	12,519,642	1,425,930	13,945,572
Goodwill and other intangible assets	78,062	68,300	746	147,108	—	147,108
Deposits	10,210,502	8,029,248	1,871,596	20,111,346	19,906	20,131,252

The above segment balances include only those items directly associated with the segment. The "Other/Elimination" column includes unallocated bank balances not associated with a segment (such as investment securities and federal funds sold), balances relating to certain other administrative and corporate functions, and eliminations between segment and non-segment balances. This column also includes the resulting effect of allocating such items as float, deposit reserve and capital for the purpose of computing the cost or credit for funds used/provided.

The Company's reportable segments are strategic lines of business that offer different products and services. They are managed separately because each line services a specific customer need, requiring different performance measurement analyses and marketing strategies. The performance measurement of the segments is based on the management structure of the Company and is not necessarily comparable with similar information for any other financial institution. The information is also not necessarily indicative of the segments' financial condition and results of operations if they were independent entities.

14. Common and Preferred Stock*

On December 18, 2019, the Company distributed a 5% stock dividend on its $5 par common stock for the 26th consecutive year. All per common share data in this report has been restated to reflect the stock dividend.

The Company applies the two-class method of computing income per share, as nonvested share-based awards that pay nonforfeitable common stock dividends are considered securities which participate in undistributed earnings with common stock. The two-class method requires the calculation of separate income per share amounts for the nonvested share-based awards and for common stock. Income per share attributable to common stock is shown in the following table. Nonvested share-based awards are further discussed in Note 11 on Stock-Based Compensation.

Basic income per share is based on the weighted average number of common shares outstanding during the year. Diluted income per share gives effect to all dilutive potential common shares that were outstanding during the year. Presented below is a summary of the components used to calculate basic and diluted income per common share, which have been restated for all stock dividends.

(In thousands, except per share data)	**2019**	2018	2017
Basic income per common share:			
Net income attributable to Commerce Bancshares, Inc.	**$ 421,231**	$ 433,542	$ 319,383
Less preferred stock dividends	**9,000**	9,000	9,000
Net income available to common shareholders	**412,231**	424,542	310,383
Less income allocated to nonvested restricted stock	**4,019**	4,558	3,848
Net income allocated to common stock	**$ 408,212**	$ 419,984	$ 306,535
Weighted average common shares outstanding	**113,784**	116,352	116,375
Basic income per common share	**$ 3.59**	$ 3.61	$ 2.63
Diluted income per common share:			
Net income available to common shareholders	**$ 412,231**	$ 424,542	$ 310,383
Less income allocated to nonvested restricted stock	**4,012**	4,547	3,838
Net income allocated to common stock	**$ 408,219**	$ 419,995	$ 306,545
Weighted average common shares outstanding	**113,784**	116,352	116,375
Net effect of the assumed exercise of stock-based awards -- based on the treasury stock method using the average market price for the respective periods	**282**	361	410
Weighted average diluted common shares outstanding	**114,066**	116,713	116,785
Diluted income per common share	**$ 3.58**	$ 3.60	$ 2.62

Unexercised stock appreciation rights of 356 thousand, 235 thousand and 167 thousand were excluded from the computation of diluted income per share for the years ended December 31, 2019, 2018 and 2017, respectively, because their inclusion would have been anti-dilutive.

On August 7, 2019, the Company entered into an accelerated share repurchase ("ASR") agreement with Morgan Stanley & Co. LLC (Morgan Stanley). Under this ASR agreement, the Company paid $150.0 million to Morgan Stanley and received from Morgan Stanley 1,994,327 shares of the Company's common stock, representing approximately 75% of the estimated total number of shares to be delivered by Morgan Stanley at the conclusion of the program. Final settlement occurred on December 30, 2019 at which time the remaining shares, totaling 438,009, were received by the Company. The specific number of shares that the Company ultimately repurchased was based on the volume-weighted-average price per share of the Company's common stock during the repurchase period.

In the Annual Meeting of the Shareholders, held on April 17, 2019, a proposal to increase the shares of Company common stock authorized for issuance under its articles of incorporation was approved. The approval increased the authorized shares from 120,000,000 to 140,000,000.

The Company has 6,000,000 depositary shares outstanding, representing 6,000 shares of 6.00% Series B Non-Cumulative Perpetual Preferred Stock, par value $1.00 per share, having an aggregate liquidation preference of $150.0 million ("Series B Preferred Stock"). Each depositary share has a liquidation preference of $25 per share. Dividends on the Series B Preferred Stock, if declared, accrue and are payable quarterly, in arrears, at a rate of 6.00%. The Series B Preferred Stock qualifies as Tier 1 capital for the purposes of the regulatory capital calculations. In the event that the Company does not declare and pay dividends on the Series B Preferred Stock for the most recent dividend period, the ability of the Company to declare or pay dividends on, purchase, redeem or otherwise acquire shares of its common stock or any securities of the Company that rank junior to the Series B Preferred Stock is subject to certain restrictions under the terms of the Series B Preferred Stock.

The Company maintains a treasury stock buyback program authorized by its Board of Directors. The most recent authorization in November 2019 approved future purchases of 5,000,000 shares of the Company's common stock. At December 31, 2019, 4,430,958 shares of common stock remained available for purchase under the current authorization.

The table below shows activity in the outstanding shares of the Company's common stock during the past three years. Shares in the table below are presented on an historical basis and have not been restated for the annual 5% stock dividends.

	Years Ended December 31		
(In thousands)	**2019**	2018	2017
Shares outstanding at January 1	**111,129**	106,615	101,461
Issuance of stock:			
Awards and sales under employee and director plans	**329**	416	403
5% stock dividend	**5,359**	5,305	5,078
Other purchases of treasury stock	**(4,670)**	(1,194)	(315)
Other	**(15)**	(13)	(12)
Shares outstanding at December 31	**112,132**	111,129	106,615

* *Except as noted in the above table, all share and per share amounts in this note have been restated for the 5% common stock dividend distributed in 2019.*

15. Regulatory Capital Requirements

The Company is subject to various regulatory capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements can initiate certain mandatory and additional discretionary actions by regulators that could have a direct material effect on the Company's financial statements. The regulations require the Company to meet specific capital adequacy guidelines that involve quantitative measures of the Company's assets, liabilities and certain off-balance sheet items as calculated under regulatory accounting practices. The Company's capital classification is also subject to qualitative judgments by the regulators about components, risk weightings and other factors.

The following tables show the capital amounts and ratios for the Company (on a consolidated basis) and the Bank, together with the minimum capital adequacy and well-capitalized capital requirements, at the last two year ends.

	Actual		Minimum Capital Adequacy Requirement		Well-Capitalized Capital Requirement	
(Dollars in thousands)	Amount	Ratio	Amount	Ratio	Amount	Ratio
December 31, 2019						
Total Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 3,052,079	15.48%	$ 1,577,105	8.00%	N.A.	N.A.
Commerce Bank	2,583,676	13.19	1,566,866	8.00	$ 1,958,583	10.00%
Tier I Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 2,890,322	14.66%	$ 1,182,829	6.00%	N.A.	N.A.
Commerce Bank	2,421,919	12.37	1,175,150	6.00	$ 1,566,866	8.00%
Tier I Common Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 2,745,538	13.93%	$ 887,122	4.50%	N.A.	N.A.
Commerce Bank	2,421,919	12.37	881,362	4.50	$ 1,273,079	6.50%
Tier I Capital (to adjusted quarterly average assets):						
(Leverage Ratio)						
Commerce Bancshares, Inc. (consolidated)	$ 2,890,322	11.38%	$ 1,015,771	4.00%	N.A.	N.A.
Commerce Bank	2,421,919	9.57	1,012,232	4.00	$ 1,265,290	5.00%
December 31, 2018						
Total Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 3,022,023	15.82%	$ 1,528,317	8.00%	N.A.	N.A.
Commerce Bank	2,655,591	13.98	1,519,169	8.00	$ 1,898,962	10.00%
Tier I Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 2,861,016	14.98%	$ 1,146,238	6.00%	N.A.	N.A.
Commerce Bank	2,494,584	13.14	1,139,377	6.00	$ 1,519,169	8.00%
Tier I Common Capital (to risk-weighted assets):						
Commerce Bancshares, Inc. (consolidated)	$ 2,716,232	14.22%	$ 859,678	4.50%	N.A.	N.A.
Commerce Bank	2,494,584	13.14	854,533	4.50	$ 1,234,325	6.50%
Tier I Capital (to adjusted quarterly average assets):						
(Leverage Ratio)						
Commerce Bancshares, Inc. (consolidated)	$ 2,861,016	11.52%	$ 993,564	4.00%	N.A.	N.A.
Commerce Bank	2,494,584	10.07	991,185	4.00	$ 1,238,981	5.00%

The minimum required ratios for well-capitalized banks (under prompt corrective action provisions) are 6.5% for Tier I common capital, 8.0% for Tier I capital, 10.0% for Total capital and 5.0% for the leverage ratio.

At December 31, 2019 and 2018, the Company met all capital requirements to which it is subject, and the Bank's capital position exceeded the regulatory definition of well-capitalized.

16. Revenue from Contracts with Customers

The Company adopted ASU 2014-09, "Revenue from Contracts with Customers," and its related amendments on January 1, 2018. The core principle of the new guidance is that an entity should recognize revenue to reflect the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. For the year ended December 31, 2019, approximately 61% of the Company's total revenue was comprised of net interest income, which is not within the scope of this guidance. Of the remaining revenue, those items that were subject to this guidance mainly included fees for bank card, trust, deposit account services and consumer brokerage services.

The adoption of ASU 2014-09 did not require any significant change to the Company's revenue recognition processes. However, application of the new guidance resulted in a reclassification of certain bank card related network and rewards costs, previously classified as non-interest expense, to a reduction to non-interest income in the Company's consolidated statements of income. The reclassification had no effect on prior period net income or net income per share. The Company adopted ASU 2014-09 on a full retrospective basis, in which each prior reporting period has been presented in accordance with the new guidance. The table below shows the effect of this reclassification on bank card fee income and non-interest expense for the year ended December 31, 2017.

	For the year ended December 31, 2017		
(In thousands)	As Previously Reported	Adoption of ASU 2014-09	As Adjusted
Non-interest income:			
Bank card transaction fees	$ 180,441	$ (25,341)	$ 155,100
Total non-interest income	486,604	(25,341)	461,263
Non-interest expense:			
Data processing and software	$ 92,246	$ (11,248)	$ 80,998
Other	77,459	(14,093)	63,366
Total non-interest expense	769,684	(25,341)	744,343

The following table disaggregates non-interest income subject to ASU 2014-09 by major product line.

	For the Year Ended December 31		
(In thousands)	**2019**	2018	2017
Bank card transaction fees	**$ 167,879**	$ 171,576	$ 155,100
Trust fees	**155,628**	147,964	135,159
Deposit account charges and other fees	**95,983**	94,517	90,060
Consumer brokerage services	**15,804**	15,807	14,630
Other non-interest income	**48,597**	37,440	30,128
Total non-interest income from contracts with customers	**483,891**	467,304	425,077
Other non-interest income [(1)]	**40,812**	34,037	36,186
Total non-interest income	**$ 524,703**	$ 501,341	$ 461,263

(1) This revenue is not within the scope of ASU 2014-09, and includes fees relating to capital market activities, loan fees and sales, derivative instruments, standby letters of credit and various other transactions.

The following table presents the opening and closing receivable balances for the years ended December 31, 2019 and 2018 for the Company's significant revenue categories subject to ASU 2014-09.

(In thousands)	**December 31, 2019**	December 31, 2018	December 31, 2017
Bank card transaction fees	**$ 13,915**	$ 13,035	$ 13,315
Trust fees	**2,093**	2,721	2,802
Deposit account charges and other fees	**6,523**	6,107	5,597
Consumer brokerage services	**596**	559	380

For these revenue categories, none of the transaction price has been allocated to performance obligations that are unsatisfied as of the end of a reporting period. A description of these revenue categories follows.

Bank Card Transaction Fees

The following table presents the components of bank card fee income.

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Debit card:			
Fee income	**$ 42,106**	$ 41,522	$ 40,134
Expense for network charges	**(2,081)**	(1,784)	(4,498)
Net debit card fees	**40,025**	39,738	35,636
Credit card:			
Fee income	**27,416**	26,799	25,275
Expense for network charges and rewards	**(13,239)**	(13,834)	(10,699)
Net credit card fees	**14,177**	12,965	14,576
Corporate card:			
Fee income	**196,984**	199,651	179,642
Expense for network charges and rewards	**(102,596)**	(100,011)	(94,823)
Net corporate card fees	**94,388**	99,640	84,819
Merchant:			
Fee income	**31,517**	30,241	31,863
Fees to cardholder banks	**(8,779)**	(7,831)	(8,228)
Expense for network charges	**(3,449)**	(3,177)	(3,566)
Net merchant fees	**19,289**	19,233	20,069
Total bank card transaction fees	**$ 167,879**	$ 171,576	$ 155,100

The majority of debit and credit card fees are reported in the Consumer segment, while corporate card and merchant fees are reported in the Commercial segment.

Debit and Credit Card Fees

The Company issues debit and credit cards to its retail and commercial banking customers who use the cards to purchase goods and services from merchants through an electronic payment system. As a card issuer, the Company earns fees, including interchange income, for processing the cardholder's purchase transaction with a merchant through a settlement network. Purchases are charged directly to a customer's checking account (in the case of a debit card), or are posted to a customer's credit card account. The fees earned are established by the settlement network and are dependent on the type of transaction processed but are typically based on a per unit charge. Interchange income, the largest component of debit and credit card fees, is settled daily through the networks. The services provided to the cardholders include issuing and maintaining cards, settling purchases with merchants, and maintaining memberships in various card networks to facilitate processing. These services are considered one performance obligation, as one of the services would not be performed without the others. The performance obligation is satisfied as services are rendered for each purchase transaction, and income is immediately recognized.

In order to participate in the settlement network process, the Company must pay various transaction-related costs, established by the networks, including membership fees and a per unit charge for each transaction. These expenses are recorded net of the card fees earned.

Consumer credit card products offer cardholders rewards that can be later redeemed for cash or goods or services to encourage card usage. Reward programs must meet network requirements based on the type of card issued. The expense associated with the rewards granted are recorded net of the credit card fees earned.

Commercial card products offer cash rewards to corporate cardholders to encourage card usage in facilitating corporate payments. The Company pays cash rewards based on contractually agreed upon amounts, normally as a percent of each sales transaction. The expense associated with the cash rewards program is recorded net of the corporate card fees earned.

Merchant Fees

The Company offers merchant processing services to its business customers to enable them to accept credit and debit card payments. Merchant processing activities include gathering merchant sales information, authorizing sales transactions and collecting the funds from card issuers using the networks. The merchant is charged a merchant discount fee for the services based on agreed upon pricing between the merchant and the Company. Merchant fees are recorded net of outgoing interchange costs paid to the card issuing banks and net of other network costs as shown in the table above.

Merchant services provided are considered one performance obligation, as one of the services would not be performed without the others. The performance obligation is satisfied as services are rendered for each settlement transaction and income is immediately recognized. Income earned from merchant fees settles with the customer according to terms negotiated in individual customer contracts. The majority of customers settle with the Company at least monthly.

Trust Fees

The following table shows the components of revenue within trust fees, which are reported within the Wealth segment.

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Private client	**$ 118,832**	$ 111,533	$ 100,358
Institutional	**29,468**	29,241	27,477
Other	**7,328**	7,190	7,324
Total trust fees	**$ 155,628**	$ 147,964	$ 135,159

The Company provides trust and asset management services to both private client and institutional trust customers including asset custody, investment advice, and reporting and administrative services. Other specialized services such as tax preparation, financial planning, representation and other related services are provided as needed. Trust fees are generally earned monthly and billed based on a rate multiplied by the fair value of the customer's trust assets. The majority of customer trust accounts are billed monthly. However, some accounts are billed quarterly, and a small number of accounts are billed semi-annually or annually, in accordance with agreements in place with the customer. The Company accrues trust fees monthly based on an estimate of fees due and either directly charges the customer's account the following month or invoices the customer for fees due according to the billing schedule.

The Company maintains written product pricing information which is used to bill each trust customer based on the services provided. Providing trust services is considered to be a single performance obligation that is satisfied on a monthly basis, involving the monthly custody of customer assets, statement rendering, periodic investment advice where applicable, and other specialized services as needed. As such, performance obligations are considered to be satisfied at the conclusion of each month while trust fee income is also recorded monthly.

Deposit Account Charges and Other Fees

The following table shows the components of revenue within deposit account charges and other fees.

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Corporate cash management fees	**$ 41,442**	$ 38,468	$ 36,044
Overdraft and return item fees	**30,596**	31,468	30,576
Other service charges on deposit accounts	**23,945**	24,581	23,440
Total deposit account charges and other fees	**$ 95,983**	$ 94,517	$ 90,060

Approximately half of this revenue is reported in the Consumer segment, while the remainder is reported in the Commercial segment.

The Company provides corporate cash management services to its business and non-profit customers to meet their various transaction processing needs. Such services include deposit and check processing, lockbox, remote deposit, reconciliation, on-line banking and other similar transaction processing services. The Company maintains unit prices for each type of service, and the customer is billed based on transaction volumes processed monthly. The customer is usually billed either monthly or quarterly, however, some customers may be billed semi-annually or annually. The customer may pay for the cash management services provided either by paying in cash or using the value of deposit balances (formula provided to the customer) held at the Company. The Company's performance obligation for corporate cash management services is the processing of items over a monthly term, and the obligations are satisfied at the conclusion of each month.

Overdraft fees are charged to customers when daily checks and other withdrawals to customers' accounts exceed balances on hand. Fees are based on a unit price multiplied by the number of items processed whose total amounts exceed the available account balance. The daily overdraft charge is calculated and the fee is posted to the customer's account each day. The Company's performance obligations for overdraft transactions is based on the daily transaction processed and the obligation is satisfied as each day's transaction processing is concluded.

Other deposit fees include numerous smaller fees such as monthly statement fees, foreign ATM processing fees, identification restoration fees, and stop payment fees. Such fees are mostly billed to customers directly on their monthly deposit account statements, or in the case of foreign ATM processing fees, the fee is charged to the customer on the day that transactions are processed. Performance obligations for all of these various services are satisfied at the time that the service is rendered.

Consumer Brokerage Services

The following shows the components of revenue within consumer brokerage services, and nearly all of this revenue is reported in the Company's Wealth segment.

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Commission income	**$ 9,071**	$ 8,956	$ 8,400
Managed account services	**6,733**	6,851	6,230
Total consumer brokerage services	**$ 15,804**	$ 15,807	$ 14,630

Consumer brokerage services revenue is comprised of commissions received upon the execution of purchases and sales of mutual fund shares and equity securities, in addition to sales of annuities and certain limited insurance products in an agency capacity. Also, fees are earned on professionally managed advisory programs through arrangements with sub-advisors. Payment from the customer is due upon settlement date for purchases and sales of securities, at the purchase date for annuities and insurance products, and upon inception of the service period for advisory programs.

Most of the contracts (except advisory contracts) encompass two types of performance obligations. The first is an obligation to provide account maintenance, record keeping and custodial services throughout the contract term. The second is the obligation to provide trade execution services for the customers' purchases and sales of products mentioned above. The first obligation is satisfied over time as the service period elapses, while the second type of obligation is satisfied upon the execution of each purchase/sale transaction. Contracts for advisory services contain a single performance obligation comprised of providing the management services and related reporting/administrative services over the contract term.

The transaction price of the contracts (except advisory contracts) is a commission charged at the time of trade execution. The commission varies across different security types, insurance products and mutual funds. It is generally determined by standardized price lists published by the Company and its mutual fund and insurance vendors. Because the transaction price relates specifically to the trade execution, it has been allocated to that performance obligation and is recorded at the time of execution. The fee for advisory services is charged to the customer in advance of the quarterly service period, based on the account balance at the beginning of the period. Revenue is recognized ratably over the service period.

Other Non-Interest Income from Contracts with Customers

Other non-interest income from contracts with customers consists mainly of various customer deposit related fees such as ATM fees and gains on sales of tax credits, foreclosed assets, and bank premises and equipment. Performance obligations for these services consist mainly of the execution of transactions for sales of various properties or providing specific deposit related transactions. Fees from these revenue sources are recognized when the performance obligation is completed, at which time cash is received by the Company.

17. Fair Value Measurements

The Company uses fair value measurements to record fair value adjustments to certain financial and nonfinancial assets and liabilities and to determine fair value disclosures. Various financial instruments such as available for sale debt securities, equity securities, trading debt securities, certain investments relating to private equity activities, and derivatives are recorded at fair value on a recurring basis. Additionally, from time to time, the Company may be required to record at fair value other assets and liabilities on a nonrecurring basis, such as mortgage servicing rights and certain other investment securities. These nonrecurring fair value adjustments typically involve lower of cost or fair value accounting, or write-downs of individual assets.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Depending on the nature of the asset or liability, the Company uses various valuation techniques and assumptions when estimating fair value. For accounting disclosure purposes, a three-level valuation hierarchy of fair value measurements has been established. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows:

- Level 1 – inputs to the valuation methodology are quoted prices for identical assets or liabilities in active markets.
- Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, quoted prices for identical or similar assets and liabilities in markets that are not active, and inputs that are observable for the assets or liabilities, either directly or indirectly (such as interest rates, yield curves, and prepayment speeds).
- Level 3 – inputs to the valuation methodology are unobservable and significant to the fair value. These may be internally developed, using the Company's best information and assumptions that a market participant would consider.

When determining the fair value measurements for assets and liabilities required or permitted to be recorded or disclosed at fair value, the Company considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the asset or liability. When possible, the Company looks to active and observable markets to price identical assets or liabilities. When identical assets and liabilities are not traded in active markets, the Company looks to observable market data for similar assets and liabilities. Nevertheless, certain assets and liabilities are not actively traded in observable markets, and the Company must use alternative valuation techniques to derive an estimated fair value measurement.

Instruments Measured at Fair Value on a Recurring Basis

The table below presents the carrying values of assets and liabilities measured at fair value on a recurring basis at December 31, 2019 and 2018. There were no transfers among levels during these years.

		Fair Value Measurements Using		
(In thousands)	Total Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2019				
Assets:				
Residential mortgage loans held for sale	**$ 9,181**	**$ —**	**$ 9,181**	**$ —**
Available for sale debt securities:				
U.S. government and federal agency obligations	**851,776**	**851,776**	—	—
Government-sponsored enterprise obligations	**139,277**	—	**139,277**	—
State and municipal obligations	**1,267,927**	—	**1,258,074**	**9,853**
Agency mortgage-backed securities	**3,937,964**	—	**3,937,964**	—
Non-agency mortgage-backed securities	**809,782**	—	**809,782**	—
Asset-backed securities	**1,233,489**	—	**1,233,489**	—
Other debt securities	**331,411**	—	**331,411**	—
Trading debt securities	**28,161**	—	**28,161**	—
Equity securities	**2,929**	**2,929**	—	—
Private equity investments	**94,122**	—	—	**94,122**
Derivatives *	**105,674**	—	**105,075**	**599**
Assets held in trust for deferred compensation plan	**16,518**	**16,518**	—	—
Total assets	**8,828,211**	**871,223**	**7,852,414**	**104,574**
Liabilities:				
Derivatives *	**10,219**	—	**9,989**	**230**
Liabilities held in trust for deferred compensation plan	**16,518**	**16,518**	—	—
Total liabilities	**$ 26,737**	**$ 16,518**	**$ 9,989**	**$ 230**
December 31, 2018				
Assets:				
Residential mortgage loans held for sale	$ 13,529	$ —	$ 13,529	$ —
Available for sale debt securities:				
U.S. government and federal agency obligations	907,652	907,652	—	—
Government-sponsored enterprise obligations	195,778	—	195,778	—
State and municipal obligations	1,328,039	—	1,313,881	14,158
Agency mortgage-backed securities	3,214,985	—	3,214,985	—
Non-agency mortgage-backed securities	1,047,716	—	1,047,716	—
Asset-backed securities	1,511,614	—	1,511,614	—
Other debt securities	332,257	—	332,257	—
Trading debt securities	27,059	—	27,059	—
Equity securities	2,585	2,585	—	—
Private equity investments	85,659	—	—	85,659
Derivatives *	41,210	—	40,627	583
Assets held in trust for deferred compensation plan	12,968	12,968	—	—
Total assets	8,721,051	923,205	7,697,446	100,400
Liabilities:				
Derivatives *	13,421	—	13,328	93
Liabilities held in trust for deferred compensation plan	12,968	12,968	—	—
Total liabilities	$ 26,389	$ 12,968	$ 13,328	$ 93

* *The fair value of each class of derivative is shown in Note 19.*

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Valuation methods for instruments measured at fair value on a recurring basis

Following is a description of the Company's valuation methodologies used for instruments measured at fair value on a recurring basis:

Residential mortgage loans held for sale

The Company originates fixed rate, first lien residential mortgage loans that are intended for sale in the secondary market. Fair value is based on quoted secondary market prices for loans with similar characteristics, which are adjusted to include the embedded servicing value in the loans. This adjustment represents an unobservable input to the valuation but is not considered significant given the relative insensitivity of the valuation to changes in this input. Accordingly, these loan measurements are classified as Level 2.

Available for sale debt securities

For available for sale securities, changes in fair value, including that portion of other-than-temporary impairment unrelated to credit loss, are recorded in other comprehensive income. As mentioned in Note 3 on Investment Securities, the Company records the credit-related portion of other-than-temporary impairment in current earnings. This portfolio comprises the majority of the assets which the Company records at fair value. Most of the portfolio, which includes government-sponsored enterprise, mortgage-backed and asset-backed securities, are priced utilizing industry-standard models that consider various assumptions, including time value, yield curves, volatility factors, prepayment speeds, default rates, loss severity, current market and contractual prices for the underlying financial instruments, as well as other relevant economic measures. Substantially all of these assumptions are observable in the marketplace, can be derived from observable data, or are supported by observable levels at which transactions are executed in the marketplace. These measurements are classified as Level 2 in the fair value hierarchy. Where quoted prices are available in an active market, the measurements are classified as Level 1. Most of the Level 1 measurements apply to U.S. Treasury obligations.

The fair values of Level 1 and 2 securities in the available for sale portfolio are prices provided by a third-party pricing service. The prices provided by the third-party pricing service are based on observable market inputs, as described in the sections below. On a quarterly basis, the Company compares a sample of these prices to other independent sources for the same and similar securities. Variances are analyzed, and, if appropriate, additional research is conducted with the third-party pricing service. Based on this research, the pricing service may affirm or revise its quoted price. No significant adjustments have been made to the prices provided by the pricing service. The pricing service also provides documentation on an ongoing basis that includes reference data, inputs and methodology by asset class, which is reviewed to ensure that security placement within the fair value hierarchy is appropriate.

Valuation methods and inputs, by class of security:

- *U.S. government and federal agency obligations*

  U.S. treasury bills, bonds and notes, including inflation-protected securities, are valued using live data from active market makers and inter-dealer brokers. Valuations for stripped coupon and principal issues are derived from yield curves generated from various dealer contacts and live data sources.

- *Government-sponsored enterprise obligations*

  Government-sponsored enterprise obligations are evaluated using cash flow valuation models. Inputs used are live market data, cash settlements, Treasury market yields, and floating rate indices such as LIBOR, CMT, and Prime.

- *State and municipal obligations, excluding auction rate securities*

  A yield curve is generated and applied to bond sectors, and individual bond valuations are extrapolated. Inputs used to generate the yield curve are bellwether issue levels, established trading spreads between similar issuers or credits, historical trading spreads over widely accepted market benchmarks, new issue scales, and verified bid information. Bid information is verified by corroborating the data against external sources such as broker-dealers, trustees/paying agents, issuers, or non-affiliated bondholders.

- *Mortgage and asset-backed securities*

  Collateralized mortgage obligations and other asset-backed securities are valued at the tranche level. For each tranche valuation, the process generates predicted cash flows for the tranche, applies a market based (or benchmark) yield/spread for each tranche, and incorporates deal collateral performance and tranche level attributes to determine tranche-specific spreads to adjust the benchmark yield. Tranche cash flows are generated from new deal files and prepayment/default assumptions. Tranche spreads are based on tranche characteristics such as average life, type, volatility, ratings, underlying collateral and performance, and prevailing market conditions. The appropriate tranche spread is applied to the corresponding benchmark, and the resulting value is used to discount the cash flows to generate an evaluated price.

Valuation of agency pass-through securities, typically issued under GNMA, FNMA, FHLMC, and SBA programs, are primarily derived from information from the to-be-announced (TBA) market. This market consists of generic mortgage pools which have not been received for settlement. Snapshots of the TBA market, using live data feeds distributed by multiple electronic platforms, are used in conjunction with other indices to compute a price based on discounted cash flow models.

- *Other debt securities*

  Other debt securities are valued using active markets and inter-dealer brokers as well as bullet spread scales and option adjusted spreads. The spreads and models use yield curves, terms and conditions of the bonds, and any special features (e.g., call or put options and redemption features).

The available for sale portfolio includes certain auction rate securities. Due to the illiquidity in the auction rate securities market in recent years, the fair value of these securities cannot be based on observable market prices. The fair values of these securities are estimated using a discounted cash flows analysis which is discussed more fully in the Level 3 Inputs section of this note. Because many of the inputs significant to the measurement are not observable, these measurements are classified as Level 3 measurements.

Equity securities with readily determinable fair values

Equity securities are priced using the market prices for each security from the major stock exchanges or other electronic quotation systems. These are generally classified as Level 1 measurements. Stocks which trade infrequently are classified as Level 2.

Trading debt securities

The securities in the Company's trading portfolio are priced by averaging several broker quotes for similar instruments and are classified as Level 2 measurements.

Private equity investments

These securities are held by the Company's private equity subsidiaries and are included in other investment securities in the consolidated balance sheets. Due to the absence of quoted market prices, valuation of these nonpublic investments requires significant management judgment. These fair value measurements, which are discussed in the Level 3 Inputs section of this note, are classified as Level 3.

Derivatives

The Company's derivative instruments include interest rate swaps and floors, foreign exchange forward contracts, and certain credit risk guarantee agreements. When appropriate, the impact of credit standing as well as any potential credit enhancements, such as collateral, has been considered in the fair value measurement.

- Valuations for interest rate swaps are derived from a proprietary model whose significant inputs are readily observable market parameters, primarily yield curves used to calculate current exposure. Counterparty credit risk is incorporated into the model and calculated by applying a net credit spread over LIBOR to the swap's total expected exposure over time. The net credit spread is comprised of spreads for both the Company and its counterparty, derived from probability of default and other loss estimate information obtained from a third party credit data provider or from the Company's Credit Department when not otherwise available. The credit risk component is not significant compared to the overall fair value of the swaps. The results of the model are constantly validated through comparison to active trading in the marketplace.

  Parties to swaps requiring central clearing are required to post collateral (generally in the form of cash or marketable securities) to an authorized clearing agency that holds and monitors the collateral. In January 2017, the Company's clearing counterparty made rule changes to characterize a component of this collateral as a legal settlement of the derivative contract exposure. As a result, this component, known as variation margin, is no longer accounted for separately from the derivative as collateral, but is considered in determining the fair value of the derivative.

  Valuations for interest rate floors are also derived from a proprietary model whose significant inputs are readily observable market parameters, primarily yield curves and volatility surfaces. The model uses market standard methodology of discounting the future expected cash receipts that would occur if variable interest rates fall below the strike rates of the floors. The model also incorporates credit valuation adjustments of both the Company's and the counterparties' nonperformance risk. The credit valuation adjustment component is not significant compared to the overall fair value of the floors.

The fair value measurements of interest rate swaps and floors are classified as Level 2 due to the observable nature of the significant inputs utilized.

- Fair value measurements for foreign exchange contracts are derived from a model whose primary inputs are quotations from global market makers and are classified as Level 2.
- The Company's contracts related to credit risk guarantees are valued under a proprietary model which uses unobservable inputs and assumptions about the creditworthiness of the counterparty (generally a Bank customer). Customer credit spreads, which are based on probability of default and other loss estimates, are calculated internally by the Company's Credit Department, as mentioned above, and are based on the Company's internal risk rating for each customer. Because these inputs are significant to the measurements, they are classified as Level 3.
- Derivatives relating to residential mortgage loan sale activity include commitments to originate mortgage loans held for sale, forward loan sale contracts, and forward commitments to sell TBA securities. The fair values of loan commitments and sale contracts are estimated using quoted market prices for loans similar to the underlying loans in these instruments. The valuations of loan commitments are further adjusted to include embedded servicing value and the probability of funding. These assumptions are considered Level 3 inputs and are significant to the loan commitment valuation; accordingly, the measurement of loan commitments is classified as Level 3. The fair value measurement of TBA contracts is based on security prices published on trading platforms and is classified as Level 2.

Assets held in trust

Assets held in an outside trust for the Company's deferred compensation plan consist of investments in mutual funds. The fair value measurements are based on quoted prices in active markets and classified as Level 1. The Company has recorded an asset representing the total investment amount. The Company has also recorded a corresponding liability, representing the Company's liability to the plan participants.

The changes in Level 3 assets and liabilities measured at fair value on a recurring basis are summarized as follows:

	Fair Value Measurements Using Significant Unobservable Inputs (Level 3)			
(In thousands)	State and Municipal Obligations	Private Equity Investments	Derivatives	Total
Year ended December 31, 2019:				
Balance at January 1, 2019	**$ 14,158**	**$ 85,659**	**$ 490**	**$ 100,307**
Total gains or losses (realized/unrealized):				
Included in earnings	**—**	**(727)**	**(93)**	**(820)**
Included in other comprehensive income	**246**	**—**	**—**	**246**
Investment securities called	**(4,635)**	**—**	**—**	**(4,635)**
Discount accretion	**84**	**—**	**—**	**84**
Purchases of private equity securities	**—**	**15,706**	**—**	**15,706**
Sale / pay down of private equity securities	**—**	**(6,548)**	**—**	**(6,548)**
Capitalized interest/dividends	**—**	**32**	**—**	**32**
Purchase of risk participation agreement	**—**	**—**	**439**	**439**
Sale of risk participation agreement	**—**	**—**	**(467)**	**(467)**
Balance at December 31, 2019	**$ 9,853**	**$ 94,122**	**$ 369**	**$ 104,344**
Total gains or losses for the year included in earnings attributable to the change in unrealized gains or losses relating to assets still held at December 31, 2019	**$ —**	**$ (2,177)**	**$ 457**	**$ (1,720)**
Year ended December 31, 2018:				
Balance at January 1, 2018	$ 17,016	$ 55,752	$ 503	$ 73,271
Total gains or losses (realized/unrealized):				
Included in earnings	—	13,849	105	13,954
Included in other comprehensive income	(274)	—	—	(274)
Investment securities called	(2,616)	—	—	(2,616)
Discount accretion	32	—	—	32
Purchases of private equity securities	—	16,395	—	16,395
Sale / pay down of private equity securities	—	(371)	—	(371)
Capitalized interest/dividends	—	34	—	34
Purchase of risk participation agreement	—	—	61	61
Sale of risk participation agreement	—	—	(179)	(179)
Balance at December 31, 2018	$ 14,158	$ 85,659	$ 490	$ 100,307
Total gains or losses for the year included in earnings attributable to the change in unrealized gains or losses relating to assets still held at December 31, 2018	$ —	$ 13,849	$ 663	$ 14,512

Gains and losses on the Level 3 assets and liabilities in the table above are reported in the following income categories:

(In thousands)	Loan Fees and Sales	Other Non-Interest Income	Investment Securities Gains (Losses), Net	Total
Year ended December 31, 2019:				
Total gains or losses included in earnings	**$ (77)**	**$ (16)**	**$ (727)**	**$ (820)**
Change in unrealized gains or losses relating to assets still held at December 31, 2019	**$ 458**	**$ (1)**	**$ (2,177)**	**$ (1,720)**
Year ended December 31, 2018:				
Total gains or losses included in earnings	$ (45)	$ 150	$ 13,849	$ 13,954
Change in unrealized gains or losses relating to assets still held at December 31, 2018	$ 535	$ 128	$ 13,849	$ 14,512

Level 3 Inputs

As shown above, the Company's significant Level 3 measurements which employ unobservable inputs that are readily quantifiable pertain to auction rate securities (ARS) held by the Bank, investments in portfolio concerns held by the Company's private equity subsidiaries, and held for sale residential mortgage loan commitments. ARS are included in state and municipal securities and totaled $9.9 million at December 31, 2019, while private equity investments, included in other securities, totaled $94.1 million.

Information about these inputs is presented in the table and discussions below.

	Quantitative Information about Level 3 Fair Value Measurements			Weighted
	Valuation Technique	Unobservable Input	Range	Average
Auction rate securities	Discounted cash flow	Estimated market recovery period	5 years	
		Estimated market rate	3.4% - 3.7%	
Private equity investments	Market comparable companies	EBITDA multiple	4.0 - 6.0	
Mortgage loan commitments	Discounted cash flow	Probability of funding	47.8% - 100.0%	83.7%
		Embedded servicing value	—% - 2.3%	1.2%

The fair values of ARS are estimated using a discounted cash flows analysis in which estimated cash flows are based on mandatory interest rates paid under failing auctions and projected over an estimated market recovery period. Under normal conditions, ARS traded in weekly auctions and were considered liquid investments. The Company's estimate of when these auctions might resume is highly judgmental and subject to variation depending on current and projected market conditions. Few auctions of these securities have been successful in recent years, and most secondary transactions have been privately arranged. Estimated cash flows during the period over which the Company expects to hold the securities are discounted at an estimated market rate. These securities are comprised of bonds issued by various states and municipalities for healthcare and student lending purposes, and market rates are derived for each type. Market rates are calculated at each valuation date using a LIBOR or Treasury based rate plus spreads representing adjustments for liquidity premium and nonperformance risk. The spreads are developed internally by employees in the Company's bond department. An increase in the holding period alone would result in a higher fair value measurement, while an increase in the estimated market rate (the discount rate) alone would result in a lower fair value measurement. The valuation of the ARS portfolio is reviewed on a quarterly basis by the Company's chief investment officers.

The fair values of the Company's private equity investments are based on a determination of fair value of the investee company less preference payments assuming the sale of the investee company. Investee companies are normally non-public entities. The fair value of the investee company is determined by reference to the investee's total earnings before interest, depreciation/ amortization, and income taxes (EBITDA) multiplied by an EBITDA factor. EBITDA is normally determined based on a trailing prior period adjusted for specific factors including current economic outlook, investee management, and specific unique circumstances such as sales order information, major customer status, regulatory changes, etc. The EBITDA multiple is based on management's review of published trading multiples for recent private equity transactions and other judgments and is derived for each individual investee. The fair value of the Company's investment is then calculated based on its ownership percentage in the investee company. On a quarterly basis, these fair value analyses are reviewed by a valuation committee consisting of investment managers and senior Company management.

The significant unobservable inputs used in the fair value measurement of the Company's derivative commitments to originate residential mortgage loans are the percentage of commitments that are actually funded and the mortgage servicing value that is inherent in the underlying loan value. A significant increase in the rate of loans that fund would result in a larger derivative asset or liability. A significant increase in the inherent mortgage servicing value would result in an increase in the derivative asset or a reduction in the derivative liability. The probability of funding and the inherent mortgage servicing values are directly impacted by changes in market rates and will generally move in the same direction as interest rates.

Instruments Measured at Fair Value on a Nonrecurring Basis

For assets measured at fair value on a nonrecurring basis during 2019 and 2018, and still held as of December 31, 2019 and 2018, the following table provides the adjustments to fair value recognized during the respective periods, the level of valuation assumptions used to determine each adjustment, and the carrying value of the related individual assets or portfolios at December 31, 2019 and 2018.

		Fair Value Measurements Using			
(In thousands)	Fair Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains (Losses)
Balance at December 31, 2019					
Collateral dependent impaired loans	**$ 422**	**$ —**	**$ —**	**$ 422**	**$ (263)**
Mortgage servicing rights	**7,749**	**—**	**—**	**7,749**	**(327)**
Long-lived assets	**1,098**	**—**	**—**	**1,098**	**(362)**
Balance at December 31, 2018					
Collateral dependent impaired loans	$ 294	$ —	$ —	$ 294	$ (269)
Mortgage servicing rights	6,478	—	—	6,478	9
Long-lived assets	914	—	—	914	(552)

Valuation methods for instruments measured at fair value on a nonrecurring basis

Following is a description of the Company's valuation methodologies used for other financial and nonfinancial instruments measured at fair value on a nonrecurring basis.

Collateral dependent impaired loans

While the overall loan portfolio is not carried at fair value, the Company periodically records nonrecurring adjustments to the carrying value of loans based on fair value measurements for partial charge-offs of the uncollectible portions of those loans. Nonrecurring adjustments also include certain impairment amounts for collateral dependent loans when establishing the allowance for loan losses. Such amounts are generally based on the fair value of the underlying collateral supporting the loan. In determining the value of real estate collateral, the Company relies on external and internal appraisals of property values depending on the size and complexity of the real estate collateral. The Company maintains a staff of qualified appraisers who also review third party appraisal reports for reasonableness. In the case of non-real estate collateral, reliance is placed on a variety of sources, including external estimates of value and judgments based on the experience and expertise of internal specialists. Values of all loan collateral are regularly reviewed by credit administration. Unobservable inputs to these measurements, which include estimates and judgments often used in conjunction with appraisals, are not readily quantifiable. These measurements are classified as Level 3. Changes in fair value recognized for partial charge-offs of loans and loan impairment reserves on loans held by the Company at December 31, 2019 and 2018 are shown in the table above.

Mortgage servicing rights

The Company initially measures its mortgage servicing rights at fair value and amortizes them over the period of estimated net servicing income. They are periodically assessed for impairment based on fair value at the reporting date. Mortgage servicing rights do not trade in an active market with readily observable prices. Accordingly, the fair value is estimated based on a valuation model which calculates the present value of estimated future net servicing income. The model incorporates assumptions that market participants use in estimating future net servicing income, including estimates of prepayment speeds, market discount rates, cost to service, float earnings rates, and other ancillary income, including late fees. The fair value measurements are classified as Level 3.

Long-lived assets

When investments in branch facilities and various office buildings are determined to be impaired, their carrying values are written down to estimated fair value, or estimated fair value less cost to sell if the property is held for sale. Fair value is estimated in a process which considers current local commercial real estate market conditions and the judgment of the sales agent and often involves obtaining third party appraisals from certified real estate appraisers. The carrying amounts of these real estate holdings are regularly monitored by real estate professionals employed by the Company. These fair value measurements are classified as Level 3. Unobservable inputs to these measurements, which include estimates and judgments often used in conjunction with appraisals, are not readily quantifiable.

18. Fair Value of Financial Instruments

The carrying amounts and estimated fair values of financial instruments held by the Company are set forth below. Fair value estimates are made at a specific point in time based on relevant market information. They do not reflect any premium or discount that could result from offering for sale at one time the Company's entire holdings of a particular financial instrument. Because no market exists for many of the Company's financial instruments, fair value estimates are based on judgments regarding future expected loss experience, risk characteristics and economic conditions. These estimates are subjective, involve uncertainties, and cannot be determined with precision. Changes in assumptions could significantly affect the estimates.

The estimated fair values of the Company's financial instruments and the classification of their fair value measurement within the valuation hierarchy are as follows at December 31, 2019 and 2018:

		Estimated Fair Value at December 31, 2019			
(In thousands)	Carrying Amount	Level 1	Level 2	Level 3	Total
Financial Assets					
Loans:					
Business	**$ 5,565,449**	**$ —**	**$ —**	**$ 5,526,303**	**$ 5,526,303**
Real estate - construction and land	**899,377**	**—**	**—**	**898,152**	**898,152**
Real estate - business	**2,833,554**	**—**	**—**	**2,849,213**	**2,849,213**
Real estate - personal	**2,354,760**	**—**	**—**	**2,333,002**	**2,333,002**
Consumer	**1,964,145**	**—**	**—**	**1,938,505**	**1,938,505**
Revolving home equity	**349,251**	**—**	**—**	**344,424**	**344,424**
Consumer credit card	**764,977**	**—**	**—**	**708,209**	**708,209**
Overdrafts	**6,304**	**—**	**—**	**4,478**	**4,478**
Total loans	**14,737,817**	**—**	**—**	**14,602,286**	**14,602,286**
Loans held for sale	**13,809**	**—**	**13,809**	**—**	**13,809**
Investment securities	**8,741,888**	**854,705**	**7,738,158**	**149,025**	**8,741,888**
Securities purchased under agreements to resell	**850,000**	**—**	**—**	**869,592**	**869,592**
Interest earning deposits with banks	**395,850**	**395,850**	**—**	**—**	**395,850**
Cash and due from banks	**491,615**	**491,615**	**—**	**—**	**491,615**
Derivative instruments	**105,674**	**—**	**105,075**	**599**	**105,674**
Assets held in trust for deferred compensation plan	**16,518**	**16,518**	**—**	**—**	**16,518**
Total	**$ 25,353,171**	**$ 1,758,688**	**$ 7,857,042**	**$ 15,621,502**	**$ 25,237,232**
Financial Liabilities					
Non-interest bearing deposits	**$ 6,890,687**	**$ 6,890,687**	**$ —**	**$ —**	**$ 6,890,687**
Savings, interest checking and money market deposits	**11,621,716**	**11,621,716**	**—**	**—**	**11,621,716**
Certificates of deposit	**2,008,012**	**—**	**—**	**2,022,629**	**2,022,629**
Federal funds purchased	**20,035**	**20,035**	**—**	**—**	**20,035**
Securities sold under agreements to repurchase	**1,830,737**	**—**	**—**	**1,831,518**	**1,831,518**
Other borrowings	**988**	**—**	**988**	**—**	**988**
Derivative instruments	**10,219**	**—**	**9,989**	**230**	**10,219**
Liabilities held in trust for deferred compensation plan	**16,518**	**16,518**	**—**	**—**	**16,518**
Total	**$ 22,398,912**	**$ 18,548,956**	**$ 10,977**	**$ 3,854,377**	**$ 22,414,310**

(In thousands)	Carrying Amount	Estimated Fair Value at December 31, 2018 Level 1	Level 2	Level 3	Total
Financial Assets					
Loans:					
Business	$ 5,106,427	$ —	$ —	$ 5,017,694	$ 5,017,694
Real estate - construction and land	869,659	—	—	868,274	868,274
Real estate - business	2,875,788	—	—	2,846,095	2,846,095
Real estate - personal	2,127,083	—	—	2,084,370	2,084,370
Consumer	1,955,572	—	—	1,916,627	1,916,627
Revolving home equity	376,399	—	—	365,069	365,069
Consumer credit card	814,134	—	—	756,651	756,651
Overdrafts	15,236	—	—	11,223	11,223
Total loans	14,140,298	—	—	13,866,003	13,866,003
Loans held for sale	20,694	—	20,694	—	20,694
Investment securities	8,698,666	910,237	7,643,290	145,139	8,698,666
Federal funds sold	3,320	3,320	—	—	3,320
Securities purchased under agreements to resell	700,000	—	—	693,228	693,228
Interest earning deposits with banks	689,876	689,876	—	—	689,876
Cash and due from banks	507,892	507,892	—	—	507,892
Derivative instruments	41,210	—	40,627	583	41,210
Assets held in trust for deferred compensation plan	12,968	12,968	—	—	12,968
Total	$ 24,814,924	$ 2,124,293	$ 7,704,611	$ 14,704,953	$ 24,533,857
Financial Liabilities					
Non-interest bearing deposits	$ 6,980,298	$ 6,980,298	$ —	$ —	$ 6,980,298
Savings, interest checking and money market deposits	11,685,239	11,685,239	—	—	11,685,239
Certificates of deposit	1,658,122	—	—	1,663,748	1,663,748
Federal funds purchased	13,170	13,170	—	—	13,170
Securities sold under agreements to repurchase	1,943,219	—	—	1,944,458	1,944,458
Other borrowings	8,702	—	7,751	951	8,702
Derivative instruments	13,421	—	13,328	93	13,421
Liabilities held in trust for deferred compensation plan	12,968	12,968	—	—	12,968
Total	$ 22,315,139	$ 18,691,675	$ 21,079	$ 3,609,250	$ 22,322,004

19. Derivative Instruments

The notional amounts of the Company's derivative instruments are shown in the table below. These contractual amounts, along with other terms of the derivative, are used to determine amounts to be exchanged between counterparties and are not a measure of loss exposure. With the exception of the interest rate floors (discussed below), the Company's derivative instruments are accounted for as free-standing derivatives, and changes in their fair value are recorded in current earnings.

(In thousands)	December 31 **2019**	2018
Interest rate swaps	**$ 2,606,181**	$ 2,006,280
Interest rate floors	**1,500,000**	1,000,000
Interest rate caps	**59,316**	62,163
Credit risk participation agreements	**316,225**	143,460
Foreign exchange contracts	**10,936**	6,206
Mortgage loan commitments	**13,755**	14,544
Mortgage loan forward sale contracts	**1,943**	5,768
Forward TBA contracts	**17,500**	16,500
Total notional amount	**$ 4,525,856**	$ 3,254,921

The largest group of notional amounts relate to interest rate swap contracts sold to commercial customers who wish to modify their interest rate sensitivity. The customers are engaged in a variety of businesses, including real estate, manufacturing, retail product distribution, education, and retirement communities. These customer swaps are offset by matching contracts purchased by the Company from other financial dealer institutions. Contracts with dealers that require central clearing are novated to a clearing agency who becomes the Company's counterparty. Because of the matching terms of the offsetting contracts, in addition to collateral provisions which mitigate the impact of non-performance risk, changes in fair value subsequent to initial recognition have a minimal effect on earnings.

Many of the Company's interest rate swap contracts with large financial institutions contain contingent features relating to debt ratings or capitalization levels. Under these provisions, if the Company's debt rating falls below investment grade or if the Company ceases to be "well-capitalized" under risk-based capital guidelines, certain counterparties can require immediate and ongoing collateralization on interest rate swaps in net liability positions or instant settlement of the contracts. The Company maintains debt ratings and capital well above these minimum requirements.

As of December 31, 2019, the Company has entered into three interest rate floors with a combined notional value of $1.5 billion, to hedge the risk of declining interest rates on certain floating rate commercial loans indexed to one month LIBOR. The first interest rate floor has a purchased strike rate of 2.25% and became effective on January 1, 2020 and matures on January 1, 2026. The second interest rate floor has a purchased strike rate of 2.50% and is effective on June 1, 2020 and matures on June 1, 2026. The third interest rate floor has a purchased strike rate of 2.00% and is effective December 15, 2020 and matures on December 15, 2026. The premiums paid for these floors totaled $31.3 million. As of December 31, 2019, the maximum length of time over which the Company is hedging its exposure to the variability in future cash flows is approximately 7.0 years. The interest rate floors qualified and were designated as cash flow hedges and were assessed for effectiveness using regression analysis. The change in the fair value of the interest rate floors are recorded in AOCI, net of the amortization of the premium paid, which is recorded against interest and fees on loans in the consolidated statements of income. As of December 31, 2019, net deferred gains on the interest rate floors totaled $40.4 million (pre-tax) and were recorded in AOCI in the consolidated balance sheet. As of December 31, 2019, it is expected that $4.1 million (pre-tax) of interest rate floor premium amortization will be reclassified from AOCI into earnings over the next twelve months.

The Company also contracts with other financial institutions, as a guarantor or beneficiary, to share credit risk associated with certain interest rate swaps through risk participation agreements. The Company's risks and responsibilities as guarantor are further discussed in Note 21 on Commitments, Contingencies and Guarantees. In addition, the Company enters into foreign exchange contracts, which are mainly comprised of contracts to purchase or deliver foreign currencies for customers at specific future dates.

Under its program to sell residential mortgage loans in the secondary market, the Company designates certain newly-originated residential mortgage loans as held for sale. Derivative instruments arising from this activity include mortgage loan commitments and forward loan sale contracts. Changes in the fair values of the loan commitments and funded loans prior to sale that are due to changes in interest rates are economically hedged with forward contracts to sell residential mortgage-backed securities in the to-be-announced (TBA) market. These forward TBA contracts are also considered to be derivatives and are settled in cash at the security settlement date.

The fair values of the Company's derivative instruments, whose notional amounts are listed above, are shown in the table below. Information about the valuation methods used to determine fair value is provided in Note 17 on Fair Value Measurements.

The Company's policy is to present its derivative assets and derivative liabilities on a gross basis in its consolidated balance sheets and these are reported in other assets and other liabilities. Certain collateral posted to and from the Company's clearing counterparty has been offset against the fair values of cleared swaps, such that at December 31, 2019 in the table below, the positive fair values of cleared swaps were reduced by $617 thousand and the negative fair values of cleared swaps were reduced by $28.5 million. At December 31, 2018, the positive fair values of cleared swaps were reduced by $8.1 million and the negative fair values of cleared swaps were reduced by $6.5 million.

	Asset Derivatives		Liability Derivatives	
	December 31		**December 31**	
	2019	2018	**2019**	2018
(In thousands)	Fair Value		Fair Value	
Derivatives designated as hedging instruments:				
Interest rate floors	**$ 67,192**	**$ 29,031**	**$ —**	$ —
Total derivatives designated as hedging instruments	**$ 67,192**	$ 29,031	**$ —**	$ —
Derivatives not designated as hedging instruments:				
Interest rate swaps	**$ 37,774**	$ 11,537	**$ (9,916)**	$ (13,110)
Interest rate caps	**4**	24	**(4)**	(24)
Credit risk participation agreements	**140**	47	**(230)**	(93)
Foreign exchange contracts	**97**	20	**(32)**	(8)
Mortgage loan commitments	**459**	536	**—**	—
Mortgage loan forward sale contracts	**6**	15	**(2)**	(8)
Forward TBA contracts	**2**	—	**(35)**	(178)
Total derivatives not designated as hedging instruments	**$ 38,482**	$ 12,179	**$ (10,219)**	$ (13,421)
Total	**$ 105,674**	$ 41,210	**$ (10,219)**	$ (13,421)

The pre-tax effects of derivative instruments on the consolidated statements of income are shown in the tables below.

	Amount of Gain or (Loss) Recognized in OCI			Location of Gain (Loss) Reclassified from AOCI into Income	Amount of Gain (Loss) Reclassified from AOCI into Income		
(In thousands)	Total	Included Component	Excluded Component	*(In thousands)*	Total	Included Component	Excluded Component
For the Year Ended December 31, 2019							
Derivatives in cash flow hedging relationships:							
Interest rate floors*	**$ 27,481**	**$ 50,327**	**$ (22,846)**	Interest and fees on loans	**$ (3,793)**	**$ —**	**$ (3,793)**
Total	**$ 27,481**	**$ 50,327**	**$ (22,846)**	**Total**	**$ (3,793)**	**$ —**	**$ (3,793)**
For the Year Ended December 31, 2018							
Derivatives in cash flow hedging relationships:							
Interest rate floors*	$ 8,381	$ —	$ 8,381	Interest and fees on loans	$ (760)	$ —	$ (760)
Total	$ 8,381	$ —	$ 8,381	Total	$ (760)	$ —	$ (760)

** No hedging relationship existed during 2017.*

	Location of Gain or (Loss) Recognized in Income on Derivative	Amount of Gain or (Loss) Recognized in Income on Derivative		
		For the Years Ended December 31		
(In thousands)		**2019**	2018	2017
Derivative instruments:				
Interest rate swaps	Other non-interest income	**$ 4,732**	$ 3,914	$ 1,978
Interest rate caps	Other non-interest income	**—**	11	—
Credit risk participation agreements	Other non-interest income	**(16)**	150	35
Foreign exchange contracts:	Other non-interest income	**53**	31	(80)
Mortgage loan commitments	Loan fees and sales	**(77)**	(45)	231
Mortgage loan forward sale contracts	Loan fees and sales	**(3)**	5	64
Forward TBA contracts	Loan fees and sales	**(837)**	414	(648)
Total		**$ 3,852**	$ 4,480	$ 1,580

The following table shows the extent to which assets and liabilities relating to derivative instruments have been offset in the consolidated balance sheets. It also provides information about these instruments which are subject to an enforceable master netting arrangement, irrespective of whether they are offset, and the extent to which the instruments could potentially be offset. Also shown is collateral received or pledged in the form of other financial instruments, which is generally cash or marketable securities. The collateral amounts in this table are limited to the outstanding balances of the related asset or liability (after netting is applied); thus amounts of excess collateral are not shown. Most of the derivatives in the following table were transacted under master netting arrangements that contain a conditional right of offset, such as close-out netting, upon default.

While the Company is party to master netting arrangements with most of its swap derivative counterparties, the Company does not offset derivative assets and liabilities under these arrangements on its consolidated balance sheet. Collateral exchanged between the Company and dealer bank counterparties is generally subject to thresholds and transfer minimums, and usually consist of marketable securities. By contract, these may be sold or re-pledged by the secured party until recalled at a subsequent valuation date by the pledging party. For those swap transactions requiring central clearing, the Company posts cash or securities to its clearing agent. Collateral positions are valued daily, and adjustments to amounts received and pledged by the Company are made as appropriate to maintain proper collateralization for these transactions. Swap derivative transactions with customers are generally secured by rights to non-financial collateral, such as real and personal property, which is not shown in the table below.

(In thousands)	Gross Amount Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Gross Amounts Not Offset in the Balance Sheet: Financial Instruments Available for Offset	Gross Amounts Not Offset in the Balance Sheet: Collateral Received/ Pledged	Net Amount
December 31, 2019						
Assets:						
Derivatives subject to master netting agreements	**$ 105,147**	**$ —**	**$ 105,147**	**$ (8,104)**	**$ (59,525)**	**$ 37,518**
Derivatives not subject to master netting agreements	**527**	**—**	**527**			
Total derivatives	**105,674**	**—**	**105,674**			
Liabilities:						
Derivatives subject to master netting agreements	**10,083**	**—**	**10,083**	**(8,104)**	**(437)**	**1,542**
Derivatives not subject to master netting agreements	**136**	**—**	**136**			
Total derivatives	**10,219**	**—**	**10,219**			
December 31, 2018						
Assets:						
Derivatives subject to master netting agreements	$ 40,613	$ —	$ 40,613	$ (2,992)	$ (26,174)	$ 11,447
Derivatives not subject to master netting agreements	597	—	597			
Total derivatives	41,210	—	41,210			
Liabilities:						
Derivatives subject to master netting agreements	13,333	—	13,333	(2,992)	(261)	10,080
Derivatives not subject to master netting agreements	88	—	88			
Total derivatives	13,421	—	13,421			

20. Resale and Repurchase Agreements

The following table shows the extent to which assets and liabilities relating to securities purchased under agreements to resell (resale agreements) and securities sold under agreements to repurchase (repurchase agreements) have been offset in the consolidated balance sheets, in addition to the extent to which they could potentially be offset. Also shown is collateral received or pledged, which consists of marketable securities. The collateral amounts in the table are limited to the outstanding balances of the related asset or liability (after netting is applied); thus amounts of excess collateral are not shown. The agreements in the following table were transacted under master netting arrangements that contain a conditional right of offset, such as close-out netting, upon default.

Resale and repurchase agreements are agreements to purchase/sell securities subject to an obligation to resell/repurchase the same or similar securities. They are accounted for as collateralized financing transactions, not as sales and purchases of the securities portfolio. The securities collateral accepted or pledged in resale and repurchase agreements with other financial institutions also may be sold or re-pledged by the secured party, but is usually delivered to and held by third party trustees. The Company generally retains custody of securities pledged for repurchase agreements with customers.

The Company is party to agreements commonly known as collateral swaps. These agreements involve the exchange of collateral under simultaneous repurchase and resale agreements with the same financial institution counterparty. These repurchase and resale agreements have the same principal amounts, inception dates, and maturity dates and have been offset against each other in the consolidated balance sheets, as permitted under the netting provisions of ASC 210-20-45. The collateral swaps totaled $200.0 million at December 31, 2019 and $450.0 million at December 31, 2018. At December 31, 2019, the Company had posted collateral of $204.3 million in marketable securities, consisting of agency mortgage-backed bonds, and had accepted $209.6 million in agency mortgage-backed bonds.

				Gross Amounts Not Offset in the Balance Sheet		
(In thousands)	Gross Amount Recognized	Gross Amounts Offset in the Balance Sheet	Net Amounts Presented in the Balance Sheet	Financial Instruments Available for Offset	Securities Collateral Received/ Pledged	Net Amount
December 31, 2019						
Total resale agreements, subject to master netting arrangements	**$ 1,050,000**	**$ (200,000)**	**$ 850,000**	**$ —**	**$ (850,000)**	**$ —**
Total repurchase agreements, subject to master netting arrangements	**2,030,737**	**(200,000)**	**1,830,737**	**—**	**(1,830,737)**	**—**
December 31, 2018						
Total resale agreements, subject to master netting arrangements	$ 1,150,000	$ (450,000)	$ 700,000	$ —	$ (700,000)	$ —
Total repurchase agreements, subject to master netting arrangements	2,393,219	(450,000)	1,943,219	—	(1,943,219)	—

The table below shows the remaining contractual maturities of repurchase agreements outstanding at December 31, 2019 and 2018, in addition to the various types of marketable securities that have been pledged by the Company as collateral for these borrowings.

	Remaining Contractual Maturity of the Agreements			
(In thousands)	Overnight and continuous	Up to 90 days	Greater than 90 days	Total
December 31, 2019				
Repurchase agreements, secured by:				
U.S. government and federal agency obligations	**$ 526,283**	**$ —**	**$ —**	**$ 526,283**
Government-sponsored enterprise obligations	**32,575**	**—**	**—**	**32,575**
Agency mortgage-backed securities	**973,774**	**48,517**	**227,802**	**1,250,093**
Non-agency mortgage-backed securities	**71,399**	**—**	**—**	**71,399**
Asset-backed securities	**60,012**	**40,000**	**—**	**100,012**
Other debt securities	**50,375**	**—**	**—**	**50,375**
Total repurchase agreements, gross amount recognized	**$ 1,714,418**	**$ 88,517**	**$ 227,802**	**$ 2,030,737**
December 31, 2018				
Repurchase agreements, secured by:				
U.S. government and federal agency obligations	$ 387,541	$ 150,000	$ 100,000	$ 637,541
Government-sponsored enterprise obligations	18,466	—	—	18,466
Agency mortgage-backed securities	882,744	31,774	213,752	1,128,270
Non-agency mortgage-backed securities	187,740	—	—	187,740
Asset-backed securities	322,680	—	—	322,680
Other debt securities	98,522	—	—	98,522
Total repurchase agreements, gross amount recognized	$ 1,897,693	$ 181,774	$ 313,752	$ 2,393,219

21. Commitments, Contingencies and Guarantees

The Company engages in various transactions and commitments with off-balance sheet risk in the normal course of business to meet customer financing needs. The Company uses the same credit policies in making the commitments and conditional obligations described below as it does for on-balance sheet instruments. The following table summarizes these commitments at December 31:

(In thousands)	**2019**	2018
Commitments to extend credit:		
Credit card	**$ 5,063,166**	$ 5,328,502
Other	**6,123,264**	5,840,967
Standby letters of credit, net of participations	**377,338**	353,905
Commercial letters of credit	**7,050**	13,774

Commitments to extend credit are legally binding agreements to lend to a borrower providing there are no violations of any conditions established in the contract. As many of the commitments are expected to expire without being drawn upon, the total commitment does not necessarily represent future cash requirements. Refer to Note 2 on Loans and Allowance for Loan Losses for further discussion.

Commercial letters of credit act as a means of ensuring payment to a seller upon shipment of goods to a buyer. The majority of commercial letters of credit issued are used to settle payments in international trade. Typically, letters of credit require presentation of documents which describe the commercial transaction, evidence shipment, and transfer title.

The Company, as a provider of financial services, routinely issues financial guarantees in the form of financial and performance standby letters of credit. Standby letters of credit are contingent commitments issued by the Company generally to guarantee the payment or performance obligation of a customer to a third party. While these represent a potential outlay by the Company, a significant amount of the commitments may expire without being drawn upon. The Company has recourse against the customer for any amount it is required to pay to a third party under a standby letter of credit. The letters of credit are subject to the same credit policies, underwriting standards and approval process as loans made by the Company. Most of the standby letters of credit are secured, and in the event of nonperformance by the customer, the Company has rights to the underlying collateral, which could include commercial real estate, physical plant and property, inventory, receivables, cash and marketable securities.

At December 31, 2019, the Company had recorded a liability in the amount of $2.6 million, representing the carrying value of the guarantee obligations associated with the standby letters of credit. This amount will be accreted into income over the remaining life of the respective commitments. Commitments outstanding under these letters of credit, which represent the maximum potential future payments guaranteed by the Company, were $377.3 million at December 31, 2019.

The Company regularly purchases various state tax credits arising from third-party property redevelopment. These credits are either resold to third parties or retained for use by the Company. During 2019, purchases and sales of tax credits amounted to $90.6 million and $84.9 million, respectively. At December 31, 2019, the Company had outstanding purchase commitments totaling $160.9 million that it expects to fund in 2020.

The Company periodically enters into risk participation agreements (RPAs) as a guarantor to other financial institutions, in order to mitigate those institutions' credit risk associated with interest rate swaps with third parties. The RPA stipulates that, in the event of default by the third party on the interest rate swap, the Company will reimburse a portion of the loss borne by the financial institution. These interest rate swaps are normally collateralized (generally with real property, inventories and equipment) by the third party, which limits the credit risk associated with the Company's RPAs. The third parties usually have other borrowing relationships with the Company. The Company monitors overall borrower collateral, and at December 31, 2019, believes sufficient collateral is available to cover potential swap losses. The RPAs are carried at fair value throughout their term, with all changes in fair value, including those due to a change in the third party's creditworthiness, recorded in current earnings. The terms of the RPAs, which correspond to the terms of the underlying swaps, range from 3 to 11 years. At December 31, 2019, the fair value of the Company's guarantee liability RPAs was $230 thousand, and the notional amount of the underlying swaps was $208.9 million. The maximum potential future payment guaranteed by the Company cannot be readily estimated and is dependent upon the fair value of the interest rate swaps at the time of default.

The Company has various legal proceedings pending at December 31, 2019, arising in the normal course of business. While some matters pending against the Company specify damages claimed by plaintiffs, others do not seek a specified amount of damages or are at very early stages of the legal process. The Company records a loss accrual for all legal and regulatory matters for which it deems a loss is probable and can be reasonably estimated. Some matters, which are in the early stages, have not yet progressed to the point where a loss amount can be determined to be probable and estimable.

22. Related Parties

The Company's Chief Executive Officer, its Executive Chairman, and its former Vice Chairman are directors of Tower Properties Company (Tower) and, together with members of their immediate families, beneficially own approximately 67% of the outstanding stock of Tower. At December 31, 2019, Tower owned 211,996 shares of Company stock. Tower is primarily engaged in the business of owning, developing, leasing and managing real property.

Payments from the Company and its affiliates to Tower are summarized below. These payments, with the exception of dividend payments, relate to property management services, including construction oversight, on three Company-owned office buildings and related parking garages in downtown Kansas City.

(In thousands)		**2019**		2018		2017
Leasing agent fees	**$**	**154**	$	133	$	32
Operation of parking garages		**118**		95		82
Building management fees		**2,001**		1,935		1,954
Property construction management fees		**250**		136		146
Dividends paid on Company stock held by Tower		**210**		181		232
Total	**$**	**2,733**	$	2,480	$	2,446

Tower has a $13.5 million line of credit with the Bank which is subject to normal credit terms and has a variable interest rate. The line of credit is collateralized by Company stock and based on collateral value had a maximum borrowing amount of approximately $11.5 million at December 31, 2019. There were no borrowings under this line during 2019, and no balance outstanding at December 31, 2019. There were no borrowings during 2018, and the maximum borrowings during 2017 were $5.2 million. There was no balance outstanding at December 31, 2018 or 2017. Interest paid on borrowings during the last three years was not significant. Letters of credit may be collateralized under this line of credit; however, there were no letters of credit outstanding during 2019, 2018 or 2017, and thus, no fees were received during these periods. From time to time, the Bank extends additional credit to Tower for construction and development projects. No construction loans were outstanding during 2019, 2018 and 2017.

Tower leases office space in the Kansas City bank headquarters building owned by the Company. Rent paid to the Company totaled $75 thousand in 2019, $74 thousand in 2018, and $74 thousand in 2017, at $17.00, $16.69 and $15.75 per square foot, respectively.

Directors of the Company and their beneficial interests have deposit accounts with the Bank and may be provided with cash management and other banking services, including loans, in the ordinary course of business. Such loans were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other unrelated persons and did not involve more than the normal risk of collectability.

As discussed in Note 21 on Commitments, Contingencies and Guarantees, the Company regularly purchases various state tax credits arising from third-party property redevelopment and resells the credits to third parties. During 2019, the Company sold state tax credits to its Executive Chairman, its former Vice Chairman, its Chief Executive Officer, and its Chief Credit Officer in the amount of $865 thousand, $663 thousand, $166 thousand, and $83 thousand, respectively, for personal tax planning. During 2018, the Company sold state tax credits to its Executive Chairman, its former Vice Chairman, and its Chief Executive Officer in the amount of $831 thousand, $759 thousand, and $119 thousand, respectively. During 2017, the Company sold state tax credits to its Executive Chairman, its former Vice Chairman, and its Chief Executive Officer in the amount of $694 thousand, $598 thousand, and $67 thousand, respectively. The terms of the sales and the amounts paid were the same as the terms and amounts paid for similar tax credits by persons not related to the Company.

23. Parent Company Condensed Financial Statements

Following are the condensed financial statements of Commerce Bancshares, Inc. (Parent only) for the periods indicated:

Condensed Balance Sheets

	December 31	
(In thousands)	**2019**	2018
Assets		
Investment in consolidated subsidiaries:		
Bank	**$ 2,687,692**	$ 2,587,489
Non-banks	**71,290**	67,538
Cash	**301,913**	207,462
Investment securities:		
Available for sale debt	**1,399**	2,576
Equity	**2,969**	3,191
Note receivable due from bank subsidiary	**50,000**	50,000
Advances to subsidiaries, net of borrowings	**26,097**	19,867
Income tax benefits	**9,973**	8,590
Other assets	**23,528**	23,734
Total assets	**$ 3,174,861**	$ 2,970,447
Liabilities and stockholders' equity		
Pension obligation	**$ 13,028**	$ 12,645
Other liabilities	**27,149**	26,504
Total liabilities	**40,177**	39,149
Stockholders' equity	**3,134,684**	2,931,298
Total liabilities and stockholders' equity	**$ 3,174,861**	$ 2,970,447

Condensed Statements of Income

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Income			
Dividends received from consolidated bank subsidiary	**$ 500,000**	$ 200,000	$ 160,002
Earnings of consolidated subsidiaries, net of dividends	**(79,641)**	233,785	147,678
Interest and dividends on investment securities	**1,698**	10,698	2,099
Management fees charged to subsidiaries	**36,776**	37,688	30,431
Investment securities gains (losses)	**3,572**	(4,581)	41,717
Net interest income on advances and note to subsidiaries	**1,208**	1,299	514
Other	**4,700**	2,390	3,346
Total income	**468,313**	481,279	385,787
Expense			
Salaries and employee benefits	**32,882**	33,588	33,714
Professional fees	**2,050**	2,383	2,036
Data processing fees paid to affiliates	**3,142**	3,341	3,512
Community service	**87**	152	32,093
Other	**13,019**	10,729	10,671
Total expense	**51,180**	50,193	82,026
Income tax benefit	**(4,098)**	(2,456)	(15,622)
Net income	**$ 421,231**	$ 433,542	$ 319,383

Condensed Statements of Cash Flows

	For the Years Ended December 31		
(In thousands)	**2019**	2018	2017
Operating Activities			
Net income	**$ 421,231**	$ 433,542	$ 319,383
Adjustments to reconcile net income to net cash provided by operating activities:			
Earnings of consolidated subsidiaries, net of dividends	**79,641**	(233,785)	(147,678)
Other adjustments, net	**2,491**	2,505	(11,268)
Net cash provided by operating activities	**503,363**	202,262	160,437
Investing Activities			
Decrease in securities purchased under agreements to resell	**—**	—	155,775
(Increase) decrease in investment in subsidiaries, net	**(12)**	—	11
Proceeds from sales of investment securities	**3,856**	41,638	11,006
Proceeds from maturities/pay downs of investment securities	**1,150**	1,988	2,295
Purchases of investment securities	**(63)**	(125)	—
Note receivable due from bank subsidiary	**—**	—	(50,000)
Increase in advances to subsidiaries, net	**(6,230)**	(5,296)	(9,518)
Net purchases of building improvements and equipment	**(235)**	(133)	(52)
Net cash provided by (used in) investing activities	**(1,534)**	38,072	109,517
Financing Activities			
Purchases of treasury stock	**(134,904)**	(75,231)	(17,771)
Accelerated share repurchase agreements	**(150,000)**	—	—
Issuance of stock under equity compensation plans	**(8)**	(10)	(8)
Cash dividends paid on common stock	**(113,466)**	(100,238)	(91,619)
Cash dividends paid on preferred stock	**(9,000)**	(9,000)	(9,000)
Net cash used in financing activities	**(407,378)**	(184,479)	(118,398)
Increase in cash	**94,451**	55,855	151,556
Cash at beginning of year	**207,462**	151,607	51
Cash at end of year	**$ 301,913**	$ 207,462	$ 151,607
Income tax receipts, net	**$ (2,337)**	$ (1,965)	$ (8,991)

Dividends paid by the Parent to its shareholders were substantially provided from Bank dividends. The Bank may distribute common dividends without prior regulatory approval, provided that the dividends do not exceed the sum of net income for the current year and retained net income for the preceding two years, subject to maintenance of minimum capital requirements. The Parent charges fees to its subsidiaries for management services provided, which are allocated to the subsidiaries based primarily on total average assets. The Parent makes cash advances to its private equity subsidiaries for general short-term cash flow purposes. Advances may be made to the Parent by its subsidiary bank holding company for temporary investment of idle funds. Interest on such advances is based on market rates.

In 2017, the Bank borrowed $50.0 million from the Parent as part of its strategy to manage FDIC insurance premiums. The note has a rolling 13 month maturity, and the interest rate is a variable rate equal to the one year treasury rate.

For the past several years, the Parent has maintained a $20.0 million line of credit for general corporate purposes with the Bank. The Parent has not borrowed under this line during the past three years.

At December 31, 2019, the fair value of the investment securities held by the Parent consisted of investments of $2.8 million in preferred stock with readily determinable fair values, $188 thousand in equity securities that do not have readily determinable fair values, and $1.4 million in non-agency mortgage-backed securities.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no changes in or disagreements with accountants on accounting and financial disclosure.

Item 9a. CONTROLS AND PROCEDURES

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of our disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934. Based on this evaluation, our principal executive officer and our principal financial officer concluded that our disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control — Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in *Internal Control — Integrated Framework (2013),* our management concluded that our internal control over financial reporting was effective as of December 31, 2019.

The Company's internal control over financial reporting as of December 31, 2019 has been audited by KPMG LLP, an independent registered public accounting firm, as stated in their report which follows.

Changes in Internal Control Over Financial Reporting

No change in the Company's internal control over financial reporting occurred that has materially affected, or is reasonably likely to materially affect, such controls during the last quarter of the period covered by this report.

Report of Independent Registered Public Accounting Firm

To the Shareholders and Board of Directors
Commerce Bancshares, Inc.:

Opinion on Internal Control Over Financial Reporting

We have audited Commerce Bancshares, Inc.'s and subsidiaries (the Company) internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements), and our report dated February 25, 2020 expressed an unqualified opinion on those consolidated financial statements.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

KPMG LLP

Kansas City, Missouri
February 25, 2020

Item 9b. OTHER INFORMATION

None

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by Items 401, 405 and 407(c)(3), (d)(4) and (d)(5) of Regulation S-K regarding executive officers, directors, and corporate governance is included at the end of Part I of this Form 10-K under the caption “Information about the Company's Executive Officers” and under the captions “Proposal One - Election of the 2023 Class of Directors”, “Delinquent Section 16(a) Reports”, “Audit and Risk Committee Report”, “Committees of the Board" and "Shareholder Proposals and Nominations" in the definitive proxy statement, which is incorporated herein by reference.

The Company’s senior financial officer code of ethics for the chief executive officer and senior financial officers of the Company, including the chief financial officer, principal accounting officer or controller, or persons performing similar functions, is available at www.commercebank.com. Amendments to, and waivers of, the code of ethics are posted on this Web site.

Item 11. EXECUTIVE COMPENSATION

The information required by Items 402 and 407(e)(4) and (e)(5) of Regulation S-K regarding executive compensation is included under the captions “Compensation Discussion and Analysis”, “Executive Compensation”, “Director Compensation”, “Compensation and Human Resources Committee Report”, and “Compensation and Human Resources Committee Interlocks and Insider Participation” in the definitive proxy statement, which is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by Items 201(d) and 403 of Regulation S-K is included under the captions “Equity Compensation Plan Information” and “Security Ownership of Certain Beneficial Owners and Management” in the definitive proxy statement, which is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Items 404 and 407(a) of Regulation S-K is covered under the captions “Proposal One - Election of the 2023 Class of Directors” and “Corporate Governance” in the definitive proxy statement, which is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 9(e) of Schedule 14A is included under the captions “Pre-approval of Services by the External Auditor” and “Fees Paid to KPMG LLP” in the definitive proxy statement, which is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as a part of this report:

		Page
(1)	Financial Statements:	
	Consolidated Balance Sheets	60
	Consolidated Statements of Income	61
	Consolidated Statements of Comprehensive Income	62
	Consolidated Statements of Cash Flows	63
	Consolidated Statements of Changes in Equity	64
	Notes to Consolidated Financial Statements	65
	Summary of Quarterly Statements of Income	53
(2)	Financial Statement Schedules:	
	All schedules are omitted as such information is inapplicable or is included in the financial statements.	

(b) The exhibits filed as part of this report and exhibits incorporated herein by reference to other documents are listed below.

3 —Articles of Incorporation and By-Laws:

(1) Restated Articles of Incorporation, as amended, were filed in quarterly report on Form 10-Q (Commission file number 1-36502) dated May 7, 2019, and the same are hereby incorporated by reference.

(2) By-Laws, as amended, were filed in annual report on Form 10-K (Commission file number 1-36502) dated February 25, 2020, and the same are hereby incorporated by reference.

4 — Instruments defining the rights of security holders, including indentures:

(1) Pursuant to paragraph (b)(4)(iii) of Item 601 Regulation S-K, Registrant will furnish to the Commission upon request copies of long-term debt instruments.

(2) Description of Commerce Bancshares, Inc. registered securities.

10 — Material Contracts (Each of the following is a management contract or compensatory plan arrangement):

(1) Commerce Bancshares, Inc. Executive Incentive Compensation Plan amended and restated as of January 1, 2019, was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 21, 2019, and the same is hereby incorporated by reference.

(2) Commerce Bancshares, Inc. Stock Purchase Plan for Non-Employee Directors amended and restated as of April 17, 2013 was filed in current report on Form 8-K (Commission file number 0-2989) dated April 23, 2013, and the same is hereby incorporated by reference.

(3) Commerce Executive Retirement Plan amended and restated as of January 28, 2011 was filed in annual report on Form 10-K (Commission file number 0-2989) dated February 25, 2011, and the same is hereby incorporated by reference.

(4) 2009 Form of Severance Agreement between Commerce Bancshares, Inc. and the persons listed at the end of such agreement was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 24, 2015, and the same is hereby incorporated by reference.

(5) 2015 Form of Severance Agreement between Commerce Bancshares, Inc. and the persons listed at the end of such agreement was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 24, 2015, and the same is hereby incorporated by reference.

(6) 2009 Form of Severance Agreement between Commerce Bancshares, Inc. and the persons listed at the end of such agreement was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 21, 2019, and the same is hereby incorporated by reference.

(7) Trust Agreement for the Commerce Bancshares, Inc. Executive Incentive Compensation Plan amended and restated as of January 1, 2001 was filed in quarterly report on Form 10-Q (Commission file number 0-2989) dated May 8, 2001, and the same is hereby incorporated by reference.

(8) Commerce Bancshares, Inc. 2020 Compensatory Arrangements with CEO and Named Executive Officers were filed in amended current report on Form 8-K (Commission file number 1-36502) dated February 7, 2020, and the same is hereby incorporated by reference.

(9) Commerce Bancshares, Inc. Amended and Restated 2005 Equity Incentive Plan, amended and restated as of April 17, 2013 (incorporated by reference to Exhibit 10(j) to Commerce Bancshares, Inc.'s Form 8-K dated April 23, 2013).

(9)(1) Amendment No. 1 dated November 12, 2018 to Commerce Bancshares, Inc. Amended and Restated 2005 Equity Incentive Plan, amended and restated as of April 17, 2013, was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 21, 2019.

(10) Commerce Bancshares, Inc. Stock Appreciation Rights Agreement and Commerce Bancshares, Inc. Restricted Stock Award Agreement, pursuant to the 2005 Equity Incentive Plan, were filed in current report on Form 8-K (Commission file number 0-2989) dated February 23, 2006, and the same are hereby incorporated by reference.

(11) Commerce Bancshares, Inc. Stock Appreciation Rights Agreement, Commerce Bancshares, Inc. Restricted Stock Award Agreements for Executive Officers, and Commerce Bancshares, Inc. Restricted Stock Award Agreements for Employees other than Executive Officers, pursuant to the 2005 Equity Incentive Plan, were filed in quarterly report on Form 10-Q (Commission file number 0-2989) dated May 6, 2013, and the same are hereby incorporated by reference.

(12) Form of Notice of Grant of Award and Award Agreement for Restricted Stock for Executive Officers, pursuant to the Commerce Bancshares, Inc. 2005 Equity Incentive Plan, was filed in quarterly report on Form 10-Q (Commission file number 0-2989) dated May 7, 2014, and the same is hereby incorporated by reference.

(13) Form of Notice of Grant of Award and Award Agreement for Restricted Stock for Employees other than Executive Officers, pursuant to the Commerce Bancshares, Inc. 2005 Equity Incentive Plan, was filed in quarterly report on Form 10-Q (Commission file number 0-2989) dated May 7, 2014, and the same is hereby incorporated by reference.

(14) Form of Notice of Grant of Award and Award Agreement for Stock Appreciation Rights, pursuant to the Commerce Bancshares, Inc. 2005 Equity Incentive Plan, was filed in quarterly report on Form 10-Q (Commission file number 0-2989) dated May 7, 2014, and the same is hereby incorporated by reference.

(15) Form of Notice of Grant of Award and Award Agreement for Restricted Stock, pursuant to the Commerce Bancshares, Inc. 2005 Equity Incentive Plan, was filed in annual report on Form 10-K (Commission file number 1-36502) dated February 21, 2019, and the same is hereby incorporated by reference.

21 — Subsidiaries of the Registrant

23 — Consent of Independent Registered Public Accounting Firm

24 — Power of Attorney

31.1 — Certification of CEO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

31.2 — Certification of CFO pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

32 — Certifications of CEO and CFO pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

101 — Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Income, (iii) the Consolidated Statements of Comprehensive Income, (iv) the Consolidated Statements of Changes in Equity, (v) the Consolidated Statements of Cash Flows and (vi) the Notes to Consolidated Financial Statements, tagged as blocks of text and in detail. The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.

104 — Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

Item 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized this 25th day of February 2020.

COMMERCE BANCSHARES, INC.

By: /s/ THOMAS J. NOACK
Thomas J. Noack
Senior Vice President & Secretary

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on the 25th day of February 2020.

By: /s/ JOHN W. KEMPER
John W. Kemper
Chief Executive Officer

By: /s/ CHARLES G. KIM
Charles G. Kim
Chief Financial Officer

By: /s/ PAUL A. STEINER
Paul A. Steiner
Controller
(Chief Accounting Officer)

David W. Kemper
Terry D. Bassham
John R. Capps
Earl H. Devanny, III
W. Thomas Grant, II
Karen L. Daniel
John W. Kemper
Jonathan M. Kemper
Benjamin F. Rassieur, III
Todd R. Schnuck
Andrew C. Taylor
Kimberly G. Walker

All the Directors on the Board of Directors*

* The Directors of Registrant listed executed a power of attorney authorizing Thomas J. Noack, their attorney-in-fact, to sign this report on their behalf.

By: /s/ THOMAS J. NOACK
Thomas J. Noack
Attorney-in-Fact

Exhibit 21

The consolidated subsidiaries of the Registrant at February 1, 2020 were as follows:

Name	Location	State or Other Jurisdiction of Incorporation
CBI-Kansas, Inc.	Kansas City, MO	Kansas
Commerce Bank.	Kansas City, MO	Missouri
Commerce Brokerage Services, Inc.	Clayton, MO	Missouri
Clayton Holdings, LLC	Kansas City, MO	Missouri
Clayton Financial Corp.	Clayton, MO	Missouri
Clayton Realty Corp..	Clayton, MO	Missouri
Illinois Financial, LLC	Peoria, IL	Delaware
Illinois Realty, LLC	Peoria, IL	Delaware
Commerce Insurance Services, Inc.	Fenton, MO	Missouri
Commerce Investment Advisors, Inc.	Kansas City, MO	Missouri
CBI Equipment Finance, Inc.	Kansas City, MO	Missouri
Tower Redevelopment Corporation	Kansas City, MO	Missouri
CBI Insurance Company	Kansas City, MO	Arizona
CFB Partners, LLC	Clayton, MO	Delaware
CFB Venture Fund I, Inc..	Kansas City, MO	Missouri
CFB Venture Fund, L.P.	Clayton, MO	Delaware
Capital for Business, Inc..	Kansas City, MO	Missouri

Exhibit 23

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Commerce Bancshares, Inc.:

We consent to the incorporation by reference in the Registration Statements No. 33-28294, No. 33-82692, No. 33-8075, No. 33-78344, No. 333-14651, No. 333-186867, No. 333-188374, and No. 333-214495 on Form S-8 and No. 333-140221 and No. 333-196689 on Form S-3ASR of Commerce Bancshares, Inc. of our reports dated February 25, 2020, with respect to the consolidated balance sheets of Commerce Bancshares, Inc. as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows, and changes in equity for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively, the consolidated financial statements), and the effectiveness of internal control over financial reporting as of December 31, 2019, which reports appear in the December 31, 2019 annual report on Form 10-K of Commerce Bancshares, Inc.

KPMG LLP

Kansas City, Missouri
February 25, 2020

Exhibit 24

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the undersigned do hereby appoint Thomas J. Noack and Paul A. Steiner, or either of them, attorney for the undersigned to sign the Annual Report on Form 10-K of Commerce Bancshares, Inc., for the fiscal year ended December 31, 2019, together with any and all amendments which might be required from time to time with respect thereto, to be filed with the Securities and Exchange Commission under the Securities Exchange Act of 1934, with respect to Commerce Bancshares, Inc., with full power and authority in either of said attorneys to do and perform in the name of and on behalf of the undersigned every act whatsoever necessary or desirable to be done in the premises as fully and to all intents and purposes as the undersigned might or could do in person.

IN WITNESS WHEREOF, the undersigned have executed these presents as of this 7th day of February, 2020.

/s/ TERRY D. BASSHAM

/s/ JOHN R. CAPPS

/s/ EARL H. DEVANNY, III

/s/ W. THOMAS GRANT, II

/s/ KAREN L. DANIEL

/s/ DAVID W. KEMPER

/s/ JOHN W. KEMPER

/s/ JONATHAN M. KEMPER

/s/ BENJAMIN F. RASSIEUR, III

/s/ TODD R. SCHNUCK

/s/ ANDREW C. TAYLOR

/s/ KIMBERLY G. WALKER

Exhibit 31.1

CERTIFICATION

I, John W. Kemper, certify that:

1. I have reviewed this annual report on Form 10-K of Commerce Bancshares, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ JOHN W. KEMPER

John W. Kemper
President and
Chief Executive Officer

February 25, 2020

Exhibit 31.2

CERTIFICATION

I, Charles G. Kim, certify that:

1. I have reviewed this annual report on Form 10-K of Commerce Bancshares, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ CHARLES G. KIM

Charles G. Kim
Executive Vice President and
Chief Financial Officer

February 25, 2020

Exhibit 32

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Commerce Bancshares, Inc. (the "Company") on Form 10-K for the year ended December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), we, John W. Kemper and Charles G. Kim, Chief Executive Officer and Chief Financial Officer, respectively, of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of our knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ JOHN W. KEMPER

John W. Kemper
Chief Executive Officer

/s/ CHARLES G. KIM

Charles G. Kim
Chief Financial Officer

February 25, 2020

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

CORPORATE HEADQUARTERS

1000 Walnut
P.O. Box 419248
Kansas City, MO 64141-6248
816.234.2000
www.commercebank.com

INDEPENDENT ACCOUNTANTS

KPMG LLP
Kansas City, MO

TRANSFER AGENT, REGISTRAR AND DIVIDEND DISBURSING AGENT

Shareholder correspondence should be mailed to:

Computershare Trust Company, N.A.
P.O. Box 505000
Louisville, KY 40233

Overnight correspondence should be sent to:

Computershare
462 South 4th Street, Suite 1600
Louisville, KY 40202

Within USA Telephone: 800.317.4445
Outside USA Telephone: 781.575.2723

Hearing Impaired/TDD: 800.952.9245
Website: www.computershare.com/investor

Shareholder online inquiries:
https://www.us.computershare.com/investor/Contact

STOCK EXCHANGE LISTING

Nasdaq
Symbol-Common Stock: CBSH
Symbol-Preferred Stock: CBSHP

COMMON STOCK INFORMATION

The table below sets forth the high and low prices of actual transactions for the company's common stock, adjusted for the December 2019 5% stock dividend, which is publicly traded on the Nasdaq Stock Market.

FISCAL 2019	HIGH	LOW
First Quarter	$60.97	$52.97
Second Quarter	59.01	53.93
Third Quarter	58.90	52.05
Fourth Quarter	68.65	54.56

ANNUAL MEETING

The annual meeting of shareholders will be held Wednesday, April 15, 2020 at 9:30 a.m. on the 10th floor of the Commerce Bank building located at 8000 Forsyth Boulevard, St. Louis, MO 63105.

INVESTOR INQUIRIES

Shareholders, analysts and investors seeking information about the company should direct their inquiries to:

Matthew Burkemper
Senior Vice President, Commerce Bank
Corporate Development and Investor Relations
8000 Forsyth Boulevard
St. Louis, MO 63105
314.746.7485
Matthew.Burkemper@commercebank.com

SHAREHOLDERS MAY RECEIVE FUTURE ANNUAL REPORTS AND PROXY MATERIALS ONLINE

To receive materials electronically, rather than by mail, **individuals who hold stock in their name** may enroll for electronic delivery at Computershare's investor website: www.computershare.com/investor

- If you have already created a login ID and password at the above site, log in and follow the prompts to "Enroll in Electronic Delivery."
- If you have not created a login ID and password on the above site, choose "Create Login." You will need the Social Security number or tax ID number associated with your Commerce stock account to create the login. After you have created your login, follow the prompts to "Enroll in Electronic Delivery."

Please note:

- Your consent is entirely revocable.
- You can always vote your proxy on the internet whether or not you elect to receive your materials electronically.

Shareholders who hold their Commerce stock through a bank, broker or other holder of record should refer to the information provided by that entity for instructions on how to elect to view future annual reports and proxy statements over the internet.

Employee PIP (401(k)) shareholders who have a company email address and online access will automatically be enrolled to receive the Annual Report, Proxy Statement, and proxy card over the internet unless they choose to opt out by emailing the Corporate Secretary at Thomas.Noack@commercebank.com.

COMMERCE BANCSHARES, INC.

1000 WALNUT
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KANSAS CITY, MO 64141-6248
Phone: (816) 234-2000
(800) 892-7100

Email: CBSHInvestorRelations@commercebank.com
Website: www.commercebank.com

An Equal Opportunity Employer

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