SECOND QUARTER 2020 EARNINGS PRESENTATION

July 23, 2020

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Associated Bank

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SECOND QUARTER 2020 UPDATE

Associated remains well prepared to face the challenges ahead

Associated Banc-Corp Reports Second Quarter 2020 Earnings of $0.94 Per Common Share Including the Gain on Sale of Associated Benefits and Risk Consulting

Supported Customers[1]

- We continue to support our customers with our balance sheet
- Total loans increased $467 million
- Total deposits increased $890 million
- Granted fee waivers and loan deferrals

Sound Credit Position

- 2Q20 net charge offs of $26 million; year to date NCOs were 36 bps of avg total loans
- 6% EOP reserve on COVID-19 affected loan portfolio
- 19% EOP reserve on oil and gas
- Well reserved with ACLL to loan ratio of 1.73% (1.80% excl. PPP) EOP 2Q 2020

Substantial Liquidity

- Loan-to-deposit ratio of 94% (90% excluding PPP) EOP 2Q 2020
- Low-cost deposits accounted for 61% of total deposits EOP 2Q 2020
- Ample liquidity available from funding sources
- Cost of interest bearing deposits decreased to 25 bps in June 2020

Well Capitalized

- Share repurchases suspended for the year
- Capital measures improved from the first quarter driven by the sale of Associated Benefits and Risk Consulting (ABRC)
- Dividend payout ratio of 33.18% for last 12 months
- Tangible book value per share increased 11%[1] to $16.21

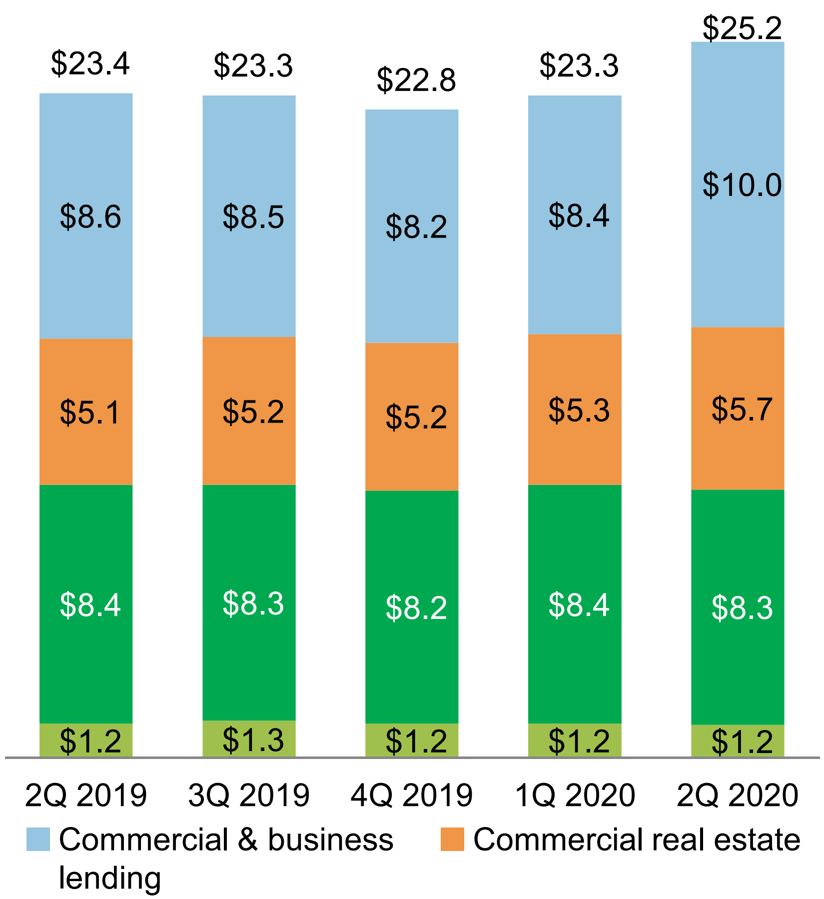
[1]2Q 2020 end of period (EOP) balances compared to 1Q 2020 EOP balances.

LOAN TRENDS

PPP loans, funding of CRE commitments and unusually high line draws on commercial lines drove increases

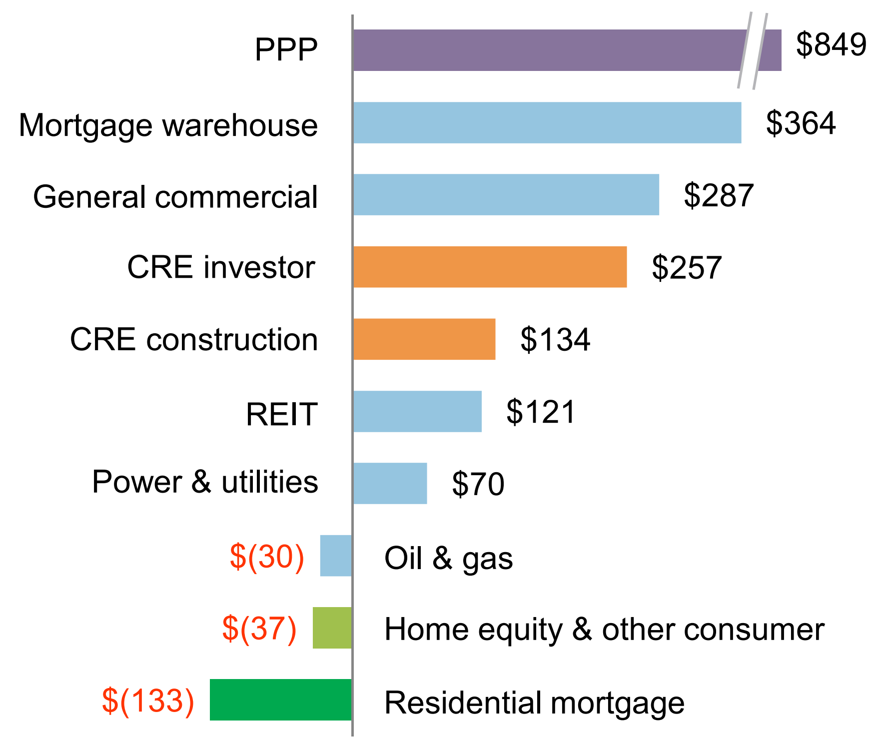
Average Quarterly Loans

($ in billions)



Average Loan Growth (1Q20 to 2Q20)

($ in millions)



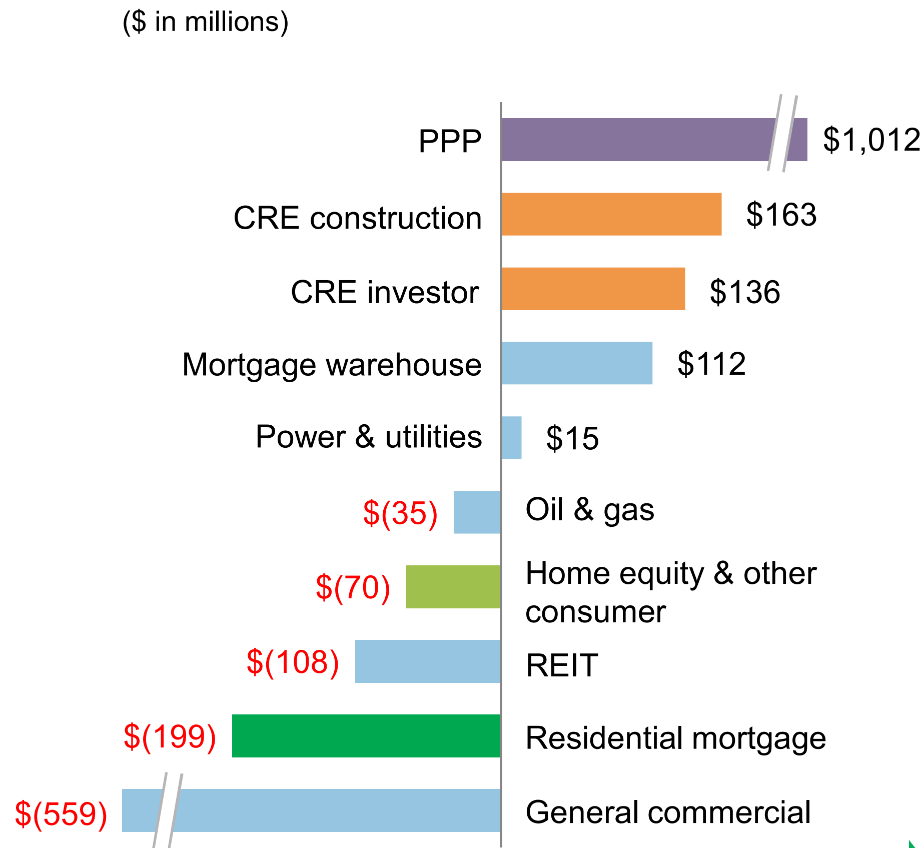
END OF PERIOD LOAN TRENDS

$1 billion of PPP loans offset by repayment of commercial lines

EOP Loan Change[1] 1Q20 to 2Q20

Total loans +$467 million (+2%)

- Commercial and Business Lending +$436 million (+5%)
  - PPP loans were the main driver for growth
  - General commercial balances declined as customers paid down lines drawn during March
- Commercial Real Estate Lending +$299 million (+5%)
  - Pipeline of commitments continues to fund as balances have grown each quarter since 3Q 2019
- Total Consumer -$269 million (-3%)
  - The decline in residential mortgages is largely driven by loan refinances
  - Home equity and consumer continued a downward trend



[1] Excludes loans held for sale.

LOAN PORTFOLIO OVERVIEW

We continue to monitor our COVID affected loan portfolios

($ in millions as of 6/30/2020)

	June 30, 2020	Key COVID Coml. Loan Exposures	% of Total Loans	Deferred Loans	% of Total Loans	Nonaccrual Loans	% of Total Loans
PPP Loans	$ 1,012	$ -	-	$ -	-	$ -	-
Commercial and industrial	7,969	926	3.7%	45	0.2%	80	0.3%
CRE - owner occupied	914	129	0.5%	138	0.6%	2	0.0%
Commercial and business lending	9,895	1,055	4.2%	184	0.7%	82	0.3%
CRE - investor	4,174	995	4.0%	606	2.4%	11	0.0%
CRE - construction	1,708	144	0.6%	32	0.1%	1	0.0%
Commercial real estate lending	5,882	1,138	4.6%	638	2.6%	12	0.0%
Total commercial	15,777	2,193	8.8%	822	3.3%	94	0.4%
Residential mortgage	7,934	-	0.0%	692	2.8%	67	0.3%
Home equity	796	-	0.0%	31	0.1%	11	0.0%
Other consumer	326	-	0.0%	2	0.0%	0	0.0%
Total consumer	9,055	-	0.0%	725	2.9%	78	0.3%
Total Loans	$ 24,833	$ 2,193	8.8%	$ 1,547	6.2%	$ 172	0.7%

- 35% of borrowers included in Key COVID Commercial Loan Exposures[1] received a loan modification
- 19% of borrowers included in Key COVID Commercial Loan Exposures[1] received a PPP loan
- 4% of borrowers included in Key COVID Commercial Loan Exposures[1] received both
- Less than 70 bps of loans are in non-accrual

[1] Excluding Oil & Gas customers which have not received loan deferrals.

KEY COVID COMMERCIAL LOAN EXPOSURES[1]

Key COVID commercial loan exposures are spread across multiple industries without large concentrations

($ in millions)

	C&BL	Utilization	CRE	Utilization	Total	% of total loans
Retailers/Shopping Centers[2]						
Retailers	$ 97.9	45%	$ 664.1	89%	$ 762.0	3.07%
Retail REITs	251.9	56%	146.7	100%	398.6	1.86%
Subtotal	349.8	52%	810.8	90%	1,160.6	4.64%
Oil & Gas						
Oil & Gas	431.7	71%	-	0%	431.7	1.74%
Subtotal	431.7	71%	-	0%	431.7	1.74%
Hotels, Amusement & Related						
Hotels	0.2	23%	224.4	77%	224.6	0.90%
Parking Lots and Garages	22.6	61%	69.5	87%	92.1	0.37%
Casinos	29.3	100%	-	0%	29.3	0.12%
Recreation & Entertainment	26.3	41%	6.9	99%	33.3	0.13%
Movie Theaters	23.6	70%	-	0%	23.6	0.10%
Subtotal	102.0	62%	300.9	79%	402.9	1.62%
Restaurants						
Full-Service	72.4	82%	12.9	100%	85.2	0.34%
Limited-Service & Other	21.0	92%	13.8	97%	34.8	0.14%
Subtotal	93.4	84%	26.7	98%	120.0	0.48%
Transportation & Other						
Transportation Services	52.2	80%	-	0%	52.2	0.21%
Fracking Sand Mining	25.8	75%	-	0%	25.8	0.10%
Subtotal	78.1	78%	-	0%	78.1	0.31%
Total	$ 1,054.9	64%	$ 1,138.3	87%	$ 2,193.3	8.83%

[1] As of 6/30/2020.
[2] C&BL excludes grocers, convenience stores, vehicle dealers, auto parts and tire dealers, direct and mail order retailers, and building material dealers; CRE excludes properties primarily anchored by grocers, self-storage facilities, and vehicle dealers.

COMMERCIAL COVID-19 RELIEF

Commercial deferral requests have slowed during the quarter

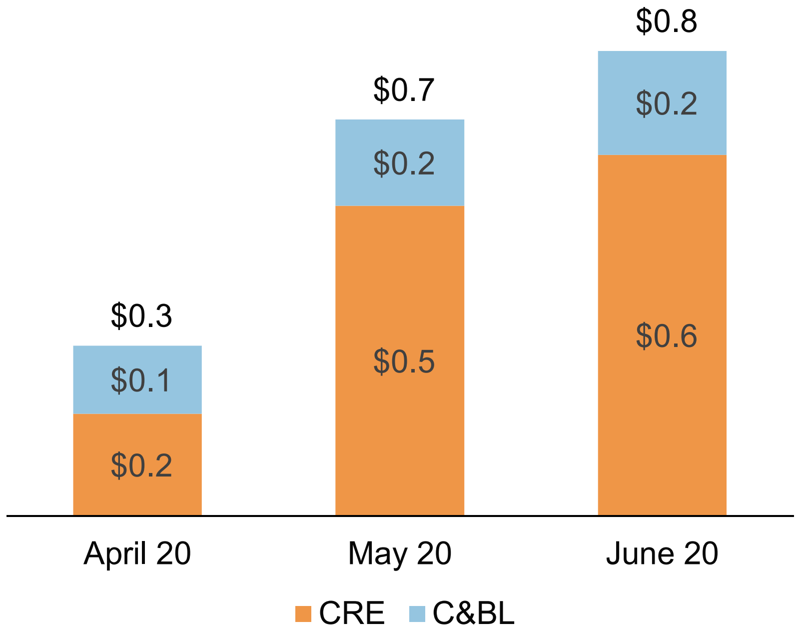
Loan Deferrals & Modifications[1]

Loan Deferrals

- Commercial Real Estate
  - $561 million (66 loans) Corporate CRE
  - $78 million (140 loans) Regional/Business Banking
- Commercial & Business Lending
  - $128 million (74 loans) Corporate Banking
  - $56 million (286 loans) Business Banking

Deferred and Modified Loans Trend

($ in billions)



[1] Includes completed modifications as of June 30, 2020.

CONSUMER COVID-19 RELIEF

Consumer deferral requests have dropped off during the quarter

Loan Deferrals & Modifications[1]

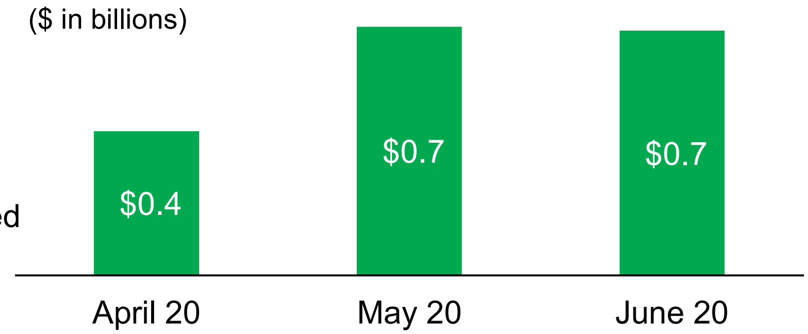
Loan Deferrals

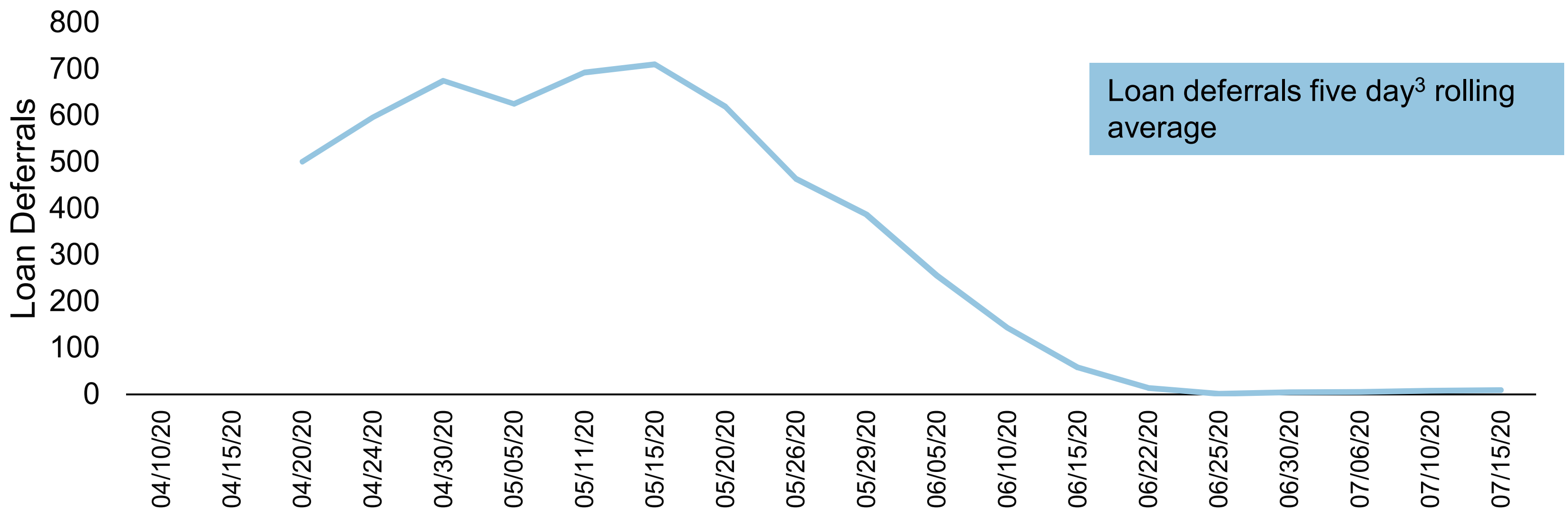
- $725 million (2,840 loans) of residential mortgage and consumer loans[2]

Fee Waivers

- Our COVID-19 Relief Program has refunded or waived approximately $1.7 million in fees for consumers and small businesses through June 30th

Deferred and Modified Loans Trend





[1] Includes completed modifications as of June 30, 2020.
[2] We have also completed deferrals on $427 million of loans in our mortgage portfolio serviced for others, representing approximately 5% of that portfolio.
[3] Business days.

DEFERRAL TRENDS

We continue to monitor and work with customers on their deferred loans

Many customers that participated in payment relief are moving back toward normally scheduled payment structures

- Consumer
  - 27% of Customers have made at least one payment post modification

- Small Business had 12 deferrals that ended in June totaling $2.5M
  - 10 of those are expected to resume payments ($2.2M)
  - 2 have requested an extension ($0.3M)

- Corporate Banking had 22 deferrals that ended in June totaling $43.6M
  - 21 of those are expected to resume payments ($32.4M)

- CRE had 11 deferrals that ended in June totaling $115.8M
  - 5 of those are expected to resume payments ($55.9M)
  - 6 have requested extensions ($59.9M) and all are either hotel or retail properties

- Discussions with customers on upcoming deferral expirations indicate most will resume making payments

ALLOWANCE UPDATE

Second quarter ACLL[2] covered 1.73% of total loans, an increase of 11 bps from the first quarter

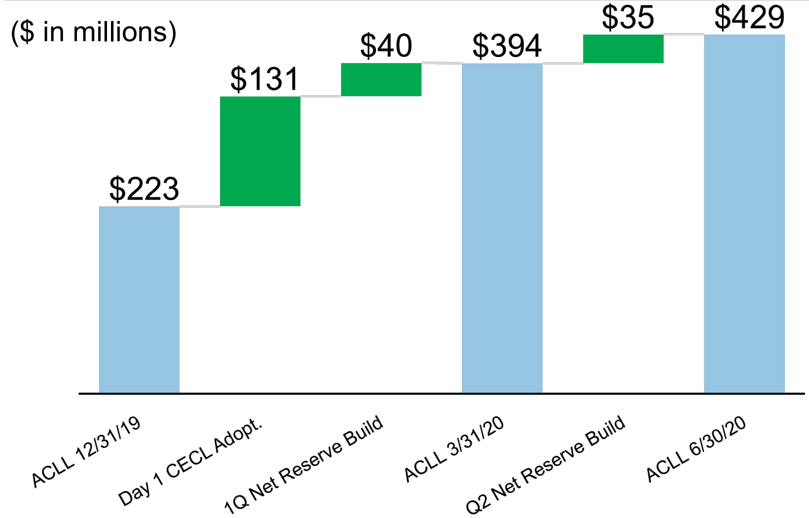
Second Quarter ACLL

- Allowance for credit losses on loans (ACLL) increased $35 million, or 9%, at the end of 2Q 2020 from 1Q 2020
- Assumptions based on Moody's Baseline scenarios

As of 6/30/2020	ACLL[2]	ACLL[2] / Loans
Key COVID Coml. Exp.	$ 136	6.21%
Non-COVID Portfolio	$ 293	1.35%

($ in millions)

Loan Allowance Walkforward



Loan Category	ACLL[1] 12/31/19	Day 1 CECL Adoption[2]	Net 1Q Reserve Build[2]	ACLL[2] 3/31/20	Net 2Q Reserve Build[2]	ACLL[2] 06/30/2020	6/30/20 ACLL[2] / Loans
C&BL - excl. Oil & Gas	$ 100,594	$ (8,390)	$ 29,571	$ 121,775	$ 326	$ 122,101	1.44%
C&BL Oil & Gas	13,226	55,460	8,880	77,567	6,025	83,592	19.36%
PPP Loans	-	-	-	-	808	808	0.08%
CRE - Investor	41,044	2,287	(785)	42,546	16,524	59,070	1.42%
CRE - Construction	32,447	25,814	7,428	65,688	10,585	76,273	4.47%
Residential Mortgage	16,960	33,215	(6,227)	43,947	(121)	43,826	0.55%
Other Consumer	19,008	22,760	777	42,546	363	42,909	3.83%
Total	**$ 223,278**	**$ 131,147**	**$ 39,643**	**$ 394,069**	**$ 34,510**	**$ 428,579**	**1.73%**
Total (excluding PPP Loans)	$ 223,278	$ 131,147	$ 39,643	$ 394,069	$ 33,702	$ 427,770	1.80%

($ in thousands)

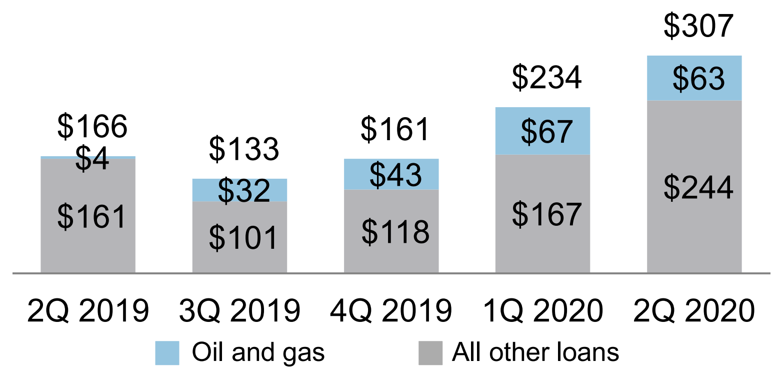
[1] Includes ALLL and the allowance for unfunded commitments.
[2] Includes funded and unfunded reserve for loans, excludes reserve for HTM securities.

CREDIT QUALITY – QUARTERLY TRENDS

Reserve builds on key commercial exposures and oil and gas while credit metrics remain fairly stable

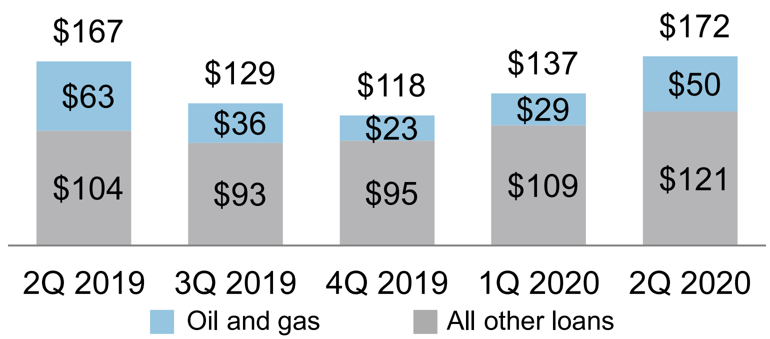
Potential Problem Loans[1]

($ in millions)



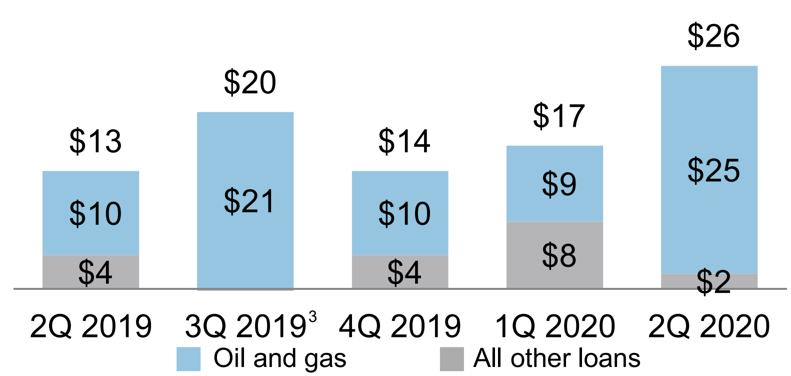
Nonaccrual Loans[1]

($ in millions)

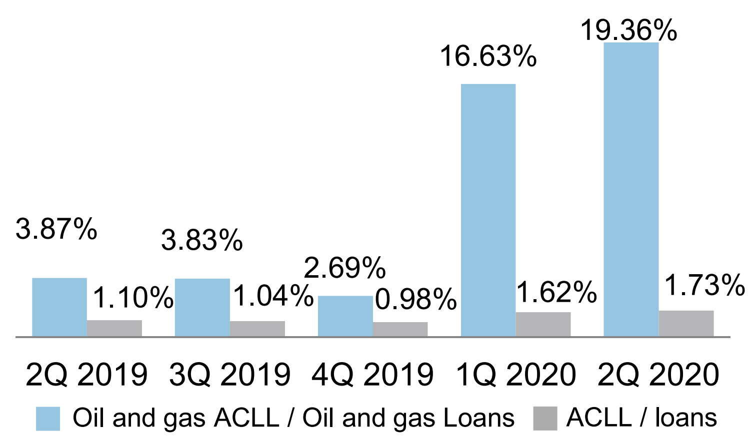


Net Charge Offs[1]

($ in millions)



ACLL[2] to Total Loans / Oil and Gas Loans[1]

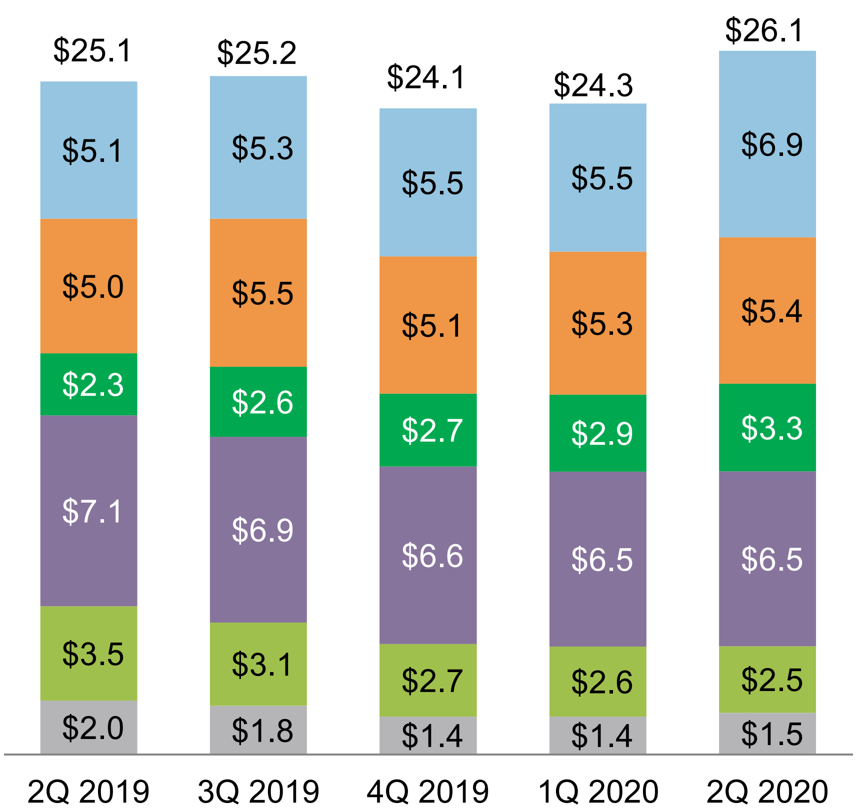


[1] At period end.
[2] ACLL figure does not include ~$61,000 for HTM securities in 2Q20.
[3] 3Q 2019 included a net recovery of $1 million for all other loans.

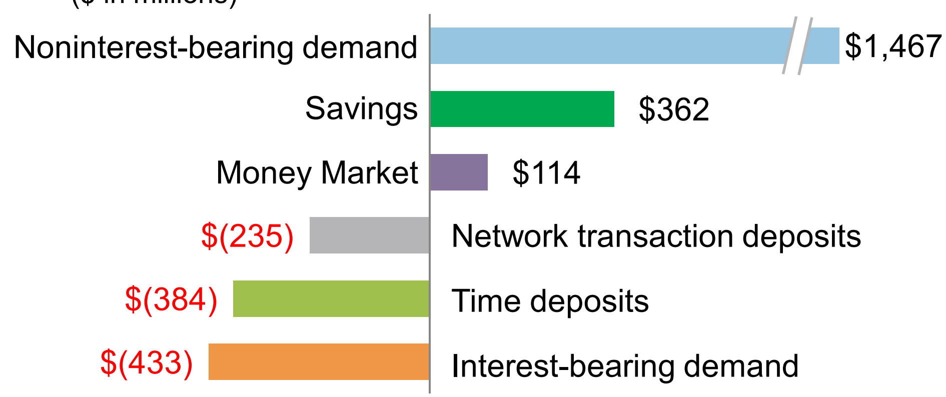
DEPOSIT PORTFOLIO TRENDS

Low-cost deposits continue to grow while reducing high-cost non-core funding

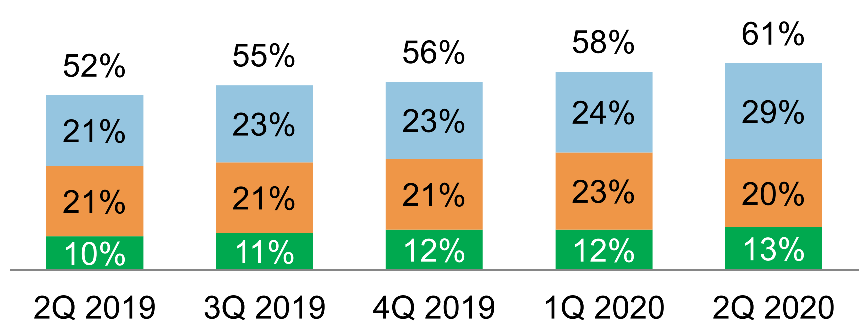
Average Quarterly Deposits



EOP Funding Change 1Q20 to 2Q20



EOP Low-cost Deposit Mix Trend



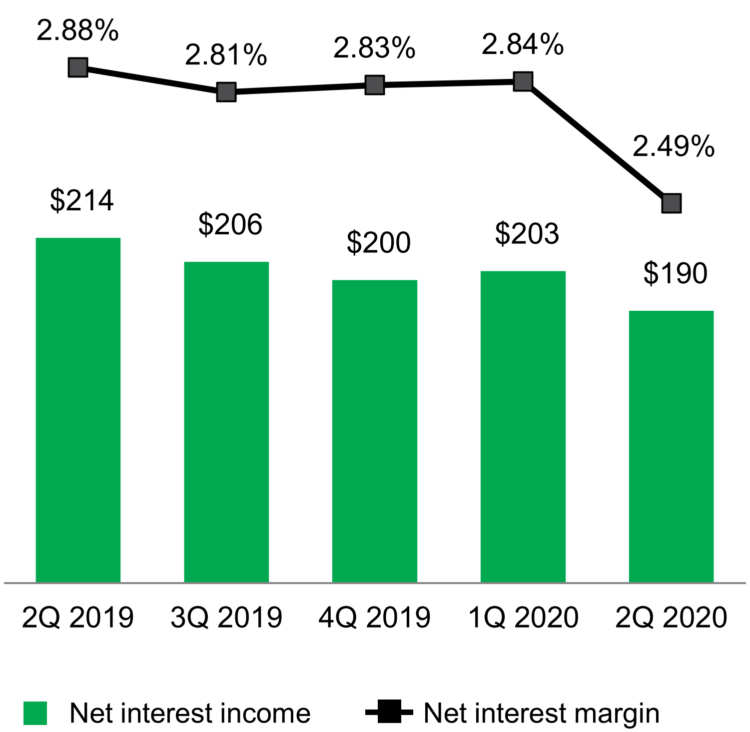
Noninterest-bearing demand
Interest-bearing demand
Savings
Money market
Time deposits
Network transaction deposits

NET INTEREST INCOME AND YIELD TRENDS

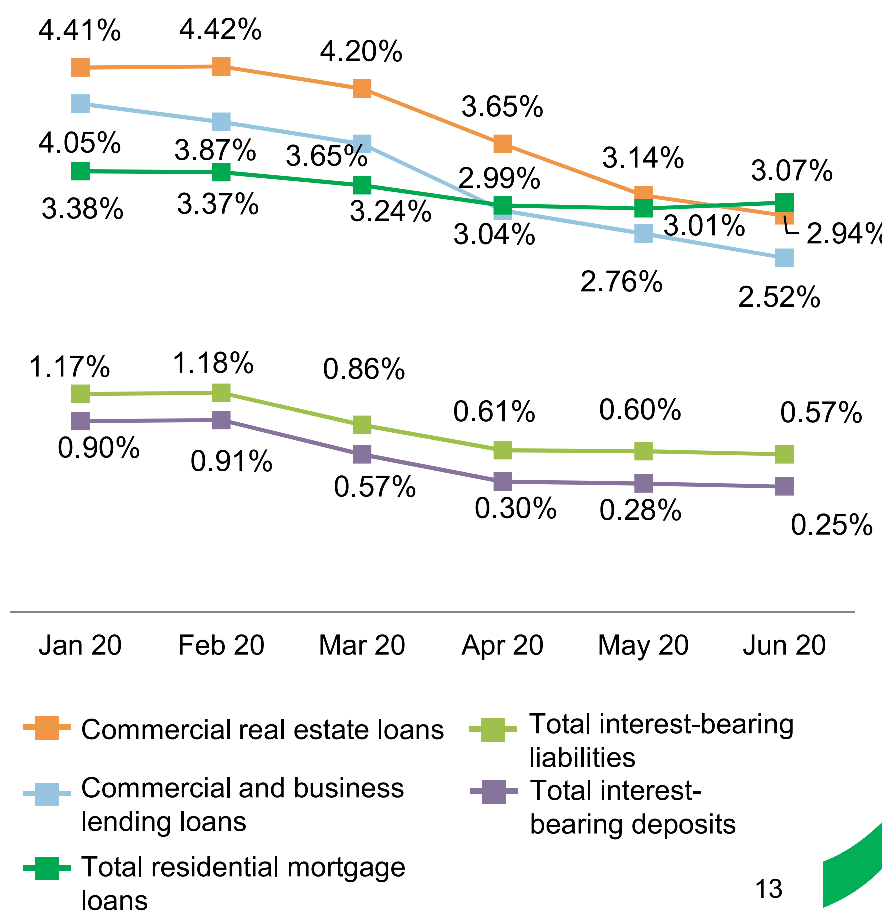
Fed Funds rate cuts and increased liquidity have pressured year to date NIM down to 2.66%

Net Interest Income and Net Interest Margin

($ in millions)



Average Yields

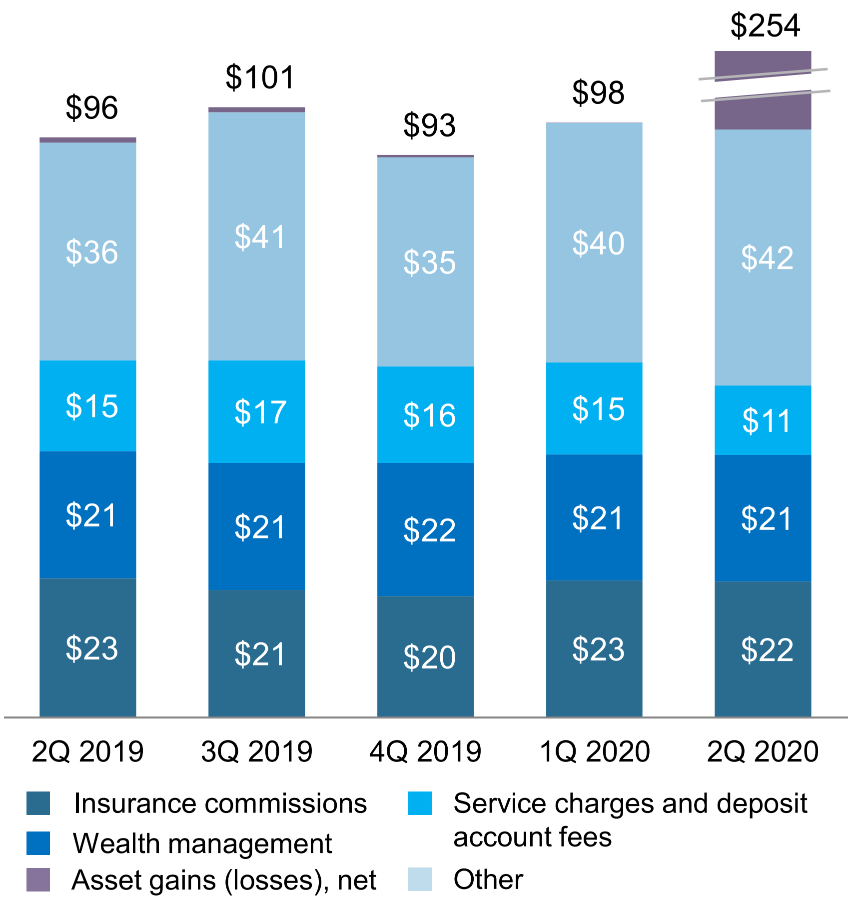


NONINTEREST INCOME TRENDS

Mortgage banking grew during the second quarter despite partially offsetting MSR impairment

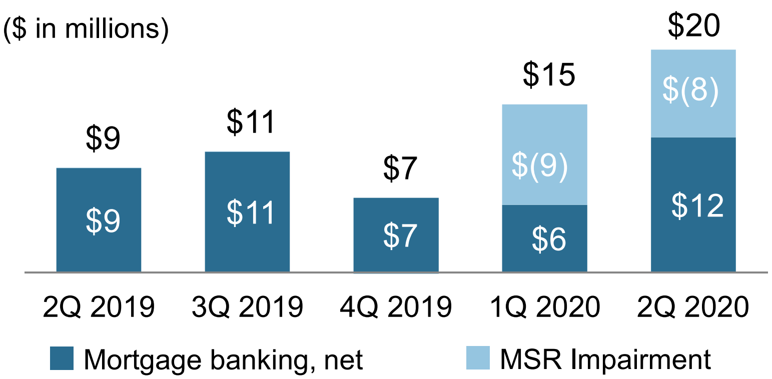
Noninterest Income Trend

($ in millions)



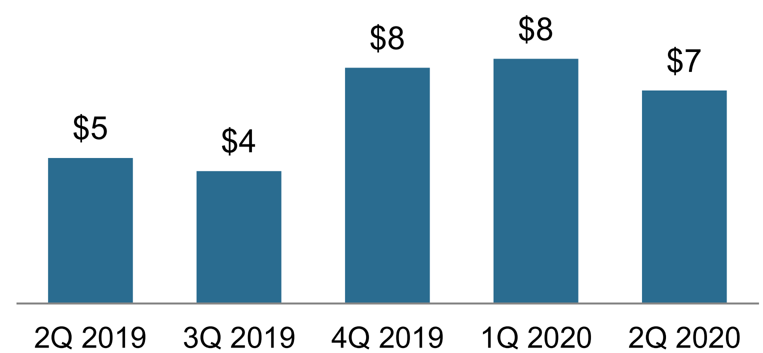
Gross Mortgage Banking Income

($ in millions)



Capital Markets, Net

($ in millions)

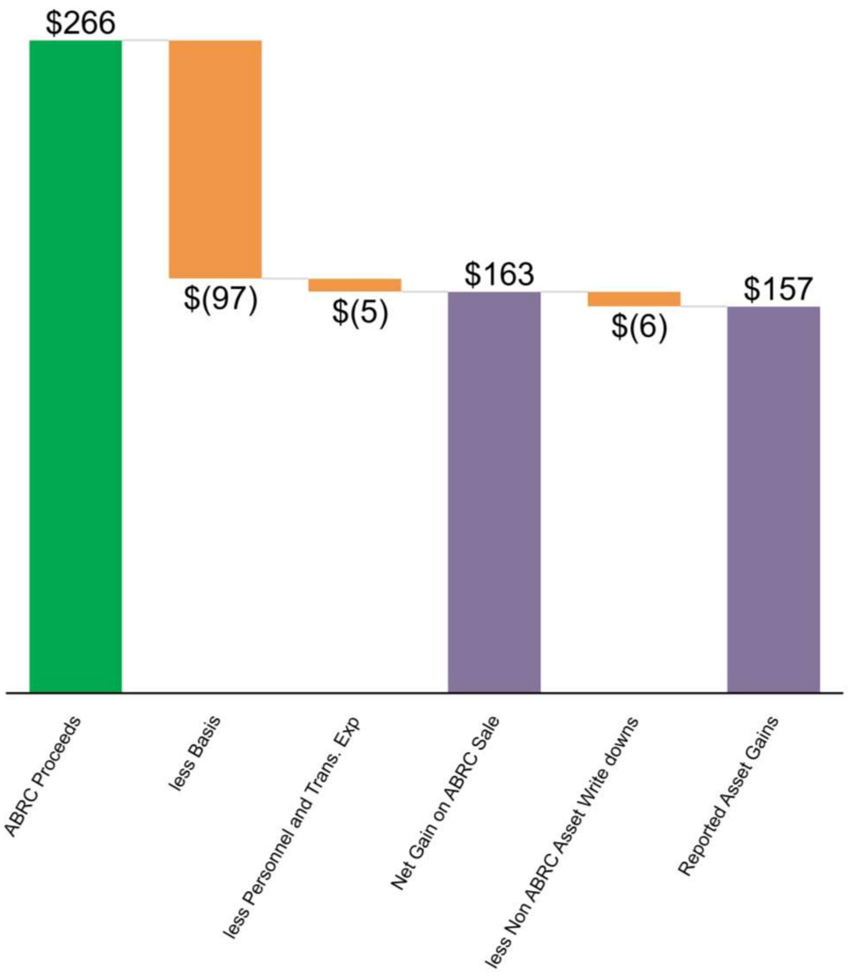


ASSET GAINS AND LOSSES

Asset Gains of $157 million including the sale of ABRC

Asset Gains (Losses) Walkforward

($ in millions)



ABRC Transaction Terms

Buyer	USI®
Purchase Price	■ $266 million[1] — 3x multiple of LTM revenue[2] — 18x multiple of LTM net income[2]
Consideration	■ 100% cash
Net Gain	■ $163 million (net of transaction expenses)
Closing	■ Closed 6/30/2020

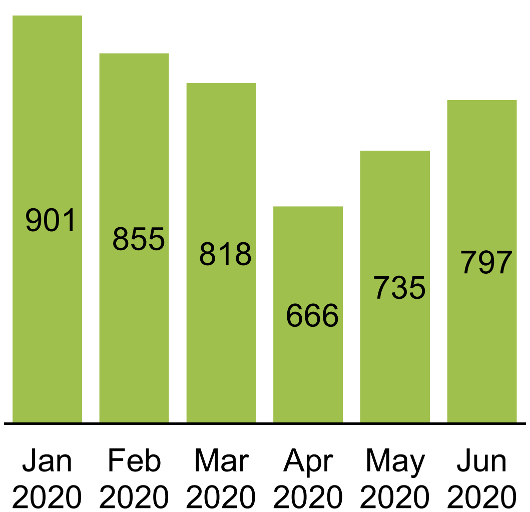
[1] Paid at closing and subject to customary adjustments.
[2] Reflects pro forma revenue and net income of transferred entity as of LTM ended 3/31/2020.

CUSTOMER ACTIVITY UPDATE

Customer activity is showing positive trends

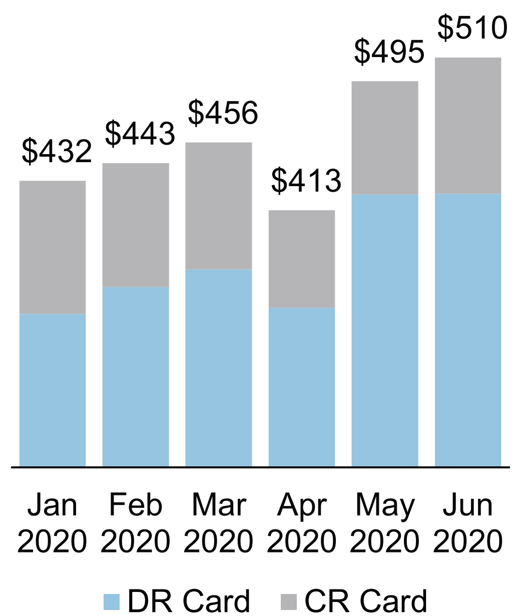
Monthly Branch Activity[1]

Branch activity has ticked back up but shifted to drive-through; ~30% of transactions are occurring in the lobby during June compared to ~65% pre-COVID



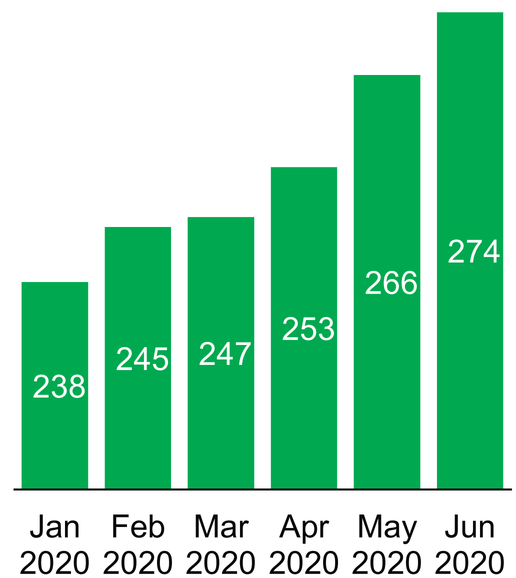
Debit and Credit Card Purchases[2]

Customers are beginning to use their cards again resulting in debit and credit card transactions increasing 23% in June from April



Active Mobile Users[3]

Active mobile users have increased 15% since January

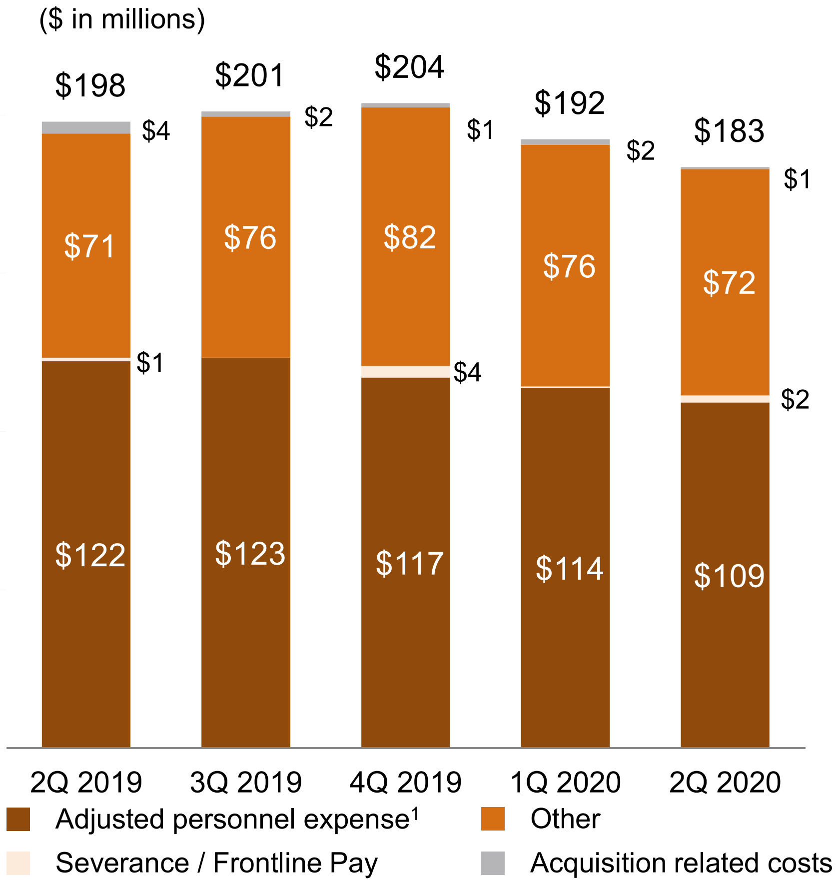


[1] Monthly branch transactions displayed in thousands.
[2] Debit and credit card spend displayed in millions.
[3] Active mobile users represented as a 90 day average, displayed in thousands.

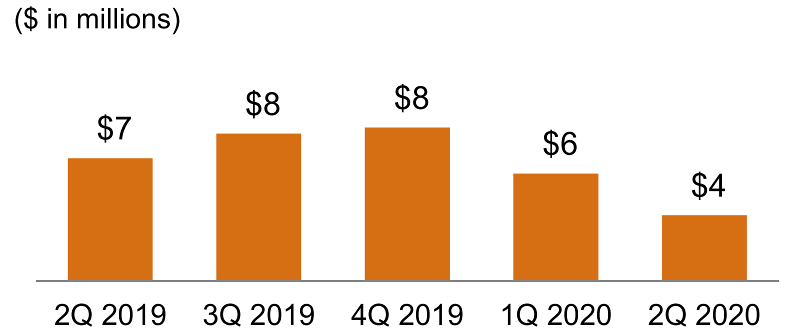
EXPENSE TRENDS

Expense discipline remains a focus as the second quarter continues downward trend

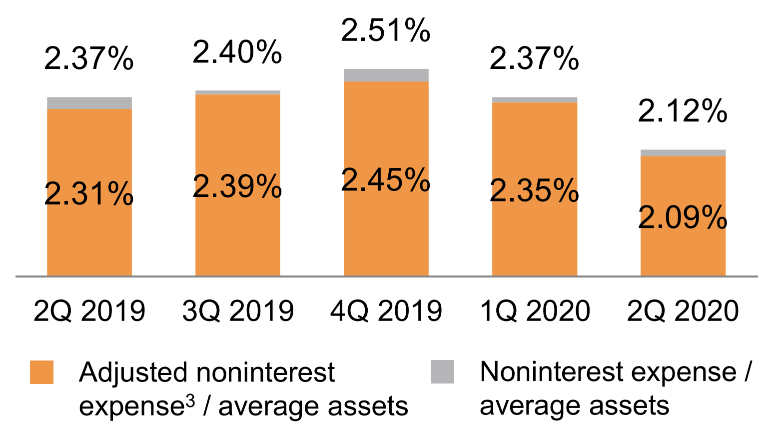
Noninterest Expense



Business Development and Advertising



Noninterest Expense[2] / Average Assets



[1] A non-GAAP financial measure, adjusted personnel expense excludes restructuring related costs and frontline pay. Please refer to the appendix for a reconciliation of personnel expense to adjusted personnel expense.

[2] Annualized

[3] A non-GAAP financial measure, adjusted noninterest expense excludes acquisition and restructuring related costs. Please refer to the appendix for a reconciliation of noninterest expense to adjusted noninterest expense.

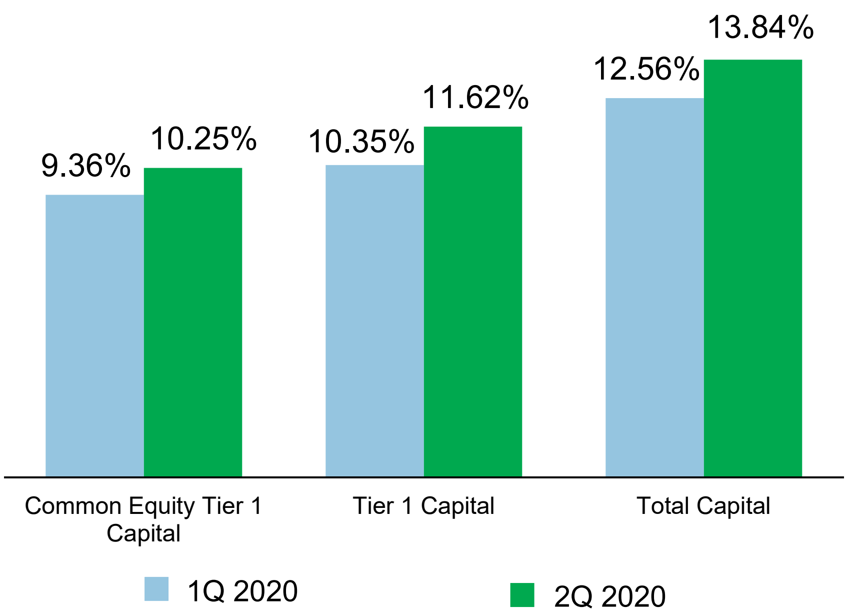
STRONG CAPITAL POSITION

Capital ratios improved during the second quarter bolstered by the sale of ABRC

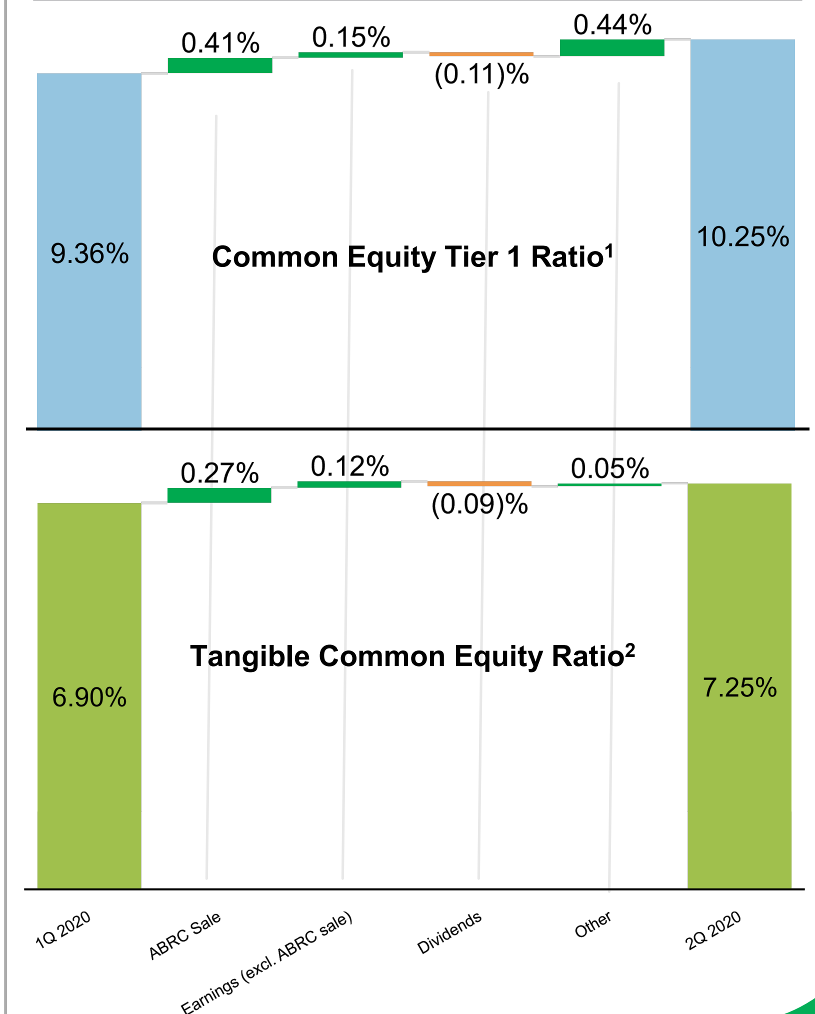
Highlights

- Expect CET1 ratio to grow over balance of 2020
- Regulatory capital ratios not expected to be impacted by PPP
- ABRC sale improved the TCE ratio[2] by 27 bps

Regulatory Capital Ratios



Capital Ratio Walkdowns



[1] CET1 CECL adoption impact includes modified transition amount.
[2] Tangible common equity / tangible assets. This is a non-GAAP financial measure. See Appendix for a reconciliation of non-GAAP financial measures to GAAP financial measures.

2020 UPDATED OUTLOOK

We are refining our guidance for the remainder of 2020

Balance Sheet Management

- Expect loan to deposit ratio to be approximately 90%, excluding PPP
- Target investments / total assets ratio of 15%, excluding PPP
- We expect PPP loans to pay down mostly in Q4 and early 2021
- Full year margin of 2.55% to 2.60%

Expense Management

- We expect a quarterly expense run rate of approximately $175M for the rest of the year due to the $15M quarterly reduction of expenses from the sale of ABRC
- Full-year effective tax rate expected to be 18% or less

Fee Businesses

- Mortgage banking expected to remain elevated in Q3
- Service charges returning to normal levels over the second half of the year
- No insurance revenue in the second half of the year due to sale of ABRC

Capital & Credit Management

- Expect capital to build over the balance of the year
- Share repurchase program will remain suspended until economic conditions improve and stabilize
- Based on our current assumptions, we expect loan loss provision to be less in the second half of the year than the first half

APPENDIX

TOTAL LOANS OUTSTANDING BALANCES AS OF JUNE 30, 2020

Well diversified $24.8 billion loan portfolio

($ in millions)

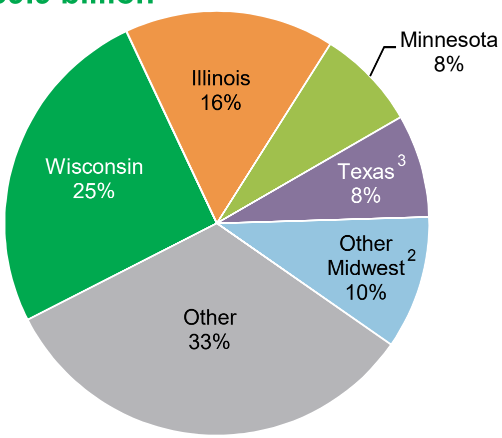
	06/30/2020[1]	% of Total Loans
C&BL (by NAICS[2])		
Wholesale/Manufacturing	$ 1,907	7.7%
Utilities	1,603	6.5%
Finance and Insurance	1,387	5.6%
Real Estate (includes REITs)	1,296	5.2%
Mining[3]	499	2.0%
Construction	437	1.8%
Health Care and Social Assistance[4]	412	1.7%
Retail Trade	392	1.6%
Professional, Scientific, and Tech. Serv.	342	1.4%
Rental and Leasing Services	255	1.0%
Transportation and Warehousing	216	0.9%
Waste Management	198	0.8%
Accommodation and Food Services	176	0.7%
Information	145	0.6%
Financial Investments & Related Activities	101	0.4%
Management of Companies & Enterprises	86	0.3%
Arts, Entertainment, and Recreation	72	0.3%
Educational Services	58	0.2%
Public Administration	28	0.1%
Agriculture, Forestry, Fishing and Hunting	8	0.0%
Other	278	1.1%
Total C&BL	$ 9,895	39.8%

	06/30/2020[1]	% of Total Loans
CRE (by property type code)		
Multi-Family	$ 1,841	7.4%
Office/Mixed	1,256	5.1%
Retail	981	4.0%
Industrial	934	3.8%
Single Family Construction	388	1.6%
Hotel/Motel	224	0.9%
Land	107	0.4%
Farm Land	17	0.1%
Mobile Home Parks	16	0.1%
Other	118	0.5%
Total CRE	$ 5,882	23.7%
Consumer		
Residential Mortgage	$ 7,934	31.9%
Home Equity	796	3.2%
Student Loans	124	0.5%
Credit Cards	106	0.4%
Other Consumer	96	0.4%
Total Consumer	$ 9,055	36.5%
Total Loans	$ 24,833	100.0%

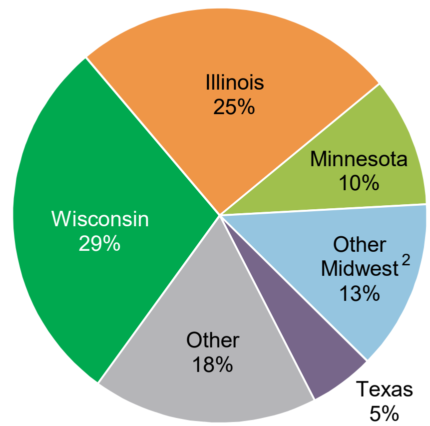
[1] All values as of period end.
[2] North American Industry Classification System.
[3] Includes $432 million of oil and gas loans and one $26 million fracking sand mining company loan.
[4] Includes $48 million of assisted living and continued care retirement communities.

LOAN STRATIFICATION OUTSTANDINGS AS OF JUNE 30, 2020

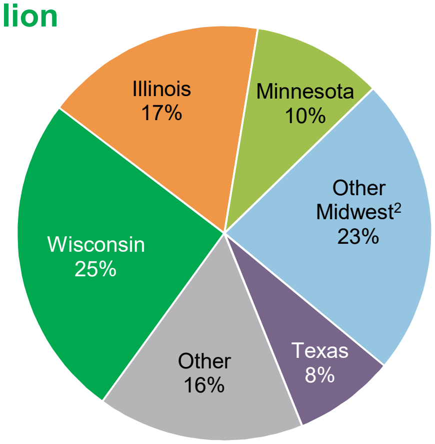
C&BL by Geography
$9.9 billion



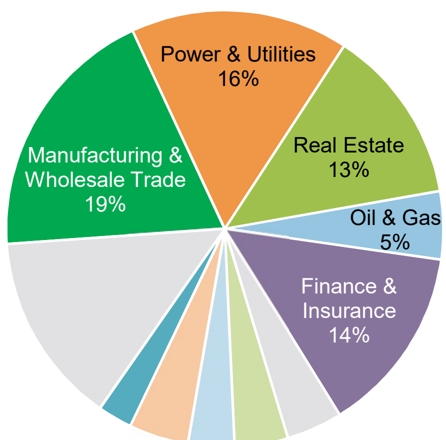
Total Loans[1]



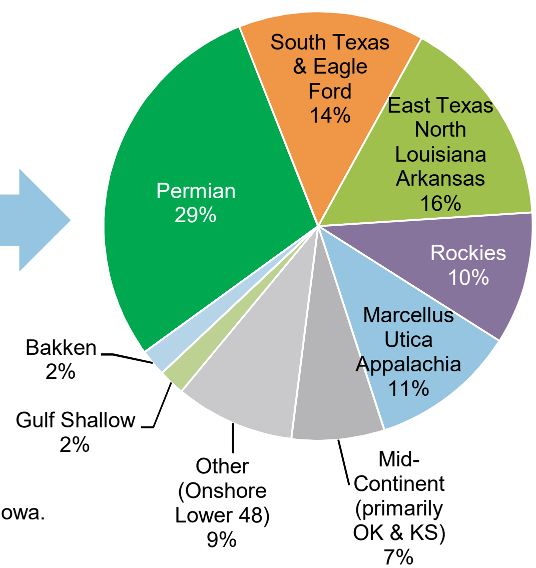
CRE by Geography
$5.9 billion



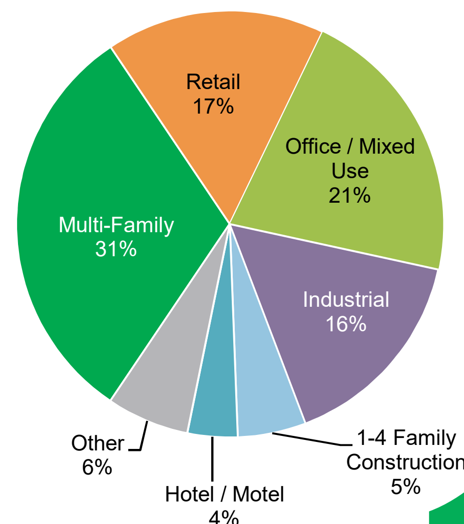
C&BL by Industry
$9.9 billion



Oil and Gas Lending[4]
$432 million



CRE by Property Type
$5.9 billion



[1]Excludes $326 million Other consumer portfolio.
[2]Other Midwest includes Missouri, Indiana, Ohio, Michigan and Iowa.
[3]Principally reflects the oil and gas portfolio.
[4]Chart based on commitments of $609 million.

RECONCILIATION AND DEFINITIONS OF NON-GAAP ITEMS ($ IN MILLIONS)

Adjusted Noninterest Expense Reconcilation[1]	2Q19	3Q19	4Q19	1Q20	2Q20
Noninterest expense	$198	$201	$204	$192	$183
Acquisition related costs	4	2	1	2	1
Severance / Frontline pay	1	0	4	0	2
Adjusted noninterest expense	$193	$199	$199	$190	$181

Adjusted Personnel Expense Reconcilation[1]	2Q19	3Q19	4Q19	1Q20	2Q20
Personnel expense	$123	$123	$121	$114	$111
Severance / Frontline pay	1	0	4	0	2
Adjusted personnel expense	$122	$123	$117	$114	$109

Tangible Common Equity and Tangible Assets Reconciliation[2]	1Q20	2Q20
Common equity	$3,534	$3,671
Goodwill and other intangible assets, net	(1,284)	(1,181)
Tangible common equity	$2,250	$2,490
Total assets	$33,908	$35,501
Goodwill and other intangible assets, net	(1,284)	(1,181)
Tangible assets	$32,624	$34,321

[1] This is a non-GAAP financial measure. Management believes these measures are meaningful because they reflect adjustments commonly made by management, investors, regulators, and analysts to evaluate the adequacy of earnings per common share, provide greater understanding of ongoing operations and enhance comparability of results with prior periods.

[2] The ratio tangible common equity to tangible assets excludes goodwill and other intangible assets, net. This financial measure has been included as it is considered to be a critical metric with which to analyze and evaluate financial condition and capital strength.