Investor Presentation

Second Quarter 2026

Cautionary Note on Forward Looking Statements

“Safe Harbor” Statement under the Private Securities Litigation Reform Act of 1995: This presentation contains, and the remarks by Prosperity’s management on the conference call may contain, forward-looking statements within the meaning of the federal securities laws, including Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. From time to time, oral or written forward-looking statements may also be included in other information released to the public. Such forward-looking statements are typically, but not exclusively, identified by the use in the statements of words or phrases such as “aim,” “anticipate,” “believe,” “estimate,” “expect,” “goal,” “guidance,” “intend,” “is anticipated,” “is expected,” “is intended,” “objective,” “plan,” “projected,” “projection,” “will affect,” “will be,” “will continue,” “will decrease,” “will grow,” “will impact,” “will increase,” “will incur,” “will reduce,” “will remain,” “will result,” “would be,” variations of such words or phrases (including where the word “could,” “may,” or “would” is used rather than the word “will” in a phrase) and similar words and phrases indicating that the statement addresses some future result, occurrence, plan or objective. Forward-looking statements include all statements other than statements of historical fact, including forecasts or trends, and are based on current expectations, assumptions, estimates and projections about Prosperity Bancshares and its subsidiaries. These forward-looking statements may include information about Prosperity’s possible or assumed future economic performance or future results of operations, including future revenues, income, expenses, provision for credit losses, provision for taxes, effective tax rate, earnings per share and cash flows and Prosperity’s future capital expenditures and dividends, future financial condition and changes therein, including changes in Prosperity’s loan portfolio and allowance for credit losses, changes in deposits, borrowings and the investment securities portfolio, future capital structure or changes therein, as well as the plans and objectives of management for Prosperity’s future operations, future or proposed acquisitions, the future or expected effect of acquisitions on Prosperity’s operations, results of operations, financial condition, and future economic performance, statements about the anticipated benefits of any proposed transactions, and statements about the assumptions underlying any such statement. These forward-looking statements are not guarantees of future performance and are based on expectations and assumptions Prosperity currently believes to be valid. Because forward-looking statements relate to future results and occurrences, many of which are outside of Prosperity’s control, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. These risks and uncertainties include, but are not limited to, whether Prosperity can: successfully identify acquisition targets and integrate the businesses of acquired companies and banks; continue to sustain its current internal growth rate or total growth rate; provide products and services that appeal to its customers; continue to have access to debt and equity capital markets; and achieve its sales objectives. Other risks include, but are not limited to: the possibility that credit quality could deteriorate; actions of competitors; changes in laws and regulations (including changes in governmental interpretations of regulations and changes in accounting standards); the possibility that the anticipated benefits of an acquisition transaction are not realized when expected or at all, including as a result of the impact of, or problems arising from, the integration of two companies or as a result of the strength of the economy and competitive factors generally; a deterioration or downgrade in the credit quality and credit agency ratings of the securities in Prosperity’s securities portfolio; customer and consumer demand, including customer and consumer response to marketing; effectiveness of spending, investments or programs; fluctuations in the cost and availability of supply chain resources; economic conditions, including currency rate, interest rate and commodity price fluctuations; changes in trade policies by the United States or other countries, such as tariffs or retaliatory tariffs; and the effect, impact, potential duration or other implications of weather and climate-related events. Prosperity disclaims any obligation to update such factors or to publicly announce the results of any revisions to any of the forward-looking statements included herein to reflect future events or developments. These and various other factors are discussed in Prosperity’s Annual Report on Form 10-K for the year ended December 31, 2025, and other reports and statements Prosperity has filed with the Securities and Exchange Commission (“SEC”). Copies of the SEC filings for Prosperity may be downloaded from the Internet at no charge from http://www.prosperitybankusa.com.

Second Quarter Highlights

- Net income of $168.6 million, or $162.7 million excluding merger related expenses and non-recurring items[1], representing an increase of 20.4% compared with second quarter 2025
- Earnings per share (diluted) of $1.67, or $1.62 excluding merger related expenses and non-recurring items[1], representing an increase of 14.1% compared with second quarter 2025
- Net interest margin increased 29 basis points to 3.47% compared to second quarter 2025
- Assets of $43.9 billion, total loans of $25.0 billion, and deposits of $32.6 billion at June 30, 2026
- Common equity tier 1 ratio of 15.94% and leverage ratio of 11.12% at June 30, 2026
- Return (annualized) on second quarter average assets of 1.55%, and average tangible common equity of 15.48%
- Allowance for credit losses on loans and off-balance sheet credit exposures of $420.5 million and allowance for credit losses on loans to total loans, excluding Warehouse Purchase Program, of 1.61%
- Declared cash dividend of $0.60 for the third quarter 2026
- Repurchased approximately 200 thousand shares of common stock in the second quarter 2026, and 1.0 million shares for the year to date ended on June 30, 2026
- Completed the merger of Stellar Bancorp, Inc. on July 1, 2026

Source: Company Documents

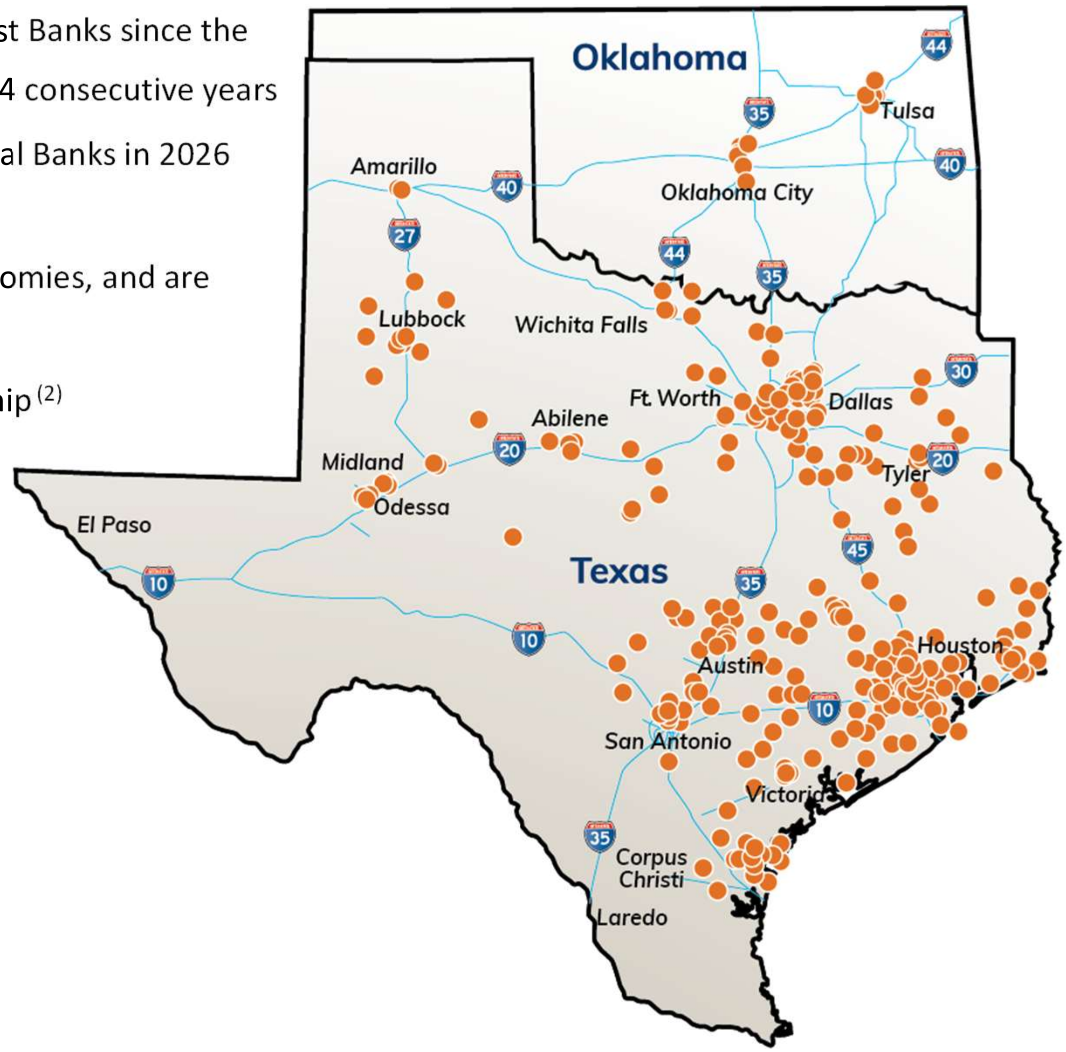
I1) Adjusted net income and earnings per share exclude merger related expenses and gain on Visa Class B-2 stock exchange net of investment securities sales

Strong Presence in Texas and Oklahoma

- A Texas-based financial holding company with $43.9 billion in total assets
- Prosperity has been ranked as one of Forbes America's Best Banks since the list's inception in 2010, and was ranked in the Top 10 for 14 consecutive years
- Recognized by Newsweek as one of America's Best Regional Banks in 2026
- Ranked #2 in deposit market share in Texas (1)
- Texas and Oklahoma continue to benefit from strong economies, and are home to 62 Fortune 500 headquartered companies
- Shareholder driven with 4.0% fully diluted insider ownership (2)
- Successful completion of 48 acquisitions (whole bank, branch and failed bank transactions)

363 Full-Service Locations *(3)*

15	in Bryan/College Station Area
6	in Central Oklahoma Area
32	in Central Texas Area
62	in Dallas/Fort Worth Area
21	in East Texas Area
113	in Houston Area
15	In San Antono Area
46	in South Texas Area
8	in Tulsa Area
45	in West Texas Area



(1) *Per FDIC; Includes Texas headquartered commercial banks; Shown pro-forma for the recently completed acquisitions of American Bank Holding Company and Southwest Bancshares, Inc.; Deposits as of 6/30/2025*
(2) *Per proxy statement (Form DEF 14A) filed on 3/16/2026*
(3) *Includes 18 locations currently doing business as American Bank, 11 locations doing business as Texas Partners Bank and 52 doing business as Stellar Bank*

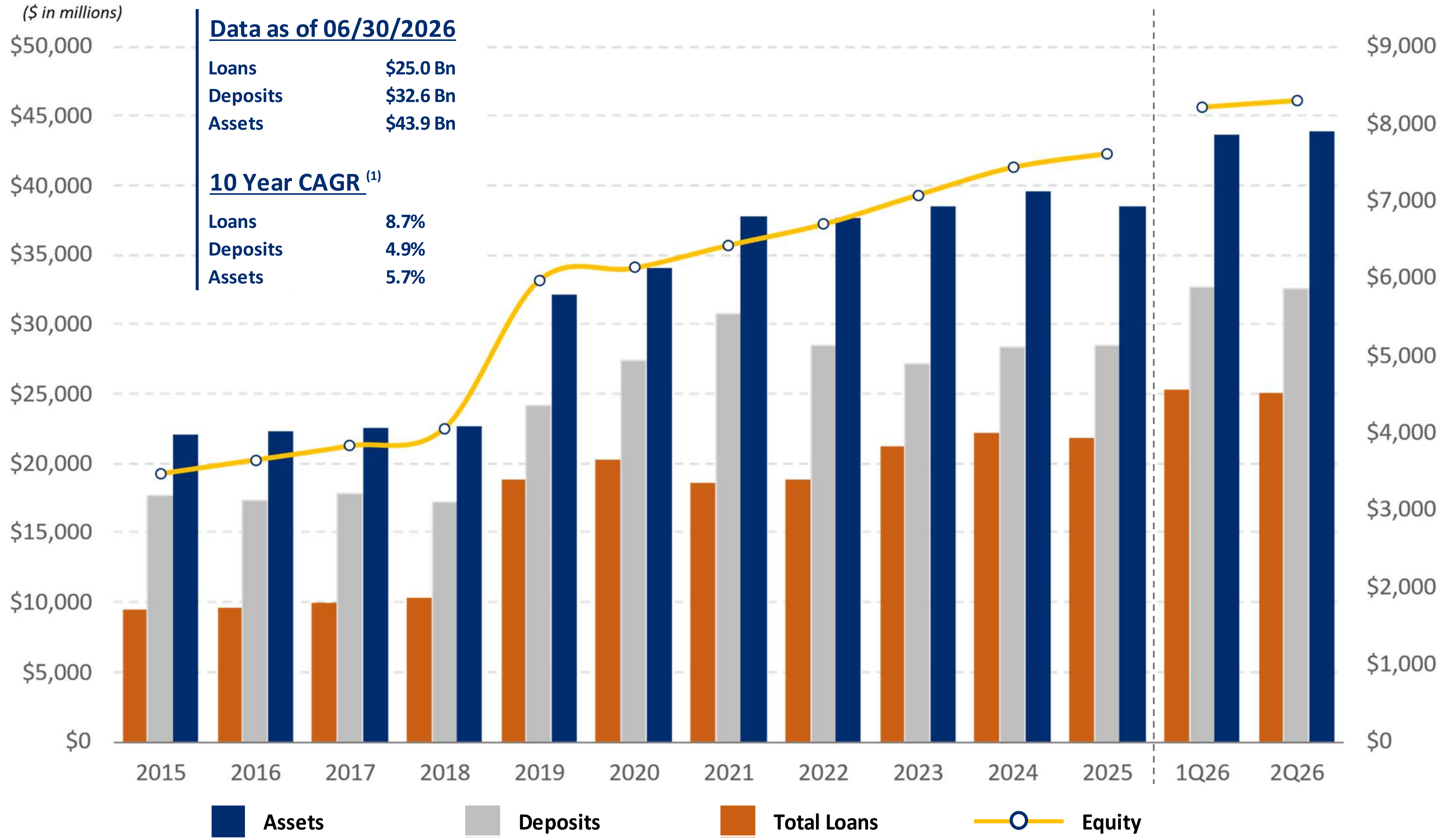
Balance Sheet Summary

Data as of 06/30/2026

Loans	$25.0 Bn
Deposits	$32.6 Bn
Assets	$43.9 Bn

10 Year CAGR [(1)]

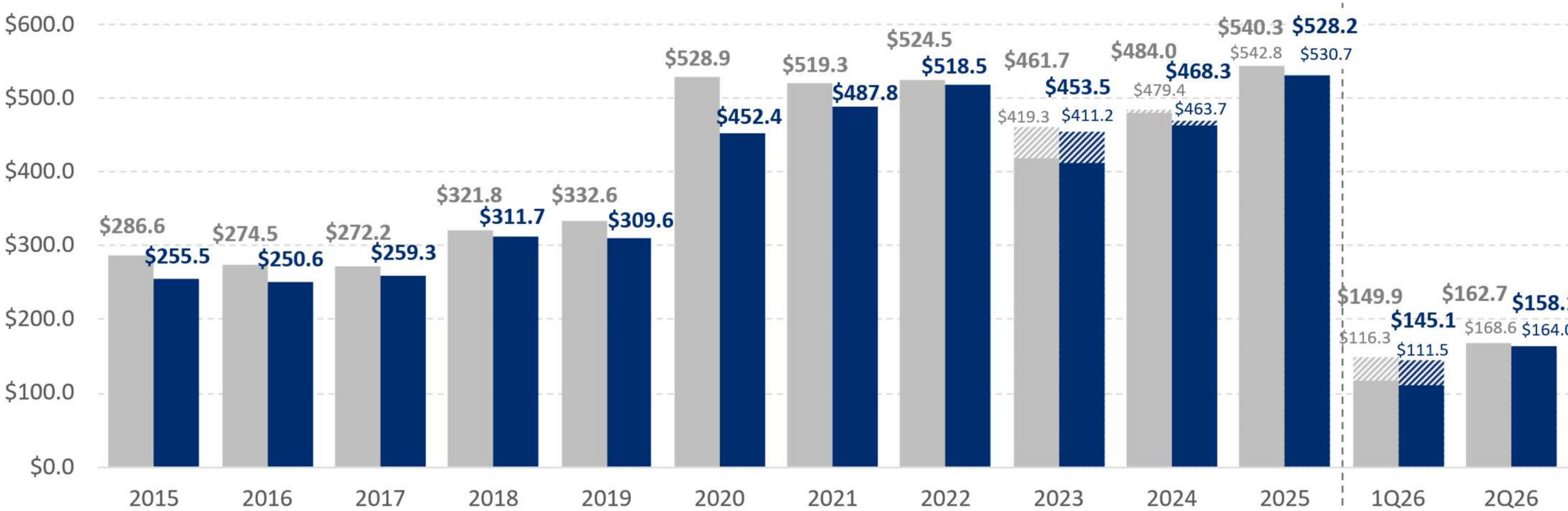
Loans	8.7%
Deposits	4.9%
Assets	5.7%



Source: Company Documents

(1) Represents the Compound Annual Growth Rate from 12/31/2015 – 12/31/2025

Net Income



Note: Net income includes the following ($ in thousands)

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	1Q26	2Q26
Provision for Credit Losses	*$7,560*	*$24,000*	*$14,325*	*$16,350*	*$4,300*	*$20,000*	-	-	*$18,540*	*$9,066*	-	-	—
Loan Discount Accretion	*$52,122*	*$38,970*	*$21,906*	*$13,909*	*$28,045*	*$91,341*	*$39,278*	*$7,401*	*$5,566*	*$17,490*	*$12,402*	*$3,748*	*$4,005*

Net Income
Net Income (Excluding Non-Recurring Charges)(1)
Net Income (Excluding Purchase Accounting Adjustments)
Net Income (Excluding PAA and Non-Recurring Charges)(1)

Source: Company Documents
(1) Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 and B-2 stock exchanges, net of investment securities sales and FDIC special assessments

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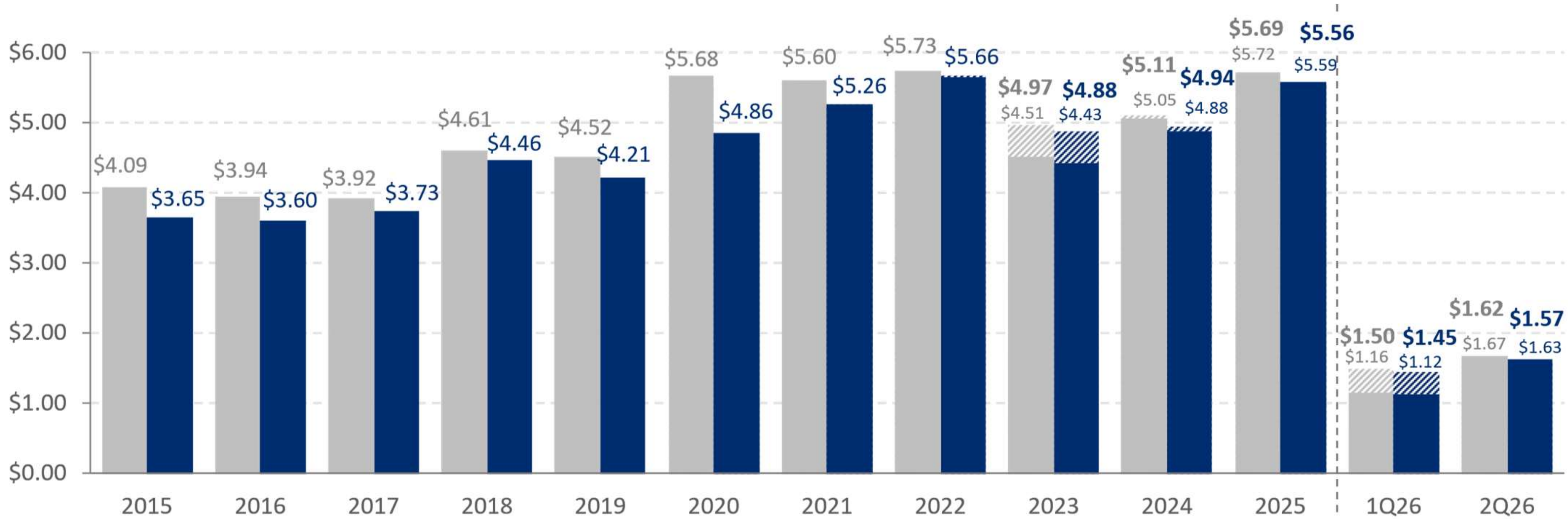
Earnings Per Share



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EPS **Core EPS (Excluding Purchase Accounting Adjustments)**

EPS (Excluding Non-Recurring Charges)[(1)] **Core EPS (Excluding PAA and Non-Recurring Charges)**[(1)]

Source: Company Documents

(1) Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 and B-2 stock exchanges, net of investment securities sales and FDIC special assessments

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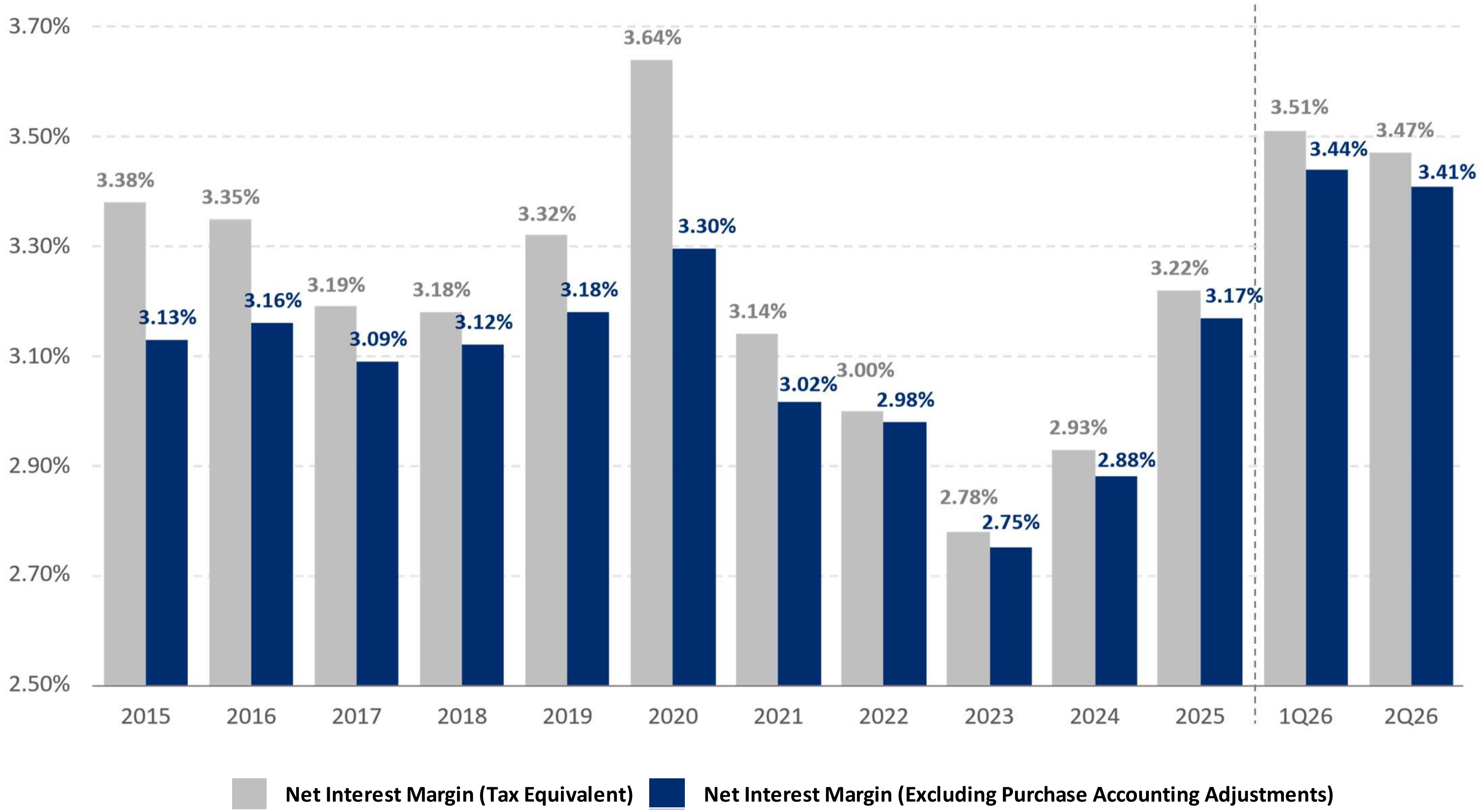
Net Interest Margin



Source: Company Documents

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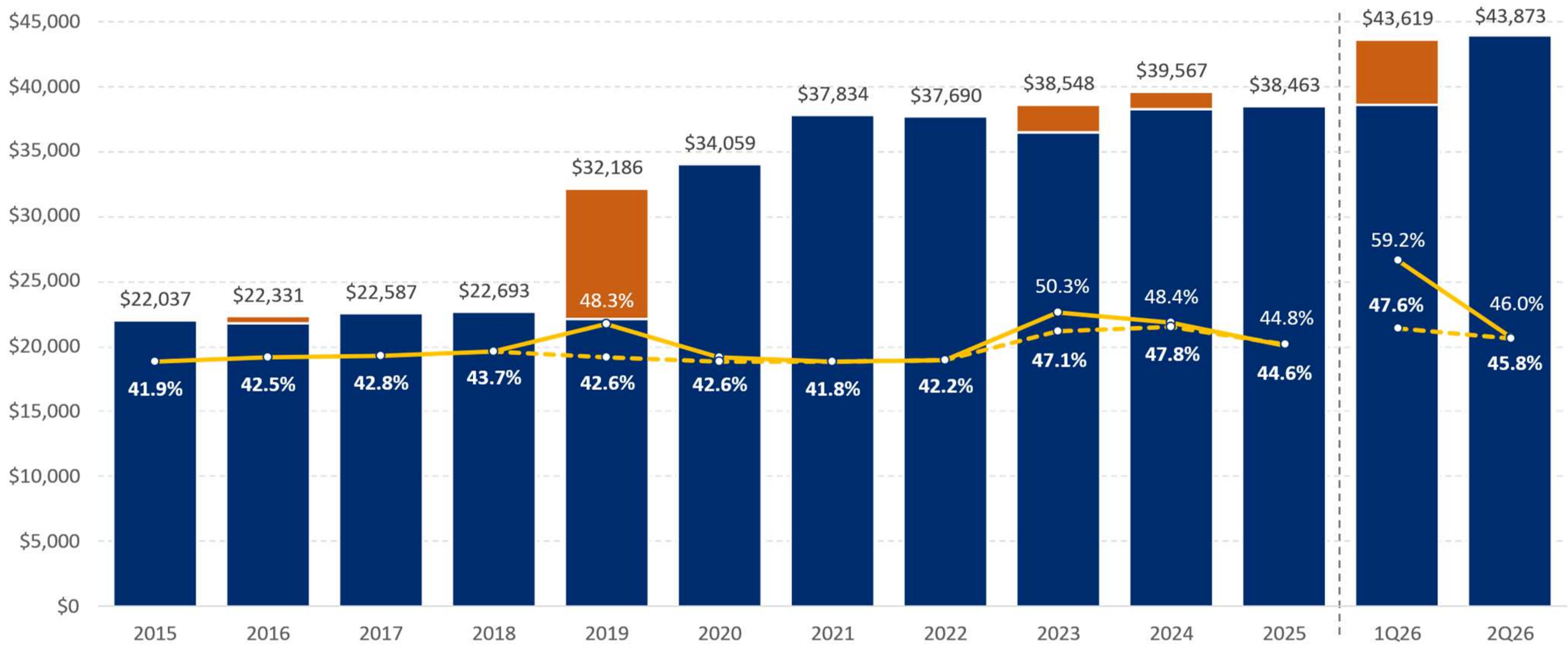
Acquisitions & Efficiency Ratio

($'s in millions)



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	1Q26	2Q26
% of Assets Acquired	***0.0%***	***2.5%***	***0.0%***	***0.0%***	***31.3%***	***0.0%***	***0.0%***	***0.0%***	***5.5%***	***3.5%***	***0.0%***	***11.5%***	***0.0%***

Total Assets Excluding Acquisitions **Total Assets Acquired** [1] **Efficiency Ratio**[2] **Efficiency Ratio (Excluding Non-Recurring Charges)**[3]

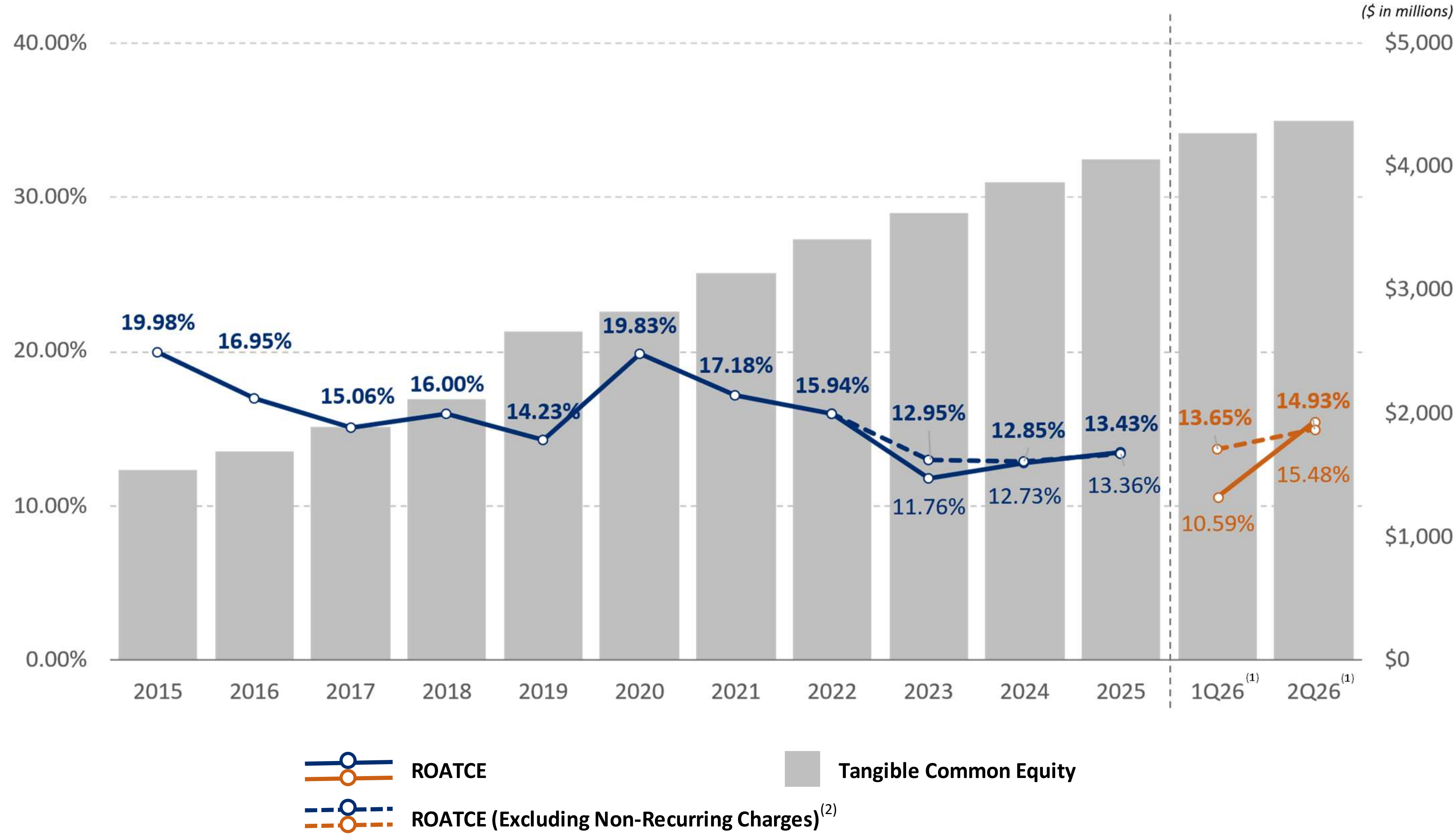
Source: Company Documents

(1) Representative of target assets at closing

(2) Calculated by dividing total noninterest expense, excluding credit loss provisions, by net interest income plus noninterest income, excluding net gains and losses on the sale or write down of assets and securities. Additionally, taxes are not part of this calculation.

(3) Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 and B-2 stock exchanges, net of investment securities sales and FDIC special assessments

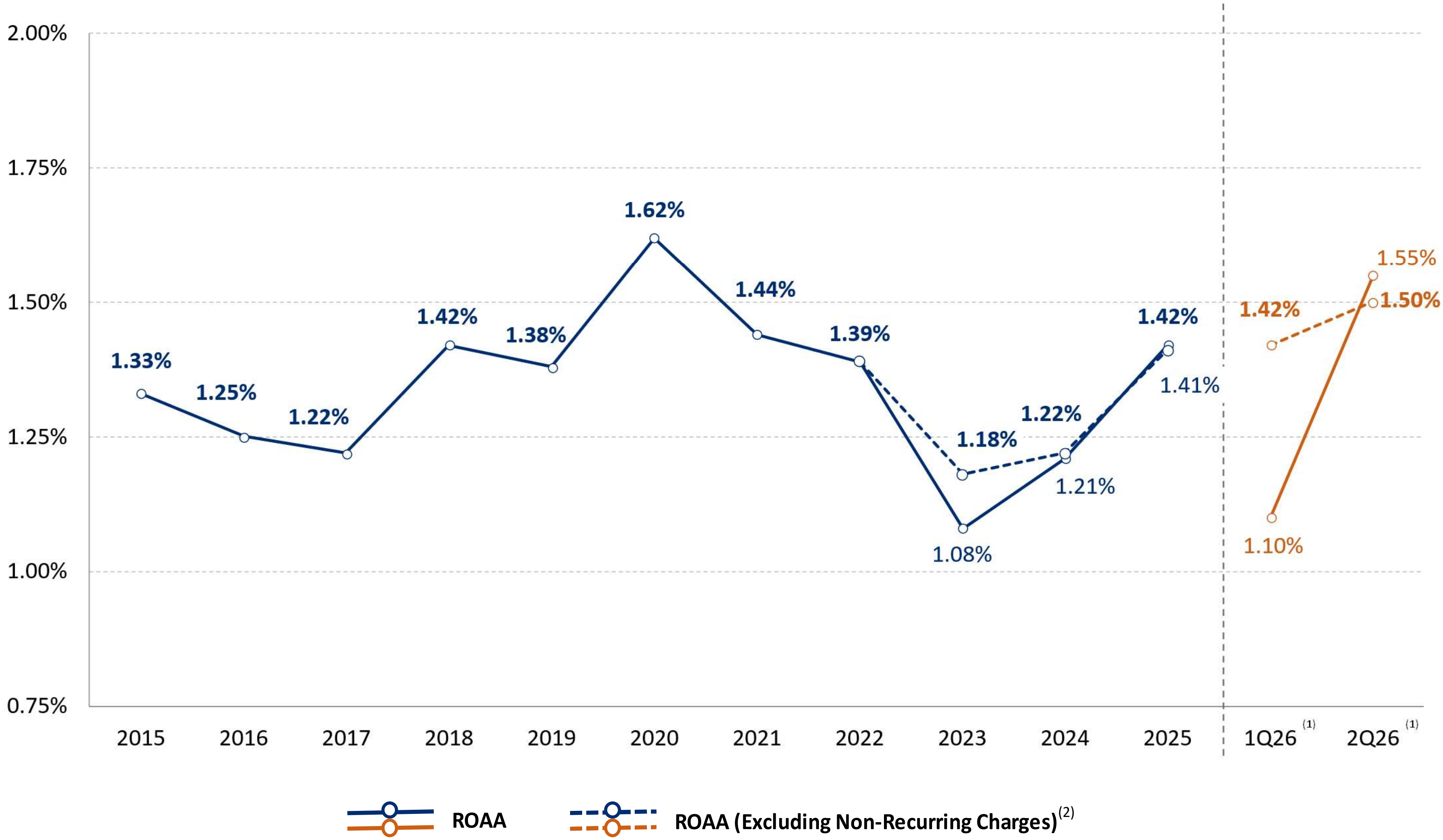
Return on Average Tangible Common Equity



(1) *Interim periods shown on an annualized basis*

(2) *Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 and B-2 stock exchanges, net of investment securities sales and FDIC special assessments*

Return on Average Assets



(1) *Interim periods shown on an annualized basis*

(2) *Excludes after-tax merger related provision and expenses related to recent acquisitions, gain on Visa Class B-1 and B-2 stock exchanges, net of investment securities sales and FDIC special assessments*

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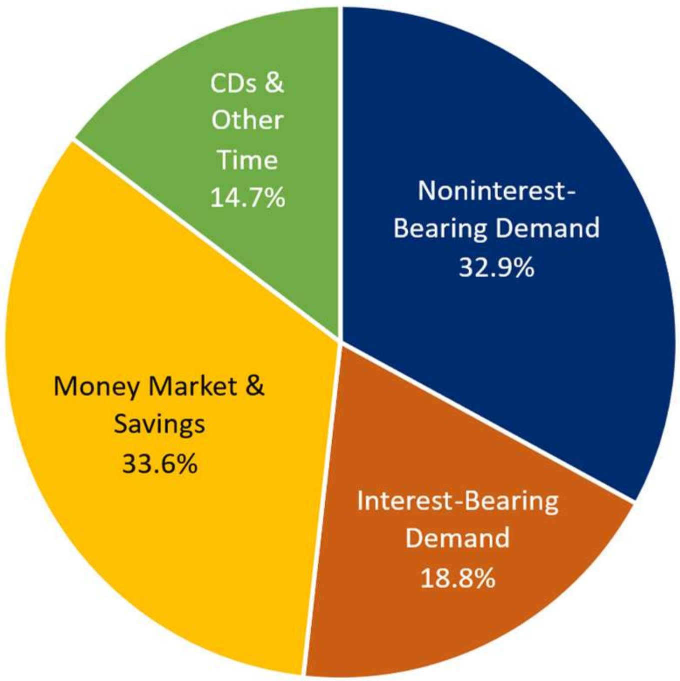
Deposit Composition

As of June 30, 2026
($ in millions)



	$mm	Cost (%)[1]
Noninterest-Bearing Demand	$10,740	0.00%
Interest-Bearing Demand	$6,134	0.99%
Money Market & Savings	$10,949	1.97%
CDs & Other Time	$4,777	3.21%

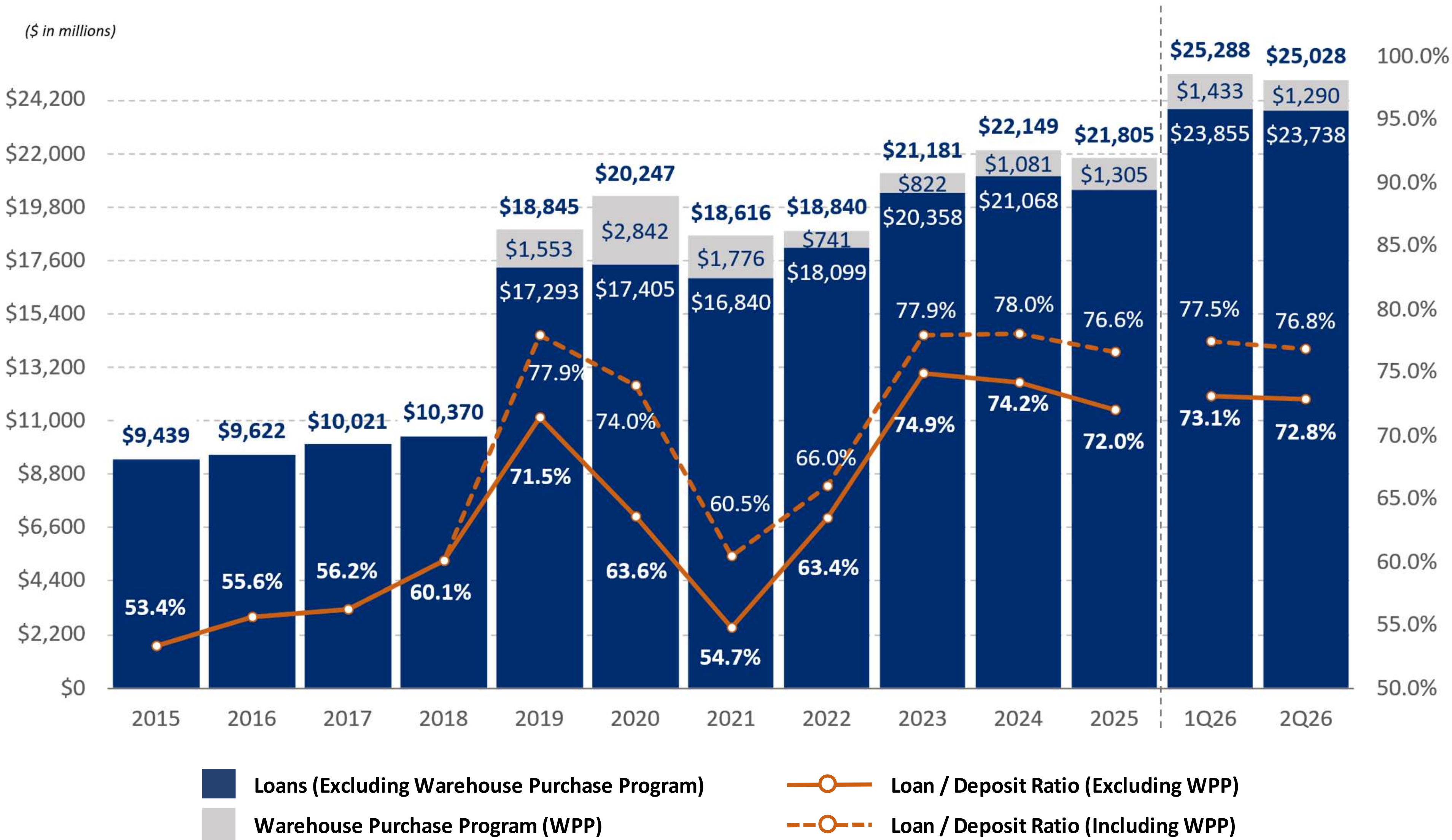
Total Deposits: $32.6Bn

Total Cost of Deposits: 1.33% [1]

Cost of Interest-Bearing Deposits: 1.97% [1]

Source: Company Documents
(1) Data for the three months ended June 30, 2026

Loan Growth

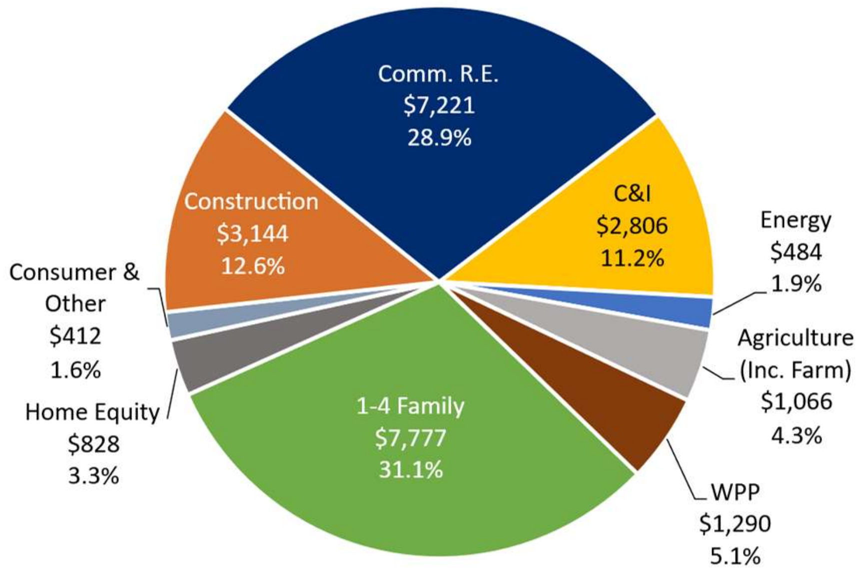


Source: Company Documents

Loan Portfolio Overview

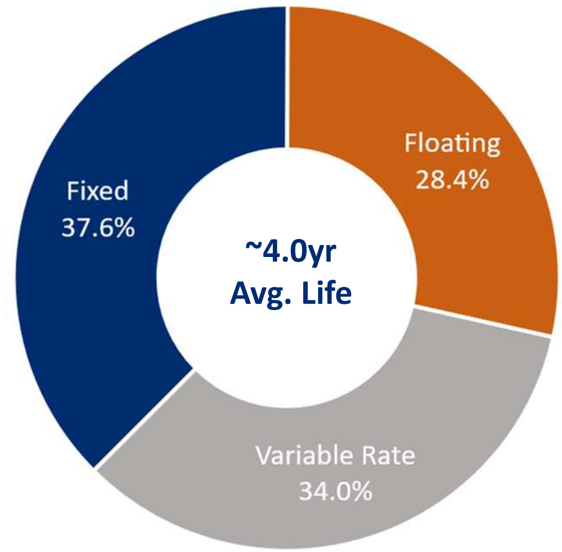
As of June 30, 2026
($ in millions)

Loan Portfolio by Category & Geography



Loans By Area	Amount[2][4]	% of Total
Bryan / College Station	$993	4.2%
Central Oklahoma	$603	2.6%
Central Texas	$3,066	13.0%
Dallas / Ft. Worth	$6,093	25.8%
East Texas	$818	3.5%
Houston	$4,722	20.0%
San Antonio	$1,993	8.4%
South Texas	$2,414	10.2%
Tulsa	$505	2.1%
West Texas	$2,421	10.2%

Loans by Rate Structure



Total Loans: $25.0Bn

Loans HFI (Excl. WPP): $23.8Bn

Yield on Total Loans: 5.91% [1]

Yield on Loans HFI (Excl. WPP): 5.93% [1]

Core Yield on Loans HFI (Excl. WPP): 5.86% [1][3]

Source: Company Documents
(1) Data for the three months ended June 30, 2026
(2) Excludes $110 million in loans assigned to the Corporate Group
(3) Core yield excludes purchase accounting adjustments
(4) Excludes Warehouse Purchase Program (WPP) loans

Loan Portfolio Detail

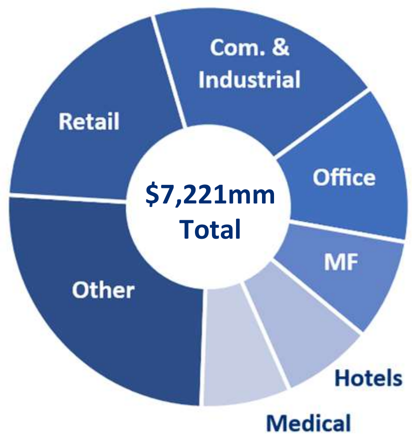
As of June 30, 2026
($ in millions)

Portfolio Commentary

- Loan portfolio is diversified across the Bank's market areas and by underlying collateral type
- CRE and construction loans conservatively underwritten to cost of collateral
- 36% of commercial real estate is owner occupied

Commercial Real Estate Detail

($ in millions)

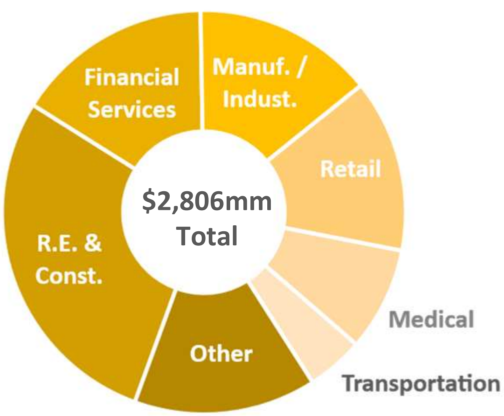


Other	$1,835	25%
Retail	$1,410	20%
Industrial	$1,405	19%
Office	$929	13%
Multifamily (MF)	$592	8%
Hotels	$530	7%
Medical	$520	7%

Note: Average CRE loan balance outstanding equal to $1.1 million

C&I Detail (Excluding Energy Loans)

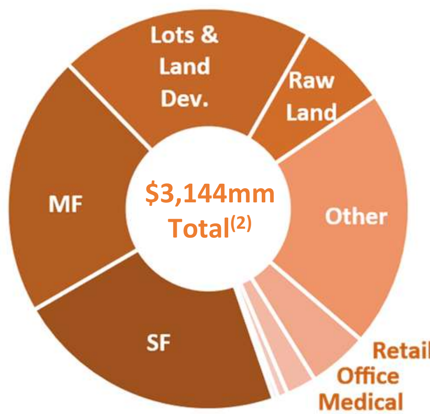
($ in millions)



R.E. & Const.	$796	28%
Financial Services	$444	16%
Manuf. / Indust.	$406	14%
Retail	$389	14%
Medical	$233	8%
Transportation	$128	5%
Other [(1)]	$410	15%

Construction Detail

($ in millions)



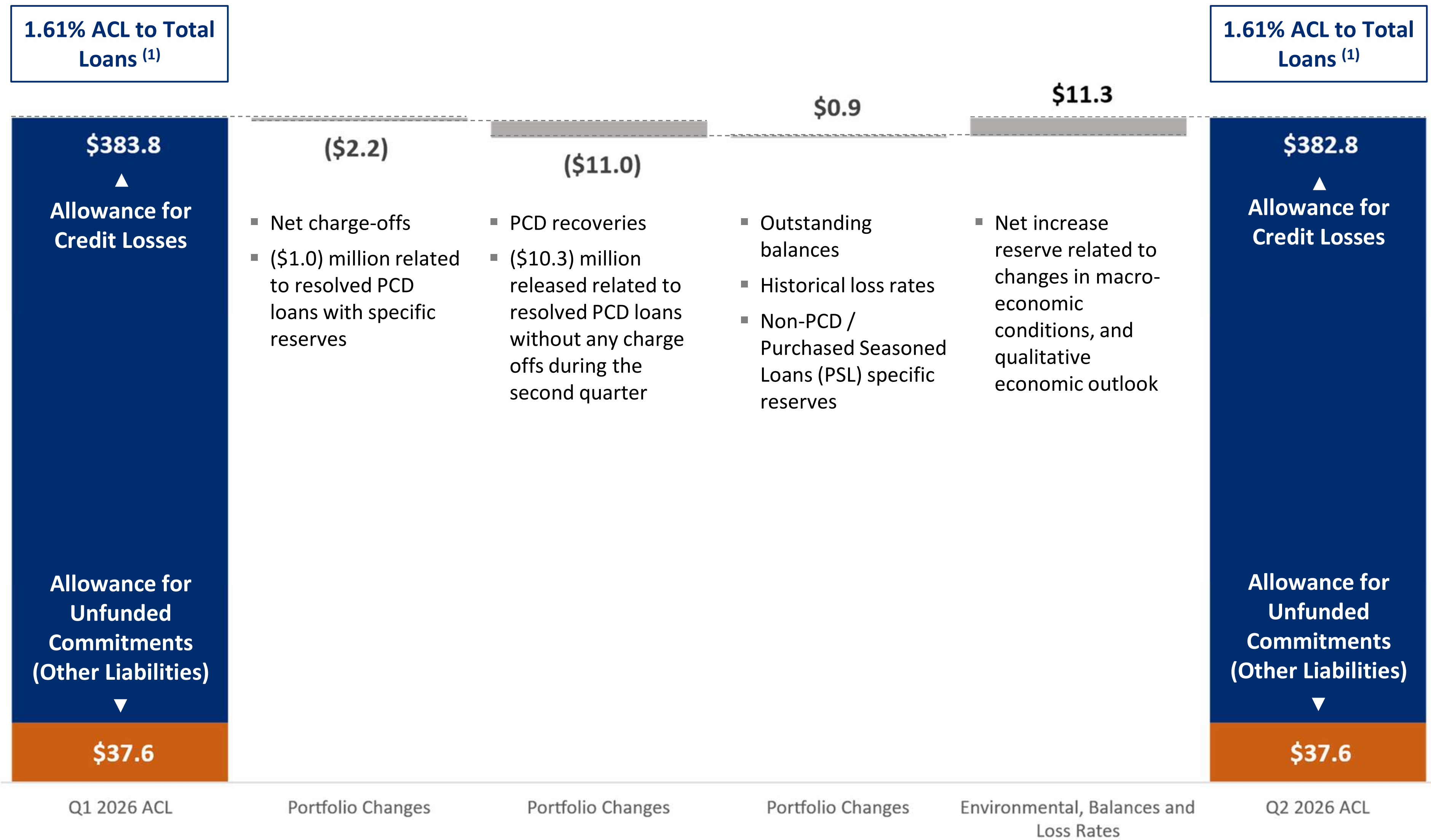
Single Family (SF)	$689	22%
Multifamily (MF)	$664	21%
Lots & Land Dev.	$645	21%
Other	$228	7%
Raw Land	$653	21%
Retail	$152	5%
Office	$76	2%
Medical	$25	1%
Hotels	$12	0%

Source: Company Documents
(1) Includes State & Political loans
(2) Total includes a net unaccreted discount of $0.20 million not shown in graph

Changes to Allowance for Credit Losses

($ in millions)

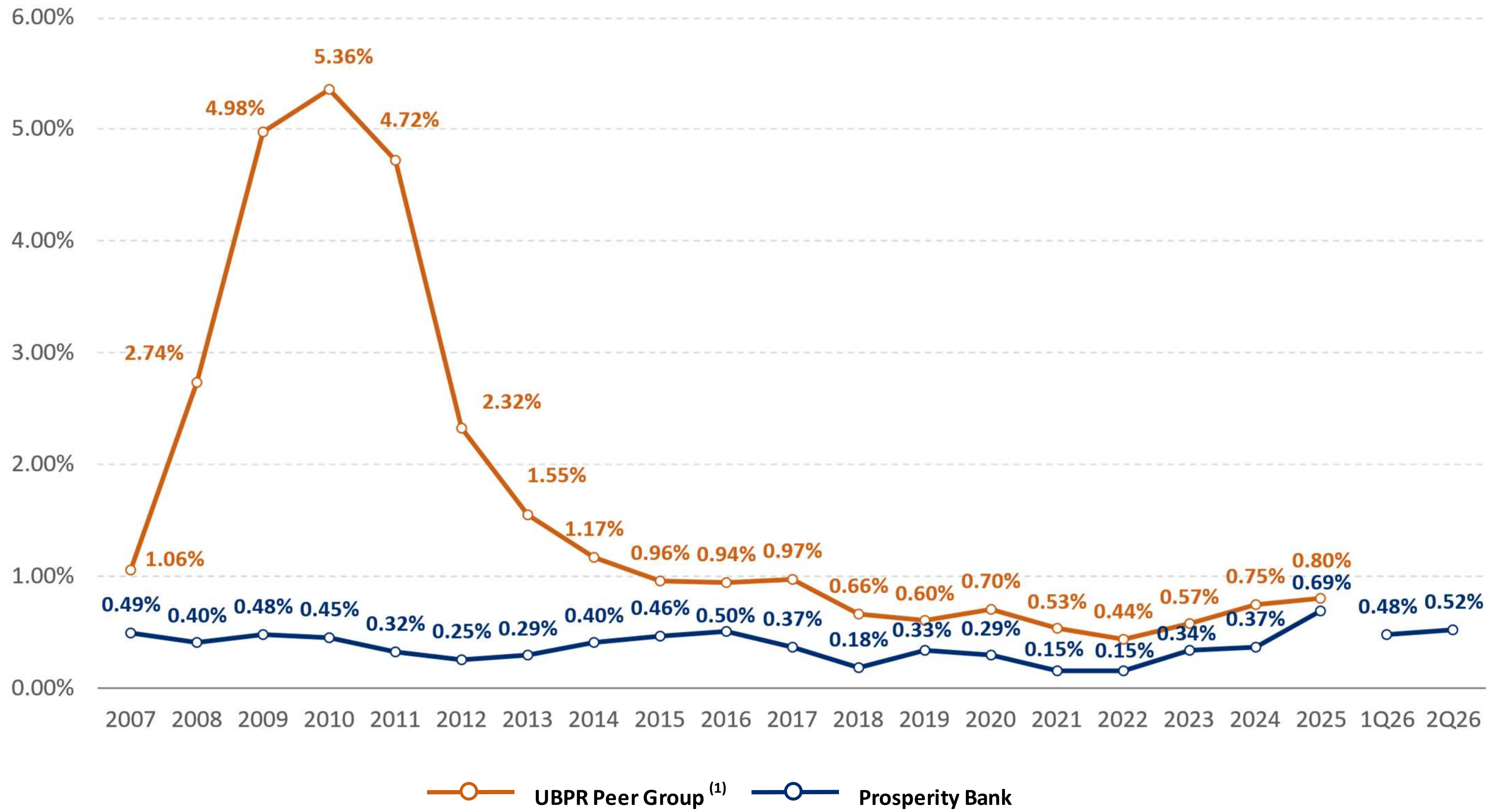
$421.5 million --------- Total Allowance for Credit Losses and Unfunded Commitments --------- $420.5 million



(1) *Excludes Warehouse Purchase Program (WPP) loans*

Asset Quality

NPAs / Loans + OREO



Source: Company Documents & Uniform Bank Performance Report
Note: NPAs include loans past due 90 days and still accruing
(1) UBPR = Uniform Bank Performance Report; Peer Group 2 (110 banks) – Insured commercial banks having assets between $10 billion and $100 billion

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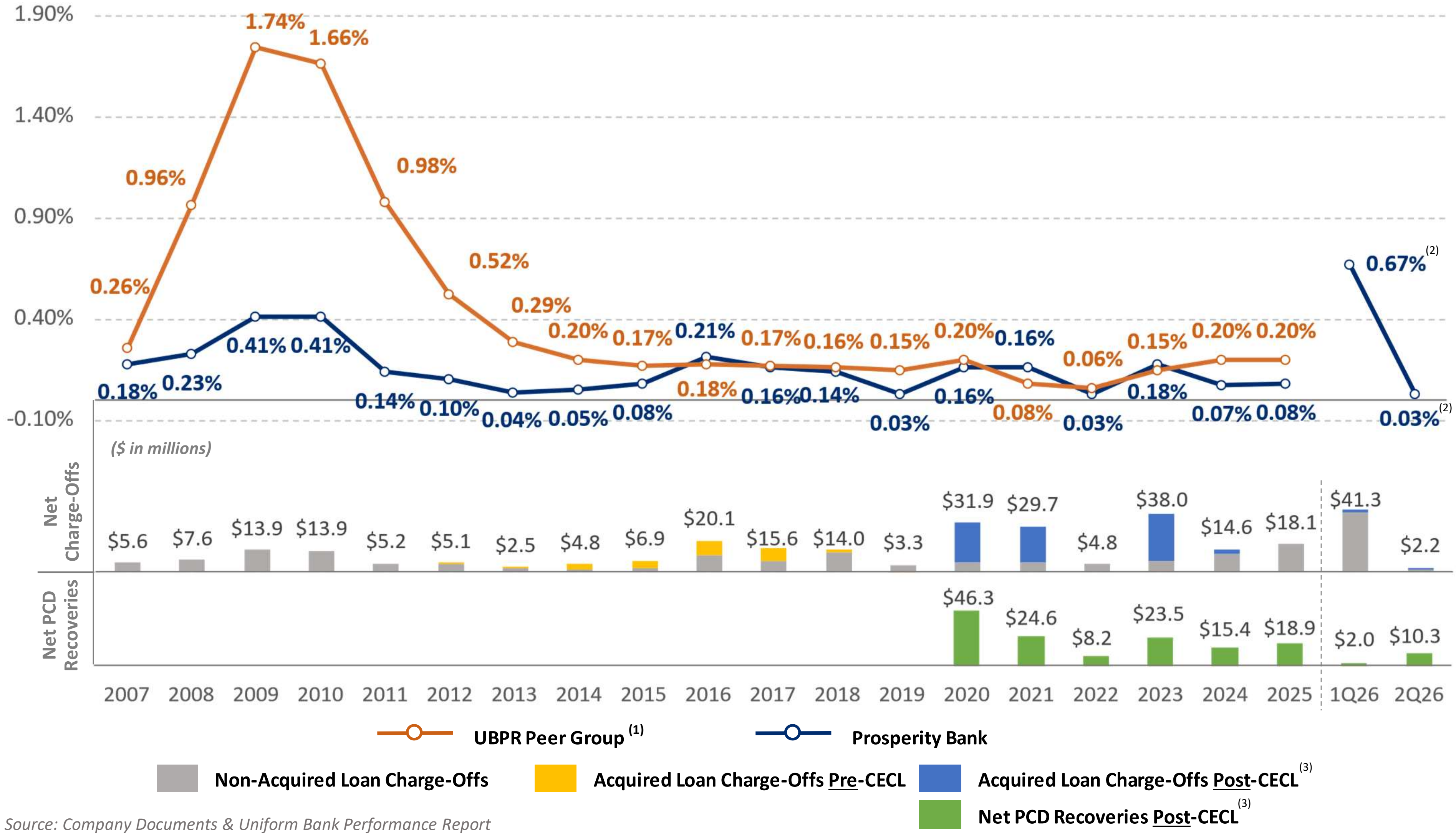
Asset Quality

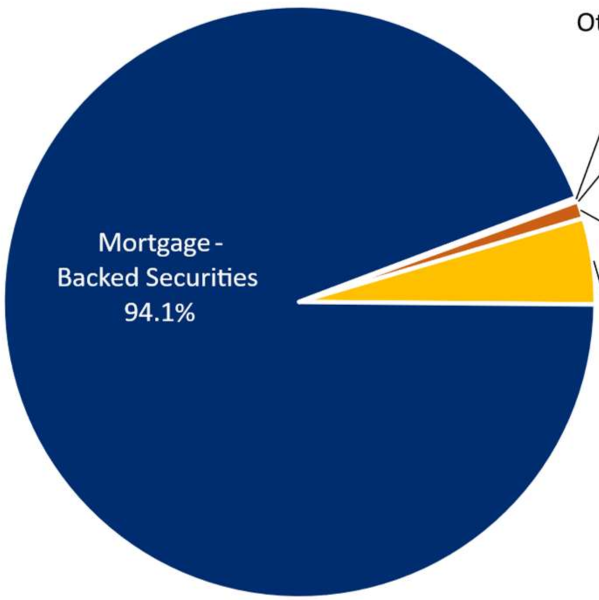
Net Charge-Offs / Average Loans



Source: Company Documents & Uniform Bank Performance Report
Note: NPAs include loans past due 90 days and still accruing
(1) UBPR = Uniform Bank Performance Report; Peer Group 2 (110 banks) – Insured commercial banks having assets between $10 billion and $100 billion
(2) Interim period net charge-off ratios shown on an annualized basis
(3) Reflects all charge-offs and recoveries on acquired loans in accordance with CECL accounting practices; Prior to the adoption of CECL in the first quarter of 2020, PCD loans were classified as Purchased Credit Impaired (PCI) loans and their assigned fair-value marks were netted against the outstanding loan balance with a charge-off only being recorded when the loss exceeded the amount of fair-value marks remaining.

Securities Portfolio Detail

As of June 30, 2026
($ in millions)



	$mm
Mortgage-Backed Securities	$11,614
Collateralized Mortgage Obligations	$580
States & Political Subdivisions	$118
Other Securities	$23
U.S. Government Agency Securities	$4

97.2% Held to Maturity
2.8% Available for Sale

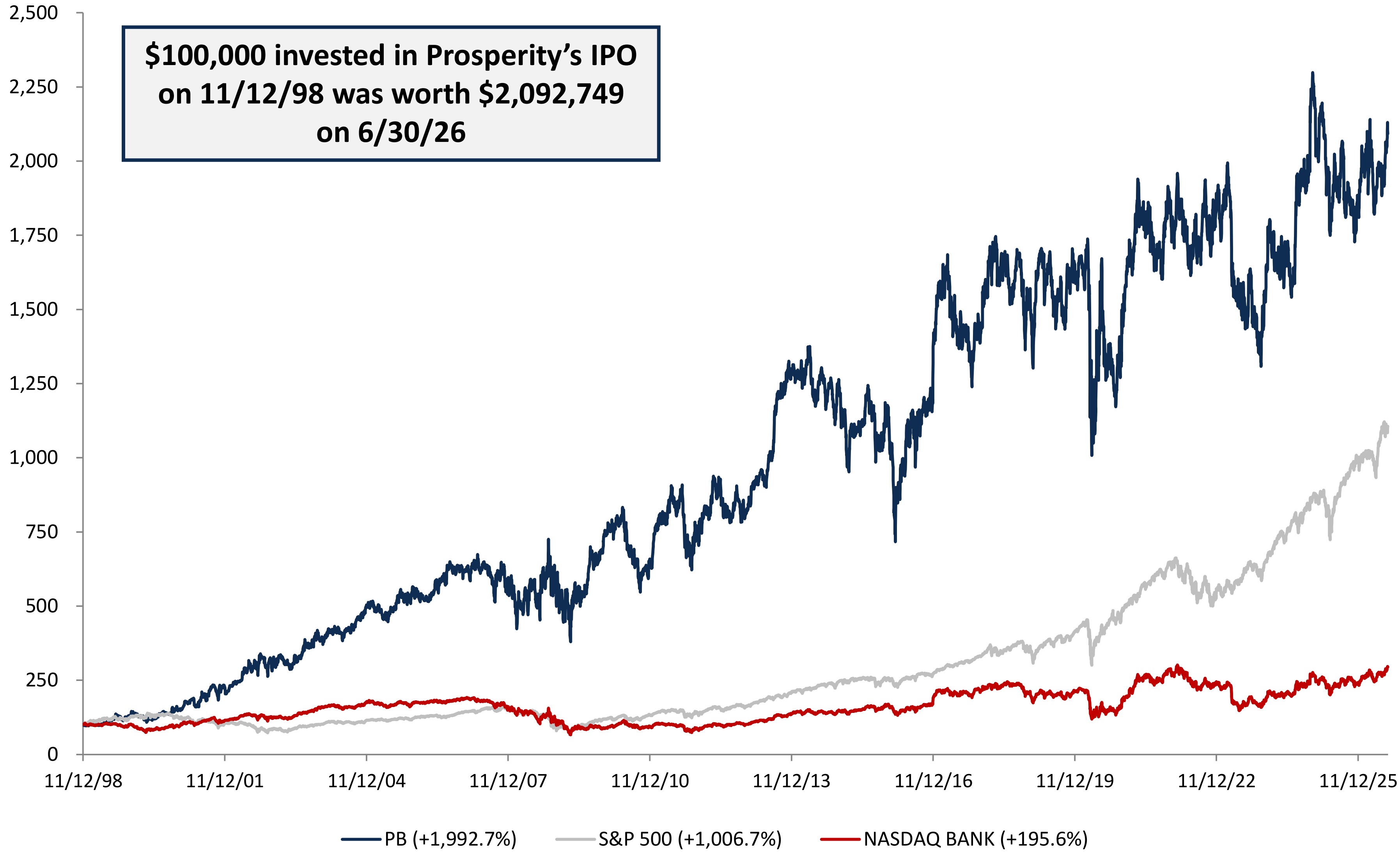
Total Securities: $12.3Bn

Yield on Securities: 2.66% [(1)]
Duration: 3.68 [(2)]
Avg. Yearly Cash Flow: ~$2.2Bn

Source: Company Documents
(1) Data for the three months ended June 30, 2026
(2) Modified duration shown; Weighted average life equal to 4.3 years

Total Return Performance

IPO (November 12, 1998) to June 30, 2026



Note: Market data as of 6/30/2026.

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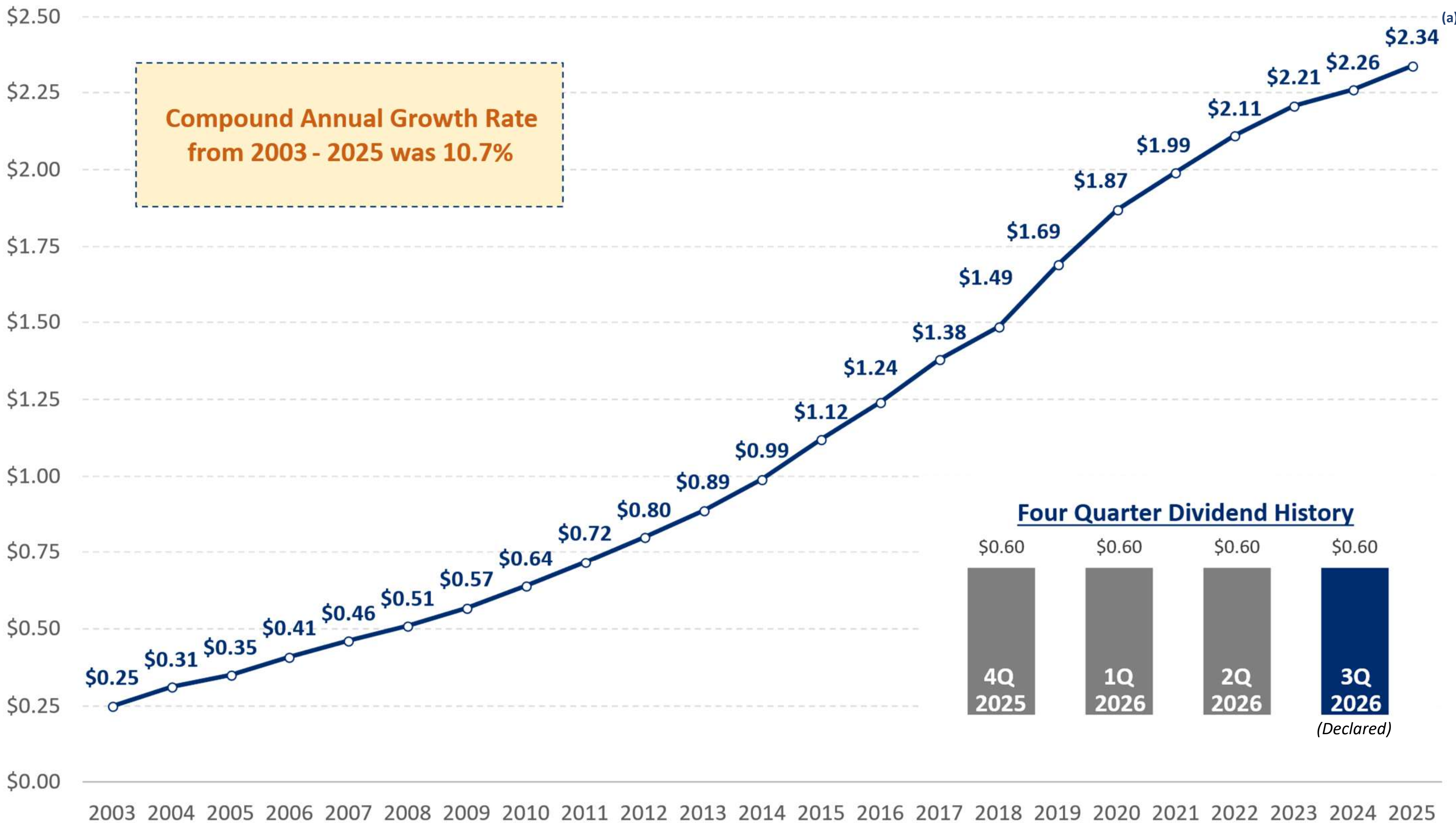
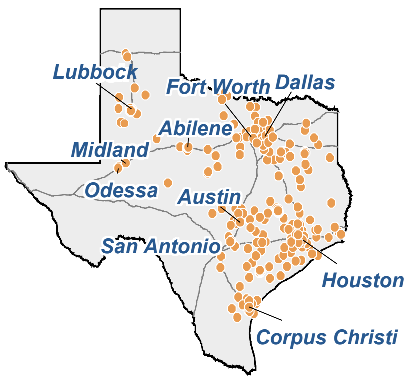
Dividend History



(a) 2024 dividend consists of $0.58 per share declared in Q1 2024, 2Q 2024, 3Q 2024 and $0.60 per share declared in 4Q 2025

Presence in Fast-Growing Markets

Positioned in Strong Markets



- In June 2026, Texas set a new record for total jobs, reaching a high of 14,469,600 total nonfarm jobs
- Texas ranked fourth nationwide in CNBC's America's Top States for Business 2026
- As of May 2026, total nonfarm employment in Texas rose 0.7% year-over-year, outpacing the national growth rate of 0.3%. Employment in the Business Services sector increased 1.8% year-over-year, as compared to the national growth rate of 0.2%

- The 2026 Oklahoma Innovation Expansion Program (OIEP) approved projects at 262 companies, which is expected to generate 1,211 jobs, $68 million in new payroll, and $510 million in increased sales over the next twelve months
- As of May 2026, employment in the Financial Activities sector was up 1.6% year-over-year, as compared to national levels, which fell by 1.2%

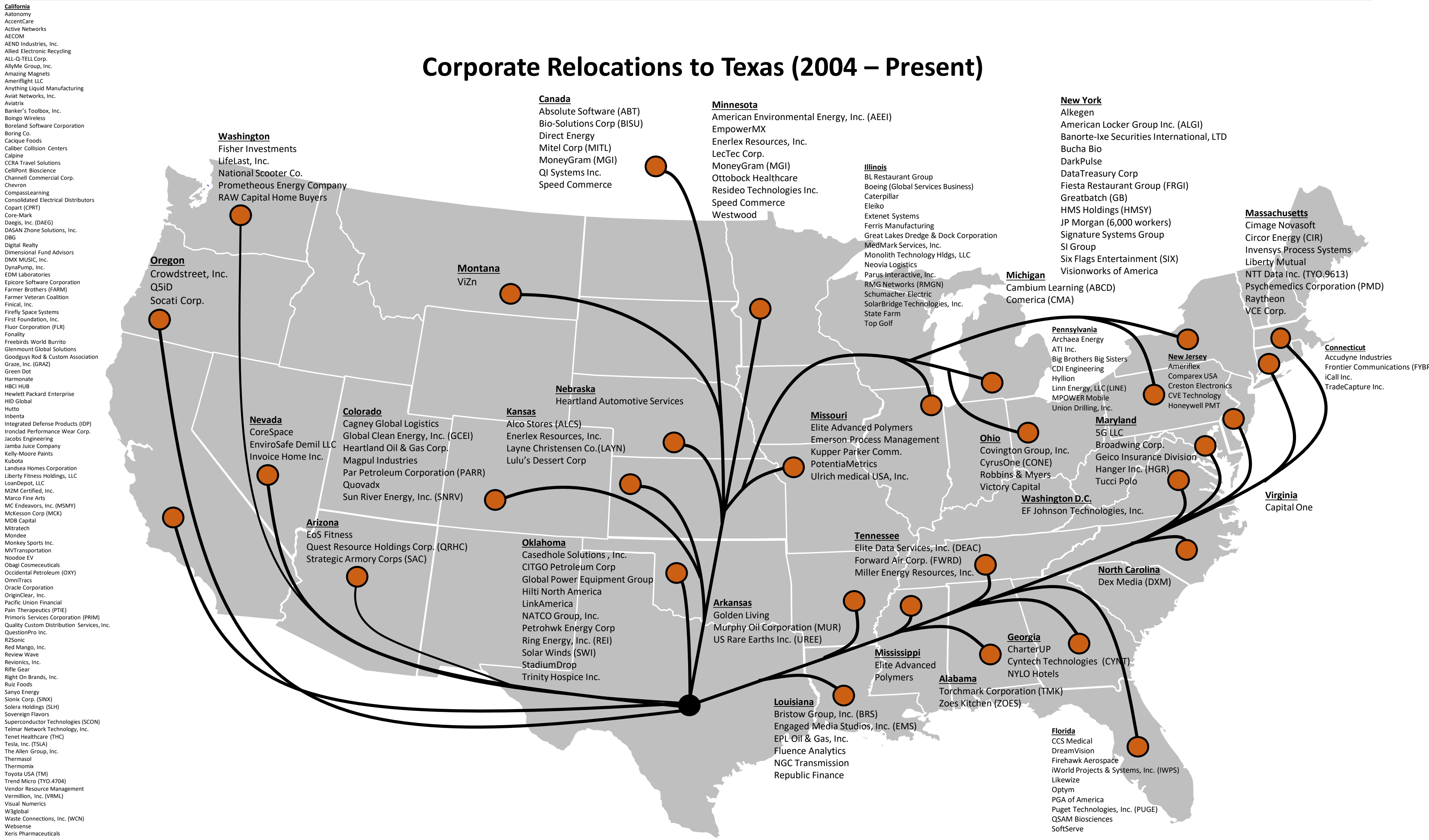
Top 15 Fastest Growing MSAs in the U.S. (1)

#	Metropolitan Statistical Area	Prosperity Presence	Prosperity Deposits ($mm)	Proj. Population Growth (%)
1.	Austin-Round Rock-San Marcos, TX	✓	$1,992	9.3%
2.	Jacksonville, FL			8.8%
3.	Orlando-Kissimmee-Sanford, FL			8.3%
4.	Raleigh-Cary, NC			8.3%
5.	Houston-Pasadena-The Woodlands, TX	✓	$11,092	7.3%
6.	Dallas-Fort Worth-Arlington, TX	✓	$5,950	7.3%
7.	Charlotte-Concord-Gastonia, NC-SC			7.2%
8.	San Antonio-New Braunfels, TX	✓	$2,498	7.1%
9.	Tampa-St. Petersburg-Clearwater, FL			6.7%
10.	Greenville-Anderson-Greer, SC			6.6%
11.	Nashville-Davidson--Murfreesboro--Franklin, TN			5.7%
12.	Miami-Fort Lauderdale-West Palm Beach, FL			5.7%
13.	Phoenix-Mesa-Chandler, AZ			5.6%
14.	Las Vegas-Henderson-North Las Vegas, NV			5.3%
15.	Atlanta-Sandy Springs-Roswell, GA			4.2%

- Presence in four of the fastest growing MSAs in the United States

Source: Office of the Texas Governor, CNBC, U.S. Bureau of Labor Statistics, and Oklahoma Department of Commerce.
Note: Prosperity is shown pro forma for its recently closed acquisition of Stellar Bancorp, Inc..
(1) Includes MSAs with greater than one million in total population. Deposit data as of 6/30/2025.

Corporate Relocations to Texas



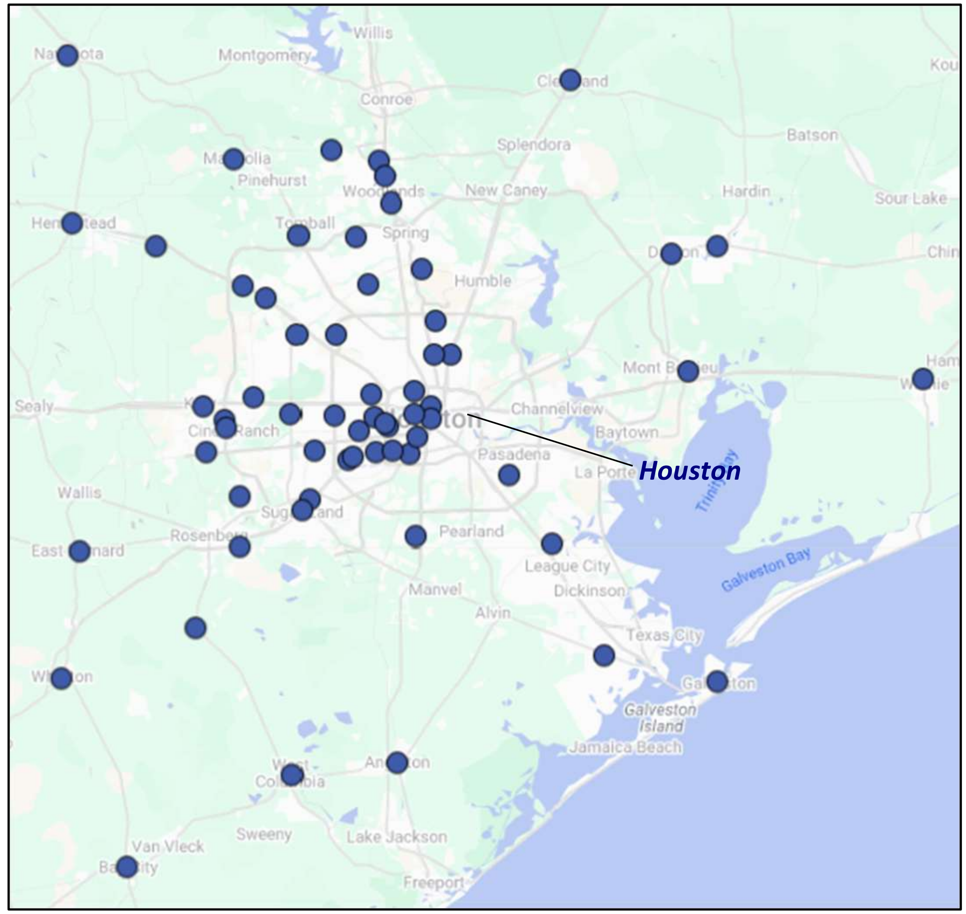
Source: Office of the Texas Governor.

Houston Market Highlights

Market Highlights

- The Houston MSA is the 5th largest in the United States by population with nearly 8.0 million residents
  - Population is expected to grow 7.3% from 2026 – 2031 (compared to the 2.6% projected growth for the U.S.)
  - Current Median Household Income is $87k (in line with $87k for the U.S.)
- As of May 2026, employment in Houston has increased 1.2% YoY in the professional & business services sector, compared to the nationwide increase of only 0.2%
- As of May 2026, employment in Houston has increased 0.3% YoY in the government sector, compared to the nationwide decrease of 0.8%
- Houston is the nation's top exporting metro with $177.3 billion in goods and commodities sent abroad in 2025
- Houston's living costs are 25.1% below the average of the nation's 20 largest metros, while housing costs are 50.8% below the average of the nation's 20 largest metros

Houston Franchise



Select Fortune 500 Companies

Phillips 66 | ExxonMobil | Chevron | Sysco | ConocoPhillips | Enterprise Products
Plains All American Pipeline | OXY | APA Corporation | eog resources | WM | Kinder Morgan
Halliburton | Baker Hughes | Hewlett Packard Enterprise | Quanta Services | CenterPoint Energy | Targa
Group 1 Automotive | Westlake Chemical | nrg | NOV | Cheniere | Par Pacific

Source: Bureau of Labor Statistics, Greater Houston Partnership.
Note I: References to Houston refer to the Houston – Pasadena – The Woodlands metropolitan statistical area.
Note II: Prosperity is shown pro forma for its recently closed acquisition of Stellar Bancorp, Inc..

Dallas/Ft. Worth Market Highlights

Market Highlights

- The Dallas/Ft. Worth MSA is the 4th largest in the United States by population with nearly 8.6 million residents
  - Population is expected to grow 7.3% from 2026 – 2031 (compared to the 2.6% projected growth for the U.S.)
  - Median Household Income is expected to grow to $109k by 2031 (compared to $97k for the U.S.)
- As of May 2026, employment in Dallas has increased 1.4% YoY in the professional & business services sector, compared to the nationwide increase of 0.2%
- Dallas-Fort Worth ranked No. 1 in the nation for corporate headquarters relocations as of April 2026

Select Fortune 500 Companies

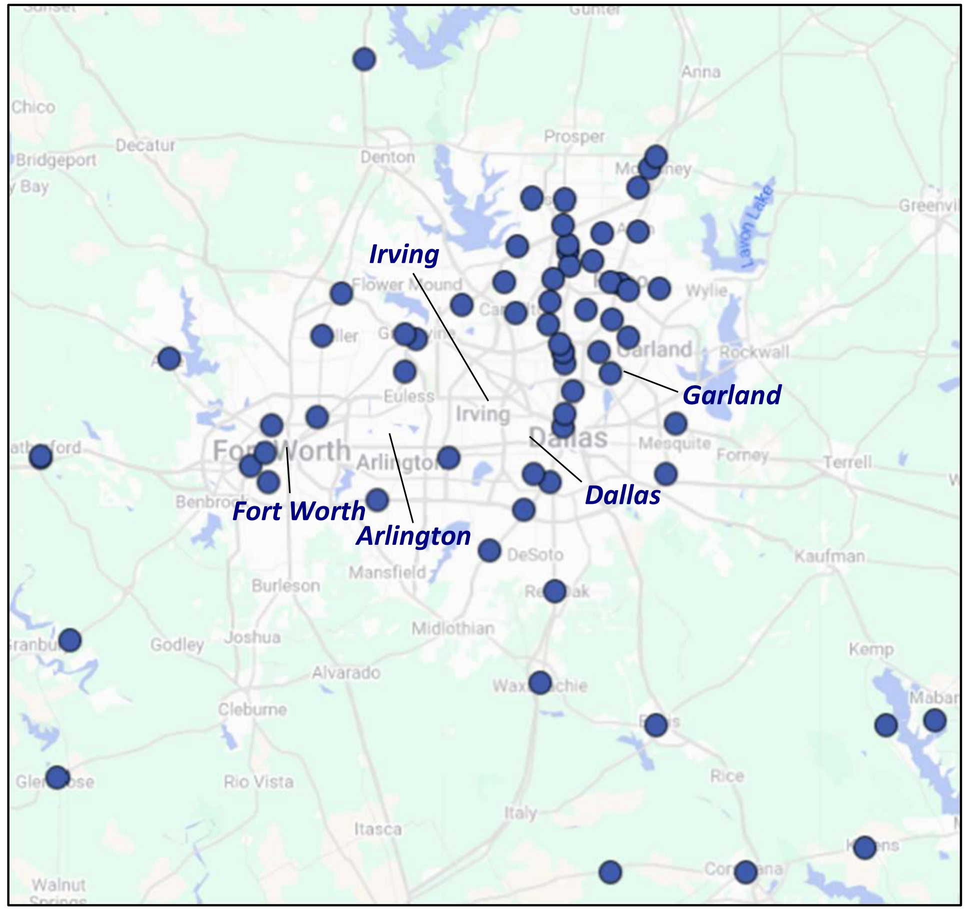
Southwest, AT&T, Energy Transfer, American Airlines Group, Tenet Health

Jacobs, Kimberly-Clark, Fluor, Texas Instruments, AECOM

Caterpillar, McKesson, Keurig Dr Pepper, CBRE, Builders FirstSource

Celanese, Vistra Energy, D.R. Horton America's Builder, CMC Commercial Metals, Charles Schwab

Dallas / Ft. Worth Franchise



Source: Bureau of Labor Statistics, CBRE.
Note I: References to Dallas refer to the Dallas – Fort Worth – Arlington metropolitan statistical area.
Note II: Prosperity is shown pro forma for its recently closed acquisition of Stellar Bancorp, Inc..

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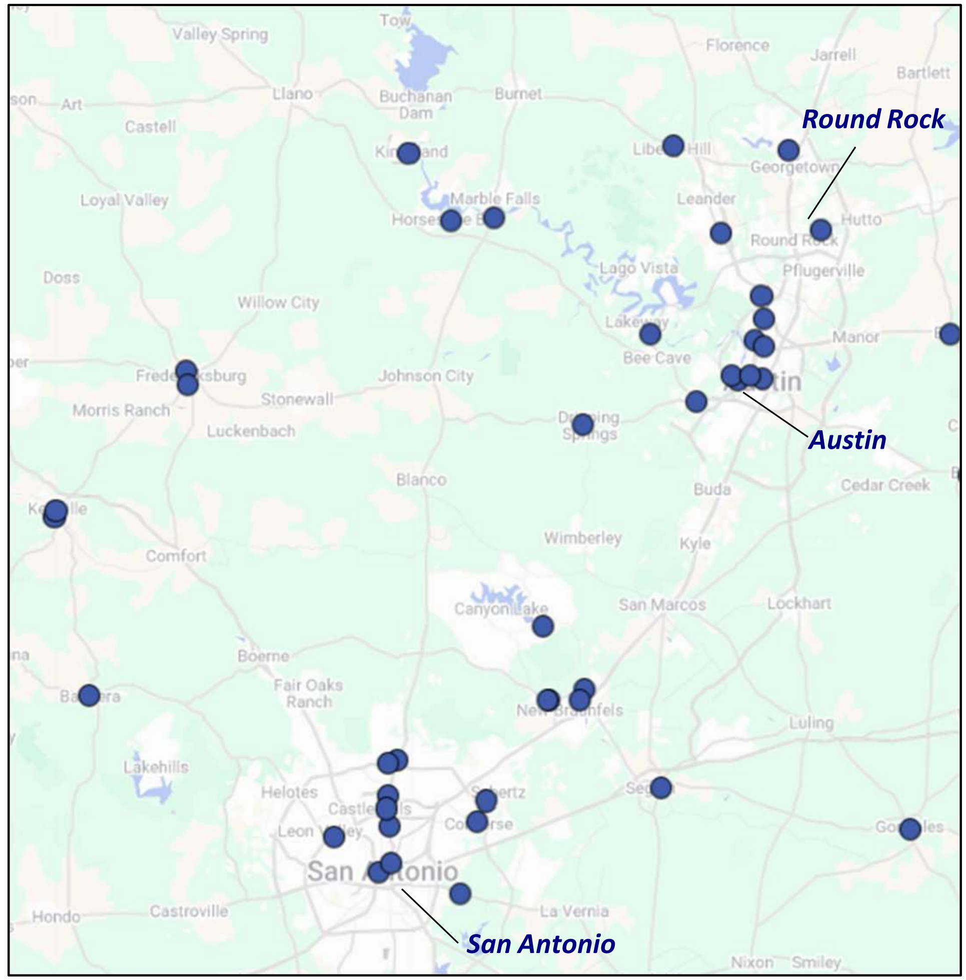
Austin Market Highlights

Market Highlights

- The Austin MSA is the 25th largest in the United States by population with over 2.6 million residents
  - Population is expected to grow 9.3% from 2026 – 2031 (compared to the 2.6% projected growth for the U.S.)
  - Median Household Income is expected to grow to $126k by 2031 (compared to $97k for the U.S.)
- As of May 2026, employment in Austin has increased 3.0% YoY in the financial activities sector, compared to the nationwide decrease of 1.2%
- As of May 2026, the Austin unemployment rate is 3.5%, compared to 4.1% nationwide
- In May 2026, the City of Austin announced that it surpassed 1 million residents for the first time in its history (1,002,632 as of the latest Census estimate), becoming the 12th largest city in the United States

Select Fortune 500 Companies

Austin Franchise



Source: Bureau of Labor Statistics, Fox News.
Note I: References to Austin refer to the Austin – Round Rock – San Marcos metropolitan statistical area.
Note II: Prosperity is shown pro forma for its recently closed acquisition of Stellar Bancorp, Inc..

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