



Applied Portfolio Management

State Street Corporation(STT)

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Executive Summary

Buy - Recommendation

Sector: Financials

Industry: Banks

Key Statistics

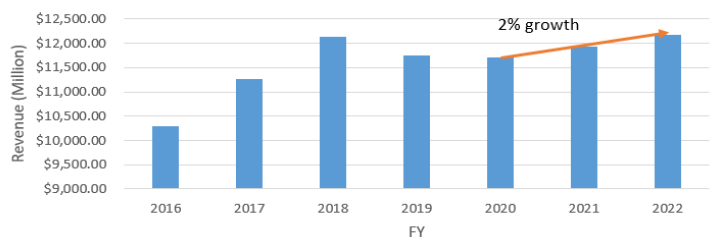
Current Price	\$81.11
18 February Price	\$74.55
52 Week Range	\$51.21 - \$87.89
Dividend & Yield	2.08(2.56%)
Ex-Dividend Date	31-Mar-21
Market Cap	27.9B
Current P/E	13.36
Forward P/E	11.68
Revenue	11.54B
Diluted EPS	\$6.07
Price/Book	1.23
Profit Margin	19.97%
Operating Margin	27.44%
ROA	0.68%
ROE	9.43%



Historical EPS and Future Estimation



Historical Revenue and Future Estimation



Investment Summary

- I use the P/E multiple valuation to get a target price \$84.8 and Gorgon Growth method target price at \$98.2, which shows a possible 10%-30% upside potential since 18 Feb
- 10 years of continuous dividend payment history with compound annual growth 9.01%
- Acquired Charles River Development for new business lines and efficiencies in 2016
- NII shrinks for about 60% due to low interest-rate environment but expected to go up
- Fee revenue is going to continuously grow and software and processing business are expected to go back to normal
- State Street Corporation has underperformed the industry over the past six months thus with greater growth potential, P/B and P/E are relatively low compared to its competitors
- Enough cash, due from banks, and interest-bearing deposits with banks to pay for debts.

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1. Company Overview

State Street Corporation is a financial holding company. The Company operates through two lines of business: **Investment Servicing and Investment Management**. The Company, through its subsidiary, State Street Bank and Trust Company (State Street Bank), provides a range of financial products and services to institutional investors across the world. Investment servicing line of business performs functions, such as providing institutional investors with clearing, settlement and payment services. The Company operates investment management line of business through State Street Global Advisors (SSGA). SSGA provides a range of investment management, investment research and investment advisory services to corporations, public funds and other investors. In 2016, State Street acquired GE Asset Management. In 2018, the company acquired Charles River Development (CRD). As of December 31, 2020, State Street had assets under custody and administration of \$38.8 trillion, and assets under management (AUM) of \$3.5 trillion. It operates in more than 100 geographic markets worldwide, including the U.S., Canada, Europe, the Middle East and Asia.

Strategies and Goals

- Be an Essential Partner: Trusted, Strategic, and Proactive
- Develop a Scalable, Configurable, and Resilient End-to-End Operating Model
- Implement Cultural Transformation to Create a High-Performing Organization
- Enhance Operational Resiliency
- Execute on Behalf of the Shareholders

Major Clients

- ✧ **Asset Managers:** Provide insights and intelligence to unlock opportunities. Use data mining and integrating the operating model. Help with agility and scale to support global expansion.
- ✧ **Asset Owners:** Provide beneficiaries with a steady income over a long period. Help develop strategies, build portfolios and measure performances.
- ✧ **Alternative Asset Managers:** Simplify the day-to-day operations. Provide solutions to minimize disruption and enhance resilience. Help guide the business, reduce complexity, gain scale, and enhance data insights.
- ✧ **Insurance Companies:** Simplify operations and unlock the data's potential. Gain control of the investment process with more effective analytics and wide range of reporting tools. Make smarter investment decisions and scale for faster growth.
- ✧ **Official Institutions:** Give analytical support to manage risks. Help find solid returns even in a tough environment. Emphasize the confidentiality and data security.



Asset Servicing Platform

After acquiring Charles River Development for \$2.6 billion in July 2018, State Street Corporation manage to enable first-ever global front-to-back client servicing platform – **State Street Alpha**. Alpha brings together the clients' choice of real-time data and asset intelligent across the investment lifecycle to help them make better decisions and deliver growth for their clients. Together with State Street's middle and back office, Charles River IMS forms the foundation of State Street Alpha.

With built-in flexibility and scalability, Alpha lets clients manage any assets in any market and streamline their day-to-day processes — helping to facilitate innovation, better inform investment decisions, optimize returns and streamline business operations.

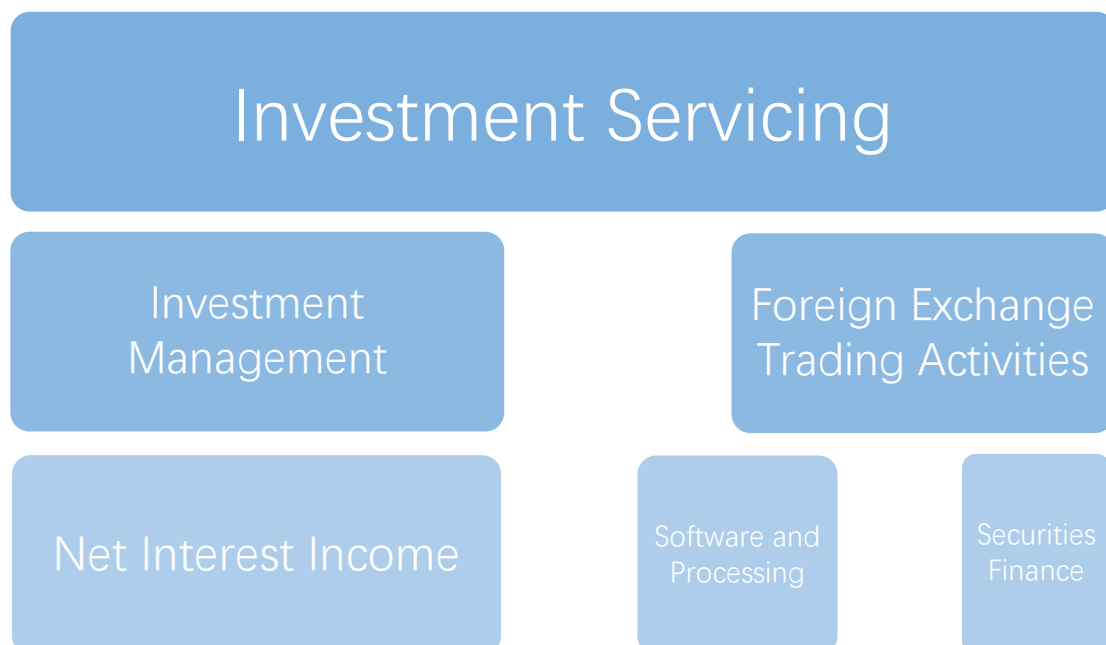
Businesses and Capabilities

- ✧ **Collateral Management:** Provide collateral+ solutions, which is an integrated service and platform with modular components that allow clients to add specific, tailored capabilities to their collateral management service. Design tools to optimize margin to help minimize costs and capitalize on available inventory.
- ✧ **ETFs Servicing:** Help launch and serve active exchange traded funds(ETF). Provide solutions for clients to successfully navigate the ETFs market.
- ✧ **Volatility to Value:** Assist the clients to move from volatility to value through deeper investment insights and better liquidity management. Guarantee to maintain business continuity through globally diversified and split operating model with built-in redundancies. Provide liquidity wherever you see investment opportunities because of the consistently high credit ratings and global scale.
- ✧ **Investment Management:** Provide a diverse range of investment strategies and products including core and enhanced indexing, multi-asset strategies, active

quantitative and fundamental active capabilities and alternative investment strategies. Be capable of ESG investing, ETF model portfolios, fixed income, gold investing, low-cost core ETF investing, sector analysis, and smart beta construction.

- ✧ **Global Markets:** Support liquidity requirements to multiple portfolios, foreign exchange, and unified electronic trading across multiple open-source architecture platforms. Offer the channels and products to make financing and asset management simpler and more efficient. Help sift through vast amounts of data and make more educated execution decisions. Provide solutions for better performance through outsourced trading.
- ✧ **Investment Servicing:** Support the outsource of all investment operations to provide with complex alternate assets like over-the-counter derivatives, private equity, and real estate. Offer key services like ETF servicing, fund administration, performance measurement, and private equity servicing.
- ✧ **Data and Analytics:** Come up decision-making tools, strategy planning, fund and execution solutions for clients. Offer research and advice which gives insight and information and data management plus analytics which help visualize the results and manage all kinds of risks.
- ✧ **ESG Investing:** Invest in environmental, social, and governance issues(ESG) that are substantial to a company's ability to make sustainable profits.

STT generates revenue through six main segments



2. Industry Analysis

State Street Corporation(STT) is in the Banks industry of Financials sector. According to the Global Industry Classification Standard(GICS), it is further classified as a Regional Bank. In the Financials sector, valuation metrics like P/E, PEG, P/B, P/FCF could be useful when comparing SST with its industry competitors and its pass performances.

Financials Sector

The Financials sector mainly contains companies involved in banking, insurance, asset management, and some other diversified financial services. The market cap is now \$8.26T compared to \$5.06T in 2015, which implies approximately 10.3% per year. Due 04/09/2021, the Financials sector constructs 11.24% market cap of the US market.

From Figure 1 below, we can see STT underperforms the S&P 500 index and Financials sector over the previous one year and thus has greater growth potential.

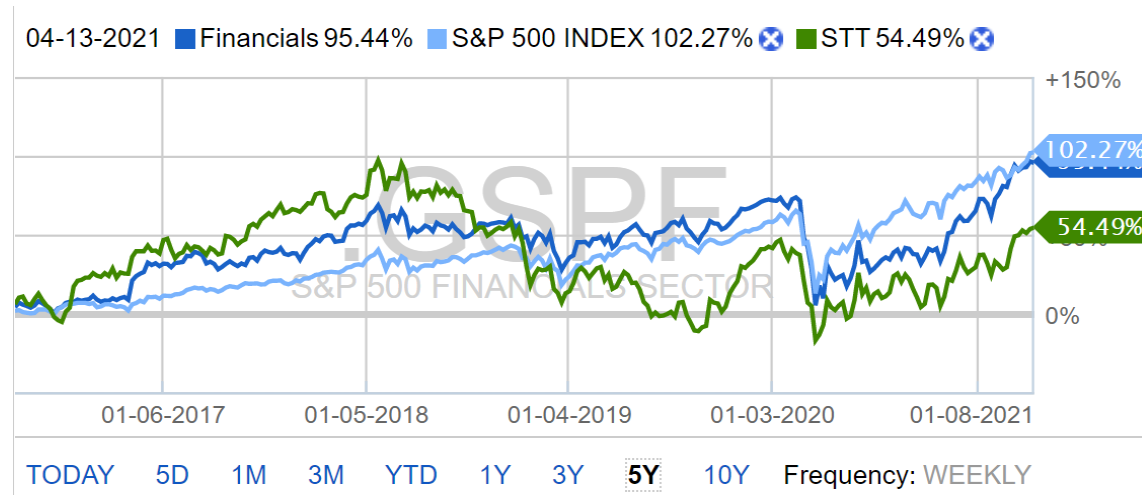


Figure 1: Stock Performance Source: *eresearch.fidelity.com*

P/E(Last Year GAAP Actual)	19.08
P/E(This Year's Estimate)	10.70
Enterprise Value	\$134.40B
EPS(TTM)	\$6.09
ROE(TTM)	22.73%
Return on Investment(TTM)	5.62%
Total Debt/Equity(TTM)	189.68
Dividend Yield	2.51%

Table 1: Sector Fundamentals (As of 04/12/2021)

Banks Industry and Competitors

The Banks Industry in the Financials Sector includes diversified and regional Banks whose businesses are derived primarily from conventional banking operations, and have significant business activity in retail banking, and small and medium corporate lending. As of 04/12/2021, the Banks industry has market cap of \$3.80T, which constructs 46% of the Financials. Compared to companies in other industries in this sector, the banks are more sensitive to interest rate, inflation rate, and other macroeconomic factors. In addition to that, The Federal Reserve's policies would also influence banks' operations and stock prices.

During the Covid-19 and Post-Covid

With the possible exception of world wars, no year has affected the lives of more people than 2020. It is impossible to focus on the performance of our business in isolation from the pandemic, economic shutdown, historic market volatility, the radical shift in working and living conditions, and the racial and social inequities that challenged all of us. And no other year better illustrates the interconnectedness of our stakeholders — shareholders, clients, employees, vendors, policymakers, and communities. The multiple crises of 2020 highlighted both strengths and weaknesses in the public and private sectors and underscored the value of resilience in everything we do.



Ronald P. O' Hanley (Chairman and CEO)

After the outbreak of the Covid-19 pandemic, State Street rapidly moved more than 90% of the staff to remote work at the same time that market volumes and the needs of the clients rose to the peak levels. To supply the demand of the customers, State Street reconfigured the office space and technology. Because of the rapid movement and clients' adherences to the services and the stability of the new Alpha platform, State Street adapted well to the unique operating environment of 2020. Throughout 2020, with primary focus on health and safety, it also positioned the business for future success. Client and employee engagement scores increased, new technology came online, total fee revenue grew, and operating expenses continued to decrease.

State Street achieved a rather robust revenue performance in 2020 compared to its competitors. Net income in 2020 was \$2.42 billion compared with \$2.24 billion in 2019, an increase of 7.9%. Earnings per share in 2020 were \$6.32, an increase of 17.5% from 2019. Return on equity in 2020 was 10.0%. Earnings per share and return on equity improved despite no share repurchases after Q1 2020.

Assets under custody and/or administration (AUC/A) rose to a record \$38.8 trillion at December 31, 2020, up 13% year over year, driven by higher market levels, net new business installations, and client flows.

State Street Growth

The company's outlook in 2021 is based on two assumptions. These include normalizing FX market volatility and equity markets up 7-8% by year end.

In the earnings call, the company anticipates the impact of money market fee waivers (net of distribution expenses) to be \$5-10million per quarter. Given the impact of continued low interest rate environment, management expects that the Net Interest Income (NII) to remain flat and then rebound. The revenues are expected to be flat or up 2% with the servicing fees estimated growing 3-5%. Excluding FX trading revenues, fee income is projected to be up 3-5%. Excluding notable items, overall expenses are expected to be flat to down 1% and currency translation will likely be a 1% headwind to this projection. This net expense decline includes nearly 4-5% of variable costs and ongoing business investments in like CRD, Alpha, and tech infrastructure and automation. Also, focus on further process automation and organizational simplification, and real estate footprint reduction across 20 sites will lead to savings of roughly 120 million. The company ALSO expects releases of provisions for credit losses during 2021 of at least 33% of what was built in 2020. Effective tax rate is expected to be 17-19%.

As for the medium-term targets (to be achieved by 2023), management expects revenue increases of 4-5%. The pre-tax margin is predicted to be 30%. The management also expects that EPS will obtain a growth of 10-15% and ROE of 12-15%. Total payout ratio is expected to be greater than or equal 80%.

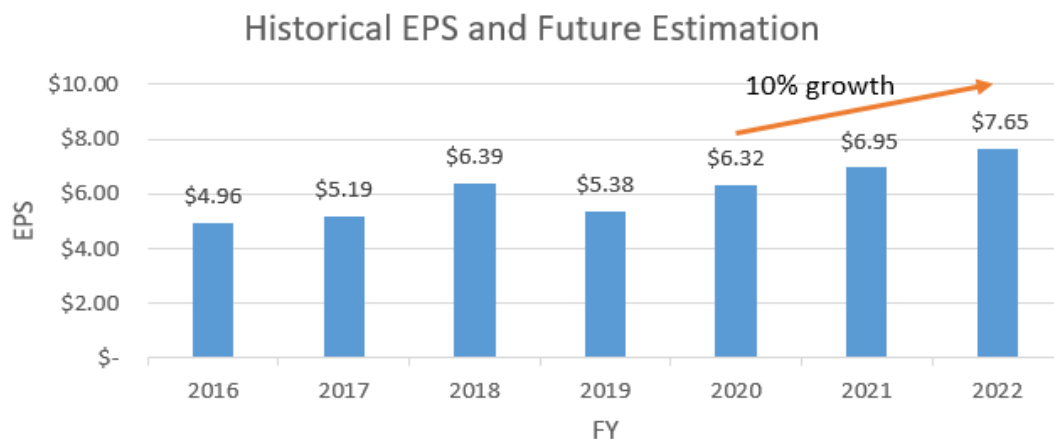


Figure 2: EPS

Source: STT Q4 Earnings Report

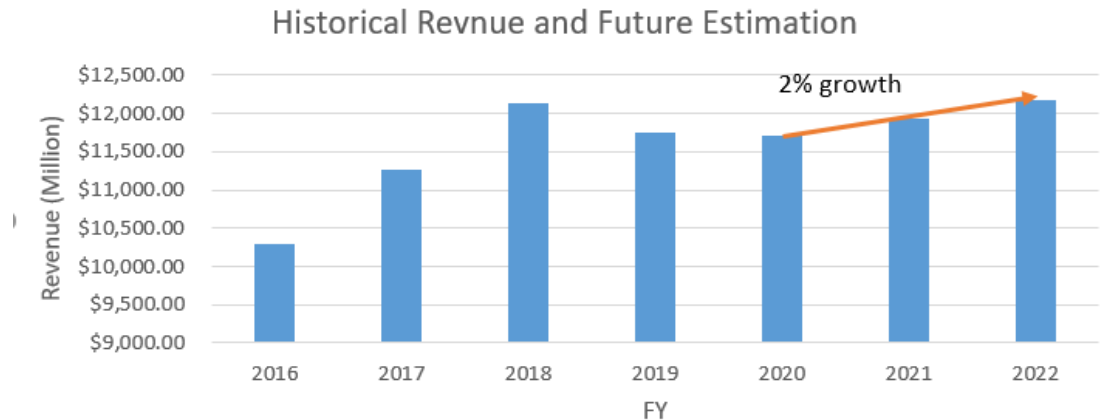


Figure 3: Revenue

Source: STT Q4 Earnings Report

Competitors

The company faces a lot of competitors out of a diverse range of business. The competitors include other custodial banks, deposit-taking institutions, investment management firms, insurance companies, mutual funds, broker/dealers, investment banks, benefits consultants, investment analytics businesses, business service and software companies and information services firms. As the businesses continue to grow and markets evolve, the company may encounter increasing and new forms of competition around the world.

\$10billion revenue are small size compared to the other huge banks in the industry. From Table 2 below, we can see State Street constructs only a small share of the financial services market. However, I believe the clients distribution in the banks industry are quite stable and are reluctant to change services from time to time.

To make comparison more reasonable, I select the companies which has relatively the same market capital and revenue. This will include *BlackRock(BLK)*, *The Bank of New York Mellon(BK)*, *T. Rowe Price Group(TROW)*, *American Financial(AMP)*, and *Northern Trust(NTRS)*.

Company	Employee	Revenue(\$B)	Net Income(\$B)	Market Cap(\$B)
State Street Corp.	40,000	11.7	2.4	30.2
JPMorgan Chase	256,000	129.5	29.1	472.9
Wells Fargo	259,800	72.3	3.6	168.6
Goldman Sachs	36,600	44.6	9.5	123.3
BlackRock	14,900	16.2	4.9	122.2
BNY Mellon	51,300	15.8	3.6	43.1
Northern Trust	20,000	6.3	1.2	22.9
T. Rowe Price Group	7,678	6.2	2.4	41.6
Ameriprise Financial	12,300	11.9	1.5	28.6

Table 2: FY2020 Competitors Size

Source: Yahoo Finance

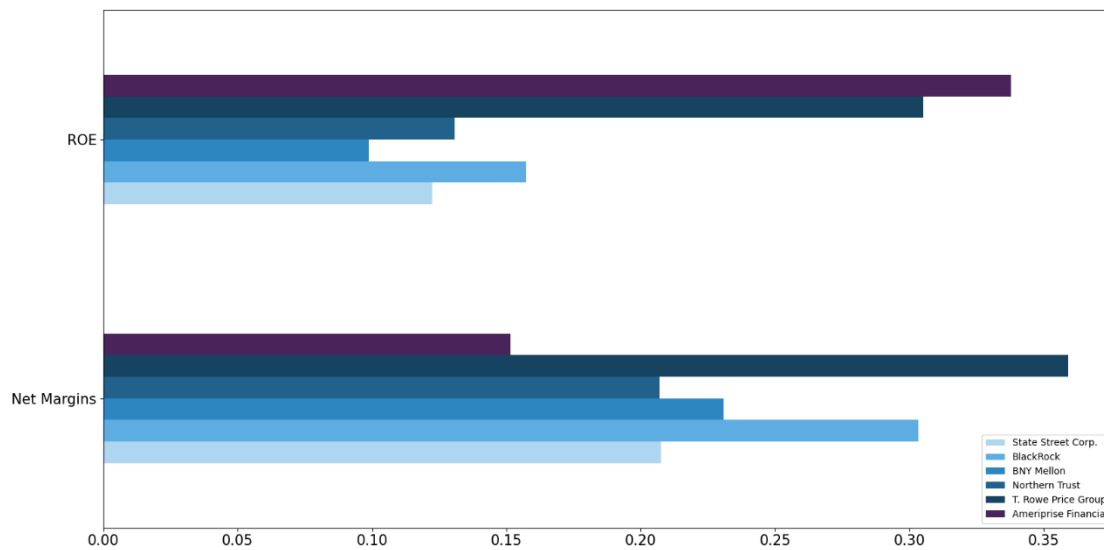


Figure 4: FY2020 ROE and Net Margins Comparison

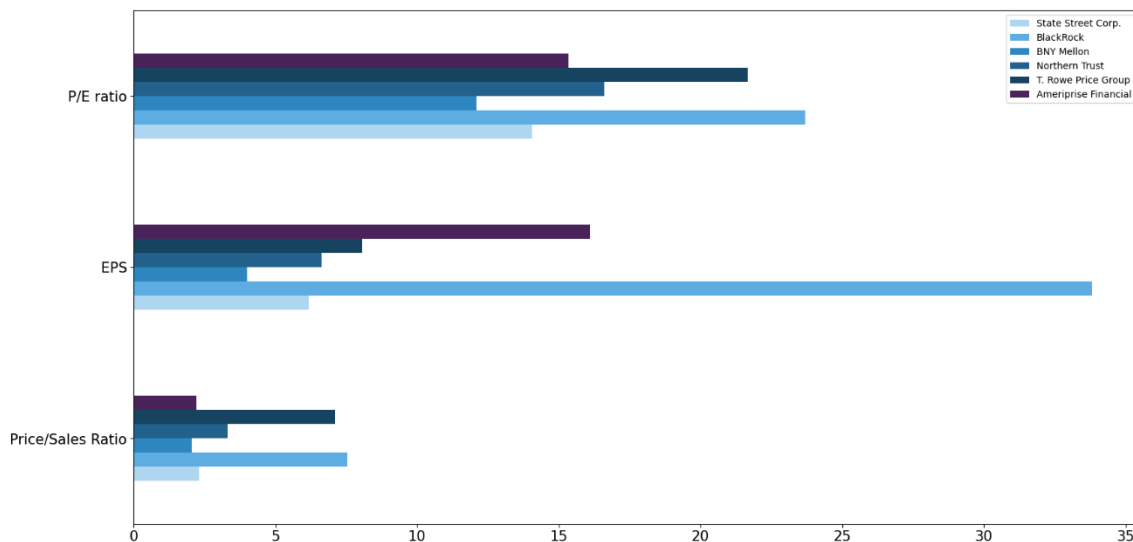


Figure 5: FY2020 P/E, P/S, and EPS Comparison

From Figure 4 and Figure 5, we can tell that State Street has relative low P/E ratio and low P/S ratio compared to its competitors. The EPS underperforms, however, mainly due to the business structure and company size. In addition to that, the ROE for State Street is about 10% in fiscal year 2020, which proves to be not significant compared to its competitors.

Not all of the competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of the competitors may not be subject to the same additional capital requirements. Thus these comparisons are just for reference.

Porter's Five Forces on State Street Corporation

Threat of New Entrants: Weak

- ✧ The economies of scale are fairly difficult to achieve in the banks industry. This makes it easier for those producing large capacities to have a cost advantage. It also makes production costlier for new entrants.
- ✧ The product differentiation is strong within the industry, where firms in the industry sell differentiated products rather than standardized products. Customers also look for differentiated products. There is a strong emphasis on advertising and customer services.
- ✧ The capital requirements within the industry are high, therefore, making it difficult for new entrants to set up businesses as high expenditures need to be incurred. Capital expenditure is also high because of high Research and Development costs.
- ✧ The government policies require strict licensing and legal requirements to be fulfilled before a company can start selling. This makes it difficult for new entrants to join the industry, therefore, making the threat of new entrants a weak force.

Bargaining Power of Suppliers: Medium

- ✧ The number of suppliers in the banks industry is a lot compared to the buyers. This means that the suppliers have less control over prices.
- ✧ The products provided are fairly standardized, less differentiated and have low switching costs. This makes it easier for State Street Corporation to switch suppliers.
- ✧ The suppliers do not provide a credible threat for forward integration into the industry in which State Street Corporation operates. All of the above combined make the bargaining power of suppliers a weak force.
- ✧ The suppliers do not contend with other products within this industry. This means that there are no other substitutes for the product other than the ones the suppliers provide. This makes the bargaining power of suppliers a stronger force within the industry.

Bargaining Power of Buyers: Weak

- ✧ The product differentiation within the industry is high, which means that the buyers are not able to find alternative firms producing a particular product.
- ✧ The quality of the products is important to the buyers, and these buyers make frequent purchases. This means that the buyers in the industry are less price sensitive. This makes the bargaining power of buyers a weaker force within the industry.
- ✧ There is no significant threat to the buyers to integrate backwards.

Threat of Substitute Products or Services: Weak

- ✧ There are very few substitutes available for the products that are produced in the banks industry. The very few substitutes that are available are also produced by low profit earning industries. This means that there is no ceiling on the maximum profit. All of these factors make the threat of substitute products a weaker force within the industry.
- ✧ The very a few substitutes available are of high quality but are way more expensive. Comparatively, firms producing within the banks industry sell at a lower price than substitutes, with adequate quality. This means that buyers are less likely to switch to substitute products.

Rivalry Among Existing Firms: Strong

- ✧ The very few competitors have a large market share. This means that these will engage in competitive actions to gain position and become market leaders.
- ✧ The fixed costs are high within the banks industry. This makes the companies within the industry to push to full capacity. This also means these companies to reduce their prices when demand slackens.
- ✧ The exit barriers within the industry are particularly high due to high investment required in capital and assets to operate. The exit barriers are also high due to government regulations and restrictions. This makes firms within the industry reluctant to leave the business, and these continue to produce even at low profits.
- ✧ The strategies of the firms within the industry are diverse, which means they are unique to each other in terms of strategy. This results in them running head-on into each other regarding strategy. All the above make the rivalry among existing firms a strong force

How State Street Will Tackle the Strong Competition

- ✧ State Street Corporation will focus on differentiating its products and services so that the actions of competitors would have less impact on its customers who seek for these unique services. In light of this, not only just for reducing costs, State Street Alpha is also designed to integrate targeted customer service which cannot be easily replaced.
- ✧ As the industry is slowly growing, State Street will focus on attract new customers with innovative data driving technology rather than winning the ones from the competitors.
- ✧ State Street Corporation will conduct market research to understand the supply-demand situation within the industry and prevent overproduction

3. Financial Statement Analysis

Income Statement

State Street Corporation achieved annual revenue \$11.7B in fiscal year 2020, which implied an average of 3.3% growth rate since 2016. However, total revenue was flat in 2020 compared to 2019, as the increase in total fee revenue was partially offset by the decline in Net Interest Income(NII) as a result of low interest rate environment since the pandemic. The EPS is reported \$6.40 in 2020 compared to 5.01 in 2016, with an approximate compound annual growth rate 6.2%. The EPS increased 17% compared to \$5.38 in 2019.

Specifically speaking, the **servicing fee revenue** increased 2% and the **management fee revenue** increased 3% in 2020 compared to 2019, as the major business, mainly because of higher market levels and client activity. **Foreign exchange trading services** increased 29% in 2020 compared to 2019 primarily due to elevated market volatility and record client FX volumes. **Securities finance revenue** decreased 24% in 2020 compared to 2019, reflecting decreases in enhanced custody balances due to client deleveraging and lower agency lending revenues due to lower spreads. **Total revenues contributed by CRD** in 2020 were approximately \$420M, including \$406M in software and processing fees. **NII** decreased 14% in 2020 compared to 2019, primarily driven by lower market rates, partially offset by higher deposit balances, higher loans, and investment portfolio growth.

(Dollars in millions)	Years Ended December 31,			% Change 2020 vs. 2019	% Change 2019 vs. 2018
	2020	2019	2018		
Fee revenue:					
Servicing fees	\$ 5,167	\$ 5,074	\$ 5,421	2 %	(6)%
Management fees ⁽¹⁾	1,880	1,824	1,899	3	(4)
Foreign exchange trading services ⁽¹⁾⁽²⁾	1,363	1,058	1,153	29	(8)
Securities finance	356	471	543	(24)	(13)
Software and processing fees ⁽²⁾	733	720	438	2	64
Total fee revenue ⁽²⁾⁽³⁾	9,499	9,147	9,454	4	(3)
Net interest income:					
Interest income	2,575	3,941	3,662	(35)	8
Interest expense	375	1,375	991	(73)	39
Net interest income	2,200	2,566	2,671	(14)	(4)
Other income:					
Gains (losses) related to investment securities, net	4	(1)	9	nm	nm
Other income	—	44	(3)	nm	nm
Total other income	4	43	6	nm	nm
Total revenue ⁽²⁾	\$ 11,703	\$ 11,756	\$ 12,131	—	(3)

Table 3: Total Revenue

Source: 2020 10-K

Balance Sheet

The company has a very robust financial conditions, with \$3.5B cash and \$120B interest-bearing deposits with banks. This is far more than \$4.0B short-term borrowings and \$13.8B long-term debt. In conformity with Basel III rule, the State Street has Tier 1 capital ratio 14.4%, which substantially surpass the minimum requirement 10.5%. The Tier 1 leverage ratio is 6.4%

which doubles the minimum standard 3.0%. With such strong holdings in cash and cash equivalents and strong conformity with Basel rules, State Street Corporation faces tiny risks of bankrupt and default.

Cash Flow Statement

The company reports cash and due from banks \$3.5B at the end of 2020, with a \$165M net increase in 2020. The financing activities generated \$62.2B cash and the operating activities provided net cash of \$3.5B, most of them offset by activities in the investment field with a notion of \$65.5B. Among the cash spent on investing activities, an approximate of \$48B was spent on interest-bearing deposit with banks. Thus it is reasonable to conclude, State Street Corporation has a healthy liquidity conditions and cash generation mechanism.

YEARS ENDED DECEMBER 31:	2020⁽¹⁾	2019⁽¹⁾	2018⁽¹⁾	2017	2016
Total fee revenue	\$ 9,499	\$ 9,147	\$ 9,454	\$ 9,001	\$ 8,200
Net interest income	2,200	2,566	2,671	2,304	2,084
Total other income	4	43	6	(39)	7
Total revenue	11,703	11,756	12,131	11,266	10,291
Provision for credit losses ⁽²⁾	88	10	15	2	10
Total expenses	8,716	9,034	9,015	8,269	8,077
Income before income tax expense	2,899	2,712	3,101	2,995	2,204
Income tax expense (benefit)	479	470	508	839	67
Net income from non-controlling interest	—	—	—	—	1
Net income	\$ 2,420	\$ 2,242	\$ 2,593	\$ 2,156	\$ 2,138
Adjustments to net income ⁽³⁾	(163)	(233)	(189)	(184)	(175)
Net income available to common shareholders	\$ 2,257	\$ 2,009	\$ 2,404	\$ 1,972	\$ 1,963
PER COMMON SHARE:					
Earnings per common share:					
Basic	\$ 6.40	\$ 5.43	\$ 6.46	\$ 5.26	\$ 5.01
Diluted	6.32	5.38	6.39	5.19	4.96
Cash dividends declared	2.08	1.98	1.78	1.60	1.44
Closing market price (at year end)	72.78	79.10	63.07	97.61	77.72
AS OF DECEMBER 31:					
Investment securities	\$ 111,276	\$ 95,597	\$ 87,062	\$ 97,579	\$ 97,167
Average total interest-earning assets	228,874	181,891	185,637	191,235	199,184
Total assets	314,706	245,610	244,596	238,392	242,689
Deposits	239,798	181,872	180,360	184,896	187,163
Long-term debt	13,805	12,509	11,093	11,620	11,430
Total shareholders' equity	26,200	24,431	24,737	22,270	21,193
Assets under custody and/or administration (in billions)	38,791	34,358	31,620	33,119	28,771
Assets under management (in billions)	3,467	3,116	2,511	2,782	2,468
Number of employees	39,439	39,103	40,142	36,643	33,783
RATIOS:					
Return on average common shareholders' equity	10.0 %	9.4 %	12.1 %	10.5 %	10.4 %
Return on average assets	0.9	1.0	1.2	1.0	0.9
Common dividend payout	32.9	36.8	27.6	30.2	28.5
Average common equity to average total assets	8.3	9.6	8.9	8.6	8.2
Net interest margin, fully taxable-equivalent basis	0.97	1.42	1.47	1.29	1.13
Common equity tier 1 ratio ⁽⁴⁾	12.3	11.7	11.7	11.9	11.6
Tier 1 capital ratio ⁽⁴⁾	14.4	14.5	15.5	15.0	14.7
Total capital ratio ⁽⁴⁾	15.3	15.6	16.3	16.0	16.0
Tier 1 leverage ratio ⁽⁵⁾	6.4	6.9	7.2	7.3	6.5
Supplementary leverage ratio ⁽⁶⁾	8.1	6.1	6.3	6.5	5.9

Table 4: Selected Financial Data and Ratio

Source: 2020 10-K

4. Valuation

P/E Multiple Valuation

I'm taking the average of past ten years' P/E ratio of State Street. Then using the projected 1 year earnings per share in 2021, I get the one-year target price 84.8.

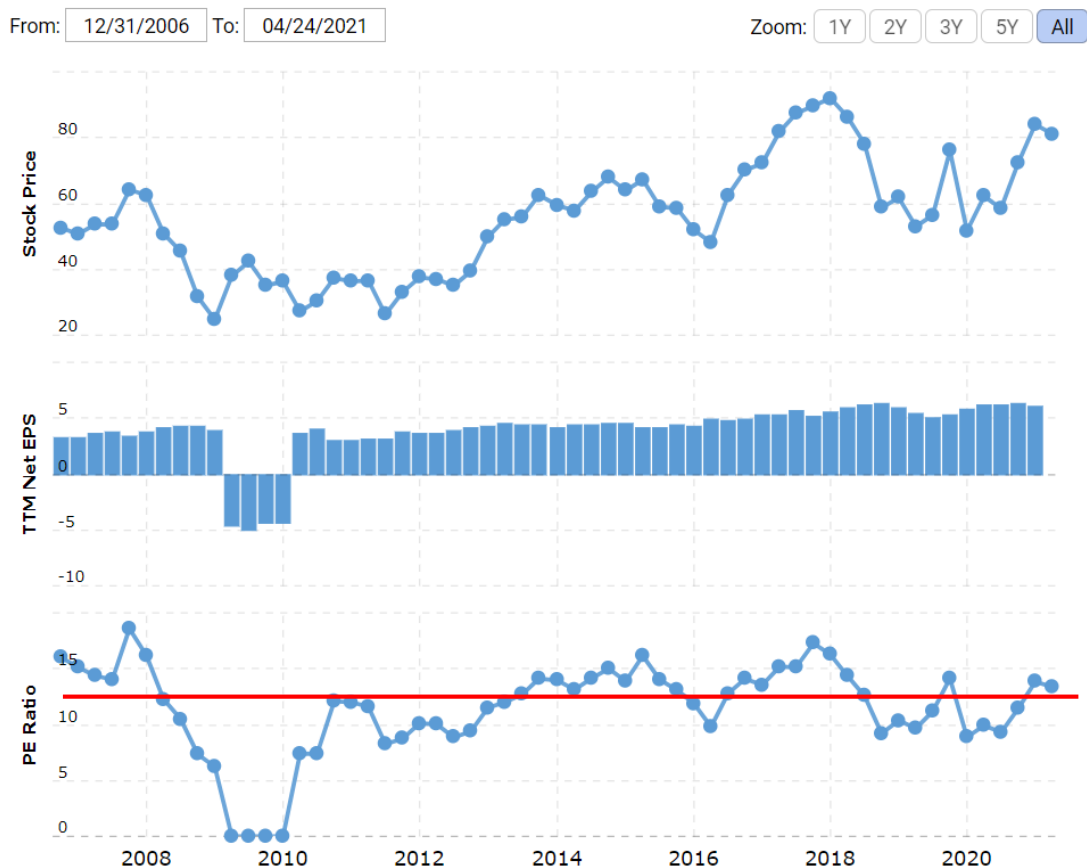


Figure 6: State Street Historical P/E Ratio and EPS *Source: macrotrends*

As we can see from the plot, State Street keeps a slowly growth rate over the past 10 years with strong cyclical patterns. The average of past ten-year P/E ratio is **12.2**.

The management believes the recovery of the economy would reverse the headwind in NII in current earnings structure and believe the undervalue of current stocks and plan to buy back stocks in fiscal year 2021.

Based on this, the management team make a projection of EPS \$6.95, which I believe is reasonable. The target price is calculated as $12.2 \times 6.95 = \$84.8$.

Dividend Discount Model

The EBIDTA and EV/EBIDTA becomes less meaningful for the bank because the NII constructs a portion in the earnings structure. In addition to this, the changes in the working capital can be massive due to the balance sheet-centric nature of the businesses.

So rather than traditional DCF, I use the dividend discount model(DDM), which uses the firm's dividends as a proxy for cash flow, based on the observation that State Street has a relative stable growth in its dividend payments in normal fiscal years.

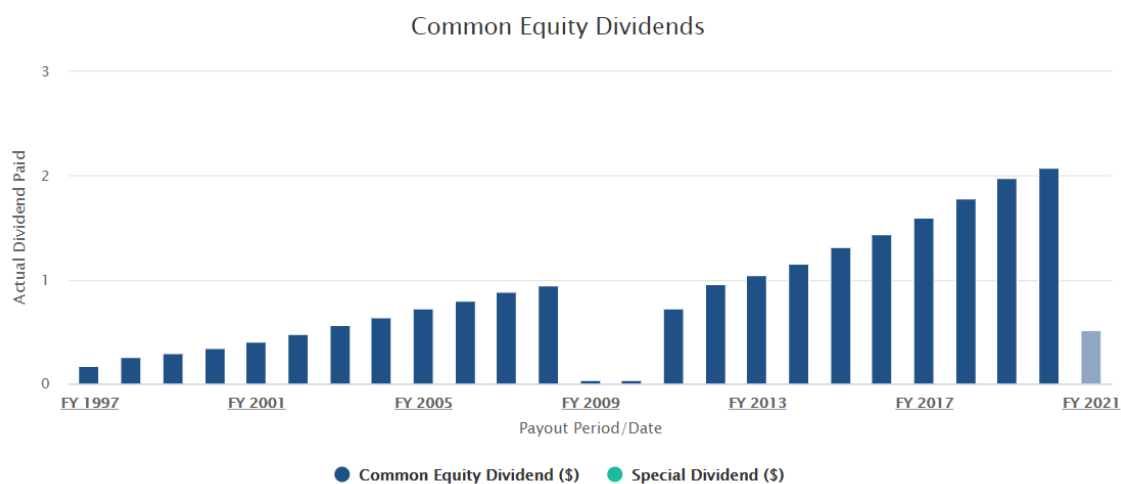


Figure 7: State Street Yearly Dividend Payment *Source: State Street Investor Relations*

State Street pays an annual dividend of \$2.08 per share, with a dividend yield of 2.56%. STT's next quarterly dividend payment will be made to shareholders of record on Tuesday, June 15. The company has grown its dividend for the last 10 consecutive years and is increasing its dividend by an average of 9.14% each year starting from FY2011. State Street pays out 33.71% of its earnings out as a dividend.

Summary DDM Valuation

Terminal Dividend Payment	\$2.25
Dividend Growth Rate	9.01%
Market Return	6.00%
Risk Free Rate	1.58%
Beta	1.62
Cost of Equity	11.30%
Price Per Share	98.18

Table 5: DDM Valuation

Using the Gordon Growth Method, I get a one-year target price \$98.2, based on the CAPM Model with assuming the market excess return of 6% and market beta for State Street is 1.62. To make the valuation football field graph, I assume the estimated P/E ratio range from 11.2 to 13.2 and earnings range from 6.5 to 7.5 in the P/E multiple valuation method. In the DDM model, I assume the market return ranges from 5.5% to 6.5%, which produces a valuation between \$72.5 - \$151.9.

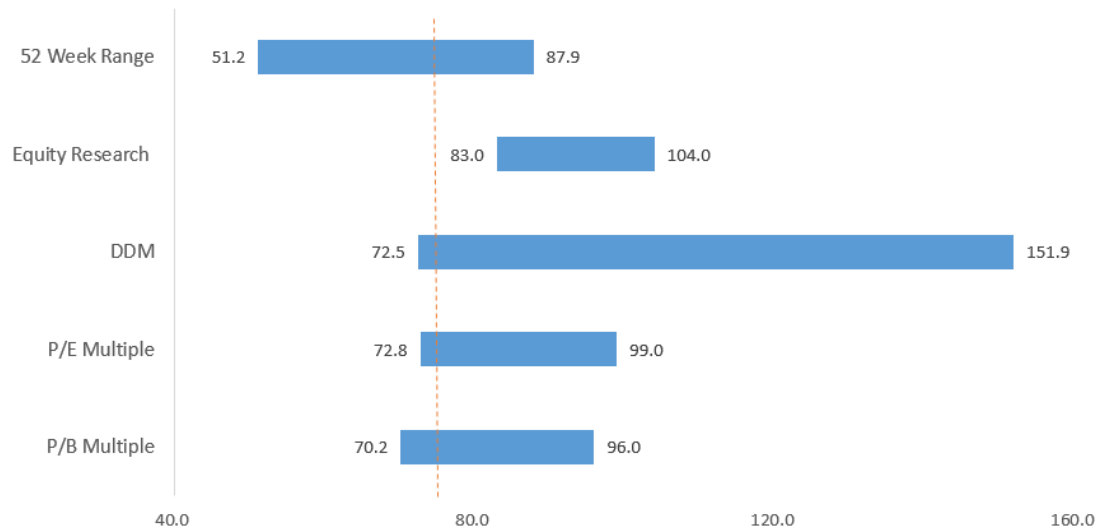


Figure 8: Football Field Valuation

The orange line shows the middle price 74.5 in 16 February. From different metrics of valuation, I consider the State Street Corp a buy, with 10% - 30% upside potential and 10% downside risks under extreme conditions.

Why Benjamin Graham and Warren Buffet Would Consider State Street

- ✚ Continuous dividend payment history
State Street has a 10-year continuous dividend payment history with annual growth rate 9.01% and over 20-year continuous dividend payment history skipping the financial crisis in 2008.
- ✚ Strong financial conditions
State Street has cash and deposits with banks over \$120 billion, which is 5 times as much as its total debt amount.
- ✚ Earnings Stability
State Street has 105% gain of earnings over the past ten years using three-year average.
- ✚ Margin of Safety
State Street has 15% margin of safety with 10-30% upside potential.
- ✚ Good and easily understandable business
As a traditional bank with innovative new business lines, State Street has a relative stable and understandable business and revenue generation mechanism.

5. Why State Street Corporation Is a Buy

State Street has a stable growth in its fee revenues, which is their major business to generate income. State Street has well-behaved growth patterns on the back of new business wins and a strong balance sheet position. State Street Alpha will keep cut expenses and continue to add profitability by attracting more customers. Below are some specific reasons:

- ✧ **State street is continuing its efforts to strengthen the fee income structures:** The company's fee revenues had a five-year compound growth rate of 3.7% from 2016 to 2020. The uptrend was mainly caused by the rise in client activity and significant market growth. Furthermore, State Street reported \$787 billion in business servicing wins last year. The company is well-positioned on the back of fundamental activities, innovative new products, and global business expansion. Investments in new products and new business will be a continuous stimulation for fee revenues going forward.
- ✧ **State Street has a strong balance sheet:** By the end of FY2020, State Street has total debt of \$21.2 billion, down sequentially. Its cash and due from banks, and interest-bearing deposits with banks were \$120.4 billion, which is 5 times as much as the debt. Thus given the cash hold in hand and capital reserve, State Street wouldn't default on the interest payments and debt payments even if the economy situation gets worse.
- ✧ **The NII is expected to go back to normal in the next few years:** State Street has a 60% down in NII since the low interest rate environment. However, when the interest rate starts to climb up, the increase in interest rate earnings with strong stable fee income would pull the earnings to a new high level.
- ✧ **State Street is expected to continue enhance shareholder value through efficient capital deployment activities:** During the Covid-19 pandemic, the federal reserve restricted dividends and share repurchases for the major banks to conserve liquidity. Following the rules, State Street didn't repurchase shares until December 2020-end. Nonetheless, the company resumed the repurchase activities in the first quarter of 2021, having authorized \$475 million for the same.
- ✧ **The State Street stocks have underperformed the industry over the past six months and thus have a greater upside potential:** The earning estimates of the company for 2021 have been revised by the management team in the first quarter earnings call from \$6.65 to \$6.95. Also, the stock seems undervalued in the broader industry. Its current P/B ratio and P/E ratio are below the respective industry average. Thus, given the strength in fundamentals positive estimate revisions, the stock has upside potential.

6. Investment Risks

In the normal course of business activities, the company is exposed to a variety of risks. The following is a discussion of material risk factors applicable to State Street.

Strategic Risks

- Subject to intense competition which may affect ability to maintain the profitability
- Subject to variability in AUC/A and AUM due to the magnificent size of clients
- New products and services like Alpha would impose costs and involve dependencies on third parties
- The Covid-19 pandemic continues to create uncertainties for the business
- Exposed to risks caused by acquisitions, strategic alliances, and joint ventures
- Integration of CRD may be more difficult, costly, or time consuming than expected

Financial Market Risks

- Potentially adversely affected by geopolitical and economic conditions
- Subject to interest rate, credit spreads, and credit performance risks
- Potential financial loss due to credit exposures to financial institutions
- Fee revenue represents a significant majority of the consolidated revenue and is subject to decline and reduction in investment activities of clients
- Potential failure in effectively managing capital and liquidity
- Any downgrade in credit ratings, or an actual or projected reduction in financial strength could negatively affect the borrowing costs and liquidity position

Compliance and Regulatory Risks

- May be negatively affected by implementation of regulatory capital and liquidity
- Extensive and changing government regulations in the US and non-US jurisdictions
- Subject to enhanced oversight as a result of certain agreements entered into a connection with the resolution of prior regulatory or governmental matters
- May be negatively affected by government enforcement and litigation
- Changes in tax laws, rules or regulations, challenges to tax positions

Operational Risks

- Cost shifting to non-US jurisdictions and outsourcing
- Attack on our information systems and facilities
- May be negatively affected by adverse publicity or other reputational harm
- Subject to lose reputation or business prospect with clients incurring substantial loss of capital under the company sponsorship or management
- Terrorist attacks, natural disasters, and the emergence of a new pandemic

Appendix

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF INCOME

(Dollars in millions, except per share amounts)	Years Ended December 31,		
	2020	2019	2018
Fee revenue:			
Servicing fees	\$ 5,167	\$ 5,074	\$ 5,421
Management fees	1,880	1,824	1,899
Foreign exchange trading services	1,363	1,058	1,153
Securities finance	356	471	543
Software and processing fees	733	720	438
Total fee revenue	9,499	9,147	9,454
Net interest income:			
Interest income	2,575	3,941	3,662
Interest expense	375	1,375	991
Net interest income	2,200	2,566	2,671
Other income:			
Gains (losses) from sales of available-for-sale securities, net	4	(1)	9
Other income	—	44	(3)
Total other income	4	43	6
Total revenue	11,703	11,756	12,131
Provision for credit losses	88	10	15
Expenses:			
Compensation and employee benefits	4,450	4,541	4,780
Information systems and communications	1,550	1,465	1,324
Transaction processing services	978	983	985
Occupancy	489	470	500
Acquisition and restructuring costs	50	77	24
Amortization of other intangible assets	234	236	226
Other	965	1,262	1,176
Total expenses	8,716	9,034	9,015
Income before income tax expense	2,899	2,712	3,101
Income tax expense	479	470	508
Net income	\$ 2,420	\$ 2,242	\$ 2,593
Net income available to common shareholders	\$ 2,257	\$ 2,009	\$ 2,404
Earnings per common share:			
Basic	\$ 6.40	\$ 5.43	\$ 6.46
Diluted	6.32	5.38	6.39
Average common shares outstanding (in thousands):			
Basic	352,865	369,911	371,983
Diluted	357,106	373,666	376,476
Cash dividends declared per common share	\$ 2.08	\$ 1.98	\$ 1.78

**STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME**

(In millions)	Years Ended December 31,		
	2020	2019	2018
Net income	\$ 2,420	\$ 2,242	\$ 2,593
Other comprehensive income (loss), net of related taxes:			
Foreign currency translation, net of related taxes of (\$40), \$2 and (\$8), respectively	488	(9)	(67)
Net unrealized gains (losses) on available-for-sale securities, net of reclassification adjustment and net of related taxes of \$165, \$212 and (\$134), respectively	436	545	(302)
Net unrealized gains (losses) on available-for-sale securities designated in fair value hedges, net of related taxes of \$1, \$6 and \$9, respectively	3	18	24
Non-credit impairment on held-to-maturity securities previously identified under ASC 320, net of related taxes of zero, \$1 and \$2, respectively ⁽¹⁾	—	1	4
Net unrealized gains (losses) on cash flow hedges, net of related taxes of \$46, \$9 and (\$17), respectively	127	25	(33)
Net unrealized gains (losses) on retirement plans, net of related taxes of \$3, (\$8) and \$8, respectively	9	(16)	27
Other comprehensive income (loss)	1,063	564	(347)
Total comprehensive income	\$ 3,483	\$ 2,806	\$ 2,246

⁽¹⁾ We adopted ASU 2016-13, Financial Instruments - Credit Losses (ASC 326) : Measurement of Credit Losses on Financial Instruments, on January 1, 2020. Non-credit impairment on HTM securities was previously recognized under ASC 320. Please refer to Note 1 for additional information.

**STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CONDITION**

	December 31, 2020	December 31, 2019
(Dollars in millions, except per share amounts)		
Assets:		
Cash and due from banks	\$ 3,467	\$ 3,302
Interest-bearing deposits with banks	116,960	68,965
Securities purchased under resale agreements	3,106	1,487
Trading account assets	815	914
Investment securities available-for-sale	59,048	53,815
Investment securities held-to-maturity purchased under money market liquidity facility (less allowance for credit losses of \$1) (fair value of \$3,304)	3,299	—
Investment securities held-to-maturity (less allowance for credit losses of \$2) (fair value of \$50,003 and \$42,157)	48,929	41,782
Loans (less allowance for credit losses on loans of \$122 and \$74)	27,803	26,235
Premises and equipment (net of accumulated depreciation of \$4,825 and \$4,367)	2,154	2,282
Accrued interest and fees receivable	3,105	3,231
Goodwill	7,683	7,556
Other intangible assets	1,827	2,030
Other assets	36,510	34,011
Total assets	\$ 314,706	\$ 245,610
Liabilities:		
Deposits:		
Non-interest-bearing	\$ 49,439	\$ 34,031
Interest-bearing - U.S.	102,331	77,504
Interest-bearing - non-U.S.	88,028	70,337
Total deposits	239,798	181,872
Securities sold under repurchase agreements	3,413	1,102
Short term borrowings under money market liquidity facility	3,302	—
Other short-term borrowings	685	839
Accrued expenses and other liabilities	27,503	24,857
Long-term debt	13,805	12,509
Total liabilities	288,506	221,179
Commitments, guarantees and contingencies (Notes 12 and 13)		
Shareholders' equity:		
Preferred stock, no par, 3,500,000 shares authorized:		
Series C, 5,000 shares issued and outstanding	—	491
Series D, 7,500 shares issued and outstanding	742	742
Series F, 7,500 shares issued and outstanding	742	742
Series G, 5,000 shares issued and outstanding	493	493
Series H, 5,000 shares issued and outstanding	494	494
Common stock, \$1 par, 750,000,000 shares authorized:		
503,879,642 and 503,879,642 shares issued, and 353,156,279 and 357,389,416 shares outstanding	504	504
Surplus	10,205	10,132
Retained earnings	23,442	21,918
Accumulated other comprehensive income (loss)	187	(876)
Treasury stock, at cost (150,723,363 and 146,490,226 shares)	(10,609)	(10,209)
Total shareholders' equity	26,200	24,431
Total liabilities and shareholders' equity	\$ 314,706	\$ 245,610

STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

(Dollars in millions, except per share amounts, shares in thousands)	Common Stock				Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock		Total
	Preferred Stock	Shares	Amount	Surplus			Shares	Amount	
Balance at December 31, 2017	\$ 3,196	503,880	\$ 504	\$ 9,799	\$ 18,809	\$ (1,009)	136,230	\$ (9,029)	\$ 22,270
Net income					2,593				2,593
Other comprehensive income (loss)						(347)			(347)
Preferred stock issued	494								494
Common stock issued				586			(13,244)	564	1,150
Cash dividends declared:									
Common stock - \$1.78 per share					(665)				(665)
Preferred stock					(188)				(188)
Common stock acquired							3,324	(350)	(350)
Common stock awards exercised				44			(2,389)	101	145
Other				(368)	4		12	(1)	(365)
Balance at December 31, 2018	\$ 3,690	503,880	\$ 504	\$ 10,061	\$ 20,553	\$ (1,356)	123,933	\$ (8,715)	\$ 24,737
Reclassification of certain tax effects ⁽¹⁾					84	(84)			—
Net income					2,242				2,242
Other comprehensive income (loss)						564			564
Preferred stock redeemed	(728)				(22)				(750)
Cash dividends declared:									
Common stock - \$1.98 per share					(728)				(728)
Preferred stock					(210)				(210)
Common stock acquired							24,884	(1,600)	(1,600)
Common stock awards exercised				95			(2,295)	103	198
Other				(24)	(1)		(32)	3	(22)
Balance at December 31, 2019	\$ 2,962	503,880	\$ 504	\$ 10,132	\$ 21,918	\$ (876)	146,490	\$ (10,209)	\$ 24,431
Net income					2,420				2,420
Other comprehensive income (loss)						1,063			1,063
Preferred stock redeemed	(491)				(9)				(500)
Cash dividends declared:									
Common stock - \$2.08 per share					(734)				(734)
Preferred stock					(152)				(152)
Common stock acquired							6,464	(500)	(500)
Common stock awards exercised				72			(2,233)	100	172
Other				1	(1)		2	—	—
Balance at December 31, 2020	\$ 2,471	503,880	\$ 504	\$ 10,205	\$ 23,442	\$ 187	150,723	\$ (10,609)	\$ 26,200

**STATE STREET CORPORATION
CONSOLIDATED STATEMENT OF CASH FLOWS**

(In millions)	Years Ended December 31,		
	2020	2019	2018
Operating Activities:			
Net income	\$ 2,420	\$ 2,242	\$ 2,593
Adjustments to reconcile net income to net cash provided by operating activities:			
Deferred income tax (benefit)	(194)	(130)	(136)
Amortization of other intangible assets	234	236	226
Other non-cash adjustments for depreciation, amortization and accretion, net	1,276	1,101	977
Losses (gains) related to investment securities, net	(4)	1	(6)
Provision for credit losses	88	10	15
Change in trading account assets, net	99	(54)	233
Change in accrued interest and fees receivable, net	127	(28)	26
Change in collateral deposits, net	(2,951)	287	7,326
Change in unrealized losses (gains) on foreign exchange derivatives, net	3,652	2,034	(1,836)
Change in other assets, net	(1,406)	(713)	(22)
Change in accrued expenses and other liabilities, net	(170)	294	394
Other, net	361	410	385
Net cash provided by operating activities	3,532	5,690	10,175
Investing Activities:			
Net (increase) decrease in interest-bearing deposits with banks	(47,995)	4,075	(5,813)
Net (increase) decrease in securities purchased under resale agreements	(1,619)	3,192	(1,438)
Proceeds from sales of available-for-sale securities	2,645	5,642	26,082
Proceeds from maturities of available-for-sale securities	23,644	20,407	14,645
Purchases of available-for-sale securities	(37,873)	(38,164)	(31,814)
Purchases of held-to-maturity securities under the MMLF program	(29,242)	—	—
Proceeds from maturities of held-to-maturity securities under the MMLF program	25,984	—	—
Proceeds from maturities of held-to-maturity securities	15,179	10,390	6,296
Purchases of held-to-maturity securities	(13,981)	(6,938)	(6,539)
Sale of loans	324	131	278
Net (increase) in loans and leases	(1,939)	(650)	(2,739)
Business acquisitions, net of cash acquired	—	(54)	(2,595)
Purchases of equity investments and other long-term assets	(1,436)	(647)	(326)
Purchases of premises and equipment, net	(560)	(730)	(609)
Other, net	1,335	720	76
Net cash (used in) by investing activities	(65,534)	(2,626)	(4,496)
Financing Activities:			
Net (decrease) increase in time deposits	(33,466)	(11,255)	6,673
Net increase (decrease) in all other deposits	91,391	12,767	(11,209)
Net increase (decrease) in securities sold under repurchase agreements	2,311	20	(1,760)
Net (decrease) increase in other short-term borrowings	(154)	(2,253)	1,948
Net increase in short-term borrowings under money market liquidity facility	3,302	—	—
Proceeds from issuance of long-term debt, net of issuance costs	2,489	1,495	995
Payments for long-term debt and obligations under finance leases	(1,724)	(402)	(1,461)
Payments for redemption of preferred stock	(500)	(750)	—
Proceeds from issuance of preferred stock, net of issuance costs	—	—	495
Proceeds from issuance of common stock, net of issuance costs	—	—	1,150
Repurchases of common stock	(515)	(1,585)	(350)
Repurchases of common stock for employee tax withholding	(78)	(81)	(124)
Payments for cash dividends	(889)	(930)	(828)
Net cash provided by (used in) financing activities	62,167	(2,974)	(4,471)
Net increase	165	90	1,208
Cash and due from banks at beginning of period	3,302	3,212	2,004
Cash and due from banks at end of period	\$ 3,467	\$ 3,302	\$ 3,212
Supplemental disclosure:			
Interest paid	\$ 375	\$ 1,382	\$ 981
Income taxes paid, net	403	510	549

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