VIPA Initiation Coverage on U.S. Large Cap Banking Industry

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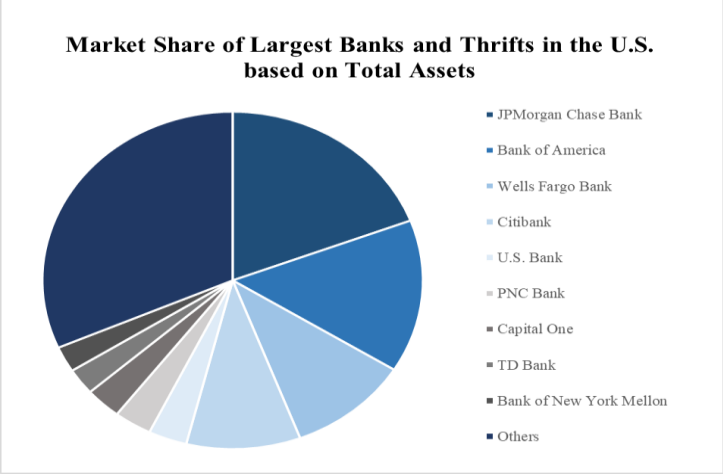
PM Summary: The diversified/ large cap banks in the U.S. covers sub-industries like Consumer Banking, Commercial Banking, Investment Banking, Wealth Management, Asset Management, and Corporate Banking with different characteristics, profitability, and business model. We also described the three major tailwinds and three major headwinds in this sector. We believed the rising interest rate will help with a high NIM, the scale effect of large and diversified banks could help the banks to maintain their competitive advantages, and the undervalued share price in late 2022. However, the deteriorating credit condition, weak economic condition, replacing of LIBOR and cancelation of overdraft fee places further uncertainty into the industry. The three companies we covered were JPMorgan Chase (JPM), Bank of America (BAC), and Citi Group (C). We gave an overweight to the three companies and from the time we covered the stocks in July 2022, JPM rise from $114 to $134, still lower than 5 year dividend discount model target of $146. BAC rise from 31.5 to 33.16, lower than our target of $35.3. C fell from $46.87 to $45.2, lower than our target of $89.3. (Note that the price target is a 5 year target using 7.3%, 8.5%, and 9.3% discount rate separately, in line with the value investing perspective that VIPA observed).

Industry Background

Background of the Universal Banking Industry

Banks provide a broad variety of comprehensive financial services, including those tailored for retail, commercial, and investment services, under a system known as universal banking. Universal banks could offer credit, loans, deposits, asset management, investment advisory services, payment processing, securities transactions, underwriting, and financial analysis, among other services. A universal banking system allows but does not require banks to offer a wide variety of services. Banks may nevertheless decide to concentrate on a certain set of financial services in a system that is universal. Universal banking provides all services through a single company by fusing the services of an investment bank and a commercial bank. Among the services available are deposit accounts, a variety of investment options, and maybe even insurance (Kagan, 2021a).

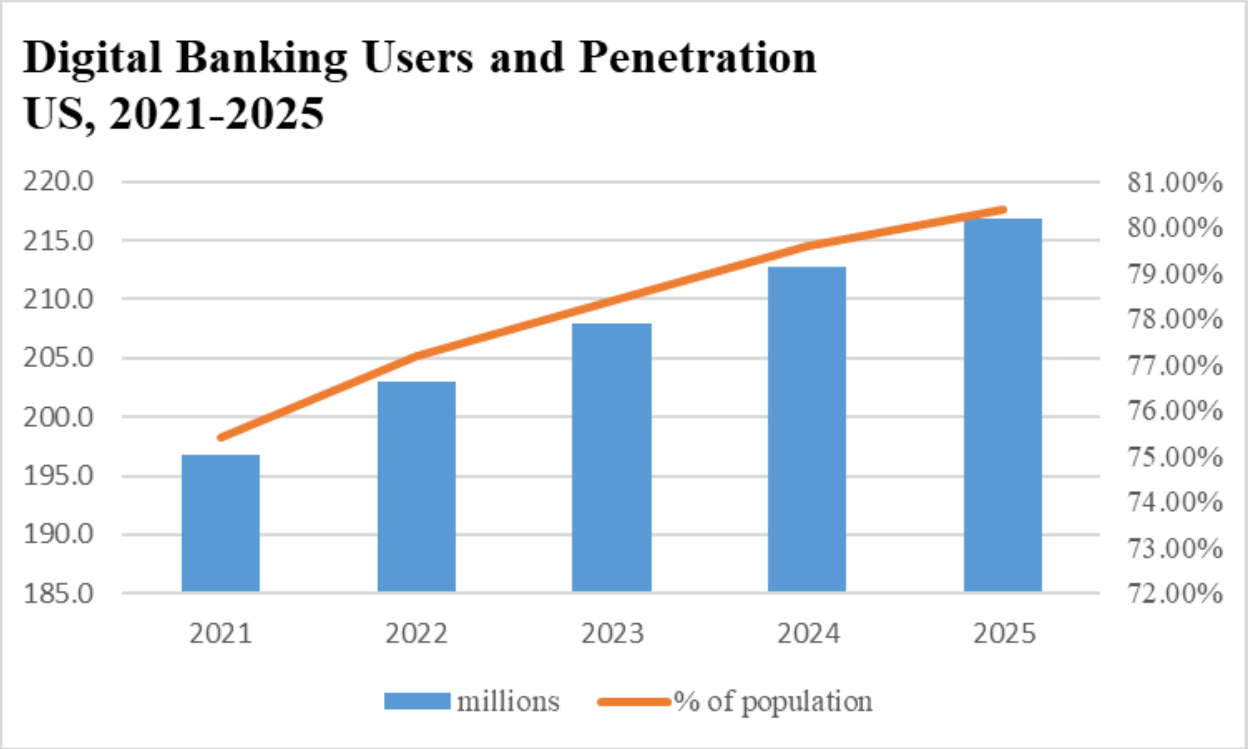


(Largest Banks and Thrifts in the U.S. based on Total Assets) Link: https://wallethub.com/edu/sa/bank-market-share-by-deposits/25587

Background of Diversified Banking Industry

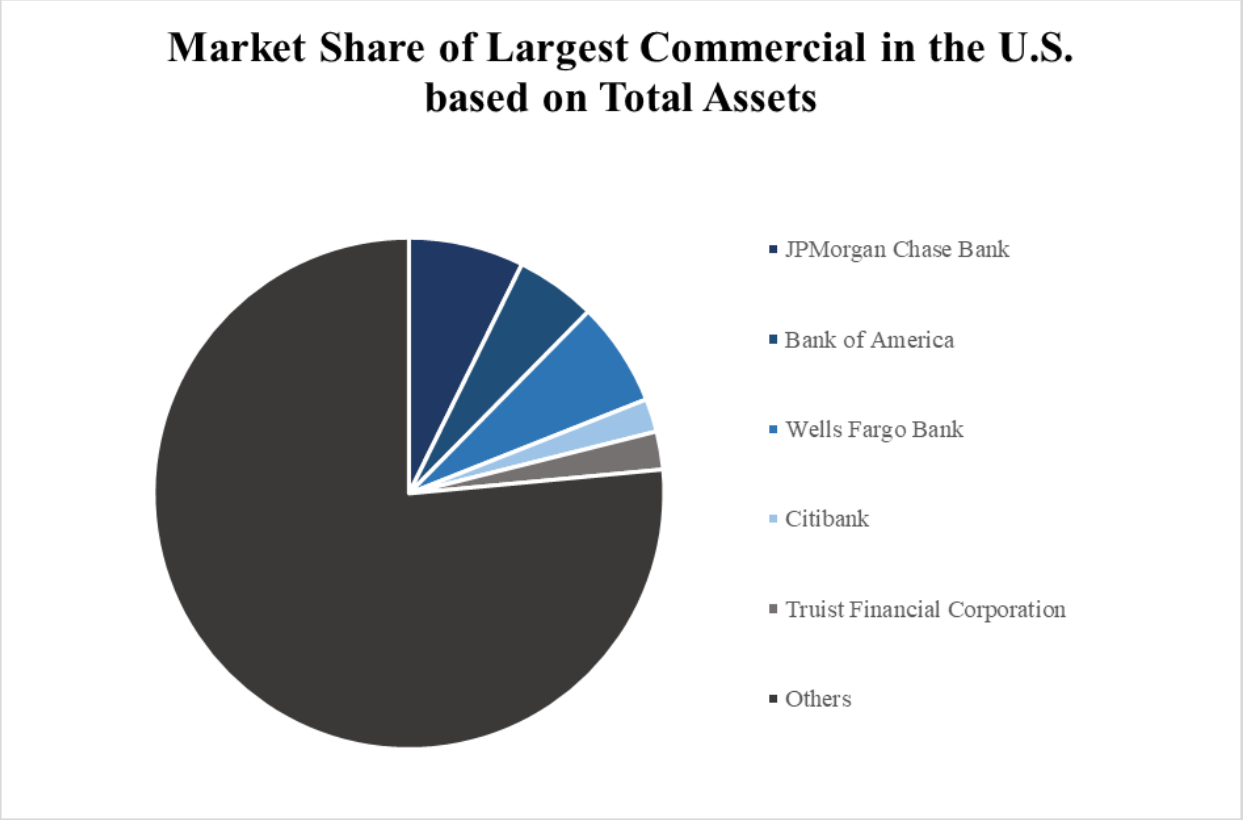
1. Consumer banking - Consumer banks are commonly referred to as retail banks or personal banks. They serve individual customers in contrast to corporations. Consumer banks give individual customers a secure way to manage their finances, get credit, and make deposits. Checking and savings accounts, mortgages, personal loans, credit cards, and certificates of deposit are among the services provided by retail banks. The primary and most important consumer banking service is checking and savings accounts. Most savings accounts offer

rates based on the fed funds rate. Since client deposits are how banks make money, they charge interest on these loans at a greater rate than they do on those deposits. Many banks now exclusively offer online services to consumers over the Internet and mobile applications, reducing the number of times a customer must visit a local branch to do business.



(Digital Banking Users and Penetration) Link: https://www.insiderintelligence.com/chart/250533/errors

2. Commercial banking - Commercial banks serve small to medium-sized enterprises. Their major products include Checking and savings accounts, loans and mortgages, fundamental investment options like Certificate of Deposits (CDs), as well as additional services like safe deposit boxes. According to Investopedia writer Julia Kagan, Service charges are how commercial banks generate revenue. These charges can include account fees, safe deposit box fees, and late fees, depending on the goods. In addition to interest costs, many loan packages also include other expenses. Banks also profit from interest earned on the loans they make to other customers. They use consumer deposits as collateral for loans. However, the bank pays less in interest on the money they borrow than they do on the money they lend (Kagan, 2021b).



(Commercial Banks market share) Link: https://my-ibisworld-com.proxy2.library.illinois.edu/download/us/en/industry/1288/1/0/pdf

3. Investment banking - Investment banks focus on the generation of capital for other businesses, governments, and other entities. It focuses on the selling of securities, underwrites new debt and equity securities for all kinds of firms, and facilitates mergers and acquisitions, reorganizations, and broker transactions for both institutions and individual investors. Investment banks also provide issuers advice on stock issuance and placement. Investment banks often support significant, complex financial transactions. If the investment banker's client is considering an acquisition, merger, or sale, they could offer guidance on how much a firm is worth and the best way to organize a deal. The investment bank stands to gain as it often marks up the price of its shares from what it originally paid. It also assumes a significant degree of risk in doing so. The investment bank might lose money on the purchase if it turns out that it overpriced the company; in this instance, it will frequently have to sell the shares for less than it originally paid for them. Experienced analysts utilize their skills to appropriately price the stock as best they can (Murry, 2022).

4. Wealth Management - Wealth Management is built to help clients to extend and secure their wealth. Financial professionals are responsible to provide suggestions that help clients to maximize growth but at the same time secure the original input within clients' acceptable range. Personalized plans would be made by the professionals to balance the acceptable range of clients and the expected output. Clients have many options to invest money into this kind of wealth management. Professionals would help clients to find the best financial planning individually with the client whether it is a long-term investment, basic money management, or investment strategy. Wealth Management gains value from advising customers. They charge the time of consulting, take a commission from their client, charge a client transaction fees, and gain by project profit. Wealth management AUM can charge from 0.25% to 1% depending on the asset's value (Treece, 2022).

5. Asset/investment management - Asset Management Companies invest pooled funds from clients into different investing instruments like stocks, bonds, real estate, and more. The firms also manage hedge funds and create mutual funds, index funds, or exchange-traded funds, according to James Chen from

Investopedia. They are generally ranked by their asset under management (AUM) --- the amount of money they manage from clients.

6. Corporate banking - Corporate banks are directly associated with companies and provide these companies with a bank-associated business that individuals cannot benefit from such as credit, checking accounts, etc. Corporate banking targets a wide range of companies that vary in size. But the common characteristic of these investments is that all assets are the company's property that cannot be owned under one person's name. Therefore, credit rating became one of the standards that affect a company's value and share price. Corporate banking profits from providing loans to a variety of companies and gaining interest. With the larger amount a company applies, Corporate banking will gain more profit. Moreover, with a great amount of need for loans, there are many different types of loans. Companies can take loans based on the credit a bank assigns them to be associated with. They will have to pay a small amount of interest every time they take money from the loan until they reach the limit the bank provided. Or companies could choose loans that get an amount of money based on their credit and affordable interest. The company will have to pay back after several years with interest. Companies can also use properties as a pledge for a set amount of years. If they cannot repay the bank on time with interest their pledge will be auctioned or sold off.

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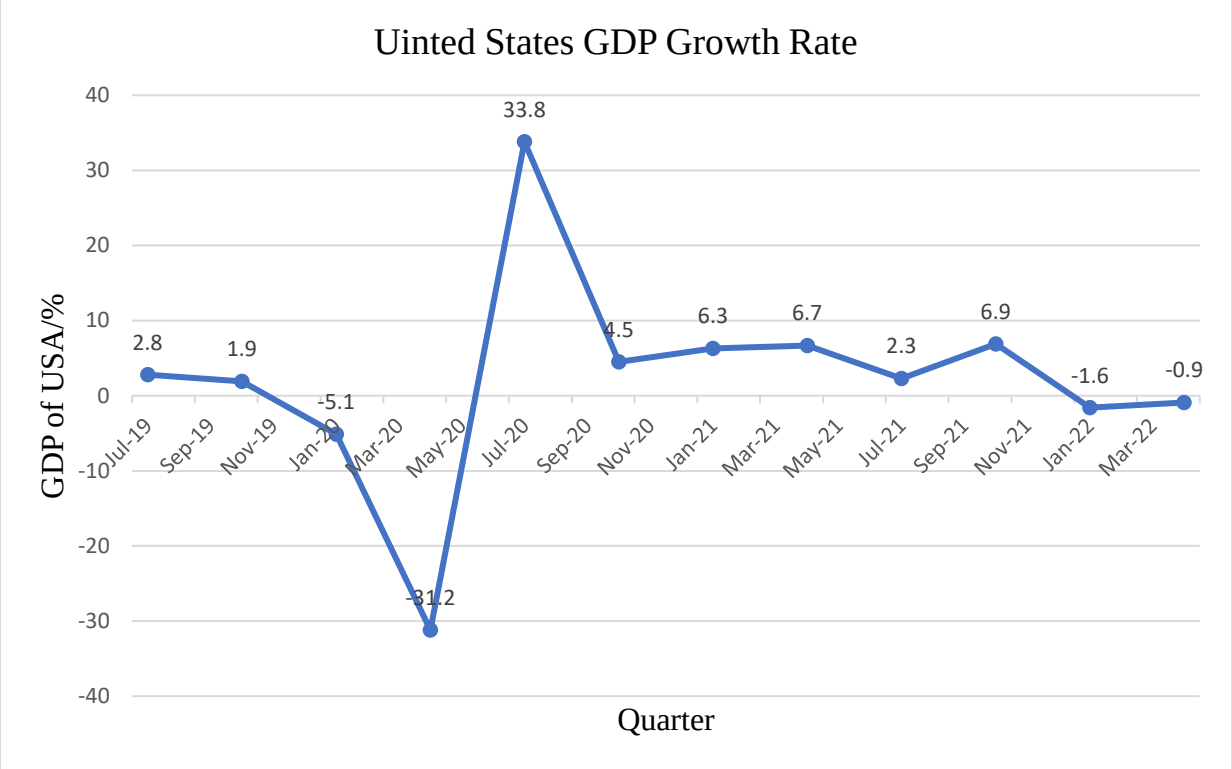
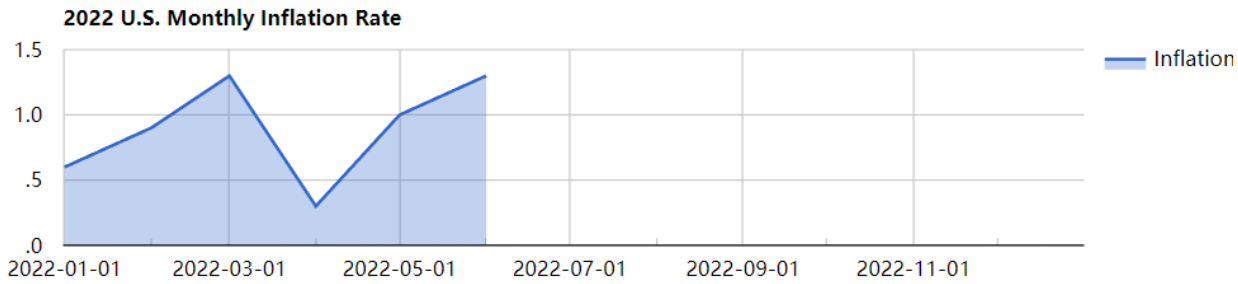
Three main Headwinds of large-capital banks

1. Increasing interest rate

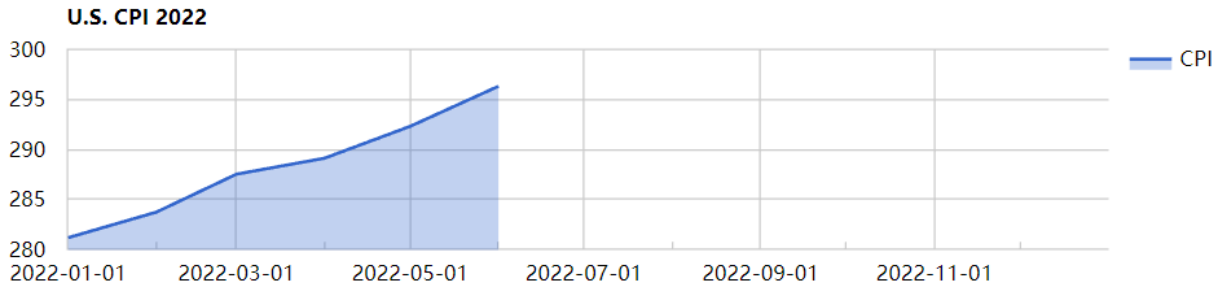
Banks benefit more from higher interest rates by gaining a higher net interest margin. On June 15, 2022, the Federal Reserve increased interest rates by 0.75 percentage points, the third largest increase of the year and the most since 1994. The action aims to slow down the fastest rate of inflation in more than 40 years. Based on the data collected from the Department of Labor in the USA, at the beginning of 2022, the inflation rate increased at a considerable speed. After setting the higher interest rate on June 15, the inflation rate had a trend to slow down. Rising interest rates frequently indicate a time of quicker economic expansion. However, given the current economic situation with 2 straight quarters of negative GDP growth, the NIM increase will be partially offset by a slowing economy Besides, the slowing fee income based on less investment banking activities and M&A deals will also offset the benefit of rising interest rates. The news observers anticipate that the federal funds rate will keep increasing throughout the year, while they expect the hawkish move to be slower after the economic data shows the first sign of cooling down. Some important indicators to watch are CPI and U.S. Jobs Opening data. From the data, the economy shows a slowing inflation rate growth while the economy keeps heating.



(United States GDP Growth Rate) Data Link: https://tradingeconomics.com/united-states/gdp-growth

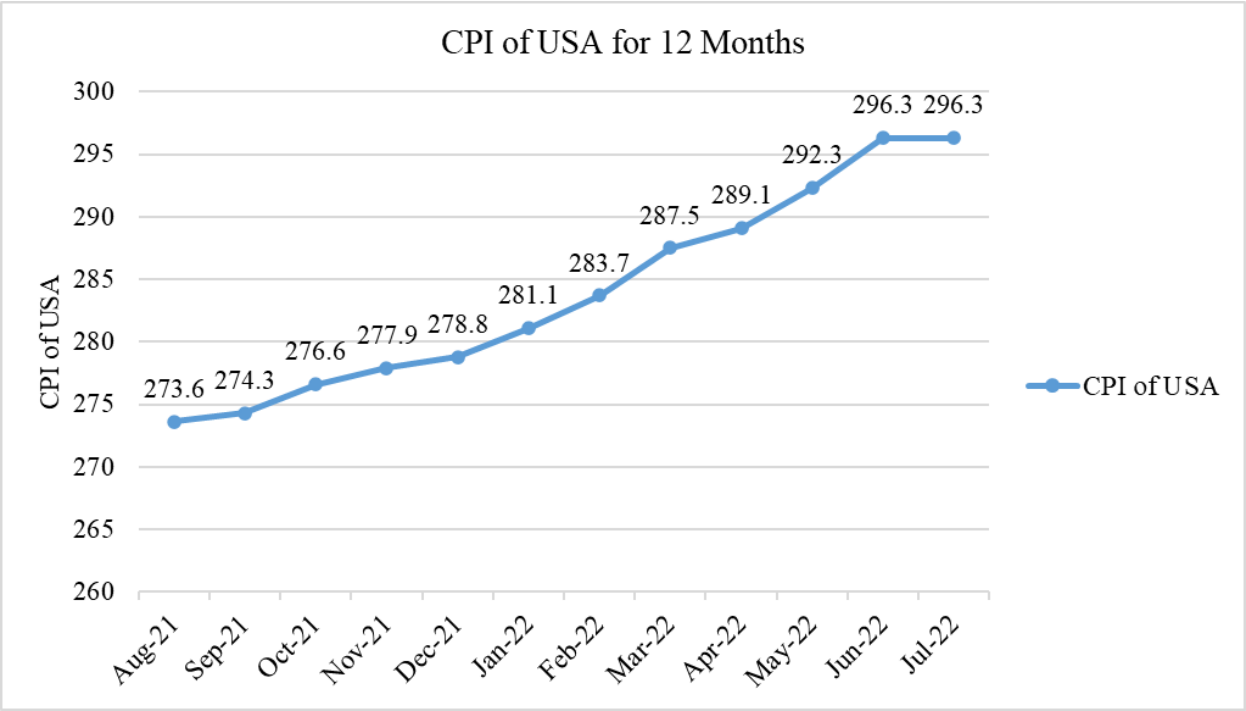


(United States Inflation Rate in 2022) Link: https://cpiinflationcalculator.com/2022-cpi-and-inflation-rate-for-the-united-states/



(United States CPI in 2022) Link: https://cpiinflationcalculator.com/2022-cpi-and-inflation-rate-for-the-united-states/

(American Interest Rate) Link: https://tradingeconomics.com/united-states/interest-rate

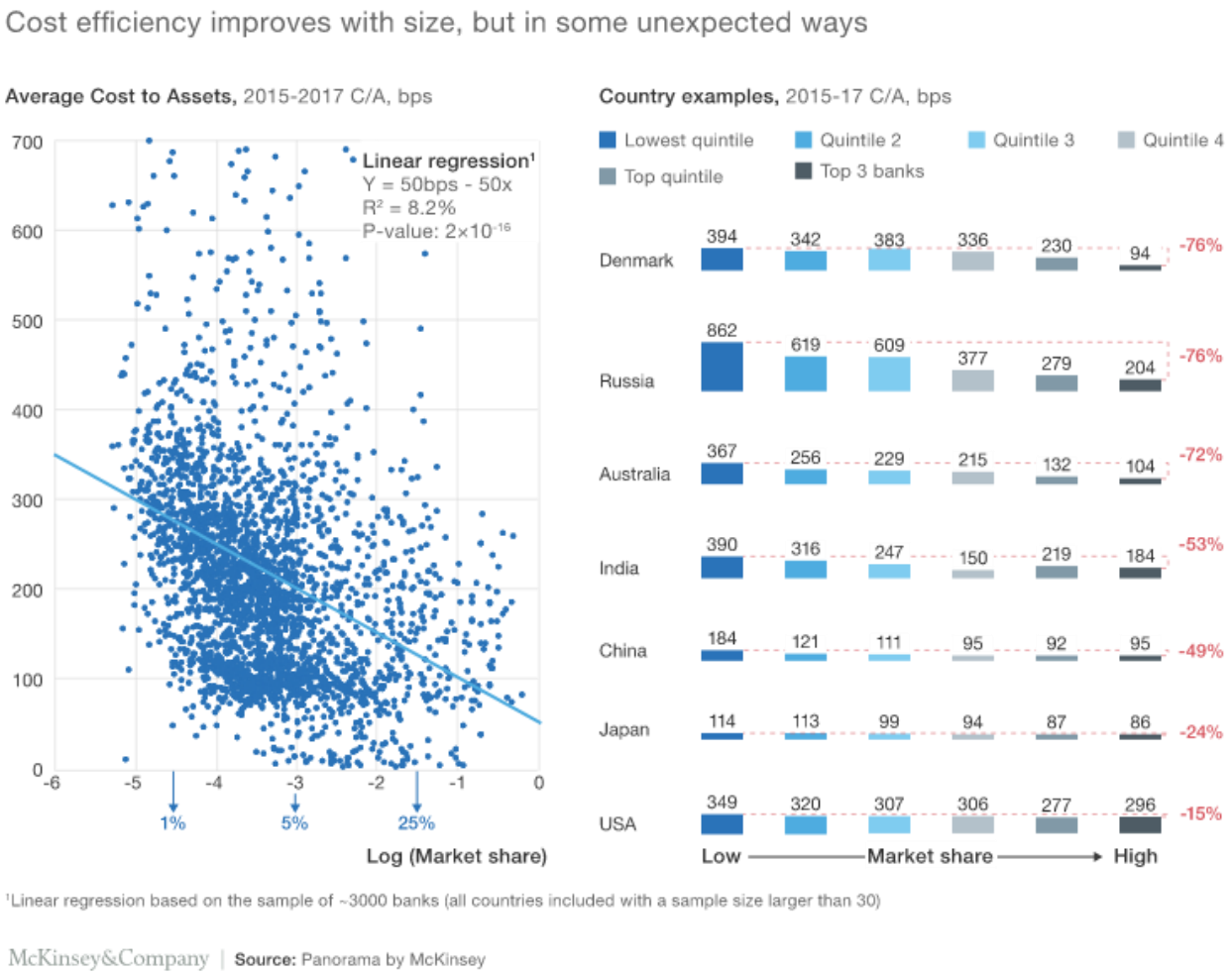


(CPI of USA for 12 months) Data Link: https://tradingeconomics.com/united-states/consumer-price-index-cpi

2. Scale effect of large-capital bank

The larger scale of banks can lead to more profits and more talented persons being employed. According to the research of David C. Wheelock and Paul W. Wilson, “We report estimates for both 2006 and 2015 to compare returns to scale some 7 years after the financial crisis and 5 years after enactment of the Dodd-Frank Act with returns to scale before the crisis. We find that a high percentage of banks faced increasing returns to scale in cost in both years, including most of the 10 largest bank holding companies. Also, while returns to scale in revenue and profit vary more across banks, we find evidence that the largest four banks operate under increasing returns to scale” (WHEELOCK, D. C., & WILSON, P. W., 2012). Also, in the research of McKinsey, they looked at the

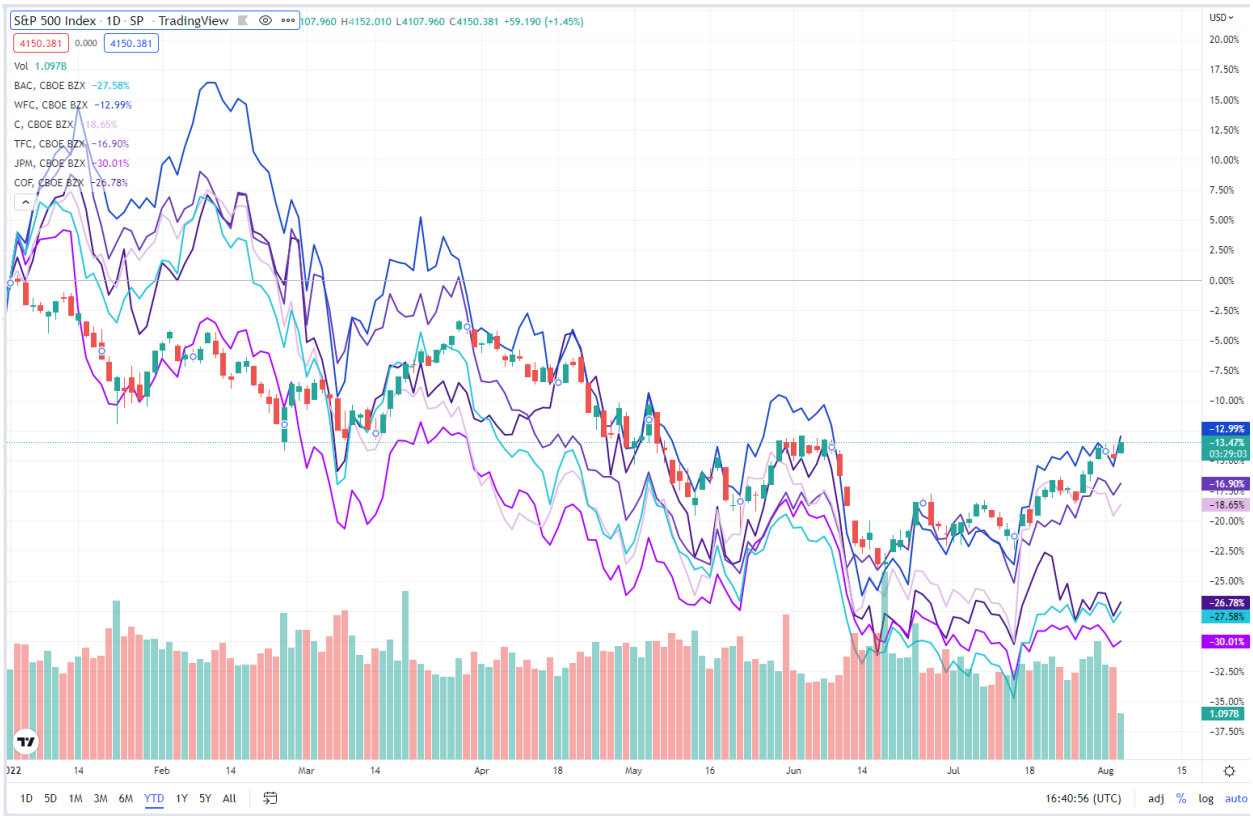
relationship between “cost efficiency” and “assets” at more than 3000 banks around the world and found that the increasing market share will reduce the average Cost-to-assets (McKinsey, 2019). According to the graph, the average cost-to-assets in bps is equal to 50bps minus 50 times the log of market share. It strongly suggests that the bigger scale banking company will not only bring more profit but also lead to the higher efficiency of operating.



(Cost efficiency improves with size) Link: https://www.mckinsey.com/industries/financial-services/how-we-help-clients/panorama/our-insights/chart-of-the-month-august-2018

3. Banking is undervalued in the market

The banking industry is being undervalued recently. Also, based on the outlook of the Deloitte Center for Financial Services, “A closer look at U.S. banks suggests a strong recovery thanks to meaningful reserve releases, positive operating leverage, improving loan growth in certain sectors, and potential net interest margin expansion”. But given the uncertainties of banks, especially the slowing investment banking fee, the major large-cap banks’ share price has dropped dramatically following the market declination. Based on TradingView data on 11:30 AM 3rd August 2022, the major banks which include all of the 5 companies we include in this equity research, mostly trail the performance of the S&P 500 which is the benchmark for U.S. large companies. While S&P 500 fell 13.47% this year, the worst performance large-cap bank this year, JPM, fell 30.01%. While JPM’s financial situation and operation strategies are still robust and will continue to improve in the midterm, we believe the trailing performance may create a possible margin of safety for these companies.



Link: https://www.tradingview.com/chart/E4rBfs36/?symbol=NYSE%3AJPM

By comparing the average P/BV value and P/BV value in 2022, it is clear that the expectation of investors on JPM, C and BAC is much lower than the average. But the company like TFC, COF can still stay around the average. If we check the data collected in the P/E table, the P/E value of JPM and C in 2022 is much lower than the average, while the P/E value of BAC, TFC and COF still stays at the same level. Therefore, based on the two tables below, we can conclude that JPM and C are undervalued, BAC is slightly undervalued, while TFC and COF are at fair value.

P/BV	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
JPM	0.93x	0.77x	1.10x	1.06x	1.20x	1.07x	1.44x	1.75x	1.61x	1.26x	0.93x	0.77x	1.16x
BAC	0.45x	0.37x	0.73x	0.72x	0.83x	0.64x	1.01x	1.32x	1.17x	0.91x	0.45x	0.37x	0.75x
C	0.66x	0.45x	0.86x	0.74x	0.88x	0.63x	0.92x	1.03x	0.90x	0.61x	0.66x	0.45x	0.73x
TFC	1.04x	1.27x	1.34x	1.29x	1.34x	1.17x	1.44x	1.52x	1.39x	0.83x	1.04x	1.27x	1.24x
COF	0.78x	0.88x	1.02x	1.11x	1.04x	0.80x	0.94x	1.06x	0.89x	0.55x	0.78x	0.88x	0.89x
WFC	1.21x	1.39x	1.61x	1.71x	1.80x	1.41x	1.52x	1.57x	1.25x	0.60x	1.21x	1.39x	1.39x
USB	1.76x	2.04x	2.06x	2.07x	2.08x	1.81x	2.14x	2.01x	1.98x	1.23x	1.76x	2.04x	1.91x
PNC	0.96x	0.98x	1.15x	1.14x	1.26x	1.02x	1.52x	1.58x	1.44x	1.01x	0.96x	0.98x	1.17x

P/E	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Average
JPM	7.87x	7.15x	10.82x	9.31x	12.74x	11.65x	15.79x	19.03x	15.11x	11.09x	7.87x	7.15x	11.30x
BAC	11.59x	15.25x	35.40x	12.37x	12.94x	11.12x	16.33x	18.60x	13.45x	11.29x	11.59x	15.25x	15.43x
C	13.89x	9.12x	33.71x	12.23x	20.19x	8.56x	14.73x	13.59x	11.54x	7.68x	13.89x	9.12x	14.02x
TFC	28.24x	22.67x	14.85x	13.58x	15.49x	14.11x	17.12x	17.62x	14.82x	11.30x	28.24x	22.67x	18.39x
COF	7.60x	8.98x	12.44x	10.95x	10.91x	9.42x	11.87x	12.97x	9.04x	6.61x	7.60x	8.98x	9.78x
WFC	12.41x	12.66x	13.74x	13.49x	14.93x	12.01x	13.66x	15.42x	13.23x	7.26x	12.41x	12.66x	12.82x
USB	18.10x	15.96x	14.36x	15.42x	16.54x	15.04x	18.13x	19.10x	16.83x	10.91x	18.10x	15.96x	16.21x

PNC	11.29x	12.07x	16.57x	12.72x	15.07x	12.83x	20.39x	20.85x	16.32x	11.86x	11.29x	12.07x	14.44x

Table 2 P/Normalized EPS as of 8.3 every year

Data Source (Capital IQ data and estimates)

Three main risks of large-capital banks

1. Risks of replacing LIBOR with SOFR

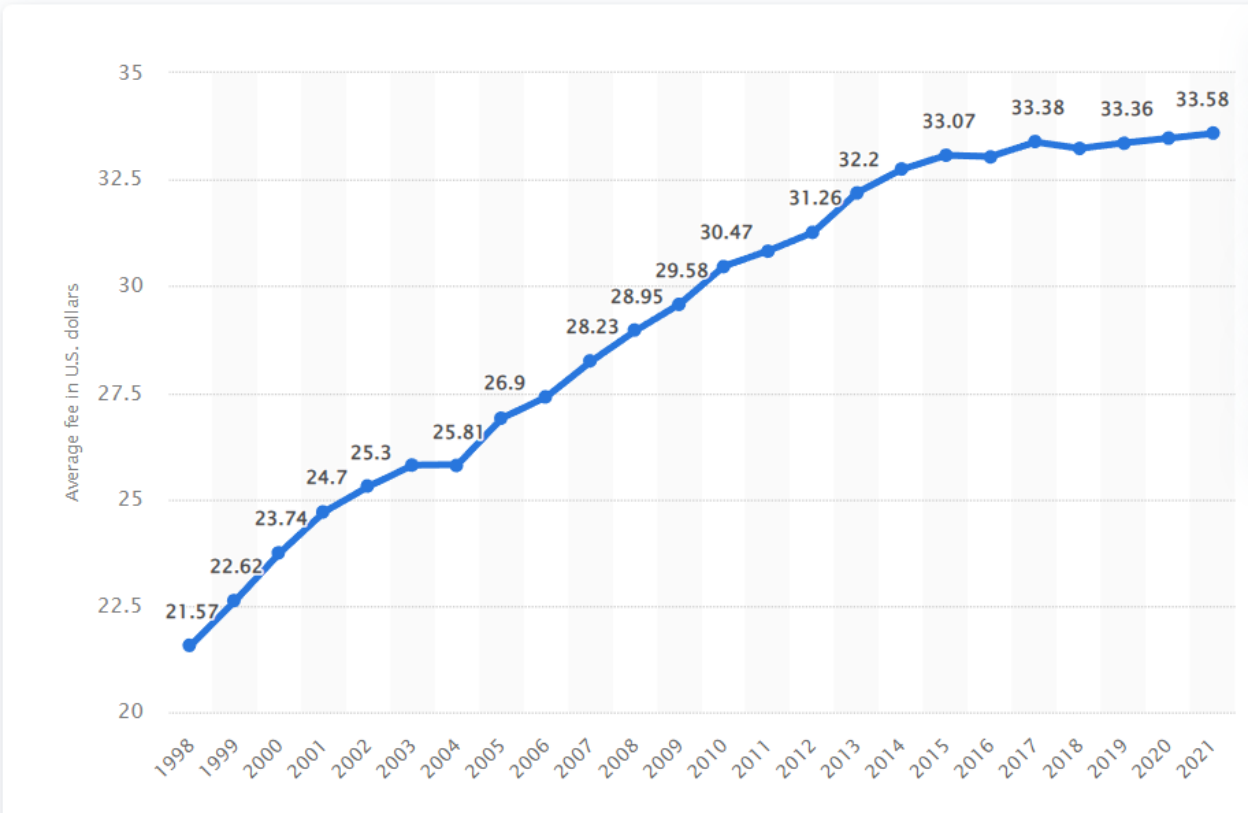
The transiting from LIBOR to SOFR has brought new challenges to large-cap banks. The challenges that came with the transition included volatility, lack of a term structure, and impractical substitutions (Burge, 3). The London interbank offered rate (LIBOR) which has been in use for decades as the international reference lending rate is being replaced by the more accurate and practical Secured overnight financing rate (SOFR). By the end of June 2023, all issuers are required to stop the use of LIBOR. SOFR, which has been termed as a forward-looking term structure benchmark, has been applauded by the Alternative References Rates Committee (AARR). SOFR is based on daily transactions between US banks. In other words, SOFR is based on what banks charge each other on daily loans they take from each other. The main risk associated with the transition to the new reference rate is volatility (Burge, 4). Unlike LIBOR, which was based on bankers' forecasts, SOFR is based on real daily trade making it less stable. This poses a risk to common trades or contracts. Market activities fluctuate and this will hurt common trades and contracts. Notably, reports are used to adjust the borrower's liquidity, which directly affects SOFR. It is also noted that comparisons of SOFR USD LIBOR rate differences in the applicable rates, will only increase when comparing SOFR with more long-term USD LIBOR rates such as 6- or 12-month rates accounting for differences in transfer rerates between the two. With SOFR transactions amounting to $1 trillion daily, rates are bound to fluctuate as demand and supply levels change (Burge, 4). This can easily lead to huge SOFR rate changes.

Graph showing the volatility of SOFR:

https://www.summitllc.us/blog/libor-transition-part-2-challenges-with-sofr

2. Cancelation of Overdraft Fee

In 2022, most large-cap banks canceled overdraft fees which will decrease their revenue in the short term. Overdraft fees are usually charged on a person's account when such a person spends more money than he or she has in the account. This is not considered by most customers as a fee, but it is usually considered as a punishment and banks are slowly opting to remove the fee and allow customers to access overdraft for free. Previous research indicates a small number of people (9%) of the whole number of overdrafts are heavy overdrafts accounting for 80% of the fees. The cancellation of overdraft fees will indeed have a significant effect on the income of various banks. The average income that banks make from overdraft fees constitutes 1% of the total revenue any American bank makes.



Average bank overdraft fee in the United States from 1998 to 2021(in U.S. dollars): https://www.statista.com/statistics/325565/average-bank-overdraft-fee-usa/

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JPMorgan Chase Co. Ltd

Part1: Overlook

We expect JPM's technology-focusing strategy makes it stand out in the mid-term given the more competitive U.S. debt and equity market today than 10 years ago. We expect JPM's fortress balance sheet gives the bank strong competitiveness to generate stabilized returns in the next two years with strong recession expectations in the market. We expect JPM to keep the market-leading position in most of its business segments. Based on our valuation model, we give a target price of $102.3 per share based on the P/E TTM climbing back to 10x and the 2022 Earnings Estimate of $10.23. Therefore, we give a selling position on JPM stock. But we believe JPM will have a good return in the mid-term, indicated by the 5-year valuation model's discounted present value of $164.2. This should give the long-term investors a 30.36% margin of safety concerning the current price of $114.3 on 8/8/2022.

We expect JPM's technology-focusing strategy to make JPM stay in a market leading position in increasingly competitive market conditions. The competition in the banking industry has been heated. The size of a nonbank competitors group increases by 11.8 times while the size of G-SIB banks grew by 1.37 times in 10 years. Fin-tech companies and shadow banks are emerging and are subject to fewer regulatory requirements. While other banks do not have enough capital to support the investment level as JPM, we believe the company will be well placed and will take more market share in the mid-term.

We expect JPM's fortress balance sheet gives the bank strong competitiveness to generate stabilized returns in the next two years with strong recession expectations in the market. With high inflation, pessimism in the market, higher interest rate, and supply chain disruptions, we believe there is a high possibility (market consensus of over 50%) of an upcoming recession. JPM's fortress balance sheet and its extraordinary ability in risk control would make it generate a steady return and mid-term normalization of profits.

We expect JPM to keep the market-leading position in most of its business segments including CCB (Consumer and Community Banking), CIB (commercial and investment banking), CB(Corporate Banking), and AWM(Asset and Wealth Management). We believe in the continuance of the market-leading position based on its technology investment strategy, its outstanding management team, and its fortress balance sheet. We expect this position to give a premium on JPM's valuation than its peers.

Part 2: Financial Overview

In the mid-term, we target a 17% ROTCE, with the market share gain and efficiency improvement from technology investments. Our expectation includes a $77+ bn expense outlook in 2022, an over $56 billion net interest income (JPM target on investor day 2022), a $79.8 bn expense in 2023 (market consensus of $79.5 bn), and a long-term normalization of expense to 56% overhead ratio, a short-term normalization of NCOs to 0.5% and a mid-term normalization to more than 0.6%, a CET1 ratio of lower than 12% in 2022, CET1 ratio of 12.5% in 2023. The reasons will be analyzed as follows.

ROTCE, JPM targeted a 17% ROTCE in the 2022 investor day while it cast doubt on this target at the beginning of this year. Its CCB ROE target is 25%+, its CIB target is 16%, its CB target is 18%, and its AWM target is 25% or higher. Since the return of investment in technology and products will not be very soon and the pessimistic outlook of the capital market in the short term, we doubt that JPM will achieve this goal this year (although the goal may still be achievable in the mid-term). We reiterate the ROTCE target to 16% this year.

Expenses, we expect 2023 expenses to pressure by inflation, competition, and short-term investments in technology and talent acquisition. Still, the improvement of efficiency based on improved technology should reduce expenses. JPM's expectation on 2022 expense has remained at $77 bn unchanged. Still, JPM expects a slightly higher expense level than the market consensus, which our model predicts a level of $79.8 bn in 2023. Since the overhead ratio of the past 5 years is an average of 56%, a normalization of the overhead ratio in the mid-term should bring a better expense outlook in the mid-term.

Net Interest Income, the Fed made will make several interest rate hikes in 2022, benefiting net interest income. Plus, with high-single-digit loan growth, a strong outlook of wholesale lending, and continuing securities deployment, JPM's guide to 2022 net interest income is at $56 bn, an uplift of last guidance's $53 bn. It expects 4Q 2022's annualized net interest income to reach $66 bn and 2023's net interest income to be higher than $66 bn (assuming the Fed Funds target upper bound reaches 3.0% at the end of 2022.

We expect the normalization of NCOs in the long term based on the company's note. The company noted the NCOs of 0.30% achieved in 2021 is less than half of the normal level of NCOs, implying more than 0.6% of NCOs in the longer term. But we believe the normalization will take years to progress. In a conservative method, we expect NCOs to reach a 0.5% level in 2022 and a 0.6% level in 2023.

CET1, the company will face more strict regulations soon. The company's CET1 ratio is at 11.2% in 1Q 2022. Its mid-term target of CET1 in 1Q 2024 is at 12.5%-13.0%, with its G-SIB buffer increasing from 3.5% to 4.0% in 2023 and increasing from 4.0% to 4.5% in 1Q 2024. We expect a CET1 ratio of 12.0% at the end of 2022 and 12.5%+ in 2023. We believe with the higher capital requirement and recent cash acquisitions, share repurchase expectations should be lower in the future, and we expect a pace of 1.5 bn+ of repurchasing in 2022.

Part 3: Past Financial Performance Analysis in the long-term:

Based on Value Investment Theory in which one of the typical analysis scales is ten years, we have studied JPM's income statement over the past 10 years between 2011-2021. The target is to determine the sources of the stock return. In 10 years, the company's EPS has grown by 13% annually for 10 years, higher than the net income growth rate of 10% in the past 10 years, due to the share repurchases the company has done in this period. Contributing to the higher net income are a lower tax rate and a higher EBIT. The effective tax rate has decreased from 29.1% to 18.9%. JPM's EBIT increased on average by 8%. For decent EBIT growth, the main reasons are the decrease of total interest expense (-9% averagely) due to a lower interest rate environment and a faster increasing non-interest income (3% averagely) than increasing non-interest expense (2% averagely) near the same NII. Increasing mortgage banking and service charges on deposits have contributed to the fast-increasing non-interest income. The final reason for the higher EBIT is a lower provision of loan losses of $-9.26 bn in 2021 compared to $7.57 bn of loan losses in 2011.

In the past 10 years, JPM has returned a 12.12% return annually based on the appreciation of stock from $44.41 per share on August 1st, 2011, to $115.76 per share on August 5th, 2022. We use a 2.77% dividend yield hypothetically given the data from Seeking Alpha of the 4-year average dividend yield of 2.77%. If a shareholder uses the dividend every year to buy JPM stock, the annual return will be 12.12% per share. According to ycharts.com, the S&P 500 long-term average dividend yield is 1.85%. Its price rose from $1257 per share on August 1st, 2011, to $4145 per share on August 5th, 2022. If a shareholder uses the dividend every year to buy S&P 500, the annual return will be 13.5% per share during the 11 years.

Therefore, we can see that JPM has underperformed the S&P 500 in terms of return in the past. However, the underperformance is partially due to JPM's trailing performance in 2022. JPM has fallen 28.41% since the beginning of 2022 while SPX has fallen 13.58% since the beginning of 2022. This may place JPM in an underestimated position. Therefore, we would like to conduct a DDM valuation to see if JPM is having a margin of safety.

JPM Past Earnings Analysis

For the Fiscal Period Ending	12 months Dec-31-2011	Reclassified 12 months Dec-31-2012	Reclassified 12 months Dec-31-2020	12 months Dec-31-2021	Growth
Currency	*USD*	*USD*	*USD*	*USD*	*%*
Interest Income On Loans	61,293.0	55,953.0	64,523.0	57,864.0	-1%
Total Interest Income	**61,293.0**	**55,953.0**	**64,523.0**	**57,864.0**	-1%
Interest On Deposits	13,604.0	11,043.0	9,960.0	5,553.0	-9%
Total Interest Expense	**13,604.0**	**11,043.0**	**9,960.0**	**5,553.0**	-9%
Net Interest Income	**47,689.0**	**44,910.0**	**54,563.0**	**52,311.0**	1%
Service Charges On Deposits	6,458.0	-	-	-	
Trust Income	14,094.0	13,868.0	18,177.0	21,029.0	4%
Total Mortgage Banking Activities	2,721.0	8,687.0	3,091.0	2,170.0	-2%
Income From Trading Activities	10,005.0	5,536.0	18,021.0	16,304.0	5%
Gain (Loss) On Sale Of Assets (Rev)	-	-	6.0	(7.0)	
Gain on Sale of Invest. & Secur (Rev)	1,593.0	2,110.0	668.0	34.0	-32%
Total Other Non-Interest Income	14,674.0	19,932.0	25,425.0	29,801.0	7%
Non-Oper. Income (Exp.)	-	-	-	-	
Total Non Interest Income	**49,545.0**	**50,133.0**	**65,388.0**	**69,331.0**	3%
Revenue Before Loan Losses	**97,234.0**	**95,043.0**	**119,951.0**	**121,642.0**	2%
Provision For Loan Losses	7,574.0	3,385.0	17,480.0	(9,256.0)	#NUM!
Total Revenue	**89,660.0**	**91,658.0**	**102,471.0**	**130,898.0**	4%
Salaries and Other Empl. Benefits	26,362.0	28,040.0	32,537.0	35,638.0	3%
Amort. of Goodwill & Intang. Assets	848.0	-	-	-	
Selling General & Admin Exp., Total	22,142.0	21,700.0	28,178.0	30,236.0	3%
Total Other Non-Interest Expense	8,659.0	9,989.0	4,826.0	5,036.0	-5%
Total Non-Interest Expense	**58,011.0**	**59,729.0**	**65,541.0**	**70,910.0**	2%
					#DIV/0!
EBT Excl. Unusual Items	**31,649.0**	**31,929.0**	**36,930.0**	**59,988.0**	7%
Impairment of Goodwill	-	-	-	-	
Total Legal Settlements	(4,900.0)	(5,000.0)	(1,115.0)	(426.0)	-22%
Other Unusual Items	-	1,988.0	-	-	
EBT Incl. Unusual Items	**26,749.0**	**28,917.0**	**35,815.0**	**59,562.0**	8%
Income Tax Expense	7,773.0	7,633.0	6,684.0	11,228.0	4%
Earnings from Cont. Ops.	**18,976.0**	**21,284.0**	**29,131.0**	**48,334.0**	10%
Earnings of Discontinued Ops.	-	-	-	-	
Extraord. Item & Account. Change	-	-	-	-	
Net Income to Company	**18,976.0**	**21,284.0**	**29,131.0**	**48,334.0**	10%
Minority Int. in Earnings	-	-	-	-	
Net Income	**18,976.0**	**21,284.0**	**29,131.0**	**48,334.0**	10%
Pref. Dividends and Other Adj.	1,408.0	1,407.0	1,721.0	1,831.0	3%
NI to Common Incl Extra Items	**17,568.0**	**19,877.0**	**27,410.0**	**46,503.0**	10%
NI to Common Excl. Extra Items	**17,568.0**	**19,877.0**	**27,410.0**	**46,503.0**	10%
Per Share Items					
Basic EPS	$4.5	$5.22	$8.89	$15.39	13%
Supplemental Items					
Effective Tax Rate %	29.1%	26.4%	18.7%	18.9%	-4%

(Source of Data: Capital IQ, JPM Annual Report)

JPM Earning Forecast

Income Statement	Column1	Column2	Column3
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2020	12 months Dec-31-2021	LTM 12 months Dec-30-2022
Currency	*USD*	*USD*	*USD*
Interest Income On Loans	64,523.0	57,864.0	63,641.0
Total Interest Income	**64,523.0**	**57,864.0**	**63,641.0**
Interest On Deposits	9,960.0	5,553.0	7,960.0
Total Interest Expense	**9,960.0**	**5,553.0**	**7,960.0**
Net Interest Income	**54,563.0**	**52,311.0**	**55,681.0**
Service Charges On Deposits	-	-	-
Trust Income	18,177.0	21,029.0	21,408.0
Total Mortgage Banking Activities	3,091.0	2,170.0	1,753.0
Income From Trading Activities	18,021.0	16,304.0	15,488.8
Gain (Loss) On Sale Of Assets (Rev)	6.0	(7.0)	
Gain on Sale of Invest. & Secur (Rev)	668.0	34.0	(508.0)
Total Other Non-Interest Income	25,425.0	29,801.0	26,179.0
Non-Oper. Income (Exp.)	-	-	-
Total Non Interest Income	**65,388.0**	**69,331.0**	**64,320.8**
Revenue Before Loan Losses	**119,951.0**	**121,642.0**	**120,001.8**
Provision For Loan Losses	17,480.0	(9,256.0)	7,717.4
Total Revenue	**102,471.0**	**130,898.0**	**112,284.4**
Salaries and Other Empl. Benefits	32,537.0	35,638.0	36,333.0
Amort. of Goodwill & Intang. Assets	-	-	-
Selling General & Admin Exp., Total	28,178.0	30,236.0	30,878.0
Total Other Non-Interest Expense	4,826.0	5,036.0	5,268.0
Total Non-Interest Expense	**65,541.0**	**70,910.0**	**77,112.0**
EBT Excl. Unusual Items	**36,930.0**	**59,988.0**	**35,172.4**
Impairment of Goodwill	-	-	-
Total Legal Settlements	(1,115.0)	(426.0)	(405.0)
Other Unusual Items	-	-	-
EBT Incl. Unusual Items	**35,815.0**	**59,562.0**	**34,767.4**
Income Tax Expense	6,684.0	11,228.0	6,326.4
Earnings from Cont. Ops.	**29,131.0**	**48,334.0**	**28,441.0**
Net Income to Company	**29,131.0**	**48,334.0**	**28,441.0**
Minority Int. in Earnings	-	-	-
Net Income	**29,131.0**	**48,334.0**	**28,441.0**
Per Share Items			
Basic EPS	$8.89	$15.39	$8.96
Basic EPS Excl. Extra Items	8.89	15.39	8.96
Weighted Avg. Basic Shares Out.	3,082.4	3,021.5	2,978.9
Supplemental Items			
Effective Tax Rate %	18.7%	18.9%	18.2%

(Sources: JPM Annual Report, Capital IQ, VIPA Estimates)

JPM Valuation Model

Fiscal Year	2021	2022E	2023E	2024E	2025E	2026E	Dividend Growth Rate 2011-2021	2.54%
Dividend That Year	$3.80	$4.00	$4.20	$4.40	$4.60	$4.80	Net Income Growth Rate Normal	13%
Discount Factor	7.34%	7.34%	7.34%	7.34%	7.34%	7.34%	Risk-Free Rate	2.98%
Years From Now	0	1	2	3	4	5	Beta of JPM	1.10%

Discounted Dividend	$3.80	**$3.73**	**$3.65**	**$3.56**	**$3.47**	**$3.37**	Market Risk Premium	3.96%
Average PE Multiple	11.3	11.3	11.3	11.3	11.3	11.3	CCE	7.34%
EPS for JPM	$12.41	$8.96	$9.86	$11.14	$12.59	$14.22	Sum of Dividend Discounted	$17.76
Share Repurchase Rate	2.54%	2.54%	2.54%	2.54%	2.54%	2.54%	Earning 2026 Discounted	$11.35
EPS after Repurchase	$12.41	$9.19	$10.38	$12.03	$13.95	$16.17	Average PE (Normalized)	11.3
Dividend Payout	31%	45%	43%	40%	37%	34%	Value Today	$146.02

(Source: JPM Annual Report, Capital IQ, VIPA Estimates)

https://seekingalpha.com/symbol/JPM/dividends/yield

https://ycharts.com/indicators/sp_500_dividend_yield#:~:text=S%26P%20500%20Dividend%20Yield%20is,month%20and%201.35%25%20last%20year.

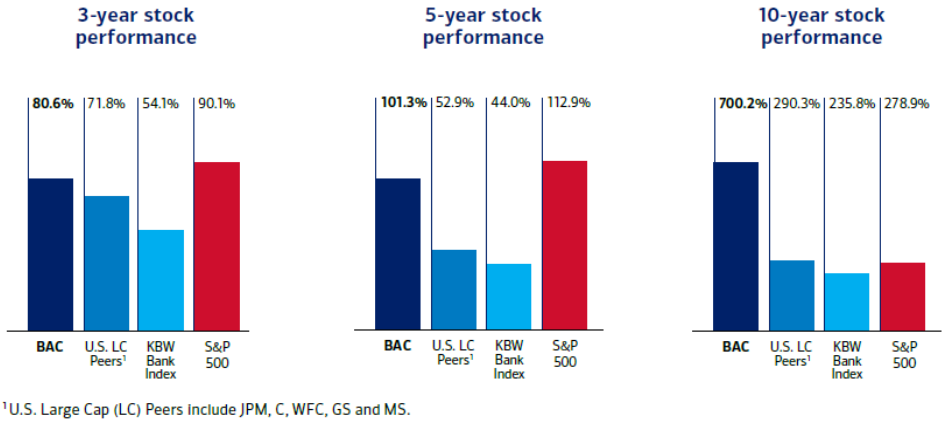
1. BAC Past Earning and Return Analysis

Over the past 10 years, BAC has improved its net income by 2111% (partially due to 2011's low net income number.) Examining its income statement, the net interest income has declined by 4% due to the decrease of total interest income by 28%. This was partially offset by the 78% declination in total interest expense. Non-interest income has slid by 3%. The 19% growth in revenue is largely due to the decrease in the provision of loan losses given the vibrant economic situation in 2021. Total non-interest expense declined by 22% and significantly contributed to the increase in net income. The final contributor is the decrease in the effective tax rate. While the tax rate can reach 30% in the early stage of the past 10 years, it declined to 5.9% in 2021. But since the major contributors to the earning increase are fewer taxes, less provision, and less expense, we doubt that in the long term, these contributors can be further reduced. On the growth side, the past 10 years show nearly no growth in terms of interest income and non-interest income. This puts a huge doubt on the growth potential of BAC. BAC has returned more capital to shareholders by paying dividends and share-repurchasing. According to Seeking Alpha, BAC's 5-year average dividend yield is 2.34%. Also, BAC has reduced its share outstanding from 10254 to 8493 shares, a 17.2% declination from 2011. Assumed a 2.34% average dividend yield for the past 10 years and used the dividend yield to buy shares of BAC, the boost of investment return would be 52.2%.

https://seekingalpha.com/symbol/BAC/dividends/yield

2. Past Stock Price as of Peers:

Bank of America has a strong and outstanding record after the subprime crisis. The diluted per-share earnings grew from $0.82 in 2010 to $3.57 in 2021, a 335% increase. At the year-end of 2021, the stock price improvement of BAC all outperformed the broader bank index, with 3-year stock performance of 80.6%, 5 years of 101.3%, and 10-year of 700.2%, in contrast to the U.S. Large Cap Peers (including JPM, WFC, GS, and MS)'s 3rrrrr stock performance of 71.8%, the 5-year stock performance of 52.9%, and 10-year stock performance of 290.3%.



(Source: BAC 2021 Annual Report, VIPA Analysis)

3. BAC Valuation: Short Term and Mid Term Perspectives

In the short term, we expect an increase in interest income due to the rising interest rate. This will be partially offset by rising interest expenses. We expect other non-interest income to endure a decline due to the decreasing investment banking and capital market activities this year. We expect provision for credit losses to increase and an increase in the effective tax rate. Finally, we expect a basic EPS of $2.77. Given an average PE in the past 10 years of 12.23x, we expect a fair price of 33.87 in the short term. Therefore, we give a “hold” on BAC. A 5-year future valuation analysis indicates that there is no margin of safety for BAC stock. The discounted present value of $35.31 is only a 3% margin of safety and isn’t significant.

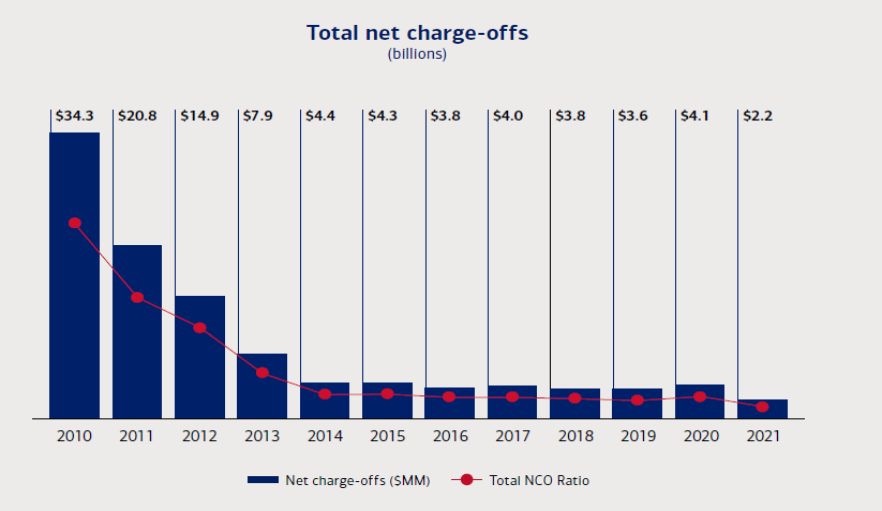
4. Other Factors

(2) Growing digital representation

The company’s investment in digital platforms and AI has built a comparative advantage. Erica, the company’s artificial intelligence-based virtual financial assistant, has interaction with clients increased 300% to 427 million times. In 2021, the active Zelle users of BAC increased by 23% to 15.8 million. The amount of Zelle transactions made by clients during 2021 reaches 779 million times, an increase of 64% from 2020. On the commercial banking side, the CashPro app saw a 55% increase in active users of the CashPro app. The payments during 2021 increased 119% from 2020 to $384 billion.

(3) An improved risk framework

The company’s risk control continues to improve and becomes a competitive advantage. In 2021, the company released $6.8 billion of these reserves as credit losses hit historic lows. The net charge-offs decreased 94% from $34.3 billion in 2010 to $2.2 billion in 2021.



(Source: BAC Annual Report, VIPA Analysis)

(4) Important Financial Overview:

Overdraft: In January 2022, BAC announced changes to its overdraft services for consumer and small business clients, eliminating NSF feeds beginning in Feb 2022. The policy also includes a reduction of overdraft fees from $35 to $10 beginning in May 2022, according to Barclays equity research. In 2021, fees from overdrafts were $1bn and recorded in Consumer Banking as a service charge. Due to the policy changes, in 2022 BAC expects a significant reduction in NSF and overdraft fees.

U.K. Tax Law Change: In June 2021, the U.K. enacted the 2021 Finance Act, which included an increase in the U.K. corporation income tax rate to 25% from 19%. This change is effective April 1, 2023, and unfavorably affects income tax expenses on future U.K. earnings. In addition, in July 2020, the U.K. enacted a repeal of the final two percent of scheduled decreases in the U.K. corporation income tax rate. As a result, in 2021 and 2020, BAC recorded write-ups of U.K. net deferred tax assets of ~$2.0bn and $700mn, with corresponding positive income tax adjustments. These write-ups were reversals of previously recorded write-downs of net deferred tax assets for prior changes in the U.K. corporation income tax rate.

LIBOR: BAC established an enterprise-wide IBOR transition program, with the active involvement of senior management and regular reports to the Management Risk Committee (MRC) and Enterprise Risk Committee (ERC). The program continues to drive BAC's industry and regulatory engagement, client and financial contract changes, internal and external communications, and technology and operations modifications, including updates to its operational models, systems, and processes, the introduction of new products, migration of existing clients, and program strategy and governance. As of 4Q21, BAC has transitioned or otherwise addressed IBOR-based products and contracts referencing the rates that ceased or became non-representative after 4Q21 including LIBOR-linked commercial loans, LIBOR-based adjustable-rate consumer mortgages, LIBOR-linked derivatives, and interdealer trading of certain USD LIBOR and other interest rate swaps, and related hedging arrangements. Additionally, in accordance with the USD LIBOR Guidance, the Corporation has ceased entering new contracts that use USD LIBOR as a reference rate, subject to certain regulatory-approved exceptions.

Additional Graphs:

BAC Mid-term Valuation Model

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column9	Column10
Fiscal year	2021	2022	2023	2024	2025	2026	Dividend growth rate forcasted	13.92%
Dividend that year	$0.78	$0.9	$1.0	$1.2	$1.3	$1.5	Net income growth rate	13%
Discount factor	8.52%	8.52%	8.52%	8.52%	8.52%	8.52%	Risk free rate	2.98%
years passed	0	1	2	3	4	5	Beta of BAC	1.40%
Discounted dividend	$0.78	**$0.82**	**$0.86**	**$0.90**	**$0.95**	**$0.99**	Market risk premium	3.96%
Average PE multiple	12.23	12.23	12.23	12.23	12.23	12.23	CCE	8.52%
Earning for BAC	$3.57	$3.2	$3.63	$3.76	$3.89	$4.03	Sum of dividend discounted	$4.52
Share Repurchase/ total shares	1.85%	1.85%	1.85%	1.85%	1.85%	1.85%	Earning 2026 discount to today	$2.72
EPS after Repurchase	$3.64	$3.26	$3.69	$3.83	$3.97	$4.10	Average PE(normalized) of BAC:	11.3
Dividend Payout	21.85%	27.77%	27.91%	30.67%	33.75%	37.17%	Value today	$35.31

(Source: Capital IQ Data, VIPA Analysis)

BAC 10-year Performance Analysis

Income Statement	Column1	Column2	Column3	Column4	Column5
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2011	Reclassified 12 months Dec-31-2012	12 months Dec-31-2020	12 months Dec-31-2021	Growth
Currency	*USD*	*USD*	*USD*	*USD*	%
Interest Income On Loans	44,966.0	38,880.0	51,585.0	47,672.0	6%
Interest Income On Investments	21,270.0	18,520.0	-	-	
Total Interest Income	**66,236.0**	**57,400.0**	**51,585.0**	**47,672.0**	-28%
Interest On Deposits	3,002.0	1,990.0	8,225.0	4,738.0	58%
Total Interest On Borrowings	18,618.0	14,754.0	-	-	
Total Interest Expense	**21,620.0**	**16,744.0**	**8,225.0**	**4,738.0**	-78%
Net Interest Income	**44,616.0**	**40,656.0**	**43,360.0**	**42,934.0**	-4%
Service Charges On Deposits	8,094.0	7,600.0	-	-	
Trust Income	11,826.0	11,393.0	-	-	
Credit Card Fee	7,184.0	6,121.0	-	-	
Total Mortgage Banking Activities	(8,830.0)	4,750.0	-	-	
Income From Trading Activities	6,697.0	5,870.0	-	-	
Gain (Loss) On Sale Of Assets (Rev)	-	-	-	-	
Gain on Sale of Invest. & Secur (Rev)	2,939.0	1,673.0	(589.0)	(1,078.0)	-137%
Income (Loss) On Equity Invest. (Rev)	7,360.0	2,070.0	-	-	
Total Other Non-Interest Income	12,368.0	1,601.0	42,757.0	47,257.0	282%
Non-Oper. Income (Exp.)	-	-	-	-	
Total Non Interest Income	**47,638.0**	**41,078.0**	**42,168.0**	**46,179.0**	-3%
Revenue Before Loan Losses	**92,254.0**	**81,734.0**	**85,528.0**	**89,113.0**	-3%
Provision For Loan Losses	13,410.0	8,169.0	11,320.0	(4,594.0)	-134%
Total Revenue	**78,844.0**	**73,565.0**	**74,208.0**	**93,707.0**	19%
Salaries and Other Empl. Benefits	34,365.0	33,378.0	30,625.0	33,140.0	
Amort. of Goodwill & Intang. Assets	1,509.0	1,264.0	-	-	
Occupancy Expense	-	-	4,518.0	4,651.0	
Selling General & Admin Exp., Total	19,477.0	19,177.0	13,340.0	14,970.0	-23%
Total Other Non-Interest Expense	21,101.0	18,274.0	6,730.0	6,970.0	-67%
Total Non-Interest Expense	**76,452.0**	**72,093.0**	**55,213.0**	**59,731.0**	-22%
EBT Excl. Unusual Items	**2,392.0**	**1,472.0**	**18,995.0**	**33,976.0**	1320%
Total Merger & Rel. Restruct. Charges	(638.0)	-	-	-	
Impairment of Goodwill	(3,184.0)	-	-	-	
Other Unusual Items	1,200.0	1,600.0	-	-	
EBT Incl. Unusual Items	**(230.0)**	**3,072.0**	**18,995.0**	**33,976.0**	
Income Tax Expense	(1,676.0)	(1,116.0)	1,101.0	1,998.0	
Earnings from Cont. Ops.	**1,446.0**	**4,188.0**	**17,894.0**	**31,978.0**	2111%
Earnings of Discontinued Ops.	-	-	-	-	
Extraord. Item & Account. Change	-	-	-	-	
Net Income to Company	**1,446.0**	**4,188.0**	**17,894.0**	**31,978.0**	2111%
Minority Int. in Earnings	-	-	-	-	
Net Income	**1,446.0**	**4,188.0**	**17,894.0**	**31,978.0**	2111%
Pref. Dividends and Other Adj.	1,362.0	1,430.0	1,421.0	1,421.0	
NI to Common Incl Extra Items	**84.0**	**2,758.0**	**16,473.0**	**30,557.0**	
NI to Common Excl. Extra Items	**84.0**	**2,758.0**	**16,473.0**	**30,557.0**	
Per Share Items					
Basic EPS	$0.01	$0.26	$1.88	$3.6	
Supplemental Items					
Effective Tax Rate %	NM	NM	5.8%	5.9%	#VALUE!
Although the table doesn't show, the effective tax rate has declined from over 30% to 5.9% in 2021, which contributes hugely on improving EPS.					

(Source: Capital IQ Data, VIPA Analysis)

BAC Earning Forecast

Income Statement	Column1	Column2	Column3
For the Fiscal Period Ending 12/31	2020	2021	2022
Currency	*USD*	*USD*	*USD*
Interest Income On Loans	51,585.0	47,672.0	57,206.4
Interest Income On Investments	-	-	-
Total Interest Income	**51,585.0**	**47,672.0**	**57,206.4**
Interest On Deposits	8,225.0	4,738.0	5,211.8
Total Interest On Borrowings	-	-	-
Total Interest Expense	**8,225.0**	**4,738.0**	**5,211.8**
Net Interest Income	**43,360.0**	**42,934.0**	**51,994.6**
Service Charges On Deposits	-	-	-
Trust Income	-	-	-
Credit Card Fee	-	-	-
Total Mortgage Banking Activities	-	-	-
Income From Trading Activities	-	-	-
Gain (Loss) On Sale Of Assets (Rev)	-	-	-
Gain on Sale of Invest. & Secur (Rev)	(589.0)	(1,078.0)	(833.5)
Income (Loss) On Equity Invest. (Rev)	-	-	-
Total Other Non-Interest Income	42,757.0	47,257.0	40,168.5
Non-Oper. Income (Exp.)	-	-	-
Total Non Interest Income	**42,168.0**	**46,179.0**	**39,335.0**
Revenue Before Loan Losses	**85,528.0**	**89,113.0**	**91,329.6**
Provision For Loan Losses	11,320.0	(4,594.0)	3,129.0
Total Revenue	**74,208.0**	**93,707.0**	**88,200.6**
Salaries and Other Empl. Benefits	30,625.0	33,140.0	35,861.5
Amort. of Goodwill & Intang. Assets	-	-	-
Occupancy Expense	4,518.0	4,651.0	4,787.9
Selling General & Admin Exp., Total	13,340.0	14,970.0	14,970.0
Total Other Non-Interest Expense	6,730.0	6,970.0	6,970.0
Total Non-Interest Expense	**55,213.0**	**59,731.0**	**62,589.5**
EBT Excl. Unusual Items	**18,995.0**	**33,976.0**	**25,611.1**
Total Merger & Rel. Restruct. Charges	-	-	-
Impairment of Goodwill	-	-	-
Other Unusual Items	-	-	-
EBT Incl. Unusual Items	**18,995.0**	**33,976.0**	**25,611.1**
Income Tax Expense	1,101.0	1,998.0	2,859.2
Earnings from Cont. Ops.	**17,894.0**	**31,978.0**	**22,751.9**
Net Income to Company	**17,894.0**	**31,978.0**	**22,751.9**
Minority Int. in Earnings	-	-	-
Net Income	**17,894.0**	**31,978.0**	**22,751.9**
Pref. Dividends and Other Adj.	1,421.0	1,421.0	1,453.0
Per Share Items			
Basic EPS	$1.88	$3.6	$2.77
Basic EPS Excl. Extra Items	1.88	3.6	2.77
Weighted Avg. Basic Shares Out.	8,753.2	8,493.3	8,227.8
Supplemental Items			
Effective Tax Rate %	5.8%	5.9%	11.2%

(Source: Capital IQ Data, VIPA Analysis)

1, Past 10-year Earning Analysis:

C has generated a return lower than the industrial average while its net income grew 7.0% annually from 2011 to 2021, lower than BAC's growth of 25.3% annually from 2012 to 2021(it is not reasonable to use 2011 data to compare) and lower than JPM's 10%. We believe the source of C's growth will not be able to retain in the future. The biggest source of income growth is from less provision for loan losses ($11336 Mn in 2011 vs $-3103 Mn in 2021). Besides that, revenue went through a modest increase of 1.3% due to the 10.5% annual decrease in total interest expense, partially offset by the 3.5% annual decrease in total interest income. Non-interest income went through a decrease of 0.1% annually in ten years. Based on these factors, we believe that the growth source of C in the past 10 years will not continue to help C to improve its net income.

2, Valuation of C

Based on a 5-year valuation model, we expect C to have a 36.18% margin of safety. The discounted value today based on the model is $89.33. The model has taken cautious measures including decreasing the net income growth rate by 3% based on past-10-years average growth rate. But investors need to know that the model is

based on 2021 EPS which year the economic situation for the banking industry is much more favorable. However, C has a 41.1% margin of safety based on its share price of $89.33 on August 20th, 2022. Given the past 5 years' average P/E Multiple of 9.1X and 2022 forecasted EPS of 9.78, we believe the fair price for C in one year should be $88.9. Given the bad economic outlook next year, we don't expect this price to be reached in a year.

2, qualitative factors:

(1) Recent important changes: in 2021, C announced a change in the financial reporting structure. From 2022, it reports on the following segments: Personal Banking and Wealth Management segment, Institutional Client Group (ICG) under Services, banking and Markets, and Legacy Holdings assets, which includes business C will exit. The new arrangement targets growing the CITI wealth management business and reorganizing business lines. Related to exiting the business, C announced to exit 13 markets and made service to these markets' clients under ICG. C also intended to leave Citibanamex's majority of business. C already sold the business of consumer banking business in Australia and the Philippines, and it will close its Korean consumer banking. In 2022, C agreed to sell its consumer banking in Indonesia, Malaysia, Taiwan, Thailand, and Vietnam. The strategic implication is Citi will concentrate its focus its EMEA and Asia consumer banking business in 4 financial markets including Singapore, London, UAE, and Hong Kong.

(2) Under the management of new CEO Jane Fraiser, C started a transformation of business targeting to optimize business and operation and strengthen its risk management and inner control. This includes exiting more non-core businesses, investing heavily in technology and fintech, and creating more value for its clients. In addition, C has formed a Transformation Oversight Committee to oversee the transformation process. The transformation has begun to show its short-term beneficial effect. C released a profit of $2.19 in 2Q, beating the consensus of %1.68. Its stock rose 13.4% after the news.

(3) Citi's transformation is still a long way to go. Its reputation has been hit hard after the subprime crisis. The past management teams have worked on cutting down business lines since the ending of the crisis. Citi group paid a $0.01 dividend quarterly after the crisis for years until 2015. The low dividend yield for 7 years has depressed its share price. In 2020, the company erroneously paid the wrong organization $390mn dollars due to human error and the quality of its loan processing system. That company commenced litigation against the companies which have not returned the money while the court issued a judgment in favor of the defendants.

Financial Overview:

The Company targeted a midterm (3-5 years) of 11%-12% ROTCE based on the transformation plan released in 2021. The 2021's ROTCE excluding reserve release was 8.9%, which means achieving an 11% ROTCE is still a long way to go for CITI. The growth in ROTCE could come from higher interest rates, possible market share gain, and growth of businesses.

The company has targeted a 5%-6% expense growth including heavy investments, transformation costs, and volume-related costs. These factors are partially offset by higher efficiency in operation and inner control. The company has also targeted 4%-5$ revenue growth, an 11.5%-12% CET1 ratio, and a mid-term targeted NCO of 1%. Besides these, the investment banking fee is expected to endure a huge decrease.

Income Statement	Column1	Column2	Column3
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2020	12 months Dec-31-2021	LTM 12 months Dec-31-2022
Currency	*USD*	*USD*	*USD*
Interest Income On Loans	58,089.0	50,475.0	57,036.8
Total Interest Income	**58,089.0**	**50,475.0**	**57,036.8**
Interest On Deposits	13,338.0	7,981.0	9,914.0
Total Interest Expense	**13,338.0**	**7,981.0**	**9,914.0**
Net Interest Income	**44,751.0**	**42,494.0**	**47,122.8**
Trust Income	3,472.0	3,943.0	3,951.0
Income From Trading Activities	13,885.0	10,154.0	11,677.1
Gain (Loss) On Sale Of Assets (Rev)	-	(700.0)	(1,500.0)
Gain on Sale of Invest. & Secur (Rev)	1,581.0	459.0	413.1
Total Other Non-Interest Income	11,805.0	15,537.0	11,652.8
Non-Oper. Income (Exp.)	-	-	-
Total Non Interest Income	**30,743.0**	**29,393.0**	**26,194.0**
Revenue Before Loan Losses	**75,494.0**	**71,887.0**	**73,316.7**
Provision For Loan Losses	15,922.0	(3,103.0)	6,850.0
Total Revenue	**59,572.0**	**74,990.0**	**66,466.7**
Salaries and Other Empl. Benefits	20,750.0	23,449.0	22,276.6
Amort. of Goodwill & Intang. Assets	-	-	-
Occupancy Expense	1,279.0	1,253.0	1,281.0
Selling General & Admin Exp., Total	11,118.0	12,064.0	12,516.0
Total Other Non-Interest Expense	12,793.0	10,755.0	11,615.4
Total Non-Interest Expense	**45,940.0**	**47,521.0**	**47,689.0**
EBT Excl. Unusual Items	**13,632.0**	**27,469.0**	**25,627.8**
Restructuring Charges	-	-	-
Impairment of Goodwill	-	-	-
Other Unusual Items	-	-	-
EBT Incl. Unusual Items	**13,632.0**	**27,469.0**	**25,627.8**
Income Tax Expense	2,525.0	5,451.0	4,976.0
Earnings from Cont. Ops.	**11,107.0**	**22,018.0**	**20,651.7**
Net Income to Company	**11,087.0**	**22,025.0**	**20,658.2**
Minority Int. in Earnings	(40.0)	(73.0)	(68.0)
Net Income	**11,047.0**	**21,952.0**	**20,590.2**
Per Share Items			
Basic EPS	$4.74	$10.21	$9.78
Basic EPS Excl. Extra Items	4.75	10.21	9.78
Weighted Avg. Basic Shares Out.	2,085.8	2,033.0	1,976.7
Supplemental Items			
Effective Tax Rate %	18.5%	19.8%	19.4%

Income Statement	Column1	Column2	Column3	Column4	Column5
For the Fiscal Period Ending	Reclassified 12 months Dec-31-2011	Reclassified 12 months Dec-31-2012	Reclassified 12 months Dec-31-2020	12 months Dec-31-2021	Growth
Currency	*USD*	*USD*	*USD*	*USD*	*Percent*
Interest Income On Loans	71,858.0	67,298.0	58,089.0	50,475.0	-3.5%
Total Interest Income	**71,858.0**	**67,298.0**	**58,089.0**	**50,475.0**	-3.5%
Interest On Deposits	24,209.0	20,612.0	13,338.0	7,981.0	-10.5%
Total Interest Expense	**24,209.0**	**20,612.0**	**13,338.0**	**7,981.0**	-10.5%
Net Interest Income	**47,649.0**	**46,686.0**	**44,751.0**	**42,494.0**	-1.1%
Trust Income	3,995.0	4,012.0	3,472.0	3,943.0	-0.1%
Income From Trading Activities	7,234.0	4,980.0	13,885.0	10,154.0	3.4%
Gain (Loss) On Sale Of Assets (Rev)	-	-	-	(700.0)	
Gain on Sale of Invest. & Secur (Rev)	(257.0)	(1,720.0)	1,581.0	459.0	
Total Other Non-Interest Income	18,710.0	15,232.0	11,805.0	15,537.0	-1.8%
Non-Oper. Income (Exp.)	-	-	-	-	
Total Non Interest Income	**29,682.0**	**22,504.0**	**30,743.0**	**29,393.0**	-0.1%
Revenue Before Loan Losses	**77,331.0**	**69,190.0**	**75,494.0**	**71,887.0**	-0.7%
Provision For Loan Losses	11,336.0	10,458.0	15,922.0	(3,103.0)	
Total Revenue	**65,995.0**	**58,732.0**	**59,572.0**	**74,990.0**	1.3%
Salaries and Other Empl. Benefits	23,984.0	23,307.0	20,750.0	23,449.0	-0.2%
Amort. of Goodwill & Intang. Assets	-	-	-	-	
Occupancy Expense	1,710.0	1,766.0	1,279.0	1,253.0	-3.1%
Selling General & Admin Exp., Total	10,553.0	11,305.0	11,118.0	12,064.0	1.3%
Total Other Non-Interest Expense	15,026.0	14,529.0	12,793.0	10,755.0	-3.3%
Total Non-Interest Expense	**51,273.0**	**50,907.0**	**45,940.0**	**47,521.0**	-0.8%
EBT Excl. Unusual Items	**14,722.0**	**7,825.0**	**13,632.0**	**27,469.0**	6.4%
Restructuring Charges	-	-	-	-	
Impairment of Goodwill	-	-	-	-	
Other Unusual Items	-	-	-	-	
EBT Incl. Unusual Items	**14,722.0**	**7,825.0**	**13,632.0**	**27,469.0**	6.4%
Income Tax Expense	3,575.0	7.0	2,525.0	5,451.0	4.3%
Earnings from Cont. Ops.	**11,147.0**	**7,818.0**	**11,107.0**	**22,018.0**	7.0%
Earnings of Discontinued Ops.	68.0	(58.0)	(20.0)	7.0	-20.3%
Extraord. Item & Account. Change	-	-	-	-	
Net Income to Company	**11,215.0**	**7,760.0**	**11,087.0**	**22,025.0**	7.0%
Minority Int. in Earnings	(148.0)	(219.0)	(40.0)	(73.0)	-6.8%
Net Income	**11,067.0**	**7,541.0**	**11,047.0**	**21,952.0**	7.1%
Pref. Dividends and Other Adj.	212.0	192.0	1,168.0	1,194.0	18.3%
NI to Common Incl Extra Items	**10,855.0**	**7,349.0**	**9,879.0**	**20,758.0**	6.7%
NI to Common Excl. Extra Items	**10,787.0**	**7,407.0**	**9,899.0**	**20,751.0**	6.8%
Per Share Items					
Basic EPS	$3.73	$2.51	$4.74	$10.21	10.6%
Supplemental Items					
Effective Tax Rate %	24.3%	0.1%	18.5%	19.8%	-2.0%

Column1	Column2	Column3	Column4	Column5	Column6	Column7	Column9	Column10
Fiscal year	2021	2022	2023	2024	2025	2026	Dividend growth rate forcasted	4.80%
Dividend that year	$2.0	$2.1	$2.2	$2.3	$2.5	$2.6	Net income growth rate	4.10%
Discount factor	9.32%	9.32%	9.32%	9.32%	9.32%	9.32%	Risk free rate	2.98%

years passed	0	1	2	3	4	5	Beta of C	1.60%
Discounted dividend	$2.0	**$2.0**	**$1.9**	**$1.8**	**$1.7**	**$1.7**	Market risk premium	3.96%
Average PE multiple	9.16	9.16	9.16	9.16	9.16	9.16	CCE	9.32%
EPS for C	$10.21	$9.78	$10.54	$11.37	$12.26	$13.22	Sum of dividend discounted	$9.00
Share Repurchase/ total shares	3.45%	3.45%	3.45%	3.45%	3.45%	3.45%	Earning 2026 discount to today	$8.77
EPS after Repurchase	$10.57	$10.13	$10.92	$11.78	$12.70	$13.69	Average PE(normalized) of C	9.16
Dividend Payout	19.98%	21.86%	21.25%	20.65%	20.07%	19.51%	Value today	$89.33