Contributors:

Callum Turcan
Associate Director of Research
callum@valuentum.com

Brian Nelson, CFA
President, Equity Research
brian@valuentum.com

Banks & Money Centers Industry Report

Summary

We'll talk about how banks make money, and the three most important costs of running a bank.

The Great Financial Crisis revealed the tremendous risks of banking equities, and we'll walk through these risks in depth. We will also cover how the COVID-19 pandemic impacted capital markets and the banking industry, and what to expect going forward.

We'll discuss how to conceptualize where we are in the banking cycle, and how that helps inform our valuation process for banks, which is different than traditional operating entities.

The stress tests have helped many of the big banks from pursuing hazardous endeavors during the past decade, and we'll go into how to think about the yield curve in the context of banks.

Investors should expect ongoing the digitalization of banking operations and increased M&A as the competitive environment only intensifies.

Our two favorite banks are Bank of America (BAC) and JPMorgan Chase (JPM). These stellar enterprises showcased the resilience of their business models during the worst of the COVID-19 pandemic.

Banks and Money Centers: AXP, BAC, BK, C, DFS, FITB, GS, HBAN, HSBC, JPM, KEY, MS, MTB, NTRS, PNC, RF, TFC, USB, WFC.

How Do Banks Make Money?

In order to understand where the big banks stand right now, it might be helpful to start at the very beginning. How do banks make money? Banks essentially make money on money. They collect money mostly in the form of deposits, often at a very low cost--such as zero interest checking accounts. Certificates of deposit ('CDs') and corporate deposits cost more than nothing, and borrowing in the bond market costs even more than that. Even when no interest is paid on transactional accounts, there remains a cost to these funds as services are being offered to those clients "for free."

While banks have a cost of funds, they then turn around and lend out some, all, or more than their deposits to the public whether in the form of credit cards or auto loans to retail clients, small business loans, construction finance loans, or loans to giant multi-national corporations. The spread between the revenue earned lending and the cost of those funds is called the net interest margin ('NIM'), which is often about 200-300 basis points for a large bank, depending on the mix of business. Banks also earn non-interest revenue in the form of banking fees, commissions, and the like. Adding net interest income to the non-interest revenue arrives at the net revenue of the bank; subtracting non-interest expenses (starting with bad credit costs) from this, one gets down to the pre-tax income line.

Three Key Costs of Running a Bank

This quick introduction to banking makes it clear the three key areas where banks must control their costs, especially given that US banking is largely a commodified industry. In a commodified industry, it is the sustainable low-cost leaders that can eek out returns above the cost of capital.

One, the cost of deposits is the first key cost to control. Banks with large, low cost deposit bases such as JPMorgan Chase (JPM), Bank of America (BAC), and Wells Fargo (WFC) enjoy the leading US deposit franchises.

Two, the cost of credit is the next key cost to control. Over the course of time, banks that are lending in the exact same space such as auto lending can experience wildly different credit costs. While some of this can be due to the risk/reward tradeoff being pursued by management, it can also reflect the success or failure of underwriting each individual loan, which ultimately creates the aggregate loss experience.

Underwriting quality stems from the underwriting culture of the bank, which starts right at the top with the CEO steering the ship. Is risk or reward being emphasized to middle managers and the rank and file? What kind of targets are financial incentives and promotions based upon? How is risk versus reward talked about inside the bank? Underwriting culture is driven by all layers of management and embodied in and executed by front line employees and is not quick or easy to change on a dime. It is more like turning a large ship. It is individual human decisions that we are talking about after all, and old habits die hard.

Not only is there an underwriting culture that drives credit costs (bad debt expenses), but it is also a bank's culture that drives the third major cost center, which is operating costs, as measured by the all-important efficiency ratio--operating costs over net revenue. The efficiency ratio is also very much affected by business mix. Stock brokerage and investment banking come with very high efficiency ratios (more expensive to serve clients), while mass market retail banking comes with much lower efficiency ratios (less expensive to serve clients). That said, if business mixes are similar, the bank with the lower efficiency ratio is the one that is generating revenue at a lower cost on a per dollar basis.

The Risks of Running a Bank

The risks of running a bank are many-fold. The first and most important thing a bank CEO can get wrong is the culture of the bank. Culture touches everything from how a bank operates, to the ultimate fundamental results, and even the valuation analysts and investors are willing to place on the firm. Wells Fargo used to trade at a premium and now trades at a discount to peers, and questions around the culture are a key element in that change. The bank's current CEO, Charles Scharf, took over the top job back in 2019 and has a chance to right this ship.

Every bank management team wants revenue growth. The question is how do you get there? Are you willing to sacrifice near term earnings trajectory as you invest in new markets and new salespeople? Or does your growth come simply by taking more risk for the same level of reward? The former is a tough decision for public bank managers to take as it can negatively affect the share price and management options in the short run. The latter is like a siren song. If you get the same reward for riskier new business, the near-term financials show faster growth with similar credit costs in the short run. In time, however, perhaps even as late as the next recession, the greater risk being taken ultimately will show up in the credit cost line on the profit and loss statement.

The run up to the Great Financial Crisis ('GFC') in 2007-2009 provides the perfect example of bank culture and risk versus reward. While massive home price appreciation was allowing folks to use their home as an ATM and paper over any income deficiencies, it seemed that almost all banks could do no wrong in retail banking. Revenue growth was stronger than usual and credit costs were largely benign. A key hint for those paying attention was the subtle but not insignificant differences between credit losses for those banks operating with similar business mixes.

As it turned out, the banks growing the fastest on the back of subprime mortgages and subprime mortgage-backed collateralized debt obligations ('CDOs'), which were starting to show slightly larger losses even prior to the peak, were the first banks to get blown away when the housing market melted down from excesses boiling over. What might have seemed like minor differences at the time, turned out to measure the difference between failure or tough times followed by a full rebound to health. Amongst the money center banks, JPMorgan turned out to be sitting on a lot less risk than Bear Stearns, Lehman, or Citigroup (C).

This brings us to another risk of investing in bank stocks. Bank balance sheets can be appropriately characterized as somewhat opaque. Loan books are broken down by the customers' industry and by credit quality as determined by the bank, but that doesn't mean that a large bank cannot hide a busted deal on its balance sheet without anyone really knowing. If a deal was originated with intent to distribute, but it ultimately falls through--for example because the cycle is changing on a dime—there is nothing to stop the bank from parking this loan on the balance sheet.

In fact, this is exactly what happened with busted CDOs and commercial real estate deals when the GFC hit starting in 2007. The amount of speculation about the big banks' opaque balance sheets came to a fevered pitch. Banks didn't trust each other, and investors lost faith in what was contained on the banks' balance sheets. This fed the fear in the marketplace and increased counterparty risk. This caused banks to stop lending as much to each other and further fed the liquidity crisis that was taking place at the time, effectively forcing the Federal Reserve to step in and intervene to help with bank funding. Trust matters in banking, and if investors and counterparties come to think a bank is hiding material items on its balance sheet, real trouble can ensue.

Speaking of counterparty risk, another key risk of running and investing in banks is the counterparty risk that comes from large, opaque derivative books. Notional exposure amounts are disclosed, and the banks will tell you that exposures to any particular bank are kept to reasonable levels. That said, if there is a global run on the banks in the event another major financial crisis materializes (similar to what was occurring during the early phases of the GFC before key fiscal and monetary authorities stepped in to prop up the global banking system), the risk of several banks failing at once can emerge.

Derivative books make banks more intertwined and increases the knock-on effect of bank failures. If hedges fall away, banks must scramble to put those hedges back in place. It can create chaos in the derivatives market, and it can certainly create doubt about the efficiency and effectiveness of the hedging programs that banks have in place. Though centralized clearing houses like exchanges are meant to reduce risk, they could also become a serious problem in a severe tail risk scenario.

During the coronavirus ('COVID-19') pandemic that became a major public health and economic crisis starting in 2020, key fiscal and monetary authorities around the globe stepped in to support financial markets. These measures helped ensure that there were adequate levels of liquidity in capital markets to enable lending and equity raising activities at reasonable rates while also going a long way in shoring up confidence in the economy from businesses, investors, and households.

Reductions in key interest rate benchmarks (such as the federal funds rate in the US), the launch of massive quantitative easing ('QE') programs that involved monetary bodies purchasing assets and building up the size of their balance sheets, with the Federal Reserve buying enormous amounts of US Treasuries and mortgage-backed securities ('MBS'), and special financing programs for entities that were at risk of getting locked out of capital markets represent some of the major ways monetary policy was used to keep the global economy afloat during the early phases of the COVID-19 pandemic. Monetary authorities in the UK, the EU, Japan, and elsewhere all pursued similar policies as the Federal Reserve; this approach was taken by most major economies.

The Federal Reserve even purchased corporate bonds in the secondary market during the initial phases of the COVID-19 pandemic, which included investment grade debt and firms that were rated as investment grade before the pandemic hit. Purchases of non-investment grade corporate bonds represents a "bazooka" of sorts in terms of dovish monetary policy.

Financial markets quickly rebounded in the wake of these measures, effectively ending a period of panic selling that initially sent debt and equity markets reeling lower over the course of a couple of months, particularly in February and March of 2020.

Many of the programs utilized during and after the GFC were utilized once again during the COVID-19 pandemic, and generally speaking, these measures were effective at propping up financial markets while ensuring lending and equity raising activities could resume at reasonable levels. However, there are longer term concerns here involving moral hazard risks that have not been properly dealt with since the GFC emerged more than a decade ago. When key fiscal and monetary bodies are willing to step in time and again to shore up capital markets, that reduces the incentive for entities to maintain sound financial practices such as maintaining nice net cash positions on hand and not aggressively utilizing leverage to fund growth or shareholder returns. These are risks that need to be kept in mind over the coming years and decades.

The Risk of Outsized Growth

Growth is good, right? Usually the answer to this is a simple yes. When it comes to banks, however, the answer becomes a bit more nuanced. Sustainable growth is good. Growth that the market allows for is good. Organic growth from adding productive geographies and salespeople and products is good.

However, loosening underwriting standards to hit a revenue growth target that management has foolishly sold to Wall Street can lead to full blown disaster. It is up to management to lead the bank in the right direction and communicate appropriately to employees and other stakeholders. Beware of growth hype from management when it comes to a bank. Beware of ever higher efficiency and return on capital metrics that are predicated on never ending revenue growth, ignoring the cyclical nature of banking.

It is up to the analyst to judge the quality of growth that they are witnessing at a particular bank. Sometimes, it is the bank that is leaving growth on the table that will outperform in the coming downturn. Other times, banks can be left behind when management is afraid of its own collective shadow and is not willing to grow with the market. The bottom line is that these are judgment calls. Look for logical descriptions of where the growth is coming from. Watch the bank’s key metrics to make sure they are not giving up NIMs or credit costs to achieve growth. Watch for differentials in growth rates amongst industry players. Watch for all these warning signs and retain a healthy skepticism.

Where are We in the Cycle?

This is a question that every bank manager, analyst, and investor must ask and answer for themselves, even if the answer is: I’m not sure. When bank performance is suffering from the downcycle and results are accelerating to the downside, it can be a scary time to invest in banks. The best thing to do is to try to make judgments about how much bad credit is contained on a given bank’s balance sheet and whether earnings and capital can offset these pressures to get through to the other side.

If in the case of the GFC where the downside is large and unknown, it is often best to stick to high ground banks with the strongest balance sheets and earnings power. The same can be said about the current environment in the wake of the COVID-19 pandemic and elevated levels of uncertainty in the trajectory of the global economy and the outlook for the banking industry. While the global economy is steadily recovering from the worst of the COVID-19 pandemic, various risks remain with an eye towards labor shortages in some markets (including the US) and supply chain hurdles which are negatively impacting businesses and households around the world.

High ground banks are best positioned, in our view, to navigate economic uncertainties with their growth trajectories intact. These banking entities are best positioned to reward their shareholders once the macroeconomic landscape and related outlook for the banking industry improves considerably, with an eye towards substantial share buybacks, dividend increases, or both.

If the worst of the cycle has been left behind, the question then becomes: where are we relative to the next downcycle? Are current earnings reflective of what can be characterized as mid-cycle or normalized earnings? If so, putting an appropriate valuation on those results will lead to better outcomes. Are earnings outsized because revenues are benefitting from good times and credit costs are abnormally low or even near zero? If so, it is important to scale back to mid-cycle revenue trends and margins before fully valuing an earnings stream into perpetuity. On the flip side, if revenues are under pressure from a weak economy and credit costs are also very elevated, one must scale up the earnings power towards a more normalized level in order to put an appropriate perpetuity value in place.

Another question to ask is: where are the excesses that are building up and how bad are they? How much loss content is being stored up for the next downturn? A prime example is the GFC when subprime mortgages were being written very rapidly and turned into CDOs, which were highly rated but ultimately completely suspect. The larger these revenue streams became and the larger these positions became on bank balance sheets, the more danger was lurking for when the cycle turned, and losses showed up in rapid fashion as folks could not afford the homes that they had stretched for without proper income and/or documentation. The ratings on the flood of Wall Street paper were quickly downgraded to junk and widespread financial pain soon followed.

A current example would be collateralized loan obligations or CLOs. These are levered loans where companies are borrowing substantial sums of money in instances where total debt is a large multiple of EBITDA (cash flow before several important costs) and interest payments are a large part of cash flow. These CLOs have grown substantially in size and are largely held outside of the banking system. However, if the music stopped quickly, the banks that are underwriting these loans could easily get stuck with inventory. It is a risk to watch going forward. The substantial growth of the CLO market seen during the 2010s decade is due in part to the enduring popularity of leveraged buyouts ('LBOs'), with that debt packaged into CLOs to support takeovers that sometimes are financially dubious (given the level of debt required to fund many of these types of transactions). Additionally, CLOs can be a popular instrument to assist firms (that are already highly levered) in rewarding shareholders via large dividends that are largely if not entirely funded by debt issuances.

Sometimes, the question of where we are in the cycle will give no definitive answers, which may be informative, nonetheless. After all, no one can predict the future with 100%

accuracy. Gauging where we are in the business and economic cycle may indicate that the banking industry is not at the trough and probably not at the peak of the cycle. It suggests that the industry may not see any large piles of old or new risks that can hit the P&L in a material way. It indicates that the revenue and earnings stream is more likely to be close to mid-cycle margins, deserving of a full valuation.

So, where are we right now? Widespread COVID-19 vaccine distribution efforts have helped illuminate the light at the end of the tunnel as it concerns public health authorities being able to eventually put an end to the pandemic. It appears likely that the Federal Reserve will embark on a period of sustained interest rate increases as it gets ready to end its QE program, which should positively impact NIMs going forward. Inflationary pressures grew sharply in 2021 in the US and elsewhere for a variety of reasons (supply chain hurdles, rising wages, booming commodity prices, surging raw energy resources pricing, labor shortages, and other factors), and the Federal Reserve now recognizes the need to tame these inflationary pressures by boosting interest rates to encourage saving and discourage consumption (along the margins).

The banking industry set side billions upon billions of dollars for net credit write-offs that ultimately did not materialize during the pandemic, as support for households (such as stimulus checks) and businesses (such as loans and grants) from fiscal authorities helped keep the US economy afloat (further supported by efforts from the Federal Reserve). As credit loss reserves are released, that should help free up capital that banks can use to invest in their business and return cash to shareholders.

While growth in the CLO market remains a very real concern, the CLO market was able to weather the pandemic-induced downturn largely intact. Growth in the auto loan market in the US should also be monitored, especially as sub-prime auto loans grew at a brisk pace during the 2010s decade. The CLO and auto loan markets continued to grow at a robust pace during the early part of the 2020s decade. Both the CLO and auto loan markets should be closely monitored going forward as it concerns analyzing the health of the US banking industry given the immense growth these debt markets have seen in recent years.

In our view, the outlook for the banking industry, particularly in the US, is quite bright though headwinds from the COVID-19 pandemic (including variants of the virus such as Delta and Omicron) and other factors (such as supply chain hurdles) will create hiccups along the way. We are likely at the beginning of a cycle of interest rate increases and tighter monetary policy, which should go a long way in boosting the NIMs of domestic banks at a time when the macroeconomic backdrop is also quite favorable.

Stress Tests

Since the GFC, systemically important (large and interconnected) banks have been forced to go through annual stress tests, where sizable losses are hypothetically run through each bank's P&L to see what impact there would be on capital levels. The idea is to determine what would happen to each bank in a recession and a more severe recession scenario. Would they still have the required capital after eating up the assumed losses against earnings and existing capital levels?

This process has forced a certain discipline on banks this past decade, and we would argue it has largely kept them in line from doing anything particularly reckless in the meantime. These banks must get their capital plans approved also, so they must stay in line if they want to pay out their dividends and perform the planned share buybacks. During the worst of the COVID-19 pandemic, share buybacks at US banks were suspended and dividend increases were put on hold so these entities could preserve capital in case the economic situation deteriorated further. More recently, share buybacks and dividend increases have resumed in earnest (at the blessing of key regulators) as the US banking industry emerged from the worst of the COVID-19 pandemic on solid economic footing.

Internationally, many banks were forced to suspend or cut their dividend payouts and suspend share buyback programs by the relevant financial authority in the face of the COVID-19 pandemic to preserve capital in case the economic situation deteriorated materially. In some instances, those actions have since eased up and banks have been able to resume returning cash to shareholders.

Interest Rates, the Yield Curve, and Net Interest Margins

Some but not all bank loans are tied to benchmark interest rates plus a margin. Therefore, in the short run, the amount they can charge customers varies accordingly with short rates for credit card debt and longer rates for things like mortgages. Here, we would like to stress that the London Inter-Bank Offered Rate (‘LIBOR’) is being phased out after a series of scandals in the wake of the GFC made LIBOR unappealing in the eyes of key financial regulatory authorities (and various private enterprises as well).

One of the leading candidates to replace LIBOR is the Secured Overnight Financing Rate (‘SOFR’). LIBOR, and in the future, SOFR, are important as they set the benchmark interest rates used to price numerous other forms of credit such as credit cards, auto loans, and more. By the end of December 2021, the phase out of LIBOR is supposed to begin in earnest as LIBOR will no longer be able to be used as the official reference rate. New reference rates, like SOFR, will take its place. Adoption of SOFR as a reference rate has picked up pace in recent quarters and the SOFR-related derivatives market has grown at a robust pace of late. The banking industry is steadily preparing itself for a post-LIBOR world, and we expect the industry will be up to the challenge.

Another key factor is that zero rate deposits don’t tend to move much when rates change (endowment effect). Therefore, higher rates mean higher net interest margins (‘NIMs’) on these deposits. These two factors mean that higher rates tend to mean higher NIMs and vice versa. The banks disclose how much higher and lower rates will affect revenues and the profit impact can be imputed.

That said, we think these short-term impacts can be overblown by the media and even analysts and investors at times. The reality is that the margin or spread changes with competition over a longer period of time. So, if rates are lower for longer, the banks can mark up the margin they charge over these lower rates and cycle through the book to better economics.

Given that the overall banking industry tends to produce cost-of-capital returns on average over time, it suggests a competitive landscape and one that can adjust the levers of profitability to match the exogenous or uncontrollable factors like short-term rates and the shape of the yield curve. Therefore, beware when you hear oversimplifications in the media that banks borrow short and lend long and are simply price takers on both sides according to the whims of the yield curve. We would beg to differ, and we think the financial results of major banking entities will prove out over time. As the outlook for NIMs in the US improved considerably in 2021, we view the domestic banking landscape quite favorably.

Digitalization of Banking

The digitalization that is taking place across so many industries has certainly been taking place in banking over the past decade (especially in the US). Think about how advanced mobile banking apps are now compared to where things stood a decade ago, when most people were in the branch or at the ATM. For instance, the ability to cash checks via mobile apps has saved many households countless hours versus having to wait in line at a physical bank branch. Major banking entities with strong digital operations have been able to slim down their physical branch footprints and rationalize the size of their workforce over the past decade while improving their ability to meet customer demand due to the digitalization of the banking industry. This has gone a long way in improving the industry's cost structure.

The digitalization is also simplifying processes in the back office, taking out people, making things more scalable and repeatable. The biggest banks with the most scale have the largest revenue streams and can afford to stay on top of this trend most easily, while many small-scale banks and credit unions are stuck in the past shuffling paper around with unsophisticated or even no mobile app available. This trend plays right into the hands of the biggest banks in the country and is encouraging consolidation in the industry.

Having a digital competitive edge helps bigger banking entities hold onto clients, win new clients, and ultimately grow their market share. It helps them deliver a better customer experience and frees up branches for sales activities, all while streamlining their cost structure (which in turn frees up additional funds that can be used to invest in their digital operations and/or offer lower cost financials services and products). These trends will continue to help large banking entities and drive further consolidation of market share within the industry--especially in retail banking, but also in commercial banking.

Mergers & Acquisitions

In December 2019, BB&T completed its merger of equals with SunTrust to become Truist (TFC), and TCF Financial completed its merger with Huntington Bancshares (HBAN) in June 2021. We don't think these deals will be the last of major consolidation activities in the U.S. banking industry. Given the digitalization taking place in the banking industry, scale matters even more than it already did.

Retail banking, especially, is mostly about scale. Running large credit card operations is a mass marketing game and the back office certainly benefits from scale. Smaller banks have largely ceded this market to the larger banks already. With the digitalization trend pouring fuel on this fire, we expect M&A to continue apace. Mergers of equals might be a path to success in scaling up to play with the big boys for the regional banks. The recovery in bank stocks from the worst of the COVID-19 pandemic should provide regional banks more financial firepower to make transformative deals to try and seriously compete with the US megabanks.

Business Mix

Having mentioned the upside of being a big bank, let's also talk about a more questionable characteristic of most of the largest banks. Most of these institutions have large investment banking and trading operations. While this clearly is a benefit when it comes time to win over major corporate clients, as they can be a full one-stop shop for all of the clients' needs, it also introduces a volatile and low return on capital earnings stream to the overall earnings mix that needs to be monitored.

Banking firms are increasingly pushing into the wealth management space given the more stable nature of the financial performance of these types of businesses. Growing assets under management ('AUM') is the name of the game, and as AUM grows, so too does earnings in most circumstances. Key geographical markets that financial firms are targeting as it concerns growing their wealth management operations includes Western Europe, North America (specifically the U.S. and Canada), and East Asia.

For the big money center banks, it is the bread-and-butter banking unit (especially retail banking) where the highest returns on capital are made and generally with the smoothest earnings streams (setting aside the GFC and the COVID-19-induced down cycles). Simply put, large scale retail banking operations deserve higher valuations. This can also be true of asset management, wealth management, and payment processing units for those banks that benefit from material operations on these fronts.

Valuation

Banking valuations can be very bi-polar throughout the market cycle. At the trough of the GFC, banks were being priced as if they were going out of business. Some in fact did. Therefore, it was no shock that most banks traded at a discount to tangible net asset value. The banks were being priced as if they would be wound down or as if there was a probability of survival and a probability of failure or permanent capital impairment.

These weightings would change from day to day along with the macro assumptions about the magnitude and duration of the banking crisis and substantial economic downturn. Of course, this happened again with the COVID-19 induced economic downturn. Many banks traded sharply off their highs during the worst of the pandemic, before later recovering in the wake of widespread COVID-19 vaccine distribution efforts and the related improvement in the economic outlook.

Just before the COVID-19 downturn and just before the GFC, analysts and investors were arguing that banks shouldn't suffer from price-to-earnings ('PE') multiples below the overall market. The case was being made those big earnings cycles were a thing of the past, these were growth stocks, and so, there should be no P/E discount. This was and continues to be extremely flawed logic.

The right answer to us is that banks--those that do not face the risk of permanent capital impairment--should be valued based on the premium or discount that they are able to earn relative to book value. It should be based on mid-cycle revenue and margin trends. If a bank does face the risk of permanent capital impairment, at the very least one must introduce a probability-of-zero value into the overall value. More realistically, if this risk is material, the stock is simply "un-investible" as no one ever truly knows (in advance) the magnitude and duration of any particular downturn in the banking cycle.

Fragile banks can tumble like dominoes when things get bad enough.

Bank Panics

The problem with banks as opposed to operating companies is that it is extremely hard to tell which banks will suffer a crisis of confidence and a "run on the bank" by its various stakeholders in the event of a major economic recession or widespread panic in the banking industry. The GFC and the COVID-19 pandemic represent two recent examples of economic downturns that brought about serious concerns for the banking industry, but a down cycle or panic can in fact come in much worse than those events.

Banks operate with significant financial leverage by their very business model. They borrow money to lend money. Most banks are levered approximately 10 times to 1. If the loss content in the assets becomes large enough, and the revenues come under enough pressure, it is like everything is going wrong at once. This is especially true for banks that are only marginal during the good times. They are simply closer to the tipping point in terms of failure.

The other undeniable fact is that perception can quickly become reality. Banks need their depositors to keep their funds in place. Banks need to rollover their market funding. If these conditions don't hold, then a bank can face a liquidity crisis. Once a crisis of confidence starts, it is hard to arrest. In fact, without help from the US Treasury and the Federal Reserve, the GFC could have led to many, many more bank failures and a full-blown depression (which is why fiscal and monetary authorities intervened so aggressively during the GFC and again during the COVID-19 pandemic). So, investors at that time (during the GFC) were left guessing what the next regulatory response would be and whether the medicine would be strong enough to turn around the systemic infection.

It is hard to "double down" on even the strongest bank stocks in an environment like that and one could even argue that it is not as logical as doubling down on strong operating companies with rock-solid balance sheets and strong free cash flows, where the risk of permanent capital impairment is often essentially non-existent. The exception is for a deep-pocketed player like Warren Buffett who by investing enough capital and committing to invest more can almost guarantee a bank's survival.

Regulatory Risk on Both Sides

Regulatory risk could bite the banking industry from both sides. If de-regulation goes too far and the stress tests are thrown out, excesses could easily build up again in the banking industry, cowboy capitalism could ensure, and the next bank panic could follow. On the other side of the coin, some of the most progressive politicians, pundits, and officials seem to still be gunning for the banking and investment banking world in the aftermath of the GFC and the consequences visited upon society. These risks bear watching, especially as the

Federal Reserve is taking more control over large banks' ability to pay out dividends and buy back shares. The reappointed of Federal Reserve Chairman Jerome Powell to a second term as head of the central bank is a welcome sign on this front.

Contagion from Offshore

The lingering impact the COVID-19 pandemic will have on the global banking system as the world economy continues to recover from the worst of the pandemic needs to be monitored going forward. Another big systemic risk to the U.S. banking industry that we see stems from contagion from offshore and specifically from Europe as these large banks are indeed interconnected with large US banks.

If deflation or depression-like environments take hold in Europe (and to a lesser extent Japan), sovereign defaults and domino bank failures could cause severe stress on the global banking system. This kind of stress would certainly spill into the US market and economy. This risk is not easy to handicap but bears close watching. While inflationary pressures are running high in the US and Europe, that could change over the coming years as supply chain bottlenecks fade.

Another major offshore risk worth monitoring concerns China's property market in the wake of widespread defaults and pending defaults from massive property developers like China Evergrande Group and Kaisa Group Holdings (both of which defaulted on their US dollar bonds in 2021). These entities, along with many other Chinese property developers, have sizable offshore debt and immense onshore liabilities.

Stress facing Evergrande Group prompted authorities in China to step in to shore up the domestic property market and ensure homes that were pre-sold to customers by Evergrande and its peers (that have not yet been built) will get completed in a timely manner. Restructuring activities are either underway or soon will be at many Chinese property developers. While these risks appear containable for now, this is a space worth watching.

Cryptocurrencies

The emergence of cryptocurrencies as alternative digital assets represents an interesting development in the financial space. However, we caution that the intrinsic value of cryptocurrencies in the traditional sense such as bitcoin, dogecoin, ether, and other cryptocurrencies is zero.

What gives these cryptocurrencies "value" is the concept of the greater fool theory. That means investors are buying these alternative digital assets for no other purpose than the hope that they will be able to sell these assets at a higher price to another investor in the future. Cryptocurrencies, in and of themselves, do not generate cash flows like traditional businesses and are not a claim on the future cash flows a business might generate like equities are.

These alternative digital assets have little use in the real economy other than offering investors, particularly retail investors using mobile financial apps, a way to gamble 24/7. We do not see the emergence of cryptocurrencies posing a major threat to the established banking industry and efforts to offer decentralized finance ('DeFi') services have not gone very far. This is a space worth watching, of course, though we must stress here that its impact on the real world economy is arguably overblown. For the most part, the appeal of cryptocurrencies over the past decade is the enormous increase in value, in US dollar terms, these alternative digital assets have generated and nothing more, in our view.

Buyer beware.

Our Favorite Banks

Our favorite banks are Bank of America and JPMorgan Chase. These banking institutions have stellar deposit franchises, top-notch digital operations, and are well-managed. Both Bank of America and JPMorgan Chase benefit from cultures that encourage the right kind of risk/reward thinking, as seen through the resilience of their respective business models and financial performance during the worst of the COVID-19 pandemic. If these equities start to trade at a meaningful discount to our fair value estimates, they may be worth considering as long-term investments, in our view.

Both Bank of America and JPMorgan Chase pay out nice dividends and have a history of being shareholder friendly. Additionally, both banking entities are steadily repurchasing their stock and are likely to push through meaningful dividend increases over the coming years as their financial performance rebounds from the worst of the COVID-19 pandemic, aided by the improving macroeconomic background and rising NIMs due to the Federal Reserve embarking on a period of tighter monetary policy.

Company Name	Ticker	Price	Fair Value	Price/FV	Price/Book	DCF Valuation	Relative Valuation	ValueCreation
American Express	AXP	163.68	172.00	0.95	6.22	FAIRLY VALUED	UNATTRACTIVE	GOOD
Bank of America	BAC	43.53	47.00	0.93	1.73	FAIRLY VALUED	ATTRACTIVE	GOOD
Bank of NY Mellon	BK	56.24	57.00	0.99	1.46	FAIRLY VALUED	ATTRACTIVE	GOOD
Citigroup	C	60.26	60.00	1.00	0.80	FAIRLY VALUED	ATTRACTIVE	POOR
Discover Financial	DFS	113.07	122.00	0.93	3.55	UNDERVALUED	UNATTRACTIVE	GOOD
Fifth Third	FITB	42.50	46.00	0.92	1.84	FAIRLY VALUED	ATTRACTIVE	GOOD
Goldman Sachs	GS	385.34	399.00	0.97	1.86	FAIRLY VALUED	UNATTRACTIVE	GOOD
Huntington Bancshar	HBAN	14.97	14.00	1.07	1.02	FAIRLY VALUED	ATTRACTIVE	POOR
HSBC	HSBC	28.50	28.00	1.02	0.69	FAIRLY VALUED	ATTRACTIVE	POOR
JP Morgan	JPM	158.27	173.00	0.91	2.25	FAIRLY VALUED	UNATTRACTIVE	GOOD
KeyCorp	KEY	22.56	22.00	1.03	1.63	FAIRLY VALUED	ATTRACTIVE	GOOD
Morgan Stanley	MS	97.07	99.00	0.98	2.30	FAIRLY VALUED	UNATTRACTIVE	GOOD
M&T Bank	MTB	148.04	158.00	0.94	4.17	FAIRLY VALUED	UNATTRACTIVE	GOOD
Northern Trust	NTRS	117.20	110.00	1.07	2.67	FAIRLY VALUED	UNATTRACTIVE	GOOD
PNC Financial	PNC	196.47	190.00	1.03	2.05	FAIRLY VALUED	UNATTRACTIVE	GOOD
Regions Financial	RF	21.51	23.00	0.94	1.55	FAIRLY VALUED	ATTRACTIVE	GOOD
Truist Financial	TFC	58.37	63.00	0.93	1.18	FAIRLY VALUED	ATTRACTIVE	GOOD
US Bancorp	USB	56.81	59.00	0.96	2.03	FAIRLY VALUED	UNATTRACTIVE	GOOD
Wells Fargo	WFC	48.46	46.00	1.05	1.27	FAIRLY VALUED	ATTRACTIVE	GOOD

The information contained in this report is not represented or warranted to be accurate, correct, complete, or timely. This report is for informational purposes only and should not be considered a solicitation to buy or sell any security. No warranty or guarantee may be created or extended by sales or promotional materials, whether by email or in any other format. The securities or strategies mentioned herein may not be suitable for all types of investors. The information contained in this report does not constitute any advice, especially on the tax consequences of making any particular investment decision. This material is not intended for any specific type of investor and does not take into account an investor's particular investment objectives, financial situation or needs. This report is not intended as a recommendation of the security highlighted or any particular investment strategy. Before acting on any information found in this report, readers should consider whether such an investment is suitable for their particular circumstances, perform their own due-diligence, and if necessary, seek professional advice.

The sources of the data used in this report are believed by Valuentum to be reliable, but the data's accuracy, completeness or interpretation cannot be guaranteed. Assumptions, opinions, and estimates are based on our judgment as of the date of the report and are subject to change without notice. Valuentum is not responsible for any errors or omissions or for results obtained from the use of this report and accepts no liability for how readers may choose to utilize the content. In no event shall Valuentum be liable to any party for any direct, indirect, incidental, exemplary, compensatory, punitive, special or consequential damages, costs, expenses, legal fees, or losses (including, without limitation, lost income or lost profits and opportunity costs) in connection with any use of the information contained in this document. Investors should consider this report as only a single factor in making their investment decision.

Valuentum is not a money manager, is not a registered investment advisor, and does not offer brokerage or investment banking services. Valuentum has not received any compensation from the company or companies highlighted in this report. Valuentum, its employees, independent contractors and affiliates may have long, short or derivative positions in the securities mentioned herein. Information and data in Valuentum's valuation models and analysis may not capture all subjective, qualitative influences such as changes in management, business and political trends, or legal and regulatory developments. Redistribution is prohibited without written permission. Readers should be aware that information in this work may have changed between when this work was written or created and when it is read. There is risk of substantial loss associated with investing in financial instruments.

Valuentum's company-specific forecasts used in its discounted cash flow model are rules-based. These rules reflect the experience and opinions of Valuentum's analyst team. Historical data used in our valuation model is provided by Xignite and from other publicly available sources including annual and quarterly regulatory filings. Stock price and volume data is provided by Xignite. No warranty is made regarding the accuracy of any data or any opinions. Valuentum's valuation model is based on sound academic principles, and other forecasts in the model such as inflation and the equity risk premium are based on long-term averages. The Valuentum proprietary automated textgeneration system creates text that will vary by company and may often change for the same company upon subsequent updates.

Valuentum uses its own proprietary stock investment style and industry classification systems. Peer companies are selected based on the opinions of the Valuentum analyst team. Research reports and data are updated periodically, though Valuentum assumes no obligation to update its reports, opinions, or data following publication in any form or format. Performance assessment of Valuentum metrics, including the Valuentum Buying Index, is ongoing, and we intend to update investors periodically, though Valuentum assumes no obligation to do so. Not all information is available on all companies. There may be a lag before reports and data are updated for stock splits and stock dividends.

Past simulated performance, whether backtested or walk-forward or other, is not a guarantee of future results. For general information about Valuentum's products and services, please contact us at valuentum@valuentum.com or visit our website at www.valuentum.com.