

Global Finance Spotlight

Industry Update

Fed & Inv. Bank B/S Expansion: Lifeline for Leveraged Funds

Fed balance sheet expansion

On 11 Oct, the Fed announced the launch of a liquidity supply operation after the sharp rise in the Secured Overnight Financing Rate (SOFR) on 17 Sep 2019. The Fed's balance sheet expanded by \$0.4tn from late Sep (Figure 6).

The Fed has stressed that this operation is different from QE meant to tamp down long-term interest rates (see comments in Figure 1). However, since Oct 2019 the correlation between stock and credit prices and the Fed's balance sheet has strengthened (Figures 5, 8).

Risk-taking escalated in Jan in anticipation of further Fed balance sheet expansion (Figure 5 stock price rise). Data released post-close on 23 Jan showed the Fed's balance sheet had contracted, possibly helping fuel stock price declines from 24 Jan. The latest data released post-close on 30 Jan shows the Fed's total assets increased by \$5.7bn WoW (+0.1%) to \$4.15tn. This may have helped stabilize falling stock prices.

Impact of Fed liquidity on risk asset prices

We have no doubt there exists a mechanism by which the impact of Fed money market liquidity supply operations is transmitted to long-term rates and risk premia.

First, the Fed's balance sheet expansion likely helped reassure equity and credit market investors, indirectly impacting prices in those markets.

Second, without the Fed's liquidity injection, there was a risk Japanese financial institutions and leveraged funds, which undertake massive dollar fundraising in money markets, could have sold off long-term bonds and credit product holdings.

Key indicators for gauging Fed balance sheet policy

The Fed likely faces a difficult choice when weighing the costs and benefits of liquidity supply operations (and the associated balance sheet expansion). We will monitor the following three factors, which we think the Fed looks to in determining policy: the outlook for liquidity (especially non-reserve liability; Figure 6), volatility and tightening in money markets (Figure 7), and the side effects on risk asset prices (Figure 8).

Amid the climate of falling interest rates and credit spreads, the hunt for yield has spurred activity in the "carry trade", ie investing short-term money in long-term bonds in order to make money on long-short interest rate differentials (incl non-liquidity premium/term spread). The Bank for International Settlements (BIS) has highlighted the role of leveraged funds in that regard (comments in Figure 2).

In our view, massive dollar fundraising in money markets by A) US-based leveraged funds and B) Japanese financial institutions has heightened demand for short-term money. See the rest of this report for more details.

Sector	Financial Services
Sector rating	Equal weight

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Fed & inv. bank B/S expansion: lifeline for leveraged funds

Factors behind risk-off: Pandemic risk and Fed balance sheet

VIX rising, 10y yield falling

The volatility index (VIX) increased from 13.0 on 23 Jan to 18.0 on 3 Feb (Figure 3), and over the same period the S&P500 fell 2.3%. Also over that period, the 10y UST yield fell from 1.73% to 1.53%, and the number of Fed rate cuts this year priced in by fed funds futures rose from 1.06 to 1.80 times (Figure 9).

1) Concerns over the economic impact of the novel coronavirus outbreak and 2) adjustment to trading strategies prompted by expectations for Fed balance sheet (B/S) expansion (discussed in the next section) prompted risk-off, but 3) expectations for Fed easing have supported risk asset prices.

Investors can't stop taking risks

For investors with fixed yields on debt (pension funds, life insurers, individual investors), declines in the risk-free rate fuel stepped up risk-taking activity ([see 12 Dec 2019 "Magma Building 1" report](#)). Even amid the risk-off mood YTD, some low-valuation stocks like Deutsche Bank, which lagged last year, have bucked this trend (Figure 4). On 4 Feb, the NASDAQ reached a new all-time high.

Meanwhile, if the risk of a "once-in-a-decade" recession (Figure 12) increases, investors may stop this kind of risk-taking. Moreover, there is also a risk that individual investors could sell off credit products, as they did in the periods Dec 2015 to Feb 2016 and Oct-Dec 2018 ([see 16 Dec 2019 "Magma Building 2" report](#)).

Caution over economic & credit cycles

The Oct-Dec 2018 wave of risk-off sentiment occurring late in the economic and credit cycle expansion (especially US/China corporate sector credit) was triggered when the consensus shifted to the view that the market had entered the late cycle phase. It was a market move that reflected investors, corporates, and consumers being excessively sensitive to an inflection in the cycle.

Early in 2019, the Fed halted its B/S tapering and cut rates, halting the slide in economic data. A sense of relief that the next recession had been deferred by 1-2 years spread across markets (Figure 12). Fed rate cuts and B/S expansion have supported the expansion of both the economy and debt (Figures 8, 10).

At the same time, however, in the event of a recession caused by external shocks, the scope for additional easing to support the economy and credit markets has decreased (Note 1). Also, corporate debt-to-GDP ratios in the US and China have increased further, making those economies more vulnerable to unexpected external shocks.

It will be necessary to closely monitor how the spread of the coronavirus impacts already-weak sentiment among business managers (comments in Figure 1).

Note 1: For example, since the post-WWII US recession, the Fed has cut the fed funds rate by 4-6% on average to support the corporate interest coverage ratio. But now it only has about 1.5% scope to cut.

Fed balance sheet policy

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Costs & benefits of Fed balance sheet expansion

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Key indicators for gauging Fed balance sheet policy

The Fed likely faces a difficult choice when weighing the costs and benefits of liquidity supply operations (and the associated balance sheet expansion). We will monitor the following three factors, which we think the Fed looks to in determining policy.

The outlook for liquidity (especially non-reserve liability; Figure 6), volatility and tightening in money markets (Figure 7), and the side effects on risk asset prices (Figure 8).

Consequences of dollar liquidity shortage

Dollar crunch in money markets

Apart from seasonality (timing of tax payments, etc), we think the surge in repo rates reflected the following structural changes.

1) Decrease in liquidity owing to monetary policy (Fed balance sheet tapering), 2) decrease in liquidity owing to financial regulations like liquidity regulations (LCR), liquidity stress tests (CLAR), recovery & resolution plans (RRP), and money market fund (MMF) reforms, 3) increased demand for liquidity owing to the stepped-up hunt for yield.

Risk-taking by leveraged funds and Japanese financial institutions

Regarding point 3 above, amid the climate of falling interest rates and credit spreads, the hunt for yield has spurred activity in the "carry trade" (Note 2), ie investing short-term money in long-term bonds in order to make money on long-short interest rate differentials (incl non-liquidity premium/term spread). The Bank for International Settlements (BIS) has highlighted the role of leveraged funds in that regard (comments in Figure 2).

In our view, massive dollar fundraising in money markets by A) US-based leveraged funds and B) Japanese financial institutions has heightened demand for short-term money.

A) US-based leveraged funds take on high amounts of leverage by repeating the following: use equity sales proceeds to buy long-term bonds and use them as collateral to raise money in repo markets to fund purchases of other long-term bonds, which are re-collateralized for more long-term bond purchases, and so on (Figure 19).

B) Japanese financial institutions, specifically life insurers and non-GSIB banks, have few stable sources of dollar funding. For these entities to invest in dollar-denominated bonds, they often first raise dollars in swap/forward/repo markets (forex hedged; mostly 3-month maturities). This money is then invested in 5-10y bonds (Treasury, munis, mortgage bonds, corporate bonds, etc).

Note 2: In general, liquidity is high for short-duration funding and low for longer-duration investments like long-term bonds (liquidity and maturity transformation).

Risk of "negative carry" and asset selloffs

Leverage is being used to amplify yields, and so is trending higher (Figure 13). Use of derivatives is spreading as well (Figures 14-15).

This has been enabled by ample dollar liquidity and low volatility in markets (Figure 18).

The above described trades are subject to uncertainty (risk) in that future liability funding costs are unknown. There is risk of "negative carry" when rolling over liabilities, ie funding costs exceed yield (returns) on assets. If the kind of repo market volatility seen in Sep 2019 and rising costs continue, there is a real risk some investors could be forced to sell off long-term bond holdings.

REITs with 10% yields: Ultra-leveraged vehicles

Spread: 1% x leverage 10x

Figures 16 and 17 show total assets and leverage (total assets / capital) for Annaly Capital and AGNC, listed agency mortgage REITs (Note 3) that are typical examples of leverage funds. Both have extremely high dividend yields at around 10% and are popular funds with individual investors. Spreads (ROA) are around 1%, but leverage is roughly 10x equity procured from the market, which has boosted dividend yield on equity to approx 10% (Figure 19).

Around 90% of liabilities are from short-term (within 6 months) repo funding (70-80% within 3 months). 80-90% of assets consist of 30-year MBS (residential mortgage-backed securities). They have worked to control interest risks (asset & liabilities duration mismatch risk) mainly using swaps, but mismatch risk tends to rise rapidly when MBS convexity risk prompts sharp interest rate fluctuations.

Leverage absorbs major dollar liquidity

These REITs operated at leverages of around 9x through 2012 but incurred damage to capital after an interest rate jump from the "Bernanke shock" caused a fall in asset holdings in 2013. Providers of repo funding became cautious about extending credit to these REITs, which subsequently operated at a leverage of around 7x for some time.

From 2H 2018, however, these REITs rapidly hiked leverage (Figure 17), and we think they and other types of leveraged funds absorbed a large amount of dollar funding in money markets, reflecting surging repo rates on 17 Sep 2019.

Note 3: Agency mortgage REITs are a type of mortgage REIT (mREIT) that invests in mortgage securities and are called this since they invest mainly in agency MBS. In recent years, they have expanded their investments to credit products (mainly BB rating or below), including RMBS, CMBS, and leveraged loans (total assets: from several % to approx 10%). Being classified as REITs, over 90% of agency mortgage REIT profits are distributed but are also tax exempt.

Earnings opportunities for investment banks & securities firms

Investment bank balance sheet expansion to counteract dollar shortage

In response to a lack of market and investor liquidity, investment banks have increased provision of repo facilities and have made progress in monetization. Investment bank division trading assets for JPMorgan Chase, Bank of America, and Citigroup (4Q 2019 average) rose 5% YoY to \$112.6bn (partially based on estimates; Figure 20).

Repo assets for Nomura HD, Daiwa Securities Group, Mizuho Securities, and Mitsubishi UFJ Securities rose ¥4.3tn (+11% YoY) as of end-Dec (Figure 21).

Repo markets normally use agency MBS and other high-grade bonds as collateral, so margins are low for investment banks. However, there are cases of these transactions leading to high-margin structured transactions. Agency mortgage REITs are a destination for investment bank repo assets, but these funds have recently increased investment in low-grade securitized products.

Financing business (incl repo) enhancement

During its investor day on 29 Jan, Goldman Sachs aimed to increase FICC business financing earnings (via repos & credit) as part of its plan to improve earnings (Figure 2 comments; Figures 22-26).

During a conference call on 30 Jan, Nomura CFO Takumi Kitamura explained the reasons for increasing the repo book (Figure 2 statement). Just like Goldman Sachs, Nomura is emphasizing stable FICC financing earnings.

Figure 1. Collected comments (Fed balance sheet policy)

Fed liquidity supply

11 Oct 2019, FRB ["In light of recent and expected increases in the Federal Reserve's non-reserve liabilities, the Federal Reserve will purchase Treasury bills at least into the second quarter of next year in order to maintain over time ample reserve balances at or above the level that prevailed in early September 2019."](#)

[In addition, the Federal Reserve will conduct term and overnight repurchase agreement operations at least through January of next year to ensure that the supply of reserves remains ample even during periods of sharp increases in non-reserve liabilities, and to mitigate the risk of money market pressures that could adversely affect policy implementation.](#) These actions are purely technical measures to support the effective implementation of the FOMC's monetary policy, and do not represent a change in the stance of monetary policy."

["Without these purchases, we expect a major decline in reserve levels in the next few months due to a recent and expected rise in non-reserve liabilities \(incl money in circulation\)."](#)

["The Committee directs the Desk to continue rolling over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and to continue reinvesting all principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month."](#)

29 Jan 2020, FRB ["In light of recent and expected increases in the Federal Reserve's non-reserve liabilities, the Committee directs the Desk to continue purchasing Treasury bills at least into the second quarter of 2020 to maintain over time ample reserve balances at or above the level that prevailed in early September 2019. The Committee also directs the Desk to continue conducting term and overnight repurchase agreement operations at least through April 2020"](#) to ensure that the supply of reserves remains ample even during periods of sharp increases in non-reserve liabilities, and to mitigate the risk of money market pressures that could adversely affect policy implementation."

["The Committee directs the Desk to continue rolling over at auction all principal payments from the Federal Reserve's holdings of Treasury securities and to continue reinvesting all principal payments from the Federal Reserve's holdings of agency debt and agency mortgage-backed securities received during each calendar month."](#)

QE aimed at long-term interest rate decline is completely different

8 Oct 2019, FRB Chair Jerome Powell: "My colleagues and I will soon announce measures to add to the supply of reserves over time." ["I want to emphasize that growth of our balance sheet for reserve management purposes should in no way be confused with the large-scale asset purchase programs that we deployed after the financial crisis."](#) "Neither the recent technical issues nor the purchases of Treasury bills we are contemplating to resolve them should materially affect the stance of monetary policy." "This is not QE."

11 Oct 2019, FRB ["Large scale asset purchases conducted by the Federal Reserve during the financial crisis and its aftermath were concentrated in purchases of longer-term securities—principally longer-term Treasury securities and agency mortgage-backed securities. These operations were aimed at putting downward pressure on longer-term interest rates. The associated easing in financial conditions then helped to support economic recovery, particularly at a time when the traditional tool of monetary policy—the federal funds rate—had already been lowered to its effective lower bound. The purchases of Treasury bills announced on October 11 should have little if any effect on longer-term interest rates and other asset prices and thus should have little if any effect on household and business spending decisions and the overall level of economic activity. These purchases are purely technical operations aimed at maintaining reserves in the banking system at an ample level that supports the efficient and effective implementation of monetary policy."](#)

29 Jan 2020, FRB Chairman Jerome Powell: "All of these technical measures are designed to support the efficient and effective implementation of monetary policy." ["In terms of what affects markets, you know, I think many things affect markets. It's very hard to say with any precision at any time what is affecting markets."](#) ["It is to return reserves to an ample level... We expect that to happen during the second quarter."](#)

Balance sheet expansion comes with side effects

Minutes from 10-11 Dec 2019 FOMC, released on 3 Jan 2020: "A few participants raised the concern that keeping interest rates low over a long period might encourage excessive risk-taking, which could exacerbate imbalances in the financial sector. These participants offered various perspectives on the relationship between financial stability and policies that keep interest rates persistently low. They remarked that such policies could be inconsistent with sustaining maximum employment, could make the next recession more severe than otherwise, or could strengthen the case for the active use of macroprudential tools to guard against emerging imbalances."

15 Jan 2020, Federal Reserve Bank of Dallas President Robert Kaplan: "Many market participants believe that growth in the Fed balance sheet is supportive of higher valuations and risk assets." "The Fed balance sheet is not free and growing the balance sheet has costs." "All three of those actions are contributing to elevated risk-asset valuations," "And I think we ought to be sensitive to that." "It's a derivative of QE when we buy bills and we inject more liquidity, it affects risk assets. This is why I say growth in the balance sheet is not free. There is a cost to it." "I think we've done what we need to do up until now. But I think it's very important that we come up with a plan and communicate a plan for winding this down and tempering balance sheet growth." "It would be healthy to get to a point where, certainly, we don't need to do these daily and term [repo] operations. But I also want to do that in a way that has a structure and mechanisms in place that will again temper, limit, restrain the growth in the balance sheet overall."

Liquidity supply effect verification & standing repo facility

9 Jan 2020, FRB Vice Chair Richard H. Clarida: "In January 2019, my FOMC colleagues and I affirmed that we aim to operate with an ample level of bank reserves in the U.S. financial system. And in October, we announced and began to implement a program to address pressures in repurchase agreement (repo) markets that became evident in September. To that end, we have been purchasing Treasury bills and conducting both overnight and term repurchase operations, and these efforts were successful in relieving pressures in the repo markets over the year-end. As we enter 2020, let me emphasize that we stand ready to adjust the details of this program as appropriate and in line with our goal, which is to keep the federal funds rate in the target range desired by the FOMC. As the minutes of the December FOMC meeting suggest, it may be appropriate to gradually transition away from active repo operations this year as Treasury bill purchases supply a larger base of reserves, though some repo might be needed at least through April, when tax payments will sharply reduce reserve levels."

15 Jan 2020, Federal Reserve Bank of Philadelphia President and CEO Patrick Harker: "Central to this event is the question of why the liquidity did not flow smoothly to where it was needed most. Are some of the market's pipes rusty? Clogged? Are more needed? Has regulation inadvertently contributed to some erosion or blockage?" "These measures clearly worked, with the effective fed funds rate maintaining a virtually constant level since October, and repo markets staying calm." "We are in the process of evaluating the potential costs and benefits, and exploring possible designs as well as alternatives, so it is still very much in the discourse, rather than the decision, phase."

Minutes from 10-11 Dec 2019 FOMC, released on 3 Jan 2020: "As reserve levels increased, the distribution of reserves across bank types became comparable with where it was in early September. The federal funds rate and other overnight money market rates fell modestly and were close to the interest on excess reserves (IOER) rate for most of the period. The intraday dispersion of rates was also lower than when reserves were at similar levels before September. In addition to helping keep reserves ample, repo operations likely have reduced pressures in money markets and the dispersion in money market rates." "Money market rates are often volatile around year-end, and Federal Reserve operations are not intended to eliminate all year-end pressures but rather to ensure that reserve supply remains ample and to mitigate the risk that such pressures could adversely affect the implementation of monetary policy." "Various participants remarked on issues related to the implementation of monetary policy, highlighting topics for further discussion at future meetings. Among the topics mentioned were the potential role of a standing repo facility in an ample-reserves regime, the setting of administered rates, and the composition of the Federal Reserve's holdings of Treasury securities over the longer run."

Sentiment & the coronavirus

Minutes from 10-11 Dec 2019 FOMC, released on 3 Jan 2020: "With respect to the business sector, participants saw trade developments and concerns about the global economic growth outlook as the main factors contributing to weak business

[investment and exports. Participants generally expected these factors to continue to damp business investment and exports.](#)

29 Jan 2020, FRB Chairman Jerome Powell: "I would just tell you that, of course, we are very carefully monitoring the situation (ie coronavirus)...the impact on Chinese production will likely be obvious at least in the near term." "There are some signs that global growth may be stabilizing" "Nonetheless, uncertainties about the outlook remain."

31 Jan 2020, FRB Vice Chair Richard H. Clarida: "([impact of the coronavirus impact in China](#)) It is a wild card," "We're looking into how it translates into the outlook for Chinese growth, for global growth and for how it impacts U.S." "if this were to result in, say, a one or two-quarter slowdown in growth, that's probably not something that changes the big picture. But I do agree it's a challenging situation. We're going to keep on top of it." "([Yield curve reversal](#)) This is really driven not so much by an outlook for the U.S. economy, but globally when there is uncertainty moneyflows into the U.S., " "The tends to lower yields."

Sources: FRB, SMBC NIKKO

Figure 2. Collected comments (US & Japanese financial institution balance sheet policies)

Role of leverage funds

8 Dec 2019, BIS "September stress in dollar repo markets: passing or structural?" "[Yet none of these temporary factors can fully explain the exceptional jump in repo rates.](#)" "The four largest US banks specifically turned into key players: their net lending position (reverse repo assets minus repo liabilities) increased quickly, reaching about \$300 billion at end -June 2019." "[The big four banks appear to have turned into the marginal lender, possibly as other banks do not have the scale and non-bank cash suppliers such as money market funds \(MMFs\) hit exposure limits.](#)" "[At the same time, increased demand for funding from leveraged financial institutions \(eg hedge funds\) via Treasury repos appears to have compounded the strains of the temporary factors.](#)" "Shifts in repo borrowing and lending by non-bank participants may have also played a role in the repo rate spike. [Market commentary suggests that, in preceding quarters, leveraged players \(eg hedge funds\) were increasing their demand for Treasury repos to fund arbitrage trades between cash bonds and derivatives. Since 2017, MMFs have been lending to a broader range of repo counterparties, including hedge funds, potentially obtaining higher returns.](#) These transactions are cleared by the Fixed Income Clearing Corporation (FICC), with a dealer sponsor (usually a bank or broker-dealer) taking on the credit risk. The resulting remarkable rise in FICC-cleared repos indirectly connected these players. During September, however, quantities dropped and rates rose, suggesting a reluctance, also on the part of MMFs, to lend into these markets. Market intelligence suggests MMFs were concerned by potential large redemptions given strong prior inflows. Counterparty exposure limits may have contributed to the drop in quantities, as these repos now account for almost 20% of the total provided by MMFs. "

"[Some asset managers use derivatives to manage their risk or replicate a portfolio. For instance, ETFs may use derivatives to help their return track a particular target. Funds which invest in fixed income securities may naturally have use for IRD products. Such funds have also been expanding in terms of AUM, with an increasing share of them in the form of ETFs.](#) Gross derivatives positions for asset managers and leveraged funds are increasing faster than those of dealers. They were 37% larger from April 2016 to April 2019 for three-month eurodollar contracts on the Chicago Mercantile Exchange, as compared with 18% for dealers."

Impact of results

14 Jan 202, JPMorgan Chase CFO Jennifer Piepszak: "[On the Wholesale side, the Fed balance sheet expansion was for sure a tailwind for us.](#) Although I would say the more meaningful portion of our deposit growth on the Wholesale side in the quarter was from strong organic growth and client acquisition. [It was the right thing to do and provided stability in the repo markets.](#)"

15 Jan 2020, Goldman Sachs CFO Stephen Scherr: "In the fourth quarter, FICC net revenues were \$1.8 billion, up 5% sequentially and up 63% year-over-year. Our growth versus last year was driven by higher FICC intermediation revenues where we saw better performance as well as [higher FICC financing revenues, notably in repo.](#)" "[Over the course of 2019, we deployed balance sheet, by example, against repo, where there was demand for liquidity. We grew balance sheet so as to stand as an intermediary of liquidity for our clients. So it grows as a function of client demand.](#)"

30 Jan 2020, Nomura Holdings CFO Takumi Kitamura: "Our balance sheet at the end of December was 46.2 trillion yen, an

increase of approximately 0.5 trillion yen from the end of September, due mainly to an increase in repo transactions.” [“Although recent Wholesale performance in January has eased off slightly from December when the market was rallying, we maintain good momentum with Fixed Income, particularly Rates products, driving revenues.”](#) (For the spread tightening) [In the third quarter, we believe the environment was favorable. In the fourth quarter, there may be slight normalization.](#)

31 Jan 2020, Mitsubishi UFJ Securities Holdings: [“At overseas subsidiaries, revenue increased in total due to the expansion in repo business in America, as well as the growth in the derivative and interest trading businesses in Europe.”](#)

FICC financing business (incl repos & credit) enhancement

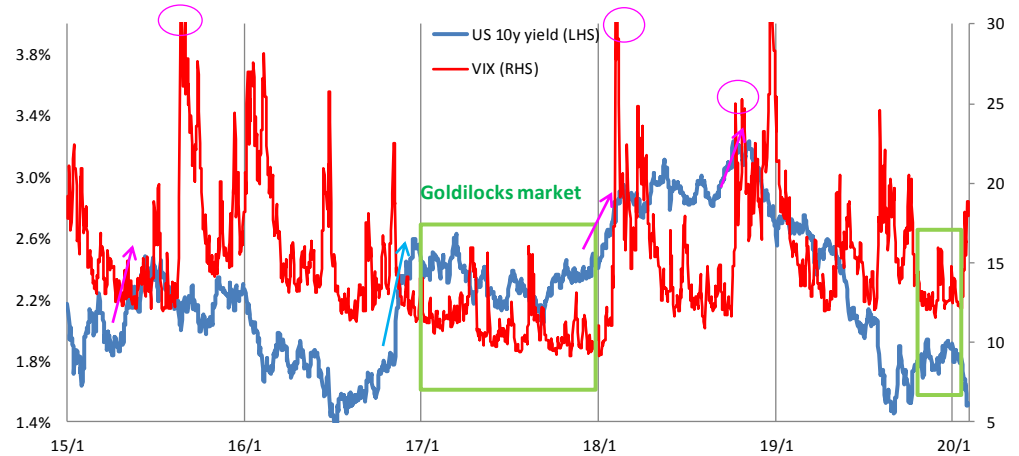
29 Jan 2020, Goldman Sachs CFO Stephen Scherr: “Since 2015, our market risk-weighted assets have decreased by 38% while our credit RWA's have increased by 16%. As we've continued to increase lending and financing activities.” “And our financing activities within Global Markets, for example, prime and repo are secured and appropriately structured.”

29 Jan 2020, Goldman Sachs Global Co-Head, Securities Division Ashok Varadhan: [“30% of our revenues now come from financing, up from 22% and secured financing activity tends to be less volatile more capital-friendly and shorter dated.”](#) 95% of our cash inventory is off our books in less than a year. Half of our derivative contracts mature in less than a year as well.”

29 Jan 2020, Goldman Sachs Global Co-Head, Securities Division James Esposito: [“Last year at Goldman 19% of our FICC revenues resulted from financing activities. That compares to a US peer group average of 32%. This financing revenue gap between us and our US peers equates to about \\$1.4 billion annually.”](#) So we are talking about a large gap here. We have a detailed plan that we've been rolling out the increase our FICC financing revenues materially from here. [But I should caution, we're going to be incredibly mindful of where we are in the current credit cycle.](#) Most of this increase financing activity will either come in investment grade equivalent form or be secured by high quality collateral.”

30 Jan 2020, Nomura Holdings CFO Takumi Kitamura: [“If we think about the most recent updated trends, the repo market is, in a way, appealing. Last year, as you know, the Fed, there was a spike in the repo market and then market liquidity was taken into consideration by the Fed and closely monitored, but demand seems to be -- continues to be tight according to our perspective. So in this context, we think that there continues to be business opportunities. RWA, we think that stable income can be gained and the attraction of this business continues,”](#) but our competitors also are focusing on this area. So we are not thinking of certainly increasing our balance sheet just to concentrate on this business.” [“There is also a Brexit. So cross-currency repo, I think there is some level of demand for cross-currency repo.”](#) “As for repo, revenue itself, in the overall picture, relatively speaking, it is not very large.” [“As for agency mortgage, the absolute level is still in the historical lowest sphere, down. New issuances were brisk in 3Q. Refinancing rose in December with prepayments. If we look at the results month by month, we did well in December. U.S.-China trade friction was rather deescalated according to the news and on the 12th, the U.K. general elections had taken place. So the market went into a risk-on environment. And as a result, we saw increase in client flow and the direction of the market was rather clear.”](#) [\(The reason earnings rose amid no RWA growth\) Some low profitability, low-performing businesses were substantially reduced. And during this meeting, as I have been saying \(repos increased\) for some time, repo does not use RW --almost no RWA is used, although repo does use balance sheet.”](#)

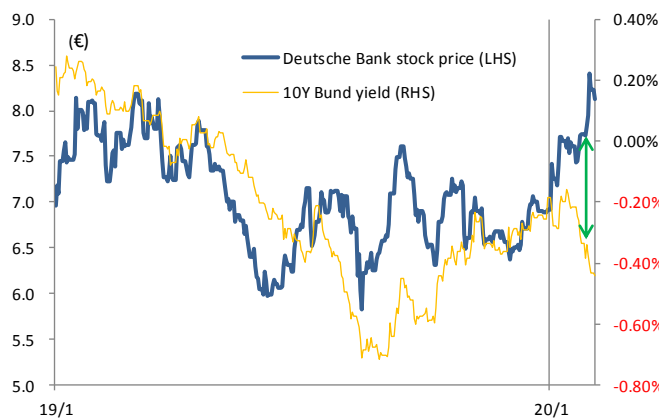
Sources: FRB, BIS, Teleconferences, Company materials, SMBC NIKKO

Figure 3. Two major drivers of global financial market

Sources: Bloomberg, SMBC NIKKO

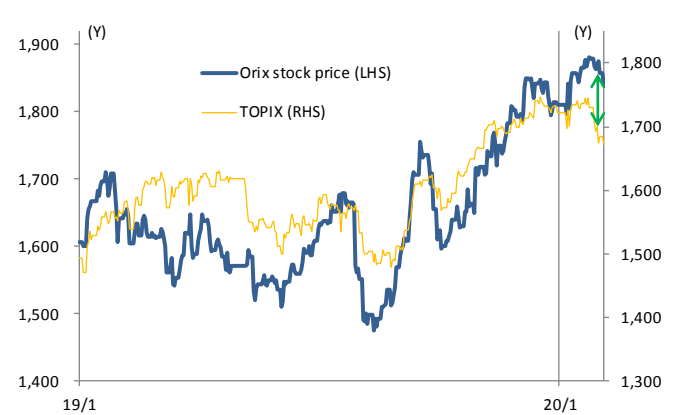
Figure 4. Examples of names that could rise inversely in 2020

Deutsche Bank

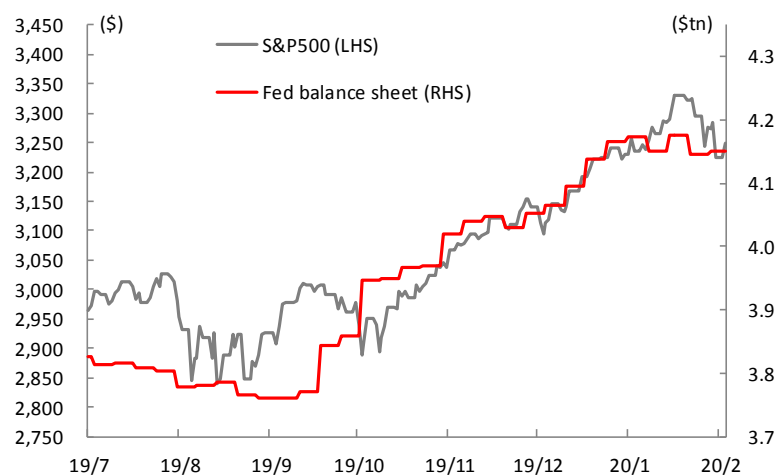


Sources: Bloomberg, SMBC NIKKO

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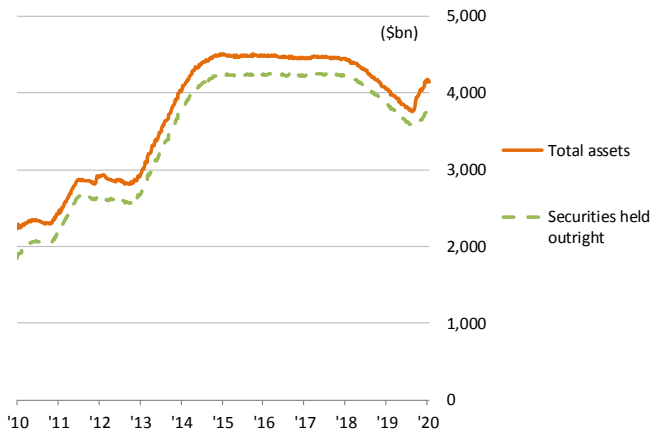
Sources: Bloomberg, SMBC NIKKO

Figure 5. Fed balance sheet expansion & share price rises

Sources: Bloomberg, SMBC NIKKO

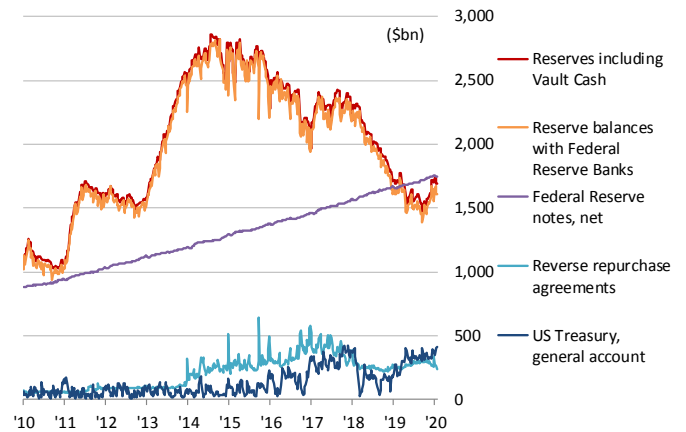
Figure 6. Fed balance sheet policy-based key aim 1) reserves

Assets (incl securities)



Source: Bloomberg, SMBC NIKKO

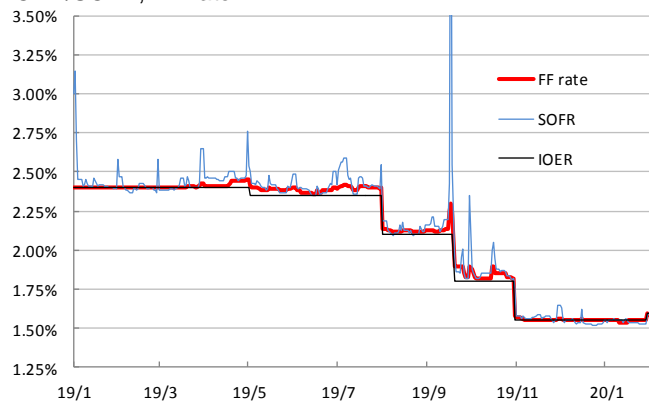
Liabilities



Source: Bloomberg, SMBC NIKKO

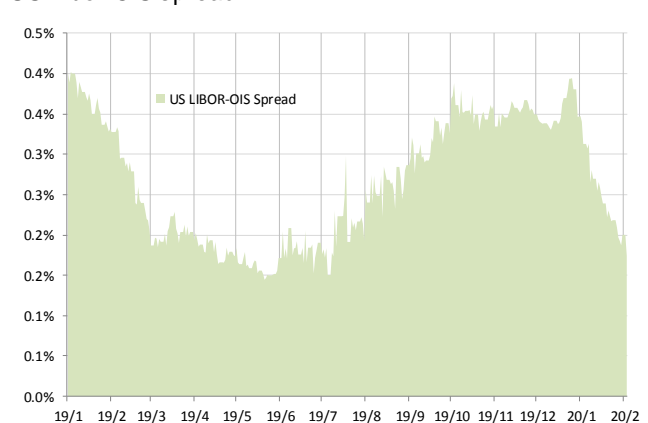
Figure 7. Fed balance sheet policy-based key aim 2) money markets

IOER/SOFR, FF rate



Source: Bloomberg, SMBC NIKKO

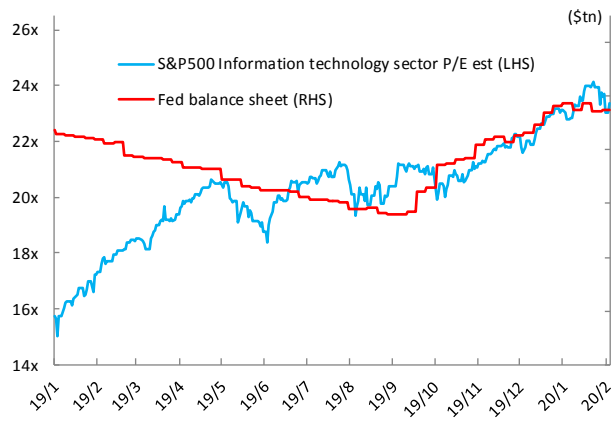
US Libor-OIS spread



Source: Bloomberg, SMBC NIKKO

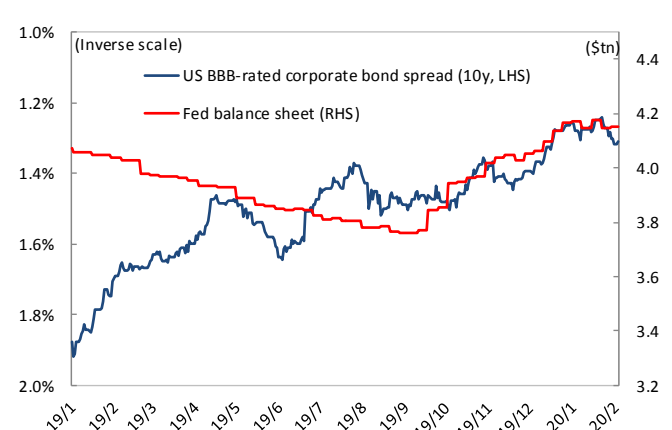
Figure 8. Fed balance sheet policy-based key aim 3) risk asset prices

Stock valuations

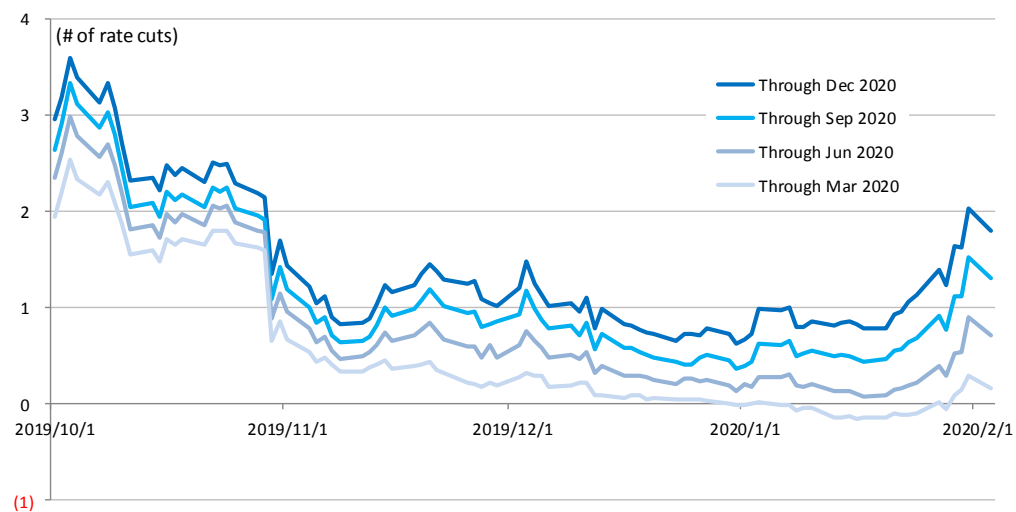


Source: Bloomberg, SMBC NIKKO

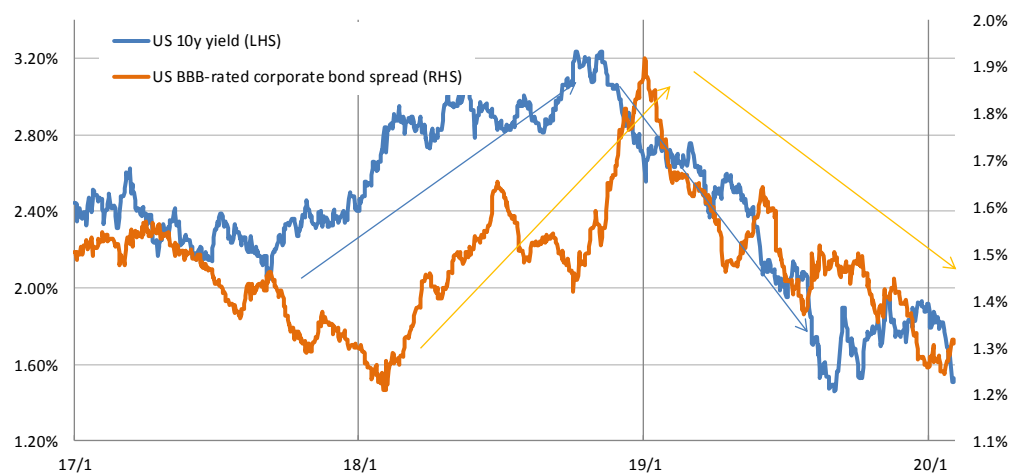
Credit valuations



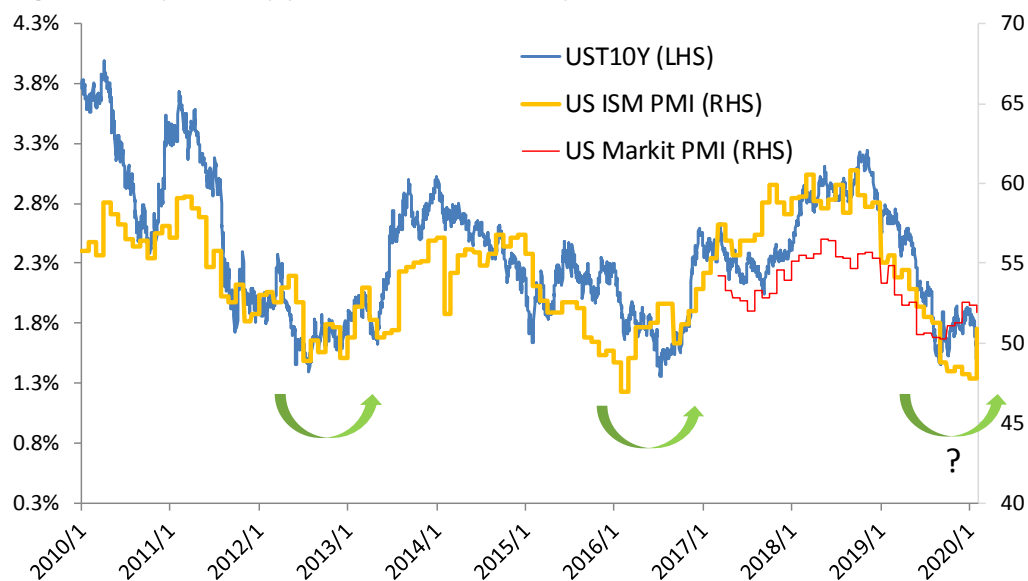
Source: Bloomberg, SMBC NIKKO

Figure 9. # of rate cuts through end-2020 priced in by futures market

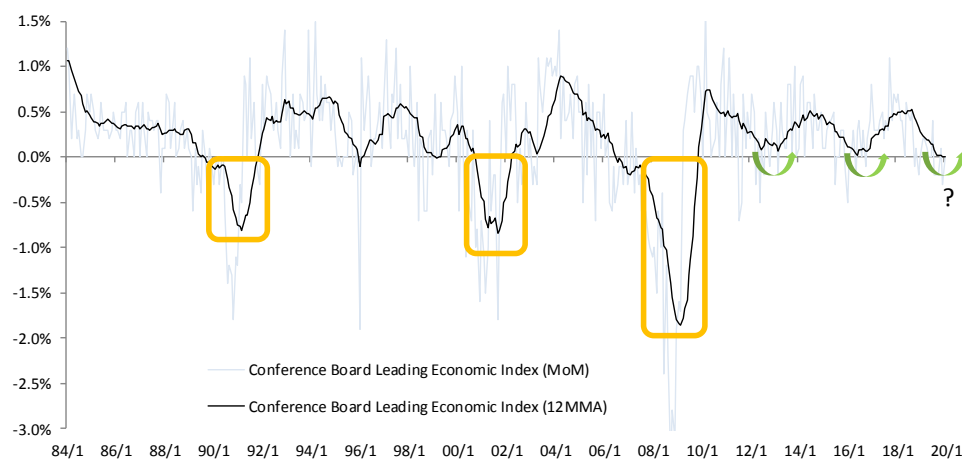
Sources: Bloomberg, SMBC NIKKO

Figure 10. US 10y yield and credit spread

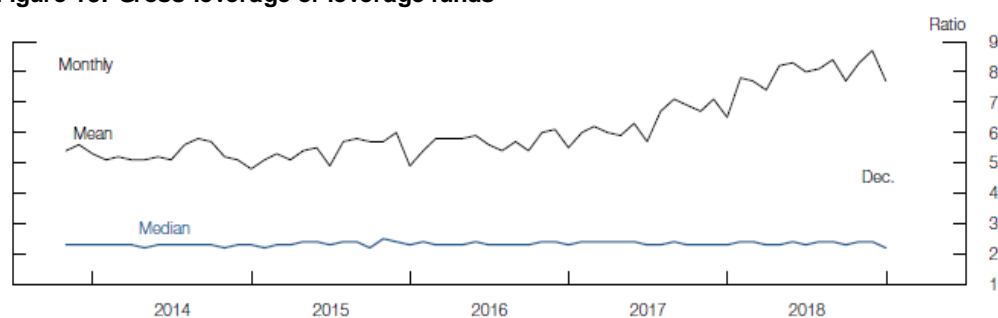
Sources: Bloomberg, SMBC NIKKO

Figure 11. 10y Treasury yield can be explained by PMI

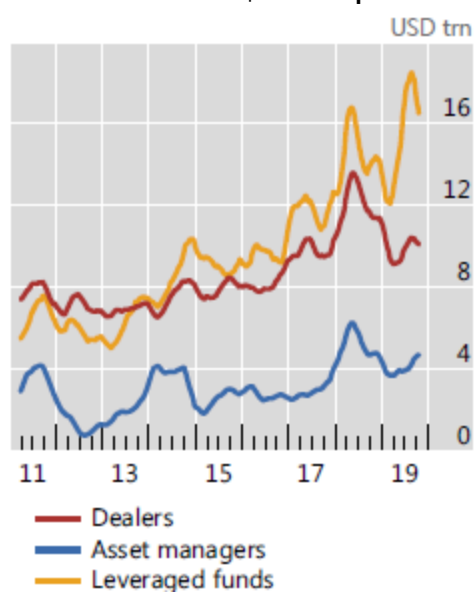
Sources: Bloomberg, SMBC NIKKO

Figure 12. US economic cycle: Essentially tracks credit cycle

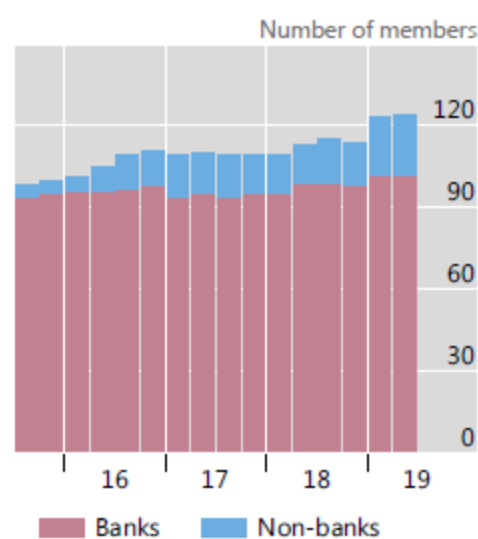
Sources: Bloomberg, SMBC NIKKO

Figure 13. Gross leverage of leverage funds

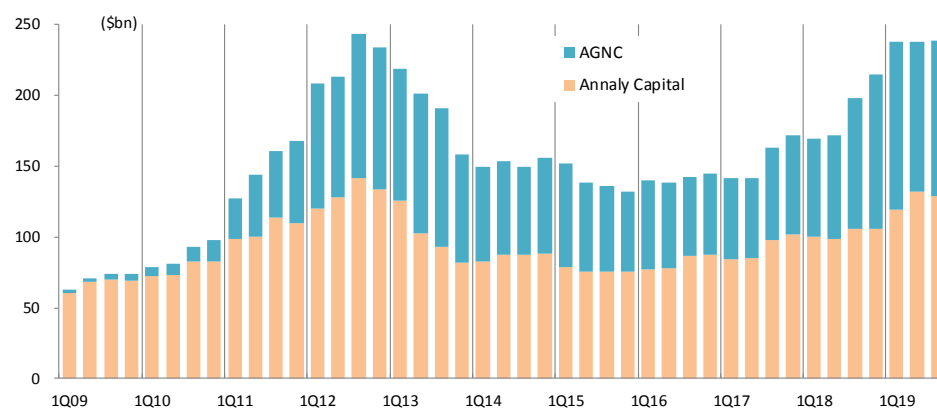
Sources: FRB "Financial Stability Report November 2019", SMBC NIKKO

Figure 14. CME 3-month EUR/\$ futures position

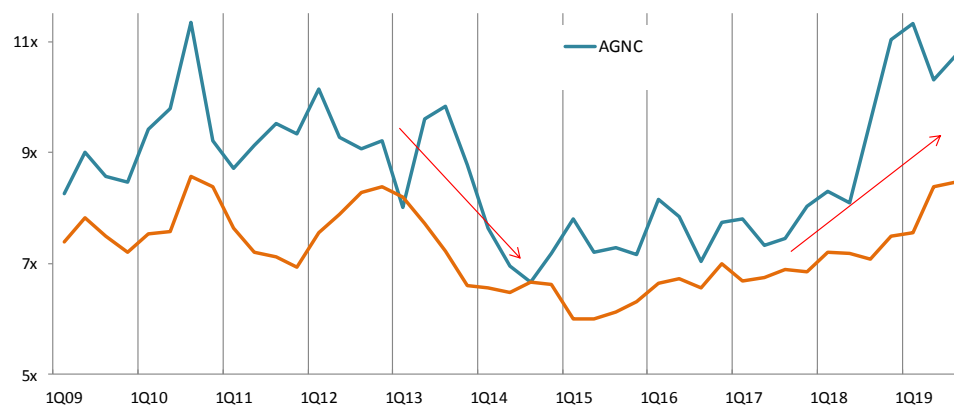
Sources: BIS "Quarterly Review December 2019", SMBC NIKKO

Figure 15. No of LCH interest rate derivative clearing firms

Sources: BIS "Quarterly Review December 2019", SMBC NIKKO

Figure 16. Assets of agency mortgage REIT

Sources: Company materials, SMBC NIKKO

Figure 17. Leverage ratio of agency mortgage REIT (Assets / Equity)

Sources: Company materials, SMBC NIKKO

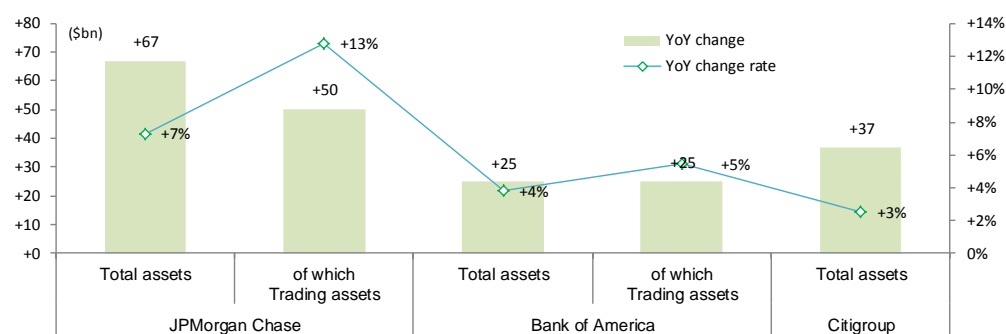
Figure 18. Interest rates & volatility

Sources: Bloomberg, SMBC NIKKO

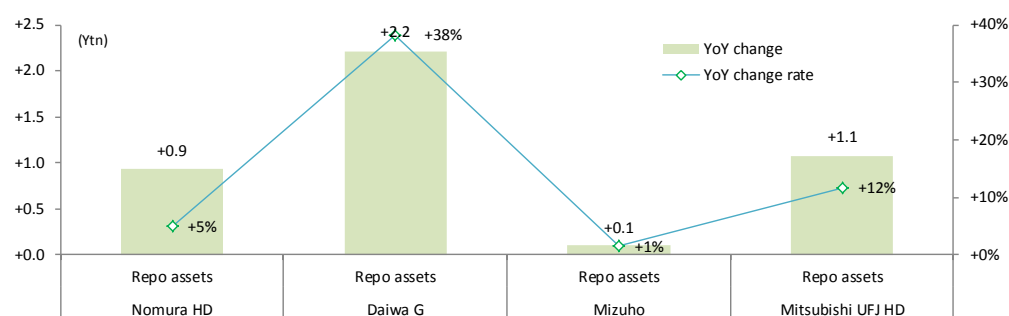
Figure 19. Agency mortgage REIT balance sheets

Asset	Liability	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
30y MBS	3-6m repo	
High yield products	Listed stocks	
		Money Market Funds Investment banks etc.
		Individual investors, etc.

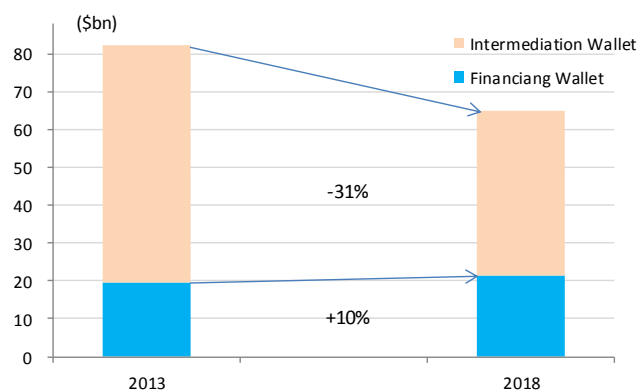
Sources: Bloomberg, SMBC NIKKO

Figure 20. US financial institutions (investment bank units) balance sheet growth (4QFY18-4Q19 average)

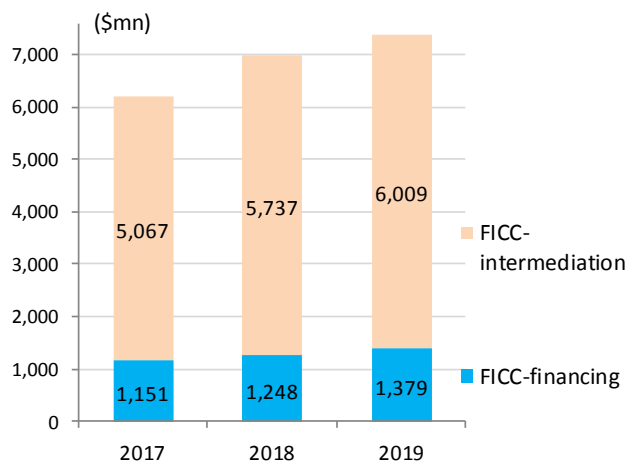
Sources: Company materials, SMBC NIKKO

Figure 21. Japanese securities company balance sheets (repo asset) growth (end-2018-19)

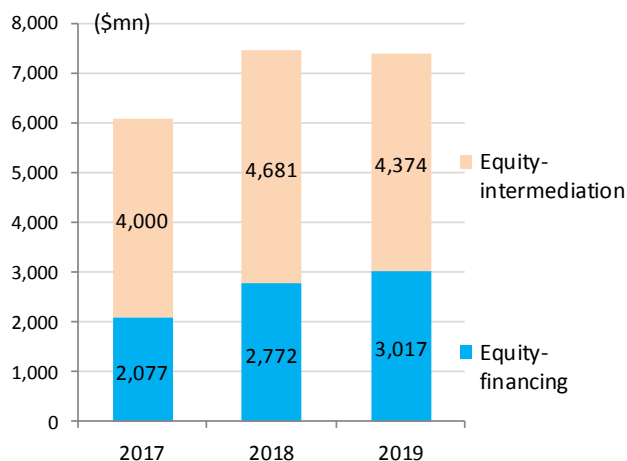
Sources: Company materials, SMBC NIKKO

Figure 22. Investment bank FCC earnings

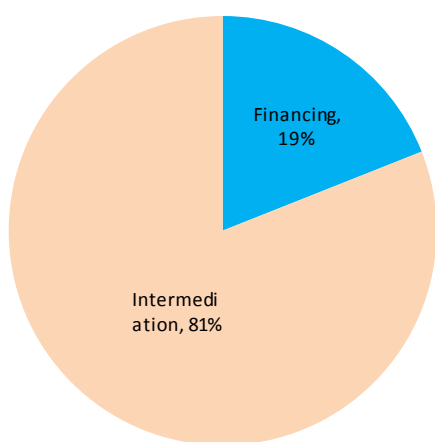
Sources: Goldman Sachs Investor Day materials (29 Jan 2020); SMBC NIKKO

Figure 23. Goldman Sachs FCC earnings

Sources: Goldman Sachs Investor Day materials (29 Jan 2020); SMBC NIKKO

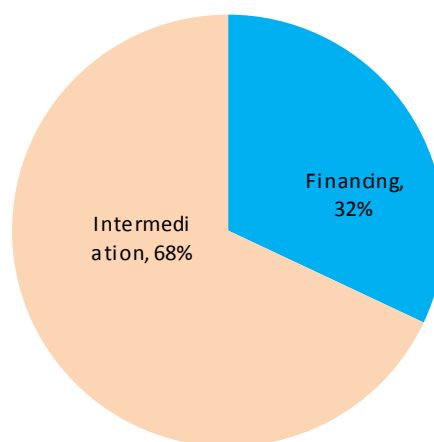
Figure 24. Goldman Sachs equity earnings

Sources: Goldman Sachs Investor Day materials (29 Jan 2020); SMBC NIKKO

Figure 25. FCC earnings weighting (Goldman Sachs, 2019)

2019 Goldman Sachs

Sources: Goldman Sachs Investor Day materials (29 Jan 2020); SMBC NIKKO

Figure 26. FCC earnings weighting (US peers, 2018)

2018 U.S. Peer Average

Sources: Goldman Sachs Investor Day materials (29 Jan 2020); SMBC NIKKO

APPENDIX

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- RS: Rating Suspended

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