Economic Analysis

Financial Stability Report: The Good, the bad and the ugly

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It is hard to imagine that Hollywood could have produced a more dramatic script. There have been more than 1.8M confirmed Covid-19 cases in the United States and 6.4M worldwide. Tragically, there have been almost 400K Covid-related deaths. Since the pandemic hit the U.S., 42M people have filed for unemployment benefits, industrial output contracted by the most in 100 years, while consumption of recreational and transportation services declined by nearly 100% on an annualized basis. Moreover, the contraction in GDP in 2Q20 is poised to erase five years of economic growth while the unemployment rate (UR) skyrocketed from 3.5% in February to 14.7% in April. In the end, the decline in GDP and the spike in the UR will be the worst since the Great Depression.

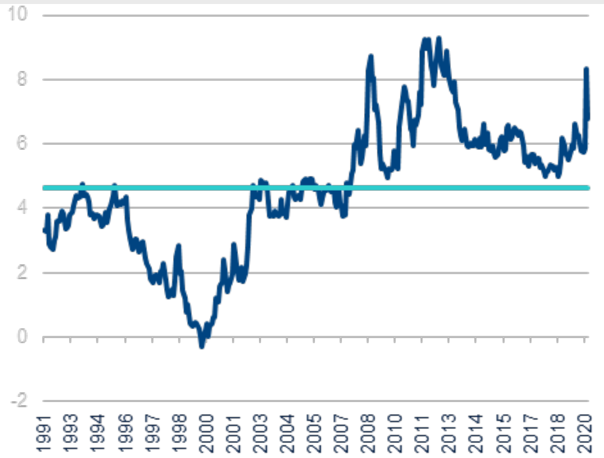
Yet, Covid-19 not only poses an unprecedented risk to the health and economic wellbeing of the U.S., it also presents a substantial risk to financial stability. In a recent report published by the Federal Reserve, it seems that while the measures taken up to this point have been successful in moderating the immense pressures faced by financial markets in the immediate aftermath of the pandemic, financial stability will remain a concern going forward. As it stands, risks to financial stability are not uniform with areas such as household leverage showing significant resilience and others like leveraged loans showing increasing strains.

While there remain significant nuances to each sector such as the level of accommodation that the Federal Reserve is committed to providing, the amount of uptake and the incentives to access emergency lending facilities and the response of the private sector to the evolving risks to the economy from the pandemic fallout, we believe there are varying degrees of inherent risks.

Best in Show

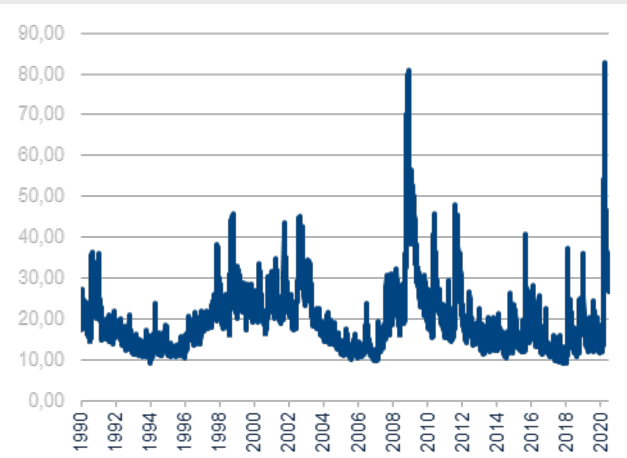
Equity prices: After a historic drop in the earliest phases of the crisis, which saw trading halted on a number of occasions, measures of stress within equity markets have improved. Implied and realized volatility have declined and measures of the premium required above risk free alternatives such as the spread between the forward price-to-earnings ratio and the real 10-year yield have receded. Moreover, the relaxation of stay-at-home orders and reduced voluntary distancing should also boost the outlook for publicly traded firms. However, sector-specific risks in segments that will continue to struggle in a world without a vaccine such as leisure and hospitality will remain elevated and could eventually lead to a bifurcation in the market and a stagnation of equity price gains. Likewise, a resurgence of the virus or another wave could cause a broad reversal in asset valuations.

Figure 1. **Spread of forward price-to-earnings ratio to 10-Year Real Treasury Yield** (PP)



Source: BBVA Research & FRB

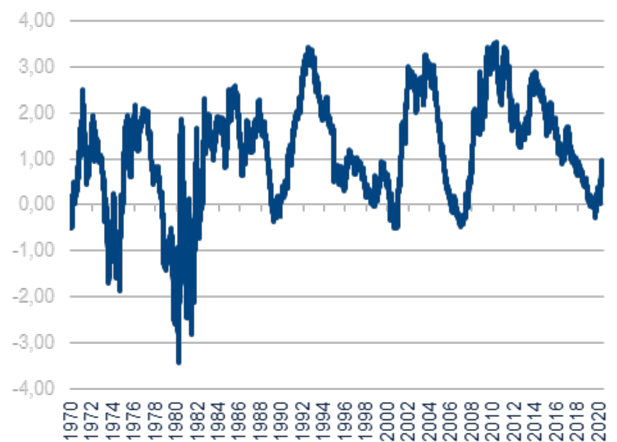
Figure 2. **CBOE Implied Volatility (VIX)** (Index)



Source: BBVA Research & Haver Analytics

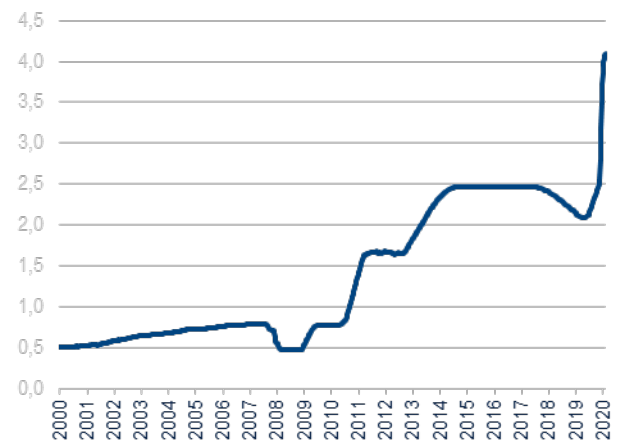
Treasury market: In response to investors trading out of Treasury securities and into cash, dealers experienced a significant accumulation of Treasuries that led to a shortfall in direct market liquidity. The Fed stepped in providing relief through expanded Repo operations, regulatory relief and outright asset purchases. Indicators within the Treasury market such as the bid-ask spread and the market depth suggests that dislocations and severe stress have abated. In addition, the Treasury slope has turned positive after inverting toward the end of February.

Figure 3. **Treasury Yield Curve Slope** (10Y-1Y BP)



Source: BBVA Research & Haver Analytics

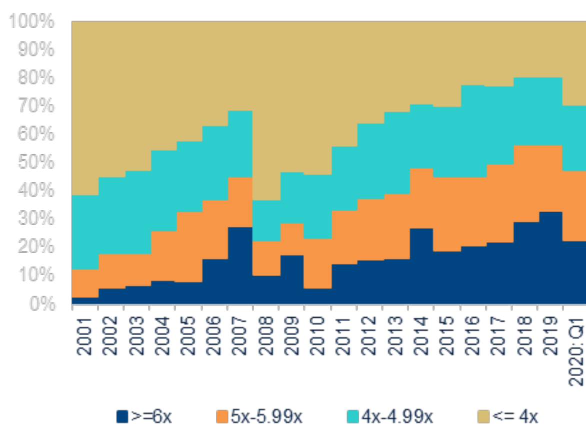
Figure 4. **Federal Reserve Treasury Balances** ($Tn)



Source: BBVA Research & Haver Analytics

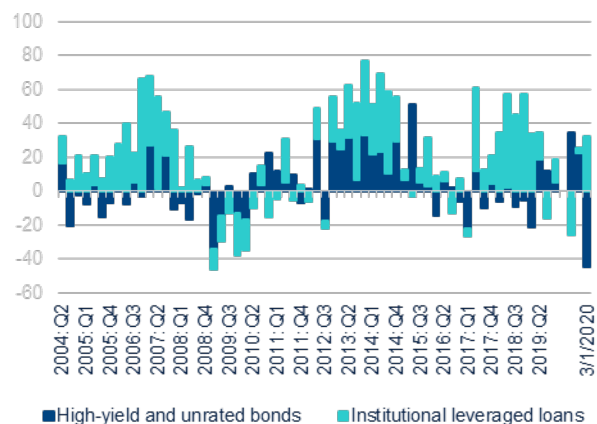
Corporate bond issuance: Borrowing and funding conditions remain tepid, particularly for some industries facing extreme dislocations and disruptions such as energy, airline and leisure. However, the decline in overall risk appetite suggests markets are reasonably pricing risk. In fact, spreads between comparable maturities of corporate bonds and Treasuries have increased, leveraged loan demand has plummeted, new issuance of Collateralized Loan Obligations (CLOs) has slowed and there has been large net outflows from prime mutual funds. The lack of demand for riskier securities and ratings downgrades could create challenges for firms needing to rollover expiring debt while reduced cash flows could imply a significant increase in defaults. Nonetheless, the primary and secondary market corporate credit facilities should provide some relief to firms albeit only for those that are perceived as more viable. In fact, while leveraged loan issuance has declined, investment grade corporate bond issuance has been particularly strong during March and April - more than twice as much bonds were issued in each of the two months compared to the average of the previous 24 months. Moreover, the high yield market was also active with April landing in the top 10% of all months since 2005, double the $18.5 billion in monthly issuance averaged over the last 15 years according to S&P.

Figure 5. **Distribution of Large Institutional Leveraged Loan Volumes** (by Debt-to-EBITDA Ratio)



Source: BBVA Research & FRB

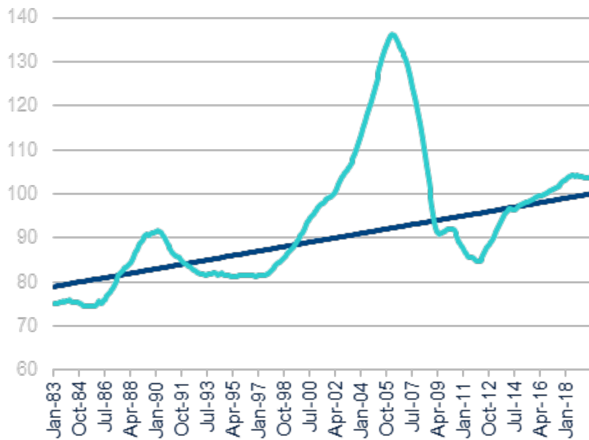
Figure 6. **Net Issuance of Risky Business Debt,** ($Bn)



Source: BBVA Research & FRB

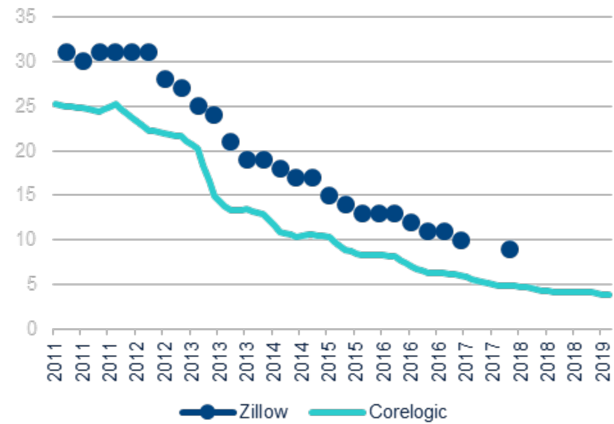
Residential real estate prices: While the risk of a demand-side fallout generated by massive job losses and negative income shocks remains a concern, low interest rates, pent up demand, low existing supply, forbearance allowances and other measures enacted to protect existing home owners should limit the downside risks to home prices. Moreover, the Fed's unlimited purchases of mortgage backed securities provides ample liquidity and minimizes downside risks to securitizations. That being said, certain markets that have experienced rapid home price appreciation, but now face long-term threats from Covid-19 due to urban density, reliance on public transportation and other systemic vulnerabilities could face modest-to-moderate downside risk, albeit less so than in 2008.

Figure 7. **Housing Price-to-Rent Ratio** (long-run trend feb-2020=100)



Source: BBVA Research & FRB

Figure 8. **Estimate of Mortgages with Negative Equity** (%)

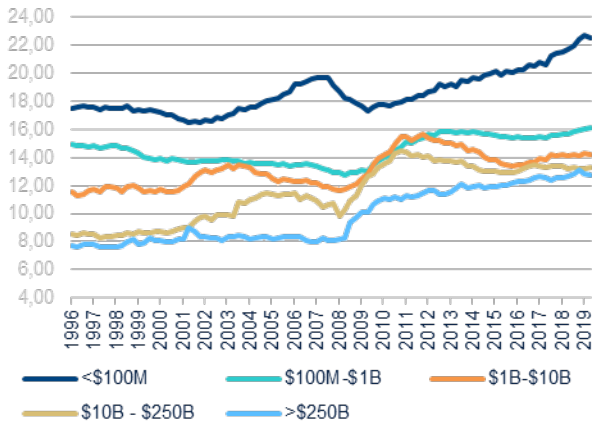


Source: BBVA Research, FRB, Core Logic, Zillow

Household leverage: Unlike the 2008 financial crisis, borrowing by households has been modest relative to the pace of growth. As a share of GDP, household debt is 24bp below the peak in 2009 while the financial obligations ratio is near the lowest levels in 40 years. Growth in household debt has also been disproportionately concentrated among prime borrowers for mortgages, auto loans and credit cards. In addition, relatively few borrowers have negative equity in their homes and thus have maintained modest levels of household leverage, which will reduce the likelihood of defaults and discourage homeowners from selling their properties at depressed prices. Nonetheless, high unemployment and shrinking real incomes could have severe consequences, particularly for lower-skilled, young and minority workers that have higher concentration in more heavily hit sectors. In this environment, high levels of student loans – highest in both absolute and relative (as a share of disposable personal income) terms- act as a bigger constraint for borrowing capacity.

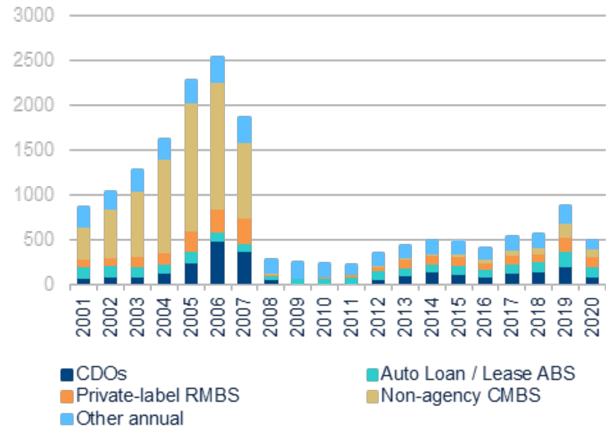
Bank capitalization: Based on the recent reviews of capital adequacy of U.S. banks, loss-absorbing capacity is at historic levels for globally systemically important banks (GSIBs) as well as for large non-GSIBs and other domestic banks. Moreover, banks have, up to this point, been able to meet the historic demands for draws on existing credit lines from businesses, and have also shown a willingness to work with borrowers on modifying the terms of existing loans such as delaying payments and working with customer requests for forbearance. In addition, the Fed and other regulators have taken actions to adjust capital requirements, in order to allow banks to use their balance sheets to support lending and the functioning of financial markets. On another positive note, in the face of substantially uncertainty and economic headwinds, credit standards have tightened for commercial and industrial loans (C&I) and commercial real estate (CRE) loans, suggesting banks are proceeding cautiously in what continues to be an extremely uncertain environment. However, some banks will experience increased pressures from higher provisions and charge offs as the cycle deteriorates.

Figure 9. **Tier 1 Risk-Based Capital Ratio (%)**



Source: BBVA Research & Haver Analytics

Figure 10. **Issuance of Non-Agency Securitized Products by Asset Class** ($Bn)



Source: BBVA Research & FRB

Securitization: While activity picked up at the end of 2019, growth in asset-backed issuance such as residential mortgage backed securities(RMBS), commercial mortgage backed securities(CMBS), CLOs and Collateralized Debt Obligations (CDOs) has slowed. In fact, the level of securitization in 2020 is approximately 80% lower than the peaks in 2006 and more evenly distributed among asset categories, suggesting limited systemic risk. For example, private-label RMBS issuance was over $1.4Tn in real terms and accounted for over 55% of total issuance in 2006 whereas in 1Q20, RMBS issuance was $90Bn and only represented 18% of total issuance. While the lack of issuance poses a risk to bank's balance sheets and borrowers if they are unable to offload a growing stock of loans, the reboot of the Term Asset-Backed Loan Facility should provide some market relief and act as a buyer-of-last-resort if need be.

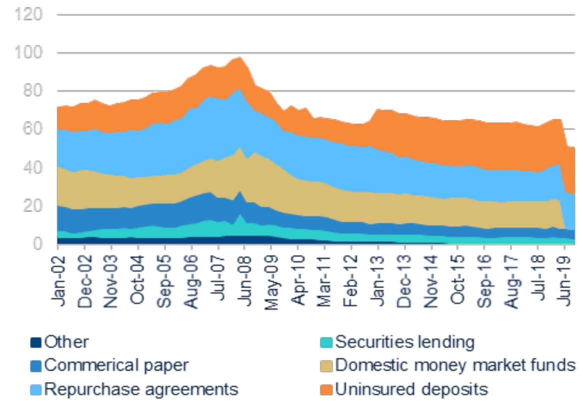
Funding risk: Runnable bank and nonbank money-like liabilities increased 10% in 2019 and total around $15.5Tn, but the risk of a funding crisis remains low given that banks, particularly GSIBs, have strong liquidity provisions and capital ratios. Moreover, a nontrivial share of bank funding consists of high quality liquid assets and the use of short-term wholesale funding has declined significantly since the crisis. The ability of banks to withstand the significant uptick in usage of credit lines also illustrates the resiliency of bank balance sheets and the fact that funding risks are modest considering the level of uncertainty and volatility. If the economic recovery gains momentum in 2H20, the likelihood of the economic recession turning into a financial crisis will be low.

Figure 11. **Runnable Money-Like Liabilities**

	Outstanding	Change 18Q4-19Q4	Average Annual Change 1997-19Q4
	$Bn	%	%
Total	**15,517**	**10**	**4**
Uninsured deposits	5,173	7	11
Repurchase agreements	3,998	13	6
Domestic MM Funds	3,604	19	4
Commercial paper	1,045	5	2
Securities lending	9,578	-4	6
Bond mutual funds	4,440	17	9

Source: BBVA Research & FRB

Figure 12. **Runnable Money-Like Liabilities** (share of GDP %)

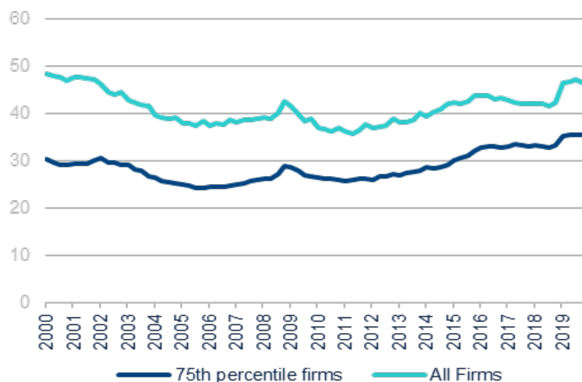


Source: BBVA Research & FRB

Goodwill hunting

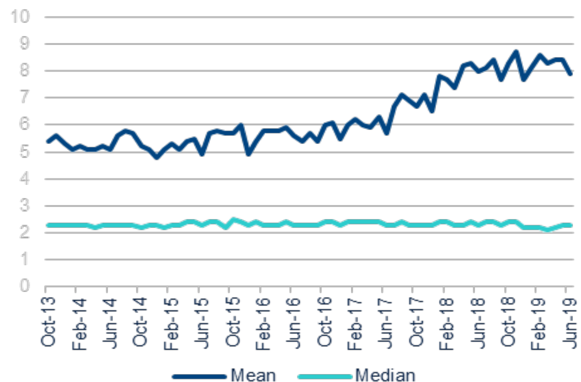
Nonfinancial corporate leverage: As a share of GDP, nonfinancial business leverage has matched the peak reached during the 2008 financial crisis, and as a result stands at a four decade high. The steady uptick in business leverage in the face of late-cycle headwinds, commodity slumps and structural shifts in globalization and technology was concerning, particularly as a large share of these resources were not used for productive purposes, but rather for stock buybacks. In fact, in 2019 issuance of the most leveraged firms with debt multiples greater than 5 accounted for more than 47% of all leverage loans. Moreover, gross balance sheet leverage of the riskiest public firms - 75th percentile- is over 45% and the average leverage remains elevated at 35%, more than 8pp higher than the average leverage ratio between 2000-2010.

Figure 13. **Gross Balance Sheet Leverage of Public Nonfinancial Businesses** (%)



Source: BBVA Research & FRB

Figure 14. **Gross Leverage at Hedge Funds** (Ratio)



Source: BBVA Research & FRB

Hedge fund leverage: While average hedge fund leverage has remained largely unchanged since 2014, there has been a nontrivial concentration. In fact, the top 25 hedge funds accounted for more than 50% of the industry's borrowing, but only 14% of its net assets. Preferential terms given to top hedge funds from dealers have increased the risk that a few large players that have outsized leverage positions may be forced to liquidate their position causing a disproportionate impact on market liquidity and asset prices.

Nonbank mortgage service providers: Provisions contained in the CARES Act give homeowners who have mortgages in pools guaranteed by Fannie Mae, Freddie Mac and Ginnie Mae the right to 12 months of forbearance. However, the mortgage service providers are responsible for advancing payments on behalf of the borrower regardless of whether they pay or not. For nonbank service providers without access to the same sources of liquidity as banks this can be burdensome, as many have had to use cash-on-hand or try to find private-financing options, which are more expensive and risky alternatives. If individuals remain unemployed or are forced to take significant pay cuts, nonbank mortgage service providers could pose a nontrivial risk to financial conditions. By mid-May, there were 4.1M homeowners in forbearance while their share in the servicers' portfolio reached 8.2%. Both the Fed and the Treasury have made it clear that they are aware of the problem and stand ready to act if needed.

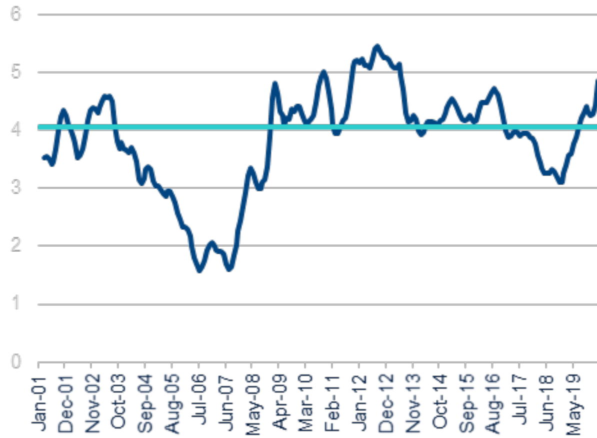
CLO risk: While CLO issuance was strong in 2019 after reaching a record level in 2018, and represented more than 50% of outstanding institutional leveraged loans, the inherent run risk is low. Unlike open-ended funds such as mutual funds most CLOs do not allow for early redemption and do not rely on funding that must be rolled over as underlying assets mature. That being said, leveraged investors that have interests in lower tranches that could be downgraded, are at risk of margin calls and forced sales, which could put significant pressure on leverage investors and broader financial market conditions.

Mortgage REITs face funding pressures: While REITs hold about $500bn in securities backed by CMBS and RMBS loans, a nontrivial share is in agency debt, which in addition to being a highly liquid asset, minimizes credit risk. That said, these assets tend to be long-term investments whereas their funding sources tend to be short-term debt. After the drop in interest rates in March, the prices of mortgage-linked assets fell, which triggered margin calls from lenders. With dealer balance sheets already strained, liquidity in MBS and CMBS markets dropped. The inclusion of agency CMBS in the Fed’s large scale asset purchase program and private-label CMBS under TALF has improved funding conditions, but risks remain.

Breaking Bad

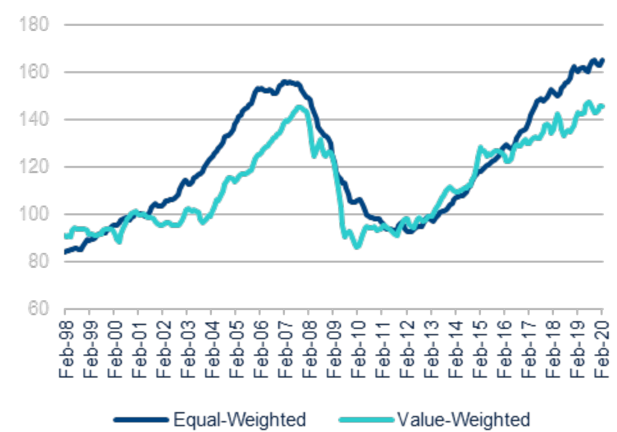
Commercial real estate(CRE): Prior to the crisis, valuations of commercial properties had already surpassed pre-crisis (2008) peaks despite extremely low capitalization rates, late-cycle risk and rising concerns stemming from a protracted trade war. In addition, segments such as retail and office in markets exposed to the commodity cycle continue to face structural headwinds that have impacted demand-side conditions. Notwithstanding the effects of Covid-19, these sub sectors were already facing less than ideal conditions, with rising vacancies, and declining rents. Now, without a viable vaccine, segments such as hospitality and retail, which have experienced a historic drop in demand as a result of compulsory and voluntary distancing, are at risk of tenants falling behind on their mortgage and rental payments. Moreover, access to credit for these borrowers has become more difficult as securitizations, which funded about 20% of new loans, have halted while bank lending standards for commercial real estate have tightened considerably.

Figure 15. **Spread of Capitalization Rate at Property Purchase to 10-Year Treasury Yield** (PP)



Source: BBVA Research & FRB

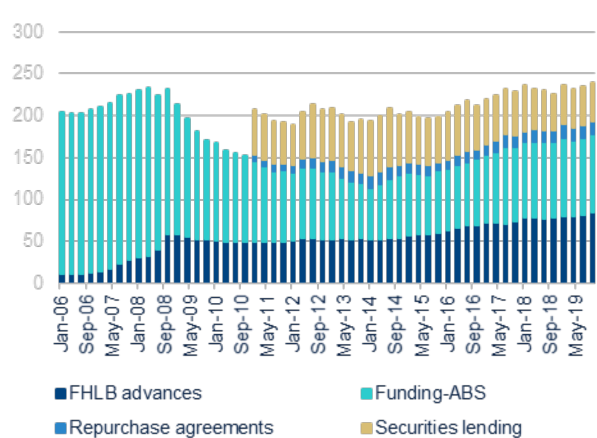
Figure 16. **Real Commercial Real Estate Prices** (Jan-2001=100)



Source: BBVA Research & FRB

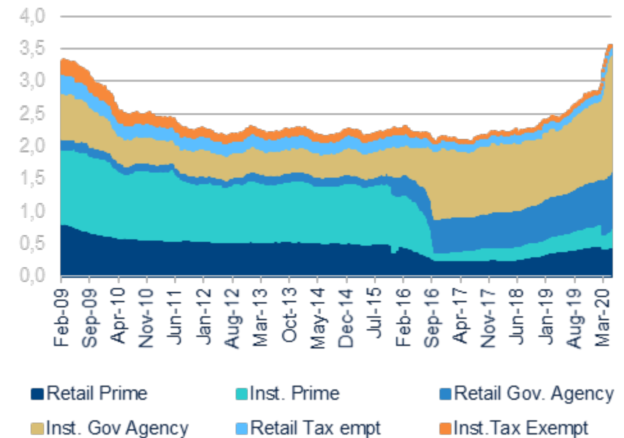
Life insurance companies: Leverage has increased substantially at life insurance companies unlike property and casualty. Moreover, capitalization of life insurance companies is poised to deteriorate over the coming quarters given the lower-than-expected valuation of their existing assets and lower interest rates that will reduce the implicit value of the portfolio. In terms of knock on effects, life insurance companies are important investors in riskier assets such as CRE, corporate bonds and CLOs exposing them to "risks stemming from sharp drops in asset prices, elevated issuer leverage, potentially rising defaults in the corporate sector and funding illiquidity risks." Payouts may also increase if the number of unanticipated deaths from the Covid-19 continue to rise.

Figure 17. **Nontraditional Liabilities of U.S. Life Insurers by Liability Type** ($BN Real)



Source: BBVA Research & FRB

Figure 18. **Domestic Money Market Fund Assets** ($BN)

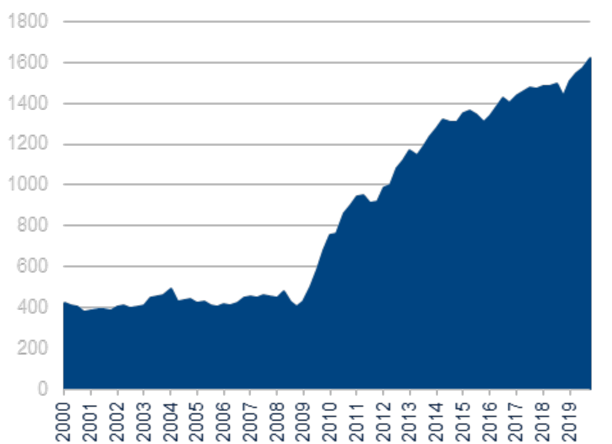


Source: BBVA Research & Bloomberg

Lending to nonbank financial firms: Over the past six years lending to nonbank financial firms has doubled and is now estimated to be around $1.4Tn. Roughly 70% has been committed to consumer and real estate lenders, “other” financial vehicles, CLOs, ABS and open-ended investment funds. Going forward, these linkages will increase the risk of a systemic crisis as these channels tend to amplify shocks and escalate the risk of a financial crisis.

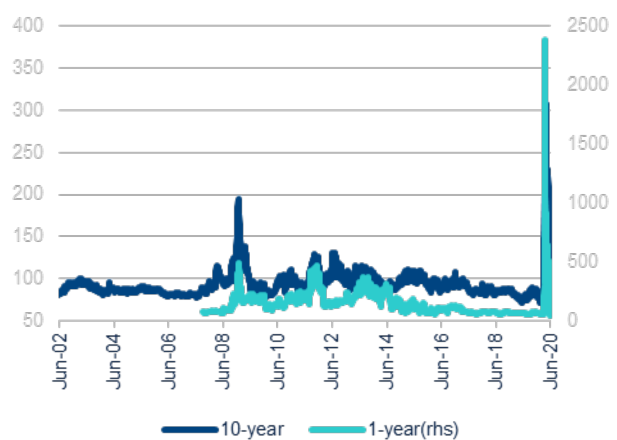
Prime money market funds: The rise in importance of open-ended funds such mutual funds have increased the vulnerability of the financial system; today these funds account for around 15% of GDP. While the bulk of assets under management are government only, there has been nontrivial growth in prime funds that invest in high-yield corporate debt and bank loans. These funds face significant run and liquidity transformational risks, and have seen significant outflows during the pandemic. Moreover, while these funds are not required to sell “fallen angels”, a wave of corporate downgrades could encourage investment-grade corporate bond funds to divest from these assets, as evidenced by the recent outflows prompted by the downgrade of several large issuers. The Fed’s Money Market Mutual Fund Liquidity Facility successfully tamed these pressures with $54bn in early April. Since then, the uptake has come down almost $16bn, suggesting that the worst may be behind us.

Figure 19. **U.S. Corporate Bonds Held by Mutual Funds** ($BN Real)



Source: BBVA Research & FRB

Figure 20. **Municipal Bond Yield Spreads** (PP relative to equivalent U.S. Treasury yield)



Source: BBVA Research & Bloomberg

Municipal bonds*:* Mass outflows in March caused the $3.1Tn municipal bond market to shut down. Traditionally, economic recessions reduce income and sales tax revenues and increase budget shortfalls. If real estate markets are hit, property taxes and other revenue sources are also impacted. State and local governments are forced to cut spending thereby exacerbating the economic downturn. Investors could become worried of potential defaults, borrowing costs increase and pressures mount up. The situation is more strenuous where the pandemic is having a larger impact like New York and New Jersey or where finances are weaker. After Congress authorized some relief to states and local governments and the Fed launched the Municipal Liquidity Facility, market conditions have improved. However, risk appetite has not fully normalized as investors know that the liquidity shock is usually followed by an economic one.

Financial Stability in a Covid-19 World

While it seems the Fed actions up to this point have made it through the first cut with a fraction of what is available, it remains to be seen if these measures will hold up in production. Massive levels of unemployment, festering uncertainty and persistent epidemiological risks will continue to influence financial stability in the U.S. In addition, weaknesses in other developed economies could spill over into the U.S., or that the fallout in developed markets could weigh on emerging markets, potentially producing a vicious feedback loop of rolling global financial crises. Combating such an epic would require substantial global coordination; something that has received mixed reviews up to this point.

In any case, the commitment by the Fed to do whatever it takes seems to have assuaged market fears and improved market functioning. The Fed still has ample firepower and is considering alternative tools in case conditions deteriorate once again. However, the longer the crisis lasts, the higher the likelihood that economic trends infect financial conditions. That being said, monetary policy powers are not limitless and the space and appetite for additional fiscal policy is waning.

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