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Housing and Housing Finance – US

Coronavirus creates cracks in solid foundations

The severe disruptions and economic contraction sparked by the coronavirus outbreak will have far-reaching implications for the US housing market and housing-related issuers. Although most sectors will experience material credit negative effects, the fallout will vary and will likely be much less severe than the damage from the housing-led recession of 2007-09. In particular, credit effects on issuers with higher exposures to housing include:

» **Banks**' strengthened residential mortgage portfolios will suffer comparatively less asset quality deterioration than other major asset classes (page 3)

» **Mortgage insurers** brace for higher delinquencies as unemployment spikes (page 4)

» **Non-bank mortgage firms**' liquidity issues persist, but higher origination volumes and strong gain-on-sale margins support profitability (page 5)

» **Fannie Mae, Freddie Mac** will face weaker asset quality; however, their very high ratings reflect our expectation of a high level of government support (page 7)

» **Federal Home Loan Banks**' asset quality unlikely to be affected by coronavirus disruption, but member demand for advances increases (page 8)

» **Homebuilding** sector hurt by unemployment, lower consumer confidence (page 8)

» **Apartment REITs**' strong balance sheets, liquidity help buffer against coronavirus economic shocks (page 10)

» **Home improvement** has been outperforming much of retail during pandemic (page 11)

» **Residential mortgage-backed securities** (RMBS) structures will shape credit effects from unemployment and obligor debt relief (page 12)

» **Commercial mortgage-backed securities** (CMBS) risk increases because of hotel and retail exposures, but multifamily well positioned (page 14)

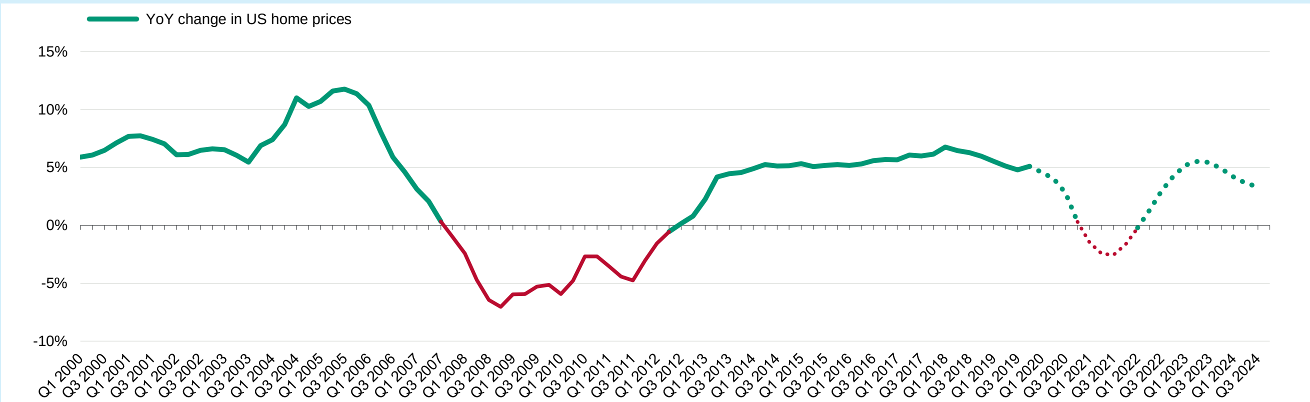
» **State housing finance agency** (HFA) single-family programs will grapple with reduced cash flow resulting from forbearance, while multifamily programs have yet to face challenges from forbearance due to use of available reserves (page 16)

We also discussed some of these implications for various housing-related issuers during a Webinar last month. For more related research, see the US Housing and Housing Finance and Coronavirus effects topics pages on Moodys.com.

Housing and housing-related issuers face a likely easier test

The impact of this recession on US housing likely will be more moderate than the last recession because of different real estate market and lending conditions, as well as government support measures and foreclosure moratoriums. For instance, as Exhibit 1 shows, Moody's Macroeconomic Board projects much smaller declines in home prices on a national basis.

Exhibit 1
Smaller depreciation in values expected than during the last recession
FHFA All Transactions Home Price Index



Dotted line represents Moody's Macroeconomic Board estimates and forecasts.
Source: Federal Housing Finance Agency, Moody's Investors Service

As a result, issuers exposed to housing will face more moderate effects on their credit quality, though these effects will also vary across sectors. This report groups sectors by broad lines of business – financial institutions, corporate, structured finance, and public finance.

Among **financial institutions**, the effects of weaker mortgage performance and other negative developments will likely be manageable. *US banks'* strengthened residential mortgage portfolios will offer relative safety, while *Federal Home Loan Banks'* asset quality will be stable amid increased member demand for advances. *Non-bank mortgage companies* are facing ongoing liquidity stress and subdued profitability, but strong volumes and loan sale margins will help earnings recover. Although weaker loan performance will hurt US *private mortgage insurers*, the full impact will depend on the length and depth of the contraction, and effectiveness of government support measures.

Among **corporates**, massive job losses and plummeting consumer confidence will affect homebuying decisions and financing options. We expect these issues will hurt *homebuilders*' revenue and gross margins. *Multifamily REITs* have strong defenses against weaker conditions, including strengthened liquidity. Rated multifamily REITs are also now larger and own higher-quality portfolios. While most US retailers are struggling amid pandemic-induced pressures, the *home improvement* business has been a brighter spot.

In **structured finance**, mortgage-backed securities will be exposed to higher unemployment, forbearance programs and servicer-related risks. Collateral performance will be weak for *RMBS* while the pandemic persists, but forbearance and government stimulus are helping to shore up consumers' finances and the ultimate credit effects will depend on deal structures. In comparison to hotel and retail exposures in *CMBS*, multifamily properties are relatively well-positioned to weather the pandemic.

Meanwhile, **public finance** issuers include *state HFAs* that also have experienced more loans in forbearance and servicing advances. However, HFAs are well positioned to absorb these increases because of their strong asset-to-debt ratios and liquidity position.

Financial institutions

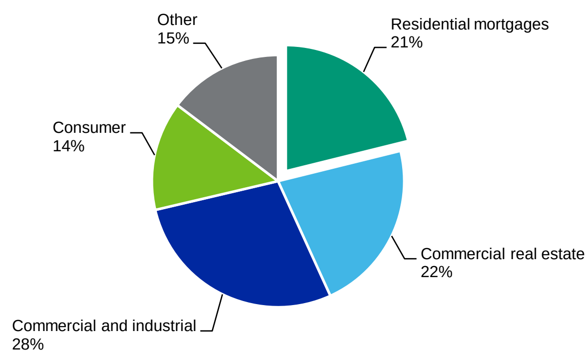
Banks' strengthened residential mortgage portfolios will suffer comparatively less asset quality deterioration than other major asset classes

Residential mortgages make up as much as about one fifth of US banks' loan portfolios in aggregate as of 27 May 2020 (Exhibit 2), forming a large absolute exposure to housing market dynamics. However, residential mortgages are comparatively less vulnerable than other asset classes in the banks' diverse consumer and commercial operations to the effects of the coronavirus pandemic. The strain on household borrowers and softening in housing markets will certainly filter through to loan performance, and the large volume of reported requests for loan forbearance indicate the stress on borrowers. However, a large portion of borrowers that applied for payment deferrals continue to make payments. Furthermore, residential mortgage charge-offs have been near historic lows, and we believe the measures banks have taken to strengthen underwriting and loan quality over the past decade have put them in good stead to manage any deterioration in mortgage performance over the next 12-18 months.

Exhibit 2

Residential mortgages make up a substantial part of US banks' loan portfolios

US commercial banks: Loan composition as of 27 May 2020



Source: Federal Reserve

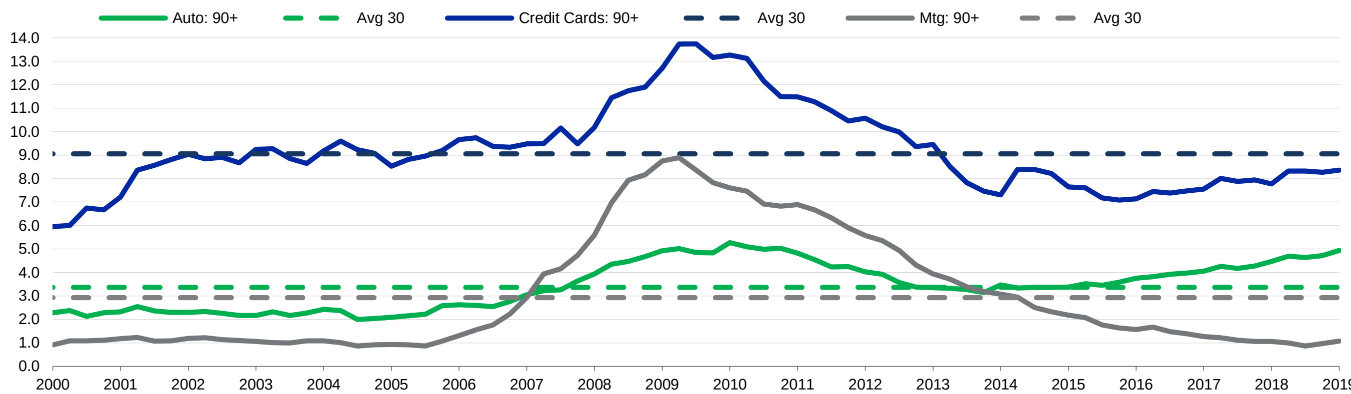
In March, we updated our outlook on the US banking system to negative from stable to reflect the broad and growing scope of economic and market upheaval unleashed by the pandemic. Higher unemployment because of stay-at-home orders and business lockdowns are straining borrowers' repayment capacity and, in turn, will weaken consumer loan performance, including that of residential mortgages. Moratoriums on payments of certain loans could help tide borrowers, and mortgage asset quality, through the downturn. US bank regulators have encouraged banks to provide prudent loan modifications and will not require these modifications to be categorized immediately as troubled debt restructured loans. But despite helping banks maintain asset quality in the opening stages of the crisis, support programs and forbearance may ultimately only delay recognition of problem loans, not prevent them.

Exhibit 3 shows that the asset risk metrics of the banks' mortgage loan books were strong entering the downturn, with loans 90 days past due at 1.07% (solid gray line) as of 31 December 2019, well below delinquency rates for the other key consumer asset classes: auto loans (solid green line) and credit card loans (solid blue line). The comparatively strong performance of mortgages in part reflects strengthened underwriting since the 2007-08 financial crisis, which was sparked by a sharp deterioration in subprime mortgage performance. Mortgage asset quality has been improving steadily since 2009, and since 2014 delinquencies have been below their 30-year average (dotted gray line). By contrast, credit card and auto loan delinquencies have been rising moderately since 2016, with auto loan delinquencies now above the 30-year average (dotted green line).

Exhibit 3

Consumer asset quality entering the downturn was solid

Auto, credit card and residential mortgage 90+ past due %, 2000-19



Source: Moody's Investor Service, Federal Reserve

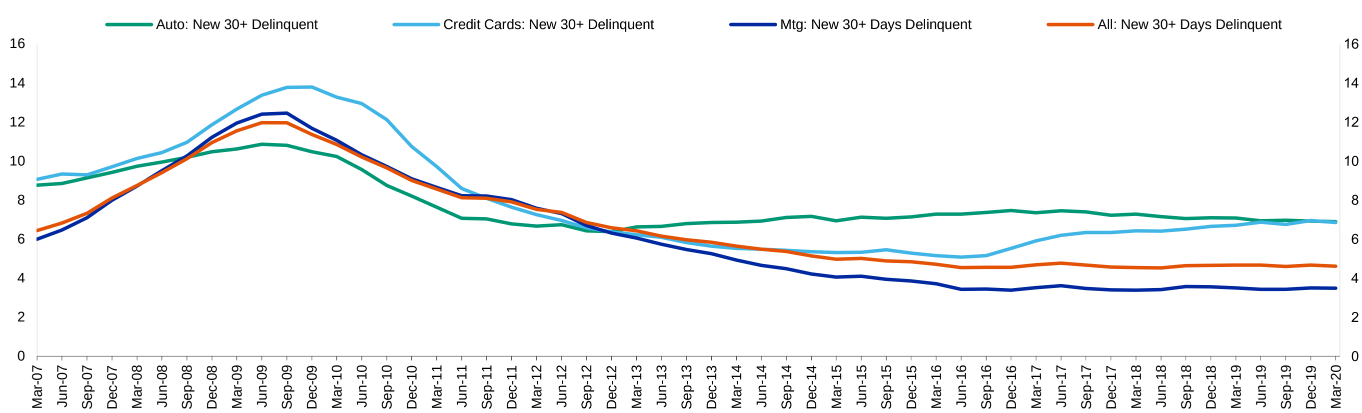
Consumer health was also solid entering the downturn, with household debt to income below the 30-year average. Homeowners are on more solid footing than non-homeowners. Consumer debt, excluding residential mortgages but including credit card, auto, student loan and personal debt, is at historic highs relative to disposable income.

As Exhibit 4 shows, the rate of total new household loan delinquencies (red line) in the first quarter was 4.61% and has been very consistent over the past several years. Here again, residential mortgage loans (dark blue line) outperform the other two main consumer asset classes. The spike in unemployment will drive a rapid rise in consumer loan delinquencies and charge-offs over the coming quarters. However, we believe that residential mortgage asset quality will deteriorate the least, given the solid underwriting quality since the financial crisis. Credit card and auto loan charge-offs are likely to be comparatively more pronounced for US banks.

Exhibit 4

Year-over-year rate of new consumer delinquencies will rise very rapidly

% of performing loans that became 30 or more days delinquent



Source: Federal Reserve Bank of New York, Moody's Investors Service

Mortgage insurers brace for higher delinquencies as unemployment rate spikes

Given the economic shock in the US stemming from the coronavirus pandemic and related business shutdowns and stay-at-home measures, mortgage loan delinquencies[1] will spike higher in the coming months. Higher mortgage loan delinquencies could lead to higher foreclosures and, ultimately, increased private mortgage insurance claims, which could reduce US private mortgage insurers' capital. The longer-term impact on private mortgage insurers will depend on the length and depth of the economic contraction. It will also depend on the effectiveness of government policy measures to support households, including stimulus payments and the success of mortgage loan payment deferral programs implemented by housing finance agencies Fannie Mae and Freddie Mac (the GSEs) in reducing foreclosures, and by extension, ultimate mortgage insurance claim rates.

Our analysis suggests US private mortgage insurers are largely resilient to economic conditions consistent with the Federal Reserve's Comprehensive Capital Analysis and Review (CCAR) severely adverse scenario, which considers a peak unemployment rate of 10% and a 25% decline in home prices. Our base case assumptions consider a year-end 2020 unemployment rate in the high single-digit percentage range and a modest decline in US home prices through the end of 2021. In such a scenario, we think the adverse impact from the downturn will largely be contained within firms' earnings. However, the characteristics of the current economic contraction are unique, with risks tilted to the downside given the high level of uncertainty. Worse than anticipated data could increase the likelihood of ratings downgrades. Key items to watch over the coming months include: unemployment rates, forbearance takeup rates, cure rates on delinquent loans, and the path of US home prices, because home price declines, like higher unemployment, are highly correlated with mortgage insurance claims. Ratings downgrades would become more likely if new economic data and forecasts deviate materially from our base case assumptions. However, the US jobs report for May was far stronger than economists had anticipated, with the Bureau of Labor Statistics reporting a gain of 2.5 million jobs for the month as temporary layoffs during the pandemic reversed, bringing the unemployment rate down to 13.3%.

Meanwhile, mortgage insurers have a number of credit strengths that will help them weather the economic shock. High-quality insured portfolios, low mark-to-market loan to value (LTV) ratios on older vintage loans, extensive reinsurance protection and strong capital and liquidity positions all support mortgage insurers' ability to pay claims (Exhibit 5). Additionally, GSE mortgage loan forbearance will reduce and delay mortgage insurance claims. Although the private mortgage insurers (PMIs) have historically experienced strong delinquency cure rates on loans in forbearance, there is uncertainty about how effective these programs will be given the massive disruption to the economy. Increased delinquencies will shrink the PMIs' capital cushions under the GSEs' Private Mortgage Insurer Eligibility Requirements (PMIERs) capital standards, the set of requirements mortgage insurers must meet to be eligible to insure loans purchased by the GSEs. Assuming a current PMIERs sufficiency ratio – available assets divided by required assets – of 130%, we estimate delinquency rates greater than 15% will cause significant capital strain.

Exhibit 5

Low mark-to-market LTVs provide equity cushion on > 40% of risk-in-force

$ Mil.

Vintage		Risk in Force	% RIF	Estimated Mark to Market LTV	HPA Down 15% LTV	HPA Down 25% LTV	
2010 & Prior	$	19,048	6.2%				
2011	$	1,112	0.4%	59%	69%	79%	
2012	$	4,148	1.4%	58%	68%	77%	
2013	$	8,480	2.8%	62%	73%	83%	
2014	$	11,583	3.8%	67%	79%	90%	**Equity cushion**
2015	$	21,750	7.1%	71%	83%	94%	
2016	$	37,144	12.1%	75%	88%	100%	
2017	$	44,570	14.6%	80%	94%	106%	
2018	$	50,251	16.4%	86%	101%	114%	**Heavily reinsured**
2019	$	86,028	28.1%	90%	106%	120%	
2020	$	22,199	7.2%	92%	108%	122%	
Total	$	306,313	100.0%				

[1] LTV: Loan to value; [2] HPA: House price appreciation

Source: Company reports, Moody's Investors Service

Non-bank mortgage firms' liquidity issues persist, but higher origination volumes and strong gain-on-sale margins support profitability

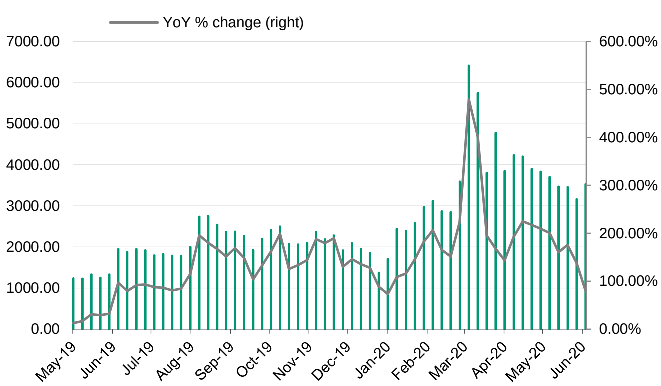
The turmoil in the residential mortgage industry stemming from the spread of coronavirus led us to change our outlook on the non-bank residential mortgage sector to negative from stable on 2 April. Crisis-related market volatility and negative marks on the fair value of mortgage servicing rights (MSRs) and non-agency mortgage investments[2] have been eroding the already modest current profitability of non-bank mortgage companies. However, we expect higher origination volumes and strong gain-on-sale margins to drive a recovery in earnings over the next several quarters even with the expected rise in servicing costs.

Liquidity pressure is intense, with mortgage real estate mortgage investment trusts (REITs) particularly challenged. For larger non-bank mortgage companies focused on origination and servicing, margin calls have largely been manageable. But quite a few REITs, such as New Residential Investment Corp. (B1 negative), have had to execute sizable asset sales to meet margin calls. Over the next several months, servicers will face a large increase in their servicer advance obligations because of the establishment of borrower-forbearance arrangements and rising delinquencies. Nonetheless, rated servicers should be able to meet their servicer advance obligations, in part because forbearance levels are around 8.5% as of 31 May 2020 versus some initial industry forecasts as high as 20% or more, and the pace of new requests is slowing significantly. In addition, in April, possibly up to half of borrowers in forbearance made their monthly payment.

We expect profitability to improve, driven by high production levels and strong gain-on-sale margins. Amid the turmoil in the residential mortgage industry in the first quarter, GAAP profitability for rated non-bank mortgage firms fell significantly, driven by mark-to-market fair value (FV) declines on mortgage assets, while core profitability (excluding FV declines and non-recurring items) surged, driven by elevated origination volumes and robust gain-on-sale margins.

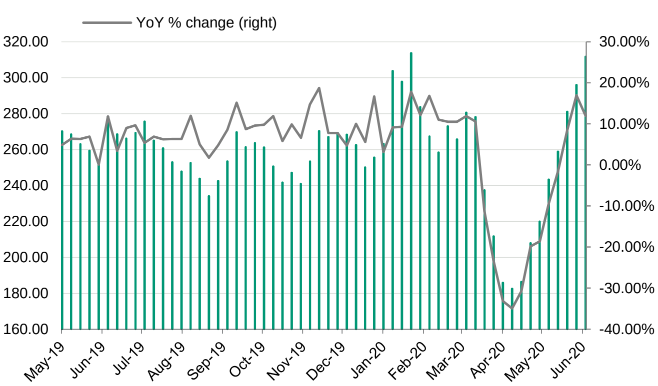
Origination volumes have increased as a result of the surge in homeowners refinancing their loans (Exhibit 6). Since the onset of the crisis, new purchase applications fell precipitously (Exhibit 7). However, over the last several weeks, purchase applications have surged back and now are around pre-pandemic levels. Given the weakness in the economy, it is uncertain whether the current level of purchase applications is sustainable. However, overall originations volumes in 2020 are expected to be strong with the Mortgage Bankers Association projecting 2020 origination volumes of $2.4 trillion, a 12% increase from 2019's already above average levels.

Exhibit 6
Refinancing applications spiked as mortgage rates fell to record lows after the Federal Reserve cut interest rates
MBA Weekly App. Refinance Index (SA, 2019-20)



Source: MBA, Moody's Investors Service

Exhibit 7
Purchase applications have surged the last several weeks and now are around pre-pandemic levels
MBA Weekly App. Purchase Index (SA, 2019-20)



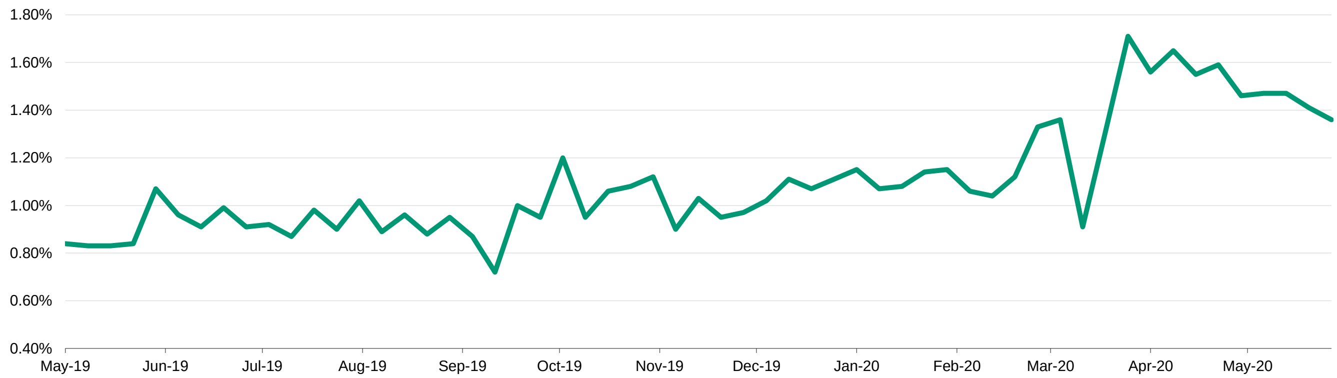
Source: MBA, Moody's Investors Service

Record high mortgage spreads also bode well for originators (Exhibit 8), driving strong gain-on-sale margins, which in turn will drive strong second quarter earnings.

Exhibit 8

Mortgage spreads have risen to their highest level in at least a year, a boon for originator earnings

Freddie Mac 30-year mortgage rates minus the yield on 30-year Fannie Mae MBS



Source: Freddie Mac, Factset, Moody's Investors Service

Fannie Mae, Freddie Mac will face weaker asset quality; however, their very high ratings reflect our expectation of a high level government support

Given the economic shock in the US stemming from the coronavirus outbreak and related business shutdowns and stay-at-home measures, asset quality will deteriorate for the government sponsored enterprises (GSEs or Enterprises), Fannie Mae (Aaa stable) and Freddie Mac (Aaa stable). We expect mortgage loan delinquencies will spike higher in the coming months leading to higher charge-offs in 2021. While this is credit negative for the GSEs' standalone credit profiles, the companies' very high ratings reflect our expectation of ongoing high level of support from the Government of United States of America (Aaa stable).

The strain on household borrowers and softening in housing markets will filter through to loan performance, and the large volume of reported requests for loan forbearance indicate the stress on borrowers. However, delinquencies and charge-offs at the GSEs have been low. We believe legislative changes as well as the measures the GSEs have taken to strengthen underwriting and loan quality over the past decade will result in far stronger asset quality than during the 2007-08 financial crisis as well as versus most other consumer and commercial asset classes. Further supporting our view is the housing supply shortage, which supports our baseline expectation that cumulative home price declines will be modest at around 5%. Even in the event of a very severe downturn, we believe that cumulative home price declines will be far less severe than the almost 30% national home price decline experienced during the 2007-08 financial crisis.

Pursuant to their Preferred Stock Purchase Agreements (PSPA), up until Q3 2019, the two companies remitted to the Treasury as a senior preferred stock dividend all earnings in excess of $3 billion in capital. In September 2019, the US Treasury and the Federal Housing Finance Agency (FHFA) agreed to increase the amount of capital that the two companies could retain to $25 billion for Fannie Mae and $20 billion for Freddie Mac. As a result, the companies internal capital cushion to weather a spike in charge-offs is very modest with equity of just $13.9 billion and $9.5 billion of equity or 0.4% and 0.4% of total assets as of first quarter 2020 for Fannie Mae and Freddie Mac, respectively.

Similar to other large financial institutions, the two companies are required under the Dodd-Frank Act to conduct annual stress tests. In the severely adverse scenario of their most recent stress test results[3] (published 15 August 2019), excluding the impact of any valuation allowance on their deferred tax assets, Fannie Mae would recognize $9.5 billion of comprehensive losses in this hypothetical, severely adverse scenario's nine quarter forecast and Freddie Mac $8.4 billion. Subtracting such losses from first quarter equity would leave Fannie Mae with just $4.4 billion in equity and Freddie Mac with $1.1 billion. However, the companies also have access to the US Treasury commitment under the PSPA of $254.1 billion – $113.9 billion for Fannie Mae, or 3.3% of assets as of 31 March 2020 and $140.2 billion for Freddie Mac, or 6.4% of assets.

The GSEs' Aaa long-term senior unsecured debt ratings reflect our assessment that, despite a lack of an explicit (formal) guarantee, these creditors benefit from very strong support from the US government. The government support assumptions reflect the critical importance of the GSEs to the US mortgage market. Over the past several years, the GSEs have acquired between 40% and 50% of US residential mortgages originated. This sizable market share underscores the firms' role in anchoring this very large market, particularly in periods of prolonged market and economic uncertainty. As a result, while any deterioration in the company's asset quality and in turn capital levels would be credit negative for the firms' standalone credit profiles, the key determinant of whether the GSEs will retain their Aaa unsecured bond ratings will likely continue to be our assessment of the extent to which creditors will benefit from US government support.

Federal Home Loan Banks' asset quality unlikely to be affected by coronavirus disruption, but member demand for advances increases

The coronavirus pandemic will have a negative impact on many borrowing members of the Federal Home Loan Bank (FHLBank) system through asset quality deterioration and reduced profitability. However, FHLBank advances to members have never resulted in a loss and make up close to two-thirds of the system's combined balance sheet, which should substantially insulate the 11 FHLBanks from the direct effects of the crisis on housing markets and residential mortgage performance.

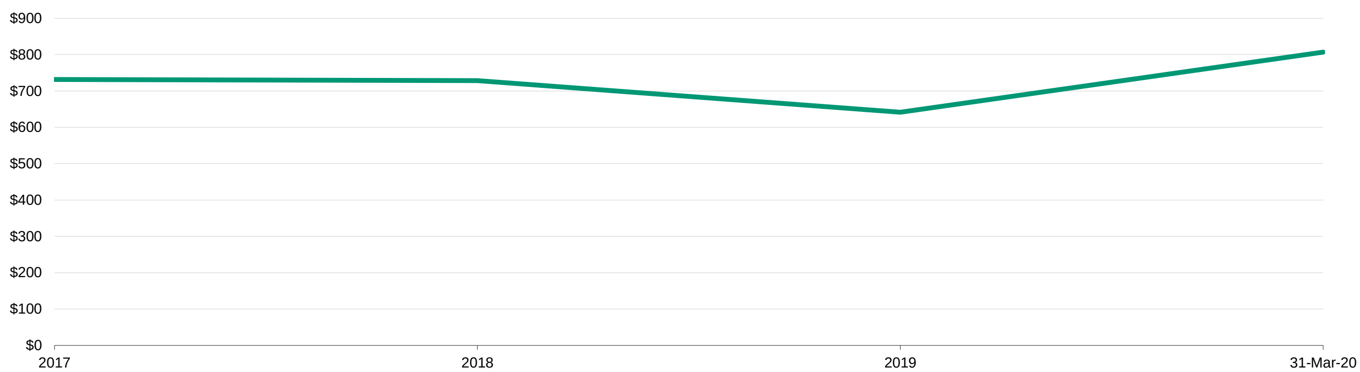
The FHLBanks' main business activity is lending to roughly 6,700 member institutions – primarily banks, savings institutions, credit unions and insurance companies – in the form of advances, which can be used for residential mortgages, community investments and other services for housing and community development. In addition to over-collateralization, the FHLBanks' record of never incurring a loss on advances reflects conservative underwriting standards and strong credit monitoring policies. Further, if a loan in a pool of collateral is underperforming, it must be replaced.

The FHLBanks' special role as providers of liquidity to the US banking system was once again demonstrated in the first quarter of 2020, when systemwide advances increased 26%, or a sizable $165 billion, from year-end 2019 (Exhibit 9). This role as liquidity providers, as well as the FHLBanks' status as government-sponsored enterprises (GSEs), contributes to a very high likelihood of support from the US government in the unlikely event that an individual FHLBank or the FHLBank System were in danger of default.

Exhibit 9

Sizeable increase in advances during first quarter underscores FHLBanks' role as liquidity providers

FHLBanks: total advances to member banks in $ billion



Source: Moody's Investors Service, company filings

Corporates

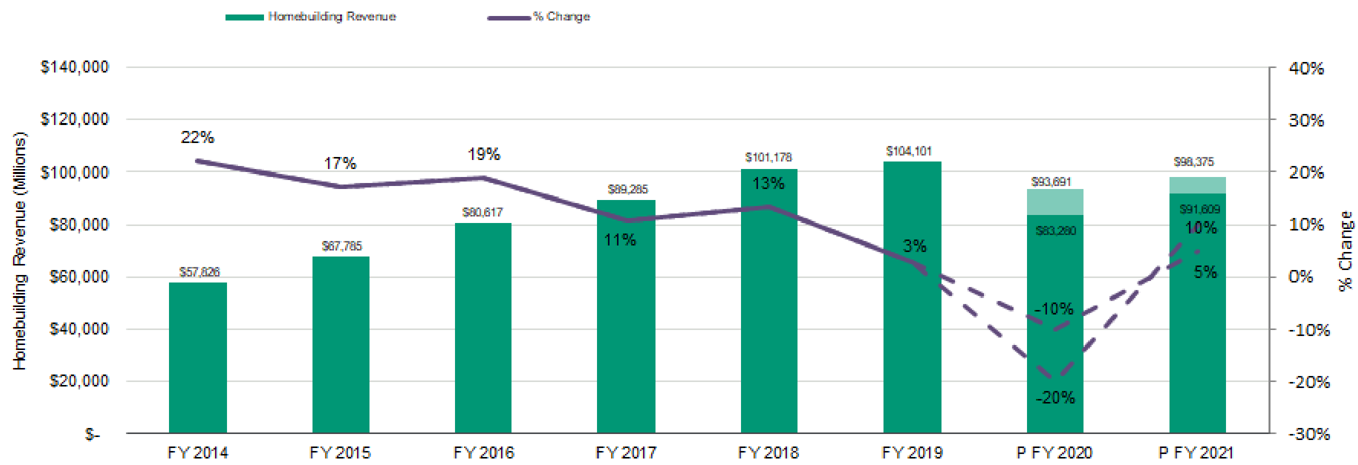
Homebuilding sector hurt by unemployment, lower consumer confidence

The coronavirus outbreak and the steps taken to contain it resulted in massive job losses and plummeting consumer confidence and spending, which all directly affect decisions to buy a home and whether a potential buyer can obtain financing. We expect these factors will reduce demand for homes throughout 2020, hurting the homebuilding industry.

While we foresee sequential improvement through the remainder of the year as lockdown restrictions are loosened, we expect revenue for US homebuilders we rate to decline 10% to 20% in aggregate for 2020 (see Exhibit 10) on a significant drop in volume, as purchase decisions are delayed and average home sales prices weaken.

Exhibit 10

US Homebuilder revenue to fall 10%-20% in 2020 before recovering in 2021



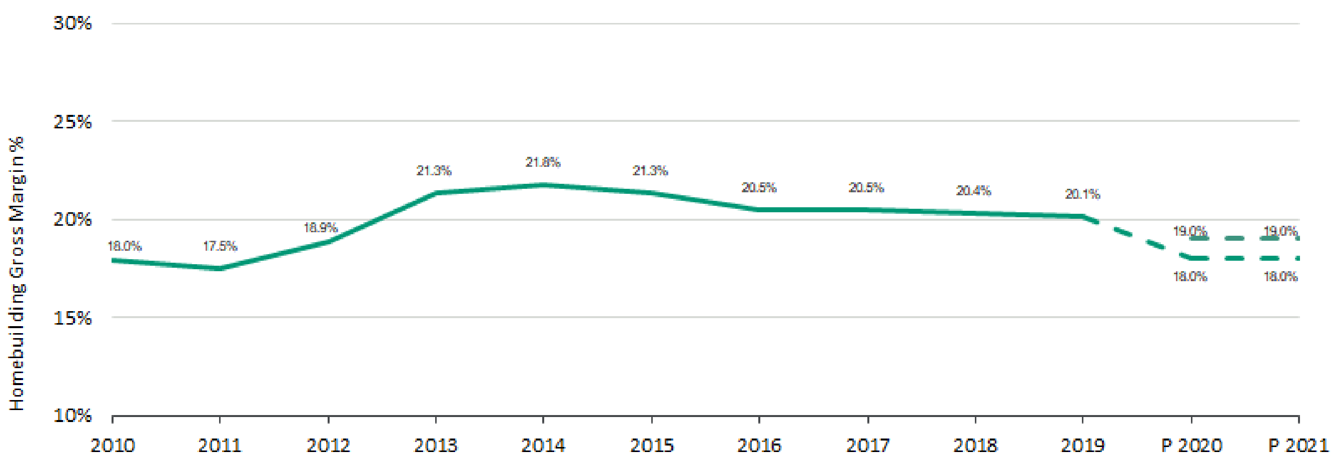
Aggregate revenue of rated homebuilders

Source: Moody's Financial Metrics

We forecast new home prices will decline 3% to 5% and gross margins will weaken to 18% - 19% in 2020, from 20% in 2019, reflecting greater incentives to encourage demand given the slower pace of sales (see Exhibit 11). Costs for materials, labor and land, will modestly decline, providing some relief. Given the spike in unemployment, wages are likely to fall. Moody's Macroeconomic Board forecasts the unemployment rate will level off around 8.5% by the end of 2020, falling to 7.0% by the end of 2021.

Exhibit 11

Aggregate homebuilding gross margin to weaken to 18%-19% range for 2020



Gross margin of rated homebuilders

Source: Moody's Financial Metrics, Moody's projections

While the coronavirus outbreak did substantial economic damage, the fundamentals underlying the homebuilding sector remain solid. Unlike the 2008 recession, the market is not oversupplied, speculative buying is not significant, and lending standards are strict. These, in concert with historically low interest rates, offer the housing market a good fundamental base from which to improve once the external shock of the virus outbreak dissipates.

In fact, the supply of homes is likely to tighten because many homebuilders modestly slowed construction and many existing homeowners are unwilling to list properties in anticipation of a better market and higher prices when social-distancing guidelines are rolled back.

While potential buyers may be staying home during the pandemic, construction has largely continued because it is deemed essential in most states, with some delays to ensure adherence to social-distancing rules. Because some states deemed home building nonessential, the recovery will be uneven across various regions and homebuilders with regional diversity will fare better.

Many homebuilders were prepared for a slowdown having reduced debt in the last several years and shifted toward a more "land light" model of owning fewer building lots. Also, homebuilders were quick to react to the coronavirus outbreak by reducing or delaying land purchases, reducing speculative home starts, and stopping share repurchases. We believe that in this environment well-capitalized homebuilders will be in a good position to take market share from small and regional custom builders by leveraging their liquidity and operating efficiencies. We estimate the 22 homebuilders we rate had nearly 40% of the US market in 2019, based on unit volume for single-family homes sold.

Apartment REITs' strong balance sheets, liquidity help buffer against coronavirus economic shocks

Multifamily REITs have strong defenses to navigate through the economic contraction and rising recession risks tied to the coronavirus. The six multifamily REITs we rate have the financial resources to navigate through the stressed operating landscape, having reduced leverage, reinforced liquidity and broadened capital access since the 2007-09 recession. These companies are now financially stronger and own large, higher-quality apartment portfolios clustered in economically resilient regions.

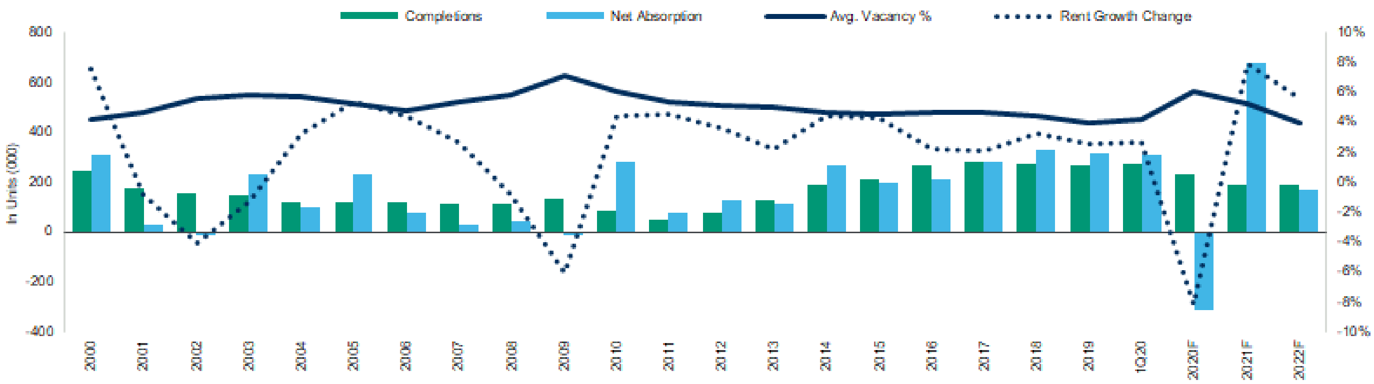
While performance for apartment REITs we rate will weaken over the next couple quarters, reflecting the full effects of the pandemic, for now we expect only a modest earnings decline, a testament to the resiliency of the business model and prudent leverage policies. As of the trailing 12-month (TTM) period ended on March 31, these REITs' average total debt-to-gross assets was 33%, compared to about 53% in 2007, while average net debt-to-EBITDA was 5.2x, down from 7.6x in 2007, providing a cushion against lower earnings. On average, consolidated secured debt as a percentage of total debt was cut to below 14% for the group, for TTM through first quarter 2020, down from 67% in 2009 and average consolidated GSE debt remained at less than 10% of total debt down from 46% during the last downturn. Reduced secured debt exposure means the REITs have head room to potentially obtain debt financing from government-sponsored entities, Fannie Mae or Freddie Mac, should the capital markets close.

The multifamily REITs maintain strong liquidity, supported by large, multiyear unsecured revolving credit facilities. These credit lines average about $1.4 billion in borrowing capacity, with plenty of remaining capacity going into Q2 2020. Moreover, these companies temporarily suspended, delayed or reduced capital spending plans to preserve liquidity.

While the transaction market largely came to a halt in Q2 2020, the 1031 market did not fully shut down and there are some signs the broader market is slowly reopening. We expect REITs' acquisition/disposition activity will gradually pick up toward Q4 2020, perhaps returning to pre-COVID 19 levels in H1 2021. That will depend on the threat of another wave of infections and the macroeconomic conditions leading up to and following the 2020 US presidential elections.

Prior to the pandemic, investor demand for apartment properties was very strong. Total multifamily investment volume grew almost 4.5% in 2019 to about $185 billion, the highest volume since 2005 and fifth straight year that multifamily topped every other property type, as data from Real Capital Analytics shows. The apartment sector benefited from historically low vacancy rates and healthy rent growth. While construction was designated an essential activity in many places, several larger markets (New York, New England and San Francisco) applied stricter conditions, causing a significant number of projects to grind to a halt. Depending on projects' location and level of completion, the REITs' with most development exposure have announced their intent to reduce or slow down budgeted spending to conserve cash. According CBRE Econometrics data, absorption of new units is expected to strongly recover in 2021 (see Exhibit 12). For developers, the going-in yields on some projects will mostly likely be revised down to account for delayed pre-leasing activity and potentially lower new lease rental rates.

Exhibit 12
Coronavirus hurting apartment demand, rent growth this year
Recovery in absorption should be strong in 2021



Sources: CBRE Econometrics Advisors and Moody's Investors Service

Apartment REITs do face risks, with high unemployment rates resulting in some tenants losing incomes. While off their historical average in the high-90% range, April and May 2020 cash rent collection rates for the apartment REITs were some of the highest in the sector at about 95%. This is testament to the resiliency of the business model and housing demand. These REITs have leveraged technology for virtual tours and executing leases for new tenants, as well as meeting needs of current tenants.

Average portfolio physical occupancy rates also remain high, in the mid-90%, with a modest dip in levels in May 2020 from April. The growth rate for lease renewals remains positive, offset by a contraction in new lease rates, as management aims to protect occupancy levels. In contrast, economic occupancy dipped because of short-term rent deferment (no abatements) offered on a case-by-case basis to tenants who demonstrate hardship from the pandemic. We expect improvement as social-distancing restrictions are rolled back and mobility increases.

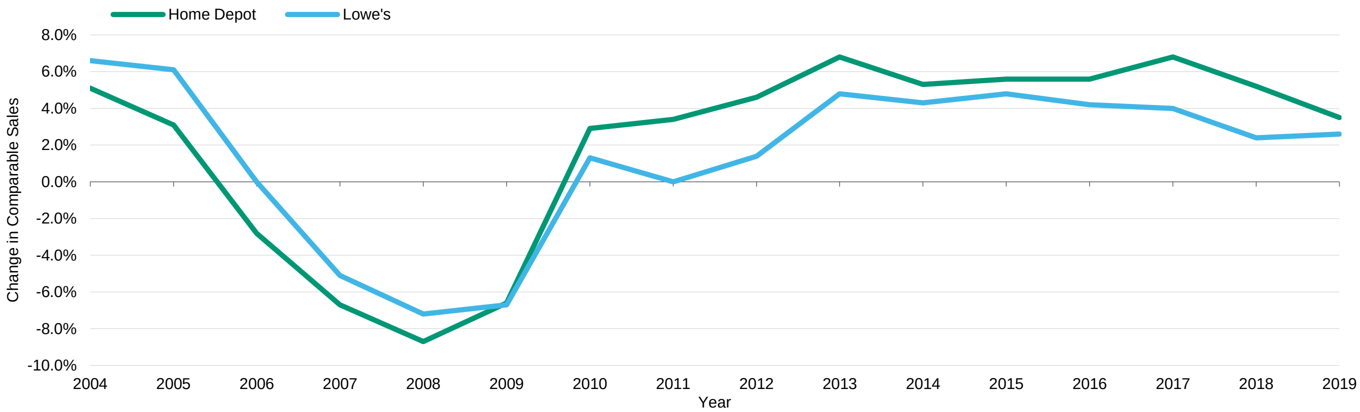
Our macroeconomic team forecasts the US unemployment rate will level off around 8.5% by the end of 2020, falling to 7.0% by the end of 2021 – still double the 3.5% reading from February. Mitigating challenges somewhat is the fact apartment REITs we rate focus on high-income salaried households in regions with substantial knowledge-based employment, which may help them weather a short-term earnings shock. We expect physical occupancy to remain high, in the mid-90% range, with landlords adjusting rents to retain tenants. We will closely monitor for a decrease in leasing demand, lower occupancy, rising unemployment and higher delinquencies from deferred rents over upcoming quarters.

Home improvement has been outperforming much of retail during pandemic

While much of the US retail sector continues to struggle with pandemic-induced pressures, home improvement has stood out as an outperformer. Home Depot, Inc. (A2 stable) and Lowe's Companies, Inc. (Baa1 stable), which dominate this space and are designated as essential services, have seen sales surge. Consumers stuck in lockdown have turned to home improvement projects and stocked up on items needed to shelter in place while Pro Customer sales remain solid. Lowe's reported an 12.3% jump in comparable sales in the first quarter, while Home Depot reported roughly 6.4% growth in comparable stores sales (7.5% in the US) for the same period. Overall, the sales growth for both have been solidly positive since the last recession (see Exhibit 13).

Exhibit 13

Home Depot and Lowe's annual comparable sales have been positive since the 2008-2009 recession



Source: Company 10K filings

Lowe's benefited from its geographic mix relative to Home Depot as it has relatively less exposure to urban areas and the Northeast. Although Home Depot took a proactive stance to limit customer traffic in its stores to facilitate social distancing, it still experienced positive comp sales in 11 of its 14 merchandising departments, with areas of weakness including kitchen and bath, flooring and millwork, and departments with heavy reliance on in-home installation. The Pro Customers comprises 40% of Home Depot's sales in comparison to 20-25% for Lowe's. Home Depot also reported an 8.9% dip in operating income, fueled by the $850 million of additional costs related to its pandemic response. In contrast Lowe's reported a 41% increase, which included $340 million of costs related to COVID-19

We expect the underlying operating performance for the home improvement sector to be positive in coming months, even as stay-at-home orders lift. We are cautiously forecasting that 2020 operating income will be flat. There remains a significant risk that demand will slow as consumers are faced with protracted high unemployment. Nonetheless, the desire of many to enhance their home environment as consumers continue to cope with the challenges of social distancing and limited outside activities poses a positive offset. Early 2020 performance stands in sharp contrast to the last recession in 2008-2009, when the sector experienced a 14% collapse in revenue. That drop was twice the nearly 7% decline in overall retail sales for the period, according to US Census Bureau data. Sales began to stabilize, and the building materials segments started to outpace retail sales year-over-year around 2012. Nonetheless, The 2008 – 2009 recession was a housing-led recession and therefore structurally different from the current economic contraction.

Prior to the pandemic, the sector had been losing its prolonged outperformance edge to broader retail. Although the sector's operating income grew a very strong 7% in 2017 it slowed to around 3% in 2018 and 2019, respectively. Margins have been under pressure due to higher operating costs, tariffs, investing back into the business and product deflation. Companies have been investing more heavily to improve customer experience while battling a continued decline in the wholesale cost of high-volume products.

Structured finance

RMBS structures will shape credit effects from unemployment and obligor debt relief

High unemployment among obligors will continue to drag collateral performance for residential mortgage-backed securities (RMBS) as the coronavirus pandemic persists. While forbearance and government stimulus are helping to shore up consumers' finances, credit effects for RMBS will depend on deal structures. Financially troubled non-bank servicers will continue to pose little immediate liquidity risk to deals because backup advancing and other structural protections will help investors avoid losses.

Unemployed and underemployed borrowers will continue to have trouble making mortgage and other debt payments, weakening collateral performance. While federal stimulus will somewhat support finances for struggling borrowers, officials approved such payments for a finite period, and certain borrowers will remain unemployed beyond the expiration of benefits.

Financial and economic fallout from the coronavirus's spread has already spurred mortgage delinquencies in recent months, worsening RMBS collateral performance. Among post-2008 prime jumbo RMBS, for example, loans that were delinquent for 30 days increased in May to 3.57% of pool balances from 0.52% in April, based on loan level data from the corresponding reporting period (see Exhibit 14).[4]

Exhibit 14
Post-2008 prime jumbo RMBS performance
Delinquencies and modifications as a percentage of current balances

Period	MBA 30 day DQ	30 day DQ	60 day DQ	90 day DQ	60+ day DQ	Annualized rate of new DQs
Jun-19	0.23%	0.03%	0.02%	0.01%	0.07%	0.11%
Jul-19	0.30%	0.03%	0.02%	0.01%	0.07%	0.14%
Aug-19	0.28%	0.04%	0.02%	0.01%	0.07%	0.14%
Sep-19	0.27%	0.03%	0.02%	0.01%	0.08%	0.19%
Oct-19	0.37%	0.05%	0.02%	0.02%	0.08%	0.13%
Nov-19	0.34%	0.06%	0.02%	0.01%	0.07%	0.16%
Dec-19	0.38%	0.04%	0.03%	0.01%	0.09%	0.30%
Jan-20	0.46%	0.08%	0.02%	0.01%	0.09%	0.13%
Feb-20	0.31%	0.04%	0.04%	0.00%	0.10%	0.36%
Mar-20	0.40%	0.05%	0.03%	0.03%	0.10%	0.23%
Apr-20	0.52%	0.08%	0.02%	0.02%	0.11%	0.17%
May-20	3.57%	0.18%	0.06%	0.02%	0.15%	0.62%

MBA (Mortgage Bankers Association) 30 day delinquency May 2020 data reflect borrowers who missed April's payment. All remaining columns are based on Office of Thrift Supervision methodology, and the 30 day DQ for May 2020 reflects borrowers who missed March's payment.
Sources: Moody's Investors Service, Moody's Analytics

Forbearance and deferral plans for struggling borrowers will improve obligors' ability to avoid default, and deal structures will shape the credit effects of consumer-relief efforts on the bonds. Heightened unemployment has been driving borrowers to opt for debt relief, which may position them to resume pre-relief mortgage payments and avoid foreclosure.

While forbearance plans support collateral performance, certain deal types' structures expose junior bondholders to higher risk of interest shortfalls and losses. For example, some post-2010 prime RMBS deals have stop-advance features which can expose bonds to interest losses from a rise in delinquencies and forbearance. Likewise, RMBS backed by re-performing loans often do not have servicing advance requirements and subordinate bonds will suffer losses and interest shortfalls from the increase in delinquencies and forbearance. In addition, if loans undergo modification following forbearance, junior bonds in some legacy Alt-A and subprime deals with weak interest reimbursement mechanisms will incur permanent interest shortfalls when servicers recoup their advances at modification.

For single-family rental transactions, government and private organizations' consumer-support efforts, such as temporary suspension of tenant evictions, pose little cash flow risk. Rental income accounts for a small portion of overall recoveries, limiting deals' exposure to rent payment disruptions.[5] Furthermore, loans typically have high debt service coverage ratios, allowing for significant declines in cash flows before the loan is at risk of default. Also, geographical diversification reduces exposure to any single market with high COVID-19 exposure.

Weak non-bank servicers pose only marginal risk to RMBS, reflecting deal structures and the ability to transfer payment collections to another institution. If a non-bank servicer fails to advance payments to trusts, transactions typically require alternate parties, such as the master servicer or the securities administrator or both, to step in and make advances until a replacement servicer is in place.

In the event of a servicer default, RMBS structures call for the master servicer or the trustee to appoint a replacement servicer. Following large-scale servicing transfers since the financial crisis, cash flow disruptions were limited, with elevated delinquencies for about 60-90 days. Delinquencies gradually declined once the transfers were complete, reducing material negative effects on overall pool performance. Even in bankruptcy, the primary servicing operation would continue for some time because the servicer would still be able to collect servicing fees.

CMBS risk increases because of hotel and retail exposures, but multifamily well positioned

Exposure to hotel and retail properties, which are among the most vulnerable property types to coronavirus-related business disruptions, is driving an increase in the risk of collateral default and realized losses among commercial mortgage-backed securities (CMBS) we rate. Among the four largest CMBS property types, multifamily is relatively well-positioned to weather the pandemic.

Exposure to the hotel and retail sectors, and to a lesser extent real estate markets hit by oil price deterioration, are heightening risk in CMBS we rate. Hotels are the properties hardest hit by the immediate economic fallout from the coronavirus given their sensitivity to consumer demand and sentiment. Hotel revenue per available room (RevPAR) had already dropped precipitously in March and early April, and will remain depressed as long as the voluntarily and mandated quarantines throughout the US persist. According to STR, Inc.'s Weekly Hotel Review for the week ending June 6, 2020, US RevPAR declined by 65% on a year-over-year basis.

The effects of the coronavirus has also hit retail properties hard, owing to both a spike in unemployment that curbs consumer spending and the closure of many non-essential retail businesses, which have been forced to fully or partially close in attempt to control the spread of coronavirus. Necessity retail, while allowed to remain open thus far, will suffer to some degree, but the immediate impact will be on discretionary retail.

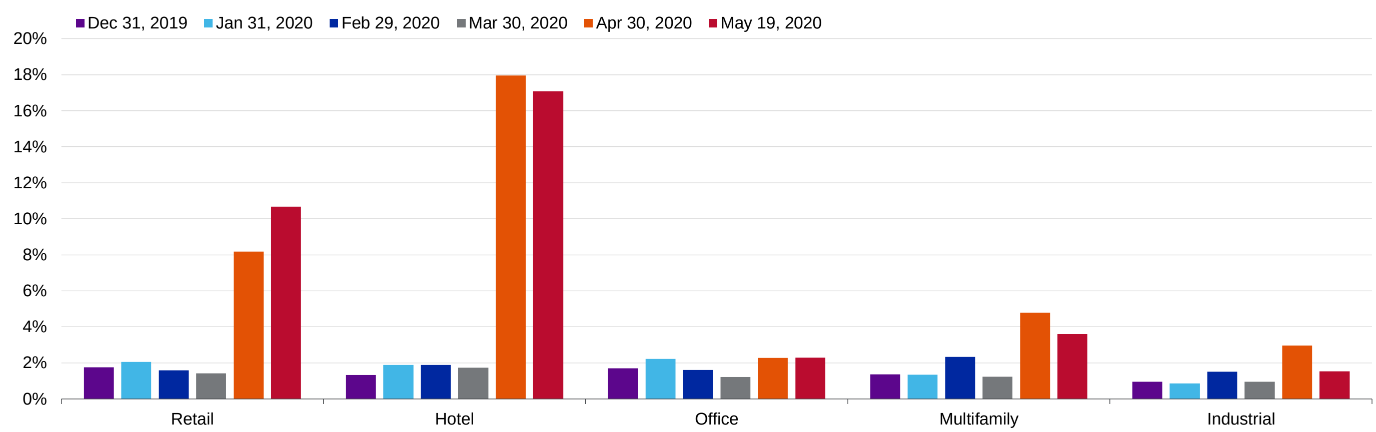
Store closures will likely accelerate and compound the stress on retail properties, particularly Class B or lower quality regional malls that have already registered a decline in performance since securitization. Class B or lower quality malls in secondary locations typically have higher cash flow volatility, loan loss severity, and refinancing risk, compared to other major property types.

As Exhibits 15 and 16 show, the pace of late payments among retail and hotel and retail properties far outpace those of other property times amid the pandemic.

Exhibit 15

Late payments spiked among retail and hotel loans

Share of conduit loans by property type with late payments 30 days or less and beyond grace period



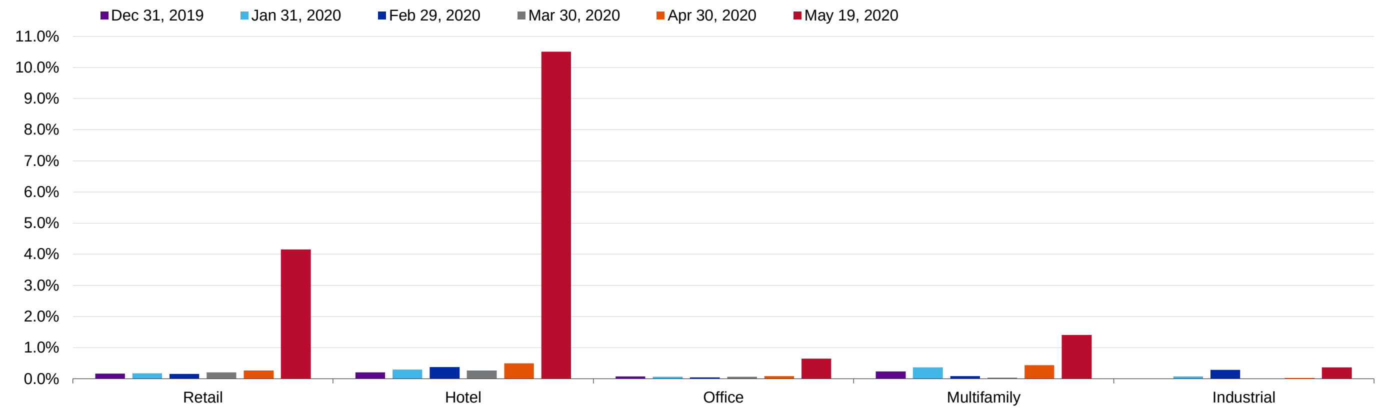
Data as of May 19, 2020

Source: Moody's Investors Service, Trepp LLC

Exhibit 16

Differences in late payments are even more stark among 30-59 day delinquent loans

Share of conduit loans by property type with late payments 30-59 day delinquent

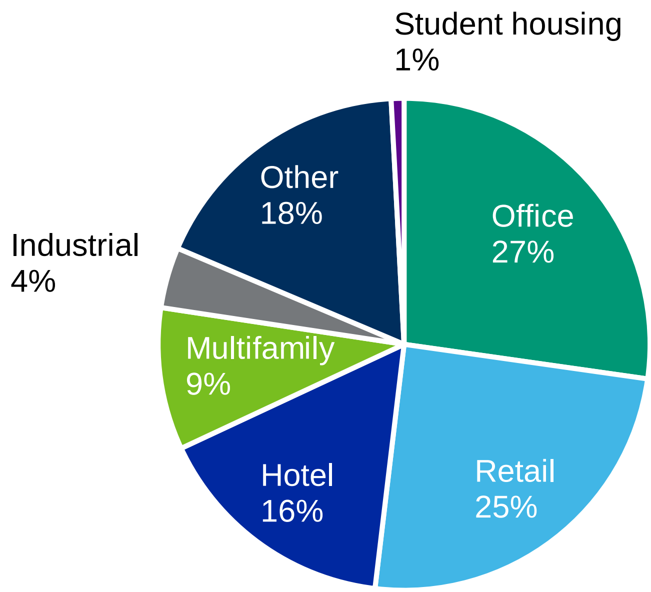


Data as of May 19, 2020

Source: Moody's Investors Service, Trepp LLC

Meanwhile, multifamily properties' relatively stable demand and cash flow projections make them less volatile than other property types, thus providing a counterbalance to coronavirus-related volatility. Multifamily properties are typically located in primary markets where affordable housing and proximity to employment centers, such as regional hospitals, manufacturing and distribution centers, are in demand. Furthermore, government stimulus programs will help mitigate rent payment disruptions resulting from increased unemployment. Multifamily properties account for 9% of collateral among deal we rate, as Exhibit 17 shows.

Exhibit 17
Multifamily properties account for 9% of CMBS collateral
CMBS property types, by share of total outstanding collateral balance of deals we rate



Data as of June 8, 2020 and excludes Agency CMBS.
Source: Moody's Investors Service, Trepp LLC

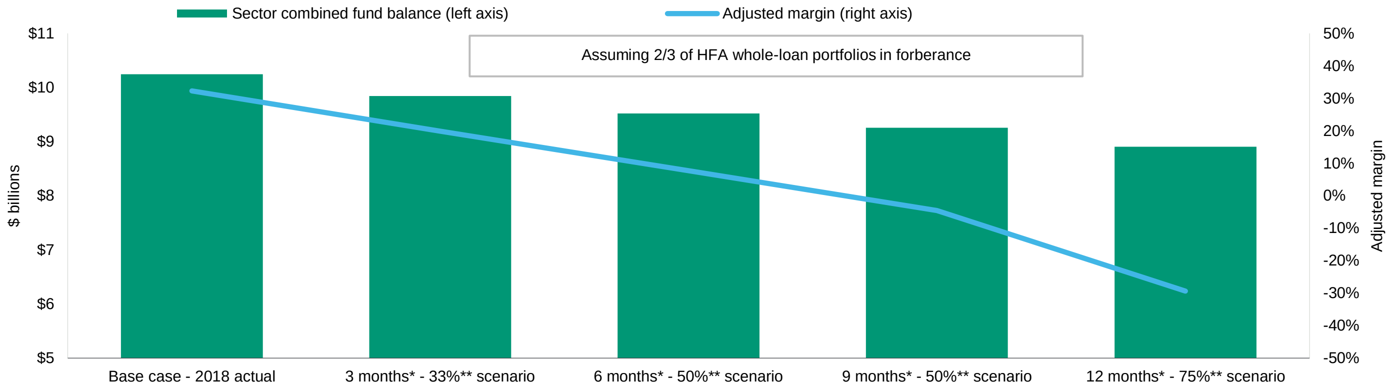
Although office properties have performed relatively well in recent months, they could be in for ongoing secular changes as businesses, may reconsider work-from-home arrangements in the wake of the pandemic once their leases expire.

Public finance

State HFA single-family programs will grapple with reduced cash flow resulting from forbearance, while multifamily programs have yet to face challenges from forbearance due to use of available reserves

Mortgage loan forbearance and foreclosure moratoriums per federal and state measures[6] will curb loan repayments and postpone recovery from loan losses, slowing cash flow for state housing finance agencies' (HFAs) single-family businesses. The potentially significant impact on HFA margins (see Exhibit 18) will depend on the length and amount of the mortgage payment deferrals as well as the reduction in investment income from the decline in interest rates. Yet HFAs benefit from generally robust fund balances — the combined fund balance for state HFAs we rate was very high entering the crisis at a median 1.2x. Stress analyses show a narrow range of declines in HFA net assets (as a percentage of bonds), from 1% in the best-case scenario to 3% in the most stressful.

Exhibit 18
Scenario analysis shows HFAs face a potentially steep decline in margins, but the negative impact on their fund balances would be more muted



*Duration of payment deferral in whole-loan programs (months). **Drop in sectorwide investment income.
Source: Moody's Investors Service

The long-term impact on HFA single-family programs will be affected by the mix of whole loans and mortgage-backed securities (MBS) in an HFA portfolio as well as the level of mortgage insurance on the loans. Mortgage payment deferrals will affect only whole-loan programs, which represent about 70% of single-family portfolios for state HFAs we rate (many HFAs that issued bonds in late 2019 and 2020 shifted to MBS financing instead of whole loans) (see Exhibit 19). Furthermore, about 84% of the single-family whole-loan portfolios for state HFAs we rate are insured by the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), the Department of Agriculture Rural Development or private mortgage companies (see Exhibit 20), which will protect the HFAs from loan losses upon foreclosures or sale of properties.

Exhibit 19
Whole-loan programs represent about 70% of HFA single-family portfolios

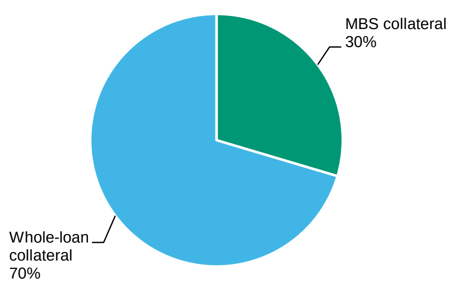


Exhibit covers Moody's-rated state HFAs.
Source: Moody's HFA Q4 2019 surveys

Exhibit 20
Government and private entities insure 84% of HFA whole-loan portfolios

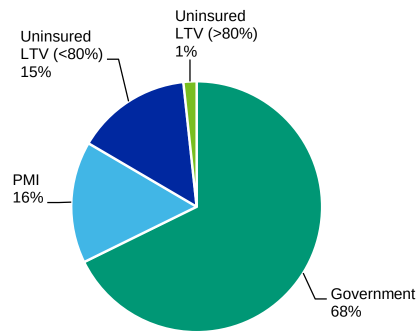


Exhibit covers Moody's-rated state HFAs. LTV refers to loan-to-value ratio. PMI stands for private mortgage insurance.
Source: Moody's HFA Q4 2019 surveys

The 18 state HFAs we rate that service single-family loans will experience draws on their liquidity as they advance principal and interest (P&I) and taxes and insurance (T&I) for loans in forbearance, but their high levels of liquidity will allow them to absorb these advances into 2021. The HFAs facing the greatest strain are those servicing large portfolios of MBS with the need to advance both P&I and T&I. Those that service whole loans will only have to advance T&I, because the lost P&I will be absorbed by the bond programs. Based on our stress tests, which include the assumptions that between 33% and 67% of HFA loan portfolios go into forbearance, most HFAs have more than enough internal liquidity or external lines of credit to sustain the advances even if loans remain in forbearance for a full year, the maximum forbearance period.

On the multifamily side, the increases in unpaid rent payments from tenants and mandated eviction moratoriums will likely cause some multifamily borrowers to request forbearance over the next few months. Thus far, very few HFA loans have gone into forbearance or delinquency, because the projects are tapping their project-level reserves, such as reserves for replacement or other operating reserves, in order to cover their mortgage payments.

HFA multifamily programs have strong financial profiles, which will provide a cushion against the negative financial effects from loans going into forbearance. They also benefit from mortgage insurance and subsidies that will help protect the loan portfolio during the forbearance period and upon foreclosure. The median reported margin was a healthy 27.6% and the median program asset-to-debt ratio (PADR) was 1.17x, giving the HFAs the ability to absorb reduced revenue or loan losses. Many projects also benefit from a federal subsidy, such as the Department of Housing and Urban Development's Section 8 subsidy, which will provide continual payments for tenants who cannot afford to pay rent. Similar to the single-family side, many of the HFAs' multifamily loans are insured or guaranteed by federal entities such as the FHA, Ginnie Mae or government-sponsored enterprises or are general obligations of the HFA.

Moody's related publications

Outlook

» Global Macro Outlook 2020-21 (April 2020 Update): Global recession is deepening rapidly as restrictions exact high economic cost, April 2020

Sector research

Global

» Macroeconomics – Global: Global economy continues to slide as coronavirus outbreak worsens, March 2020

» Credit Conditions – Global: Coronavirus and oil price shocks: managing ratings in turbulent times, March 2020

Financial Institutions

» Mortgage Insurance – US: Mortgage insurers brace for higher delinquencies as unemployment rate spikes, June 2020

» Mortgage Insurance – US: Mortgage ILNs protect earnings, capital as coronavirus-related delinquencies increase, June 2020

» Non-bank Residential Mortgage Companies and RMBS - US: Tight liquidity drives industry turmoil, April 2020

» Financial Institutions – Global: Coronavirus, oil shock hurt asset quality; monetary response reduces profitability, March 2020

Corporate Finance

» US – Homebuilding: View remains negative with home sales, revenue set to decline in new operating environment, June 2020

» Corporates – Global: Heat map: Coronavirus hurts travel-driven sectors, disrupts supply chains, effects compounded with global spread, March 2020

» REITs – US: Strong balance sheets, liquidity help buffer apartment REITs from effects of coronavirus, March 2020

Structured Finance

» Structured Finance – US, Canada & Latin America: Heat map: Bonds most vulnerable to coronavirus are in CLO, CMBS, floorplan ABS and rental car ABS sectors, March 2020

» RMBS – US: Coronavirus-tied aid will support mortgage performance, bond effects vary by structure, May 2020

» RMBS – US: Coronavirus-tied collateral delinquencies will likely rise in the next few months, May 2020

» RMBS – US: Coronavirus fallout likely eroded deal performance from flat March delinquencies, April 2020

» RMBS – US: Coronavirus-tied loan forbearance will spur losses on certain credit risk transfer deals, April 2020

Public Finance

» US Public Finance Credit Outlook: June 10, 2020

Topic pages

» US Housing & Housing Finance

» Coronavirus Effects

» Coronavirus Policy Response

» Recession Risks

Endnotes

1 Mortgage insurers consider a mortgage loan to be delinquent once the borrower has missed two consecutive payments. While mortgage loans that enter a coronavirus pandemic-related forbearance are not to be reported as delinquent for consumer credit reporting purposes, they may be reported to the mortgage insurers and the GSEs as delinquent and are treated as delinquent for purposes of the Private Mortgage Insurer Eligibility Requirements (PMIERs), the set of requirements mortgage insurers must meet to be eligible to insure loans that can be purchased by housing finance agencies Fannie Mae and Freddie Mac. Loans that were delinquent at the time such a forbearance was initiated are expected to be reported as delinquent to mortgage insurers and the GSEs.

2 Mortgage backed securities and mortgages that are not insured by the government or eligible to be purchased by Fannie Mae or Freddie Mac.

3 FHFA requires Fannie Mae and Freddie Mac to submit the results of stress tests. In 2019, FHFA required three scenarios: a baseline scenario, an adverse scenario and a severely adverse scenario. FHFA aligned the stress test scenario variables and assumptions with those used by the Board of Governors of the Federal Reserve System in its annual Dodd-Frank Act stress tests.

4 The actual delinquency rate is likely even higher, since some servicers are not reporting borrowers in forbearance as delinquent.

5 Our analysis assumes the loan will default and the trust will liquidate the collateral, which is the most stressful scenario for noteholders. If collateral is liquidated, the rental income is a small portion of the overall recoveries, which will largely be driven by home prices.

6 The Coronavirus Aid, Relief and Economic Security (CARES) Act provides for borrowers with federally backed mortgage loans who are experiencing financial hardship because of the coronavirus to request mortgage loan forbearance, and that servicers cannot foreclose on loans. Loans include mortgages purchased by Fannie Mae and Freddie Mac, insured by the Federal Housing Administration, the Department of Veterans Affairs or the Department of Agriculture (USDA), or directly made by the USDA. The statute provides that forbearance shall be granted for up to 180 days, and shall be extended for an additional period of up to 180 days at the request of the borrower. The forbearance moratorium lasted until May 17, 2020 but FHA, Fannie Mae and Freddie Mac extended foreclosure and the eviction freeze until June 30, 2020. Many states have also provided a variety of forms of relief for both homeowners and renters.

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