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STRUCTURED FINANCE COMMENTARY

Fall 2022

IN THIS ISSUE

SETTLE IN – THIS MAY TAKE A WHILE ...

We continue to experience a challenging macroeconomic environment. Inflation has been more stubbornly persistent than hoped, leading to expectations of more rate hikes, with the implied federal funds rate climbing to above 4.75% next spring and summer.

There are some "green shoots" (if you can call it that) that Fed policy is working to cool the economy, with the dollar stronger than it has been for 20 years, home prices trending downward in the hottest markets (with S&P CoreLogic CS 20-city prices falling 1.32% month over month in August), stocks down 20-30% from peak, and the ratio of JOLTS job openings to the unemployment level falling from its high of 1.99x in March to 1.67x in August (which is still incredibly high by historical standards). Q3 GDP was up 2.6% annualized quarter over quarter after two quarters of contraction, but sentiment seems to be growing more negative that a "soft landing" can be engineered.

The impact of geopolitical events on the economy has certainly been highlighted in 2022, and geopolitical risks continue to be higher than previously considered. We are more sanguine on the direct impacts of the U.S. election. It also seems like we are in it for the long haul, so welcome to the "Life Goes On" edition of the *Structured Finance Commentary*.

Some investors will thrive in this new life of higher risk, but for most the goal is to preserve and retain capital, and investors are finding ways to do that, so it's not all doom and gloom – but we will have to unlearn some things. The

ABS East conference in Miami in October was a good chance to take stock of the market, but we have heard that some investors are hitting the pause button until 2023 on making any large moves.

STRUCTURED PRODUCTS

Diversification of funding sources was the key to survival during the weekend funding squeeze back in March of 2020, and after rotating funding to concentrated longer-term evergreen facilities, diversification is back by popular demand.

Primary issuance of securitizations has obviously slowed, but not as much as one would think given the economic and rates backdrop. We saw elevated issuance in August, but it may have been the last gasp of locked-in loans being disposed of before all-in rates continue to move higher. Buy-and-hold investors like insurance companies and banks are more often the best bid instead of conduits for whole loans these days. We expect primary issuance to continue declining given rate lock-in and a cooling economy, but alternative structures are being executed, such as private credit facilities by hedge funds and others.

FIGURE 1: STRUCTURED PRODUCTS ISSUANCE

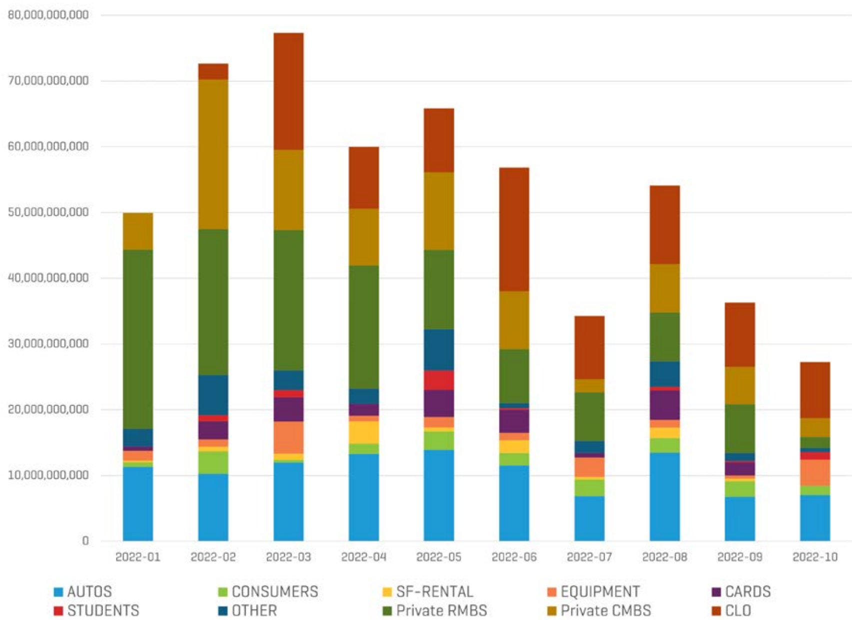
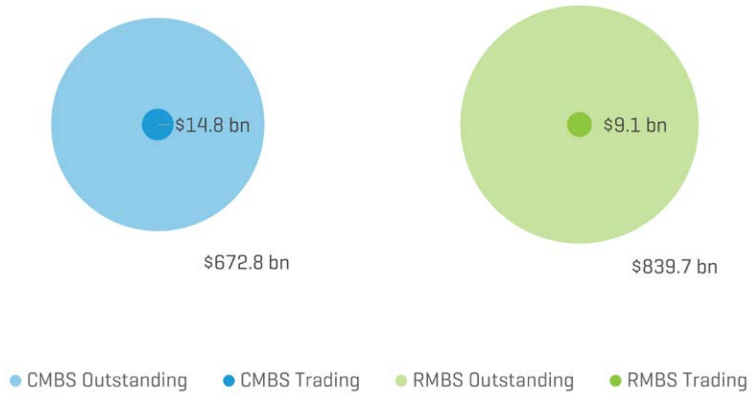


FIGURE 2: RMBS & CMBS LIQUIDITY – AUGUST TRADING



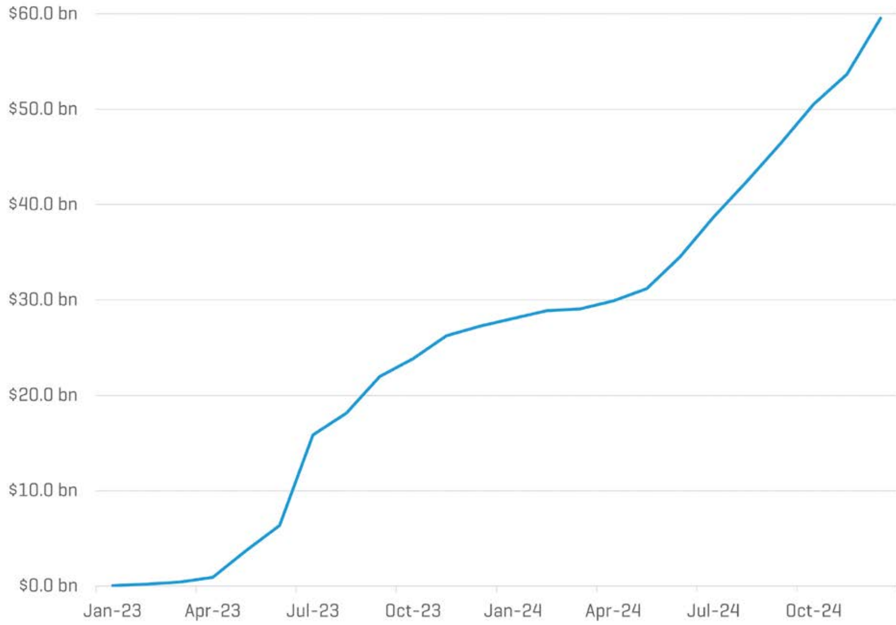
As of the writing of this commentary, we can confidently say that most participants are still in "risk-off" mode. Many investors do want to jump in, but nobody wants to be the first to step over the line while performance trends (clouded by student loan and mortgage forbearances) have yet to play out. Other reasons to delay deployment of capital have been macro volatility, inflation trends, fund outflows, a dearth of supply, and waiting for distressed sales.

CMBS

Credit spreads are at their year-to-date wides across the capital stack. Trading has been light with limited liquidity, partially in sympathy with broader fixed income markets, but there seems to have been a re-evaluation and a shift in outlook on rates, defaults, recoveries, timelines, servicing practices, litigation, and loans maturing. A "maturity wall" has been feared in the past, but ultimately has not led to substantial disruption on its own. This time it may be a tad different since post-global-financial-crisis maturity walls occurred in a low-rate environment. Now, the jump in the market rate in 2022 looks like a wall.

The result at the very least will be more difficulty refinancing any loan that matures in the next year or two. Approximately $60 billion of the total of $440 billion of loans in CMBX-referenced deals mature in 2023 or 2024, of which some $9 billion have recently-updated DSCRs below 1.00. The challenge will be especially severe for SASB or conduits with heavy collateral concentration in property types like offices that may be out of favor at the time, as office occupancy levels are still sub-50%. We have also seen excess widening in logistics and data warehouse spreads, possibly in anticipation of an outsized impact of a potential recession.

FIGURE 3: CUMULATIVE CMBX MATURITIES



RESIDENTIAL

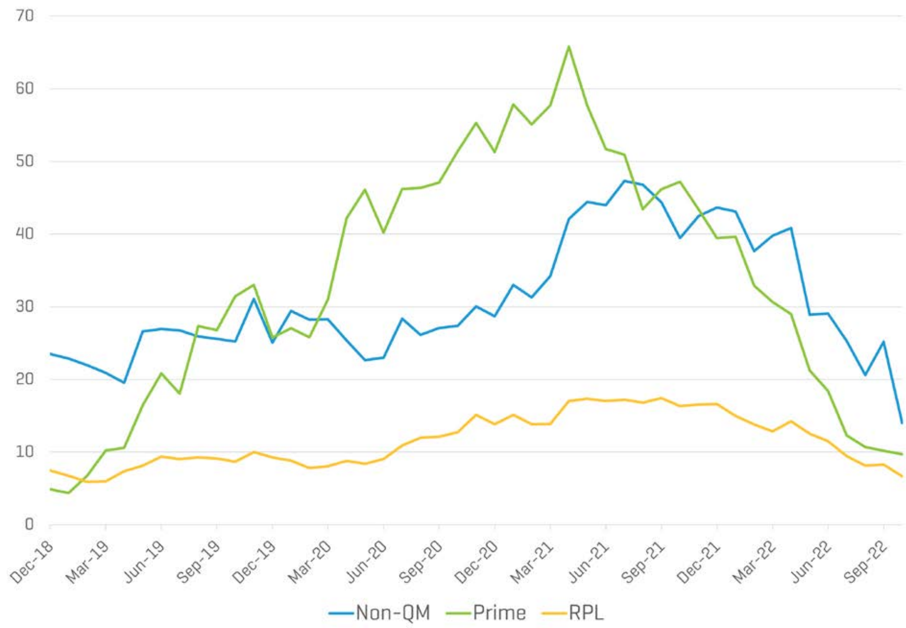
We see negative HPA as a lock for 2023, with the only real question being how strongly negative and relative levels between different locations. There is no way that with the Fed looking to drive inflation down by aggressively raising interest rates and the resultant sharp increase in consumer borrowing rates, there will not be a substantial decrease in all assets that are supported by the consumer's ability to borrow. As shown in the chart, mortgage payments have increased dramatically. The median monthly mortgage payment for an 80% LTV 30-year mortgage has risen to $2,441 for a median house price of $454,900 in October 2022, compared to the recent minimum of $1,106 for a $322,600 house in June 2020 and three years ago pre-pandemic of $1,216 for a $327,100 house in October 2019. To bring payments back to recent levels, one of two things needs to occur: either mortgage rates come down or home prices come down. The National Housing survey fell to the lowest level since 2011, indicating that only one out of five buyers think that it is a good time to buy a home, and inventory of single-family homes is at the lowest level in 40 years.

FIGURE 4: PAYMENT ON 80% LTV MORTGAGE FOR MEDIAN HOUSE

Note: Calculated using Census/HUD median sales price of houses sold (FRED: MSPUS) and Freddie Mac 30-Year Mortgage survey at 80% LTV

The supply of homes available for sale will be similarly affected by the increase in rates. Existing homeowners who are locked into a low-rate mortgage will not want to sell into a declining market or want to have to move and take out a higher-rate mortgage. Currently 86% of outstanding MBS have a rate below 5%, and 65% have a rate below 4%, much lower than the current 30-year mortgage rate. Prepayments are somewhere near the bottom and will likely stay there a while, as refinance volume is practically nonexistent. Observed prepayments on Non-QM, Prime, and RPL securitizations have followed the agency market, with prepayment rates dropping substantially, as shown in the chart below.

FIGURE 5: VOLUNTARY PREPAY RATES – 2017-2019 ISSUANCE



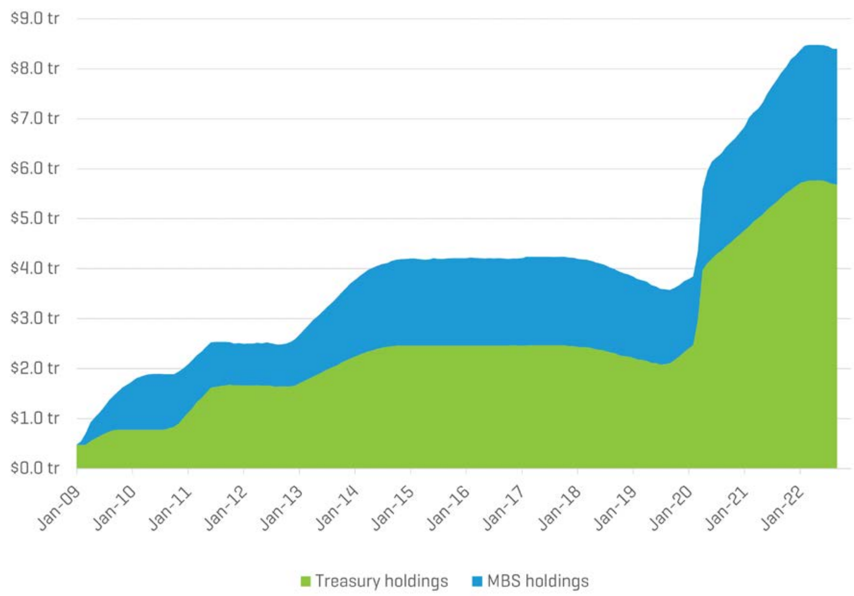
However, borrowers and industry will adapt. Products like HELOCs and ARMs will become more prominent again. HELOCs will help bridge the gap for homeowners low on cash but rich in home equity, and ARMs will make it more affordable for new entrants. ARMs once accounted for as much as 52% of all new originations during the peak of the 2005 housing bubble. From 2009 to early 2022, the ARM share remained very low, generally between 5% to 8%, as low rates on 30-year mortgages persisted. However, with rates rising substantially in 2022 and affordability worsening, the ARM share increased from 3.4% in January 2022 to 10.6% in June. In the first five months of 2022, $100.8 billion in HELOC and $38.1 billion in home equity loans were originated, representing increases of nearly 50% from 2021. These levels are also the highest since at least 2011.

Speaking of ARMs, did you know that the servicer can not only change the index next year from LIBOR but has also unilaterally taken the liberty to retain the right to change the margin? We will see if this leads to any litigation.

AGENCY MBS

The Fed has previously stated that it wants a treasury-only balance sheet, and consequently the Fed stopped its MBS purchases on September 16. Since prepayments have all but vanished, to hit its treasury-only target, the Fed will have to start selling MBS. As of September, the Fed's portfolio was approximately 30% MBS. Unfortunately, as it reduces its footprint in the space, liquidity will become more of an issue. Investors are seeing a decrease in liquidity in the treasury market already. Not only has the Fed ceased to purchase MBS, but central banks across the world have also either reduced their purchases dramatically, halted completely, or are lightening up their MBS exposures as well. The Fed's portfolio was concentrated in lower coupons so that supply will push up spreads on these pass-throughs relative to others.

FIGURE 6: FED TREASURY AND MBS HOLDINGS (2009-2022)



CONSUMER ABS

Market conditions remain tough for consumer ABS, as delinquencies continue to worsen (although continuing to be lower than levels seen as recently as 2019). Credit spreads are at their widest, depressing issuance. This backdrop, however, did not stop Freedom, Theorem, UpStart, Mariner, LendingPoint, Marlette, and Affirm from issuing deals in September and October. Freedom's AAA bonds were priced to yield 6.5% in October (up from 5.5% for Marlette's AAAs in September). As and BBBs were yielding around 8.5%-9%, with BBs, if issued, in the double-digit yield area. Freedom's latest deal had a 21% APR, and Opportun's overall APR is 32%. These high APRs still seem to leave enough margin for issuers despite higher cost of funds when accessing securitization markets. Deal economics, however, do not work for issuers of lower APR products, like subprime auto, where APRs are in the teens.

NEW AND INTERESTING DEALS

Music royalty securitizations continue to be an area of interest. Although there have been a few highly publicized $100-million catalog sales in the past couple of years – Bob Dylan, Bruce Springsteen, and David Bowie, for example – the industry as a whole is largely untapped. Securitization of music holds great capacity for growth, especially considering that digital streaming is steadily on the rise and will likely only get bigger.

We've seen only $1.5 billion or so in issuance in single-tranche pass-through securitizations since 2019, with yields ranging from 3.5% to 5% at issuance. The Hipgnosis deal (MUSIC 2022-1) priced in August 2022, with the previous deal (HIFI 2022-1A, backed by KKR) done back in February 2022. Previous deals have been similarly spread out. No doubt the securitization market has changed a lot since then, and executions have been challenging in general. However, the advance rates and ratings seen on deals so far have been attractive – so as nascent as the subsector may be, it has attracted interest from large insurance companies. The $222 million of bonds in Hipgnosis is smaller than previous securitizations, and buyers of previous music securitizations should be able to absorb this issuance without a problem. One caveat: the value of the catalog that determines the credit enhancement (35% for both of these deals) is determined by third parties. It's crucial to understand the assumptions that go in that valuation which determines the credit enhancement of the bonds. There is, however, a concentration risk in terms of exposure to a handful of songs, which can fall out of favor just as easily as becoming classics – both scenarios may affect catalog valuation significantly. For example, how would the valuation of Kanye West's catalog change given his recent controversies?

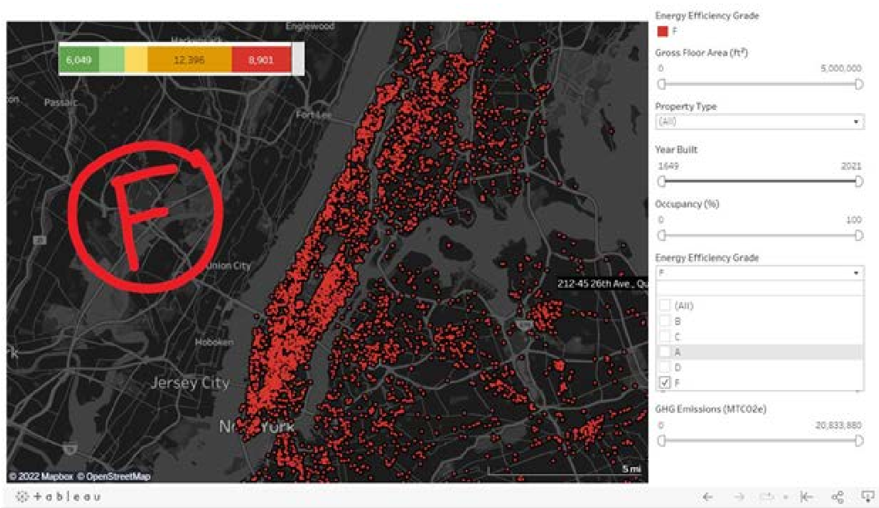
Home equity investment is an area that has generated a lot of interest given the enormous size of tappable home equity. Yet this is still a very niche and nascent asset class with limited historical data to benchmark performance. Borrower and investor education/acceptance will take some time, and we are interested to continue to watch the market develop.

ESG

While there have been some high-profile anti-ESG positions taken by certain state governments and a lot of discussion whether ESG will continue to be a priority in a worsening economic environment, there are still concrete steps being taken in the space. C-PACE (Commercial Property Assessed Clean Energy) loans are expected to increase substantially, especially in New York City, where substantial energy efficiency upgrades are mandated for large buildings. Our interactive data visualization tool gives a sense of the scale here – many billions of square feet of buildings need to have their HVAC systems updated by 2025 or 2030. To learn more, visit:

https://www.stout.com/en/insights/infographic/nycs-building-energy-efficiency-rating-interactive-tool

FIGURE 7: ENERGY EFFICIENCY RATING INTERACTIVE TOOL



Continuing in the environmental vein, extended tax credits for solar panel installation included in the Inflation Reduction Act should lead to expanded issuance of solar ABS, continuing to deepen this emerging sector of structured finance. While solar ABS has not been immune to the widening spreads and higher required credit enhancement levels that have impacted all new issuance, prospects remain bright for this subsector of the ABS market to continue to shine.

OUR STRUCTURED FINANCE COVERAGE

Residential Mortgages

- Agency MBS (spec pools, IOs, CRT)
- Non-agency RMBS (reps and warranties, monoline wrapped)
- NPL/RPL whole loans and RMBS
- Jumbo, non-QM
- Manufactured housing
- Reverse mortgages
- Manufactured housing
- EBOs
- HELOCs
- MSRs

Unsecured Consumer

- Marketplace lending
- Private student loans
- Income sharing agreements
- Credit card
- POS
- Elective medical
- Travel
- Other installment loans
- Payday
- Autos
- Solar
- Microfinance
- BNPL
- Unsecured consumer loan servicing rights

Commercial

- CRE (office, retail, multifamily)
- CMBS (including B-pieces and specially serviced deals)
- Single-family rental
- Fix and flip
- Equipment ABS
- Whole business securitizations
- Merchant cash advances
- Aviation
- Containers
- Inventory financing
- Timeshares
- Tax credits
- Music Royalties

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