ABS East 2019 Conference Notes

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The 25th Annual ABS East Conference at the Fontainebleau in Miami Beach attracted roughly 5,500 registered attendees (compared to 4,900 in 2018), including roughly 1,400 investors. The conference started on Sunday, September 22, and ran through Tuesday, September 24. Events and sessions drew strong attendance and the overall mood was generally positive. Speakers in some of the sessions expressed concerns about a potential recession in late 2020 or in 2021.

Agency mortgage-backed securities (MBS) continue to dominate the US securitization landscape. Non-agency MBS activity remains muted, though there has been a nascent revival of subprime and alt-A mortgage securitization under the guise of non-qualified mortgage (non-QM) activity. Interestingly, the conference had a session devoted to investing in whole loans. This seems to reflect the fact that some investors remain skeptical about their legal protections in MBS deals.

Collateralized loan obligations (CLOs) now provide funding for the majority of US leveraged loans, but concerns are emerging about declining loan standards and the prospects for the economy. Auto loan/lease securitization is going strong, but credit card deals are waning and student loan securitization activity is withering.

Securitizations of commercial assets and new/esoteric assets is growing. The impending demise of LIBOR remained a hot topic.
The following summaries reflect the remarks of the panelists who participated in selected sessions at the conference. For the most part, the summaries are drawn from notes that I took during the sessions. The summaries have not been reviewed or approved by the panelists. While I have tried to capture panelists’ remarks accurately, I apologize in advance for any inaccuracies and omissions. Commentary in the footnotes is mine. In addition, I wish to acknowledge the excellent work of Information Management Network in organizing and hosting the conference.

SUNDAY, SEPTEMBER 22, 2019

12:30 pm: The New Esoteric: Exploring the Potential for New Asset Classes Using Securitization as a Tool

The past 20 years have been a period of extraordinary liquidity. The impetus for extending securitization technology to new and esoteric asset classes is that liquidity is not evenly distributed. There are capital intensive activities that are not receiving sufficient financing from traditional sources. An example is financing natural resource extraction from proven reserves. There have been such deals in Brazil and Argentina, and now US firms are exploring securitization. Many US oil and gas producers currently use reserve-based lending (RBL) from banks. Securitization can allow an oil and gas producer to get 5- or 10-year financing to match its projected future production flow. Another panelist adds that traditional capital markets are not correctly pricing risk in the oil and gas sector. A third panelist states that applying securitization technology to oil and gas production is a gray area between structured finance and project finance.

One panelist explains that the Vantage securitization was backed by data centers. It formerly would have been handled as a commercial mortgage-back security (CMBS) deal, but it involved properties that housed income-producing “essential infrastructure” assets. The essence of the transaction is that data centers are worth more than simply their underlying real estate because they have long-term contracts with highly rated corporations.

Another type of transaction involving the telecom sector is a sale-leaseback of essential operating assets that do not produce cash flows by themselves. An example is Sprint’s sale-leaseback of its licensed spectrum.

One panelist asserts that aircraft securitization is on the verge of expanding sharply. He speculates that aircraft securitization could quickly expand to the range of $10 billion to $15 billion annually.

Blockchain technology has the potential to facilitate the securitization of new and esoteric asset classes. The use of blockchain technology might help improve transparency and increase confidence in data.

Another panelist asserts that a key difference between securitization today and securitization before the 2008 financial crisis is that market participants today have better access to data and the data is more reliable.

The challenges of complexity and lack of transparency remain significant. However, there is the potential for technologies, such as blockchain, to address those challenges. Improving transparency should help investors have confidence in new and esoteric asset classes and should allow securitization to expand.

One panelist takes a darker view. He notes that a company’s proven oil reserves can be re-estimated and suddenly fall by half. That would crush a transaction backed by such reserves. Why are there whole business securitizations (WBS)? The answer is usually that a company can attain an investment-grade rating on a WBS while its corporate debt would receive speculative-grade ratings. With fast food WBS, the key is that even if the corporate sponsor goes into bankruptcy, it will reorganize and continue to operate. The same is probably not true of certain other types of businesses. Massage Envy is an example.

Other examples of securitizable commercial assets include insurance sales commissions, non-guaranteed

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portions of Small Business Administration (SBA) loans, and proven mineral/metal (e.g., gold) reserves. More examples include telecom assets, solar energy assets, timeshare receivables, marine container leases, billboard receivables, and other natural resources (natural resource-based deals have been done primarily outside the US; they would be new and esoteric in the US).

The growth in private credit is providing financing to a tier of larger mid-sized companies. Non-bank lenders make the loans and then sell them to CLOs. One panelist explains that there is so much liquidity in the market that it is possible to execute deals as § 4(a)(2) private placements rather than as 144A transactions. It is possible to attract multiple investors and to achieve efficient pricing in transactions under § 4(a)(2) as well as in transactions under Rule 144A.

From a credit rating perspective, the three key factors for assessing whether a new or esoteric asset class can be securitized are:

- Does it work legally? Can the asset’s cash flow be legally isolated?
- Are the cash flows stable and predictable, and is there information to support that conclusion?
- Where on the spectrum between a traditional (pure) securitization and a corporate security does the new/esoteric lie (i.e., to what degree does the asset embody the operating risk of the sponsoring company)?

1:40 pm: Evolution in Commercial Real Estate Lending

CMBS have experienced a bit of a pull-back. The deal count is close to the level of 2017, and the projected volume for the full year is $80 billion. However, that does not include commercial real estate (CRE) CLOs or agency multifamily securitizations (i.e., securitizations issued or guaranteed by Ginnie Mae, Fannie Mae, or Freddie Mac and backed by loans on multifamily properties).

There are four main categories of commercial real estate securitizations: (i) conduit CMBS, (ii) single-asset/single-borrower (SASB) transactions, (iii) CRE CLOs, and (iv) agency multifamily securitizations. Although conduit CMBS issuance has slowed, CRE CLOs have accelerated and agency multi-family production has been steady. One panelist asserts that the pricing on CRE CLOs is slightly rich compared to corporate CLOs. Another panelist explains that investors focus on both loan characteristics and the abilities of the asset manager in a CRE CLO, whereas they focus only on loan characteristics in a conduit CMBS transaction (without regard to who originated the loans). Although CRE CLOs may not involve active trading of the loan portfolio, the manager can affect the performance of the loans. An investor would not invest in a CRE CLO with good loans if it did not have faith in the manager.

Investors vary in their approach to commercial real estate investing. Some consider only the assets. Others consider both the assets and the managers. The ones that consider only the assets tend to shy away from CRE CLOs, which often contain loans on transitional properties.

The CMBS conduit model was an outgrowth of the market’s experience with commercial mortgage securitizations by the Resolution Trust Corporation in the aftermath of the 1980s thrift crisis. It came from a setting where there was an antagonistic relationship between servicers and borrowers because the loans were often non-performing. More recently, some conduit loan borrowers experienced frustration with features of their loans, such as yield maintenance and defeasance provisions. That experience has made them averse to borrowing via conduit loan programs. This may partly explain the slow-down in conduit loan activity. The CMBS industry can control the terms under which

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it will extend loans; what it cannot control are the terms under which competing funding sources will extend loans.

The increasing footprint of Ginnie Mae, Fannie Mae, and Freddie Mae in the multi-family area has made the remaining portion of the commercial real estate landscape riskier. With a smaller share of non-agency multifamily loans, the other main property types—office, retail, and lodging—account for larger shares and are riskier than multi-family.

The low-interest rate environment is challenging. It is unclear whether it will help to increase the flow of conduit lending and conduit CMBS deals.

Panelists offer their views of the near-term outlook or the most significant threats to commercial mortgage securitization activity:

- The next 12 months will likely be a continuation of the status quo: steadily busy with maybe a slight increase in volume. Calendar year 2020 will bring substantial refinancing activity. Threats include the US presidential election and possible conflict with Iran.
- Distress in the retail sector is a potential threat to commercial mortgage securitization activity.
- A near-term threat would be the failure of the CMBS sector to increase its relevancy as a financing technique.
- All the types of commercial mortgage securitization are likely to grow. The key threat is worldwide economic troubles similar to what happened in 1998.

3:00 pm: CECL Compliance: Best Practices

[Note: CECL stands for current expected credit loss. It is a GAAP accounting standard that requires a reporting company to estimate and report the expected future credit loss on financial instruments. The standard was announced in 2016 and becomes effective for fiscal years starting after December 15, 2019.]

Many institutions will be implementing CECL in 2020Q1. Early estimates indicate that implementing CECL will have little effect on the required allowance for losses with respect to commercial loan portfolios, but that it will significantly increase the required allowance for losses on consumer loan portfolios.

One panelist explains that the CECL creates three categories of assets: (i) collectively assessed assets, (ii) troubled debt assets, and (iii) individually assessed loans. The collectively assessed group is handled with a model. The approach is to extrapolate future losses from losses that have already occurred. CECL calls for assessing future credit losses over a longer time horizon than is used under the current approach. Prepayments provide a somewhat offsetting effect. The CECL impact on commercial loans will likely be greater for those with longer tenors.

The initial expectation was that the CECL loss allowance would be greater than the loss allowance under current standards because CECL is supposed to cover the life of the loans. This is why the impact of CECL will be greater for loans with longer tenors. Because many commercial loans have shorter tenors than consumer loans, the effect is less on the commercial side.

The experience of the 2008 financial crisis shows that expectations about future credit losses can be very wrong. Macroeconomic projections can be wildly wrong. One of the possible problems with CECL is that different companies may have very different macroeconomic expectations, which would produce differing loss allowances on identical assets.

Many companies will need to rely on third-party providers for loss projections and for key economic projections. One issue is the degree of transparency in third-party models. Auditors and regulators may criticize or prohibit the use of non-transparent models or assumptions. The CECL standard requires management to understand and take responsibility for the projections and the assumptions used for setting their company’s loss allowances. Another key element is how third-party models integrate with a company’s other systems.

CECL is affecting the whole structured finance market. It has made some companies drop certain

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products that would have required higher loss allowances and capital charges. On the other hand, CECL should increase the motivation for companies to execute credit risk transfer deals. Overall, securitization will likely be more expensive going forward because of uncertainty about what assumptions to use and inconsistent implementation at different firms. Investors may demand more spread to compensate for the uncertainty. Another panelist asserts that CECL is likely to promote ABS issuance because it will make it more expensive for companies to hold assets on their balance sheets. Likewise, the growing share of non-bank lending means that those lenders will have greater incentive to securitize loans because they do not have access to deposit funding.

The CECL standard applies to assets that a company categorizes as “held to maturity.” It does not apply to assets that a company categorizes as “available for sale.”

One panelist reiterates the need for collaboration among different units within an organization in order to effectively implement CECL.

3:50 pm: Did ABS Recently Update Its Dating Profile? How Securitized Products are Attracting a Whole New Type of Investor

Insurance companies have historically been the largest group of ABS investors. One panelist asserts that it would be difficult for any other group to displace insurance companies as the largest ABS investor group. ABS offer somewhat higher yields but are somewhat less liquid than other types of investment. Another panelist states that funds—including both registered investment companies and hedge funds—are a growing investor segment. A third panelist emphasizes that a secondary trading market for whole business securitizations has emerged.

Some lenders issue pass-through certificates without credit enhancement from subordination or overcollateralization. Those unenhanced pass-through certificates use some elements of ABS structures and are intended to broaden the investor base. They are appealing to investors that have experience buying whole loans. Another panelist explains that unenhanced pass-through certificates are appealing to issuers because they achieve sale (off-balance sheet) treatment. Unenhanced pass-through certificates have been issued primarily by marketplace lending companies (MPL lenders) such as Lending Club, Prosper, SoFi, and Marlette Funding.

Corporate ABS, whole business, aircraft, cell towers, etc. One panelist states that although securitization technology has reached many new areas, the pace of further expansion will be modest. The reason is that investors need time to gain confidence in the stability of each new underlying asset class or cash flow. The most likely new asset classes will be ones where the underlying corporate exposure is a source of strength. Of note, the first Verizon securitization priced at a concession to Verizon straight debt.

One panelist states that some investors are entering into joint ventures with operators of large (depreciable) assets.

What more can be done to expand the ABS investor base? Before the 2008 financial crisis, ABS was a $1 trillion market. Although some asset classes have contracted (e.g., credit card receivables), there are solid opportunities for further growth in non-traditional ABS (i.e., new and esoteric asset classes). Education is key to expanding the investor base. Cell tower deals are an example. Cell tower securitizations were originally structured to appeal to CMBS investors. Later, as mainstream ABS investors learned about the sector and become comfortable with it, deals were structured in line with mainstream ABS rather than like CMBS.

How is risk mitigated when things go wrong? From a sponsor’s perspective, a transaction should isolate the subject assets in a bankruptcy remote, special purpose entity (SPE) that can survive the sponsor’s bankruptcy. One panelist explains that investors should consider asking for an audit or review of a deal’s SPE. Another panelist emphasizes that investors should understand what credit ratings really mean and how they are supported over time by monitoring and press release (June 26, 2019), https://www.sofi.com/press/sofi-completes-first-offering-rated-pass-certificates/.

6 Unenhanced pass-through certificates must not be confused with MBS issued in the form of pass-through certificates. Non-agency MBS always use subordination or overcollateralization for credit enhancement. Agency MBS have credit enhancement in the form of a federally-backed guarantee covering credit losses. See “Marketplace-Loan Plan Marks Funding Shift,” Asset-Backed Alert (April 15, 2016), https://www.abalert.com/search.pl?ARTICLE=167353; SoFi, “SoFi Completes First Offering of Rated Pass-Through Certificates.”

surveillance. A third panelist adds that investors should perform their own credit analysis when considering unrated ABS deals.

Although most major fixed-income investors already buy ABS, they are not all active in all asset classes. Growing the ABS investor base, therefore, means getting current investors to expand their participation into more asset classes.

4:40 pm: European STS and Risk Retention: How Will They Impact the Cross-Border Investor and Issuer?

The EU securitization regulations\(^8\) took effect on January 1, 2019. They include the requirements to qualify for the simple transparent and standardized (STS) designation.\(^9\)

The EU securitization regulation updated and collected together a number of separate regulations affecting securitization. It superseded the old Article 122a.\(^10\) The regulation potentially affects deals from outside the EU that are sold to investors in the EU. Any deal that involves tranching credit risk potentially qualifies as a securitization within the scope of the regulations. In contrast to the definition of asset-backed security in the US risk retention regulation,\(^11\) the EU regulation is not limited to bond issuances.

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\(^{9}\) Id., Arts. 18–28.


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Article 6—risk retention. Risk retention was the most highly debated feature of the EU regulation. It requires 5% risk retention. The rule requires an originator, sponsor, or issuer to retain the risk. Originators are likely to be the ones that will bear the burden of risk retention. If an originator has no ongoing involvement with a transaction, it can be the risk-retention party only if it originated at least 50% of the assets in the deal. The regulations prohibit the use of a special-purpose originator that has no independent economic substance.

Article 7—transparency. A designated party must provide information. This applies even before a deal closes. A prospectus or transaction summary must be provided before closing. The regulation also requires ongoing reporting. Information for public deals must be public. There is no specified method of information delivery for private deals but the market has adopted the approach of using a secure website.

Article 7 creates a huge host of problems. The templates for required disclosures are late.\(^12\) A real entity—not an SPE—must be on the hook for the transparency requirement. There is an open question about whether a US deal being sold to EU investors would have to comply with the requirements of Article 7. Regulated EU investors are required to determine that securitizations in which they invest comply with the regulations and that they understand the deals.

A US-based investment manager that manages investments for an EU-based client has to deal with the EU securitization regulation. There are essentially three types of deals. The first explicitly provides for compliance with the EU securitization regulation. The second type states that the sponsor will try to comply. The third type makes no attempt to comply and essentially abandons the idea of being purchasable by EU investors. The bottom line is that there are limited opportunities. Anything issued before 2019 is grandfathered. As older paper runs-off, UCITs (i.e., European mutual funds) will have a narrowing range of choices.

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One unresolved issue is the definition of “sponsor.” Being a sponsor may no longer require being a European entity. It is unclear whether regulators will actually accept that.

**Simple, transparent and standardized (STS) securitizations.** STS deals are a favored category of deals. The Article 7 transparency requirements apply to deals that do not qualify as STS. Even if the transparency requirements do not directly apply to US issuers, EU investors may believe that it requires them to insist on compliance with the transparency requirement.

The EU transparency rule is much stricter than US disclosure rules. It imposes much more stringent requirements than would apply to a US offering under Rule 144A.

**MONDAY, SEPTEMBER 23, 2019**

9:00 am: Fixed Income Investor Network and IMN Welcoming Remarks

The conference has 5,500 registered attendees. Market issuance is strong. The shadow of possible recession is in the wings. The Fixed Income Investor Network (FIIN) is a co-host of the event.

FIIN is an outgrowth of the IMN investor advisory board. FIIN has over 100 member firms. The FIIN board of directors met yesterday (September 22) to ratify the organization’s by-laws, elect officers, and set an agenda. The organization has special investor-only events at the conference, including educational events with Fitch Learning.

FIIN’s goal is to create a very broad and inclusive network of investors. Ratification of the by-laws established a set of guiding principles, a set of conflict resolution policies, and a mechanism for allowing FIIN to operate for the long-run as an independent entity. FIIN will deliver educational and networking activities. FIIN’s purpose is not to compete with other securitization industry organizations (e.g., SFA) but rather to complement them.

9:10 am: Celebrating 25 Years of ABS East and Looking Towards the Future for the US Securitization Market

Securitization has been a very meaningful source of financing for the US economy. The growth of securitization has generally been on the same growth path as the overall fixed income market. Non-government-sponsored enterprise (non-GSE) securitization is in the range of $700 billion to $750 billion per year (Exhibit 1).

The outstanding volume of US non-agency securitizations (of all types) was declining for many years, but it has recently started to rise. Securitization has been financing more than half of US household debt since 1995, primarily through agency MBS. Securitization finances nearly 70% of US residential housing debt, with agency MBS funding about 62% and non-agency MBS funding about 7%. At the peak of the housing bubble, non-agency MBS funded as much as 30%.

Student loans now amount to nearly $1.6 trillion. However, ABS backed by student loans amount to only about $166 billion, or one tenth of outstanding student loans. ABS backed by student loans provide financing for a shrinking proportion of student debt.

Securitization funds nearly 30% of the $4.4 trillion of US commercial real estate debt. Agency multifamily deals fund about 16% and non-agency CMBS fund about 13%.

Securitization accounts for a growing share of high-yield financing. CLOs provide the funding for slightly more than half of the $1.18 trillion of outstanding US leveraged loans. Securitization funds only about 12% of the roughly $1 trillion of US credit card receivables. In the early 2000s, securitization provided funding for roughly 30% of US credit card receivables. Securitization also funds about 12% of the roughly $1.16 trillion of US auto loans and leases. ABS backed by corporate (i.e., esoteric) assets has grown at a rapid pace, but from a relatively small starting level. Growth areas include marketplace lending, mobile phone contracts, PACE receivables, and other solar energy receivables. Agency credit risk transfer (CRT) deals are a strong area. Securitization provides funding for a larger share household debt in the US than in other countries.

Another panelist explains that the whole purpose of the securitization market is to convert receivables into high quality securities that can be analyzed and used as investments. Securitization works alongside bank financing and corporate debt to facilitate financing. It has had a big effect in aviation finance and high-yield finance. Securitization has provided funding for areas that might have been under-funded from other sources.
A third panelist observes that the securitization market has been very resilient. In the early days, corporate executives were reluctant to use securitization because they feared that it would give the appearance that their companies were in distress. The process of doing deals has evolved. In the market’s early days, methods were adapted from the project finance sector and professionals spent a lot of time responding to SEC comments. Today, the processes have become routine and the major players essentially operate in “compliance mode.”

The Structured Finance Association (SFA) wants to educate policymakers and regulators about the huge role of securitization in the economy. It seeks to represent the whole industry—both the buy-side and the sell-side—in its advocacy efforts. It seeks to represent consensus views. The SFA recently hosted events on the issue of the LIBOR sunset.

One panelist compares the securitization market 25 years ago with today’s market (Exhibit 2). Many of major issuers from the early days remain major issuers today.

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**EXHIBIT 1**
Securitization Issuance Volume by Product Type

**EXHIBIT 2**
Comparison of US Securitization 1995 and 2018

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<thead>
<tr>
<th></th>
<th>1995</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS East Registrants</td>
<td>400</td>
<td>5,500 (2019)</td>
</tr>
<tr>
<td>ABS East Location</td>
<td>Bermuda</td>
<td>Miami Beach</td>
</tr>
<tr>
<td>ABS East Sponsors</td>
<td>110+</td>
<td>440+</td>
</tr>
<tr>
<td>ABS Bookrunners</td>
<td>50+</td>
<td>90+</td>
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<tr>
<td>Institutional Forum</td>
<td>N.A. (ASF)</td>
<td>370 (SFA)</td>
</tr>
<tr>
<td>Members</td>
<td>founded 2001</td>
<td></td>
</tr>
<tr>
<td>Total ABS Issuance</td>
<td>$151 billion</td>
<td>$672 billion</td>
</tr>
<tr>
<td>US Real GDP</td>
<td>$10.6 trillion</td>
<td>18.6 trillion</td>
</tr>
<tr>
<td>US Population</td>
<td>266 million</td>
<td>327 million</td>
</tr>
</tbody>
</table>
The conservatorship of the GSEs was the biggest event on the GSE landscape. The GSEs provide stability and standards in underwriting and servicing residential mortgage loans. The servicing standards that they establish will potentially improve loss mitigation practices in the next downturn. Their CRT transactions also provide stability and standardization.

However, it is not sustainable for the federal government to continue funding the lion’s share of US residential mortgage debt through Ginnie Mae and the GSEs. Moreover, there is private capital available to take US residential mortgage risk. Three key steps for making a transition from the current state to one that uses a larger share of private capital are: (i) reducing the GSE footprint, (ii) making the government guarantee on GSE MBS explicit, and (iii) expanding competition for taking credit risk.

It is unlikely that there will be GSE reform before the 2020 election. However, both Democrats and Republicans agree that the housing market is too important to jeopardize.

The pipeline of legal and regulatory issues for the next several years includes the LIBOR cessation and the “valid when made” principle. If President Trump is reelected, he will likely challenge the validity of the CFPB. There would likely be few if any new SEC regulations. If a Democratic president is elected there may be new SEC rules that further expand the scope of disclosure requirements under Regulation AB. A Democratic administration might also change the educational finance system and the risk retention rules.

Panelists offer predictions for the future of securitization:

- Technology will make securitization jobs easier; it will enable market participants to better analyze risk and to process ever increasing amounts of data.
- Changing consumer attitudes toward homeownership may drive a shift to multifamily housing as younger generations feel less attachment to owning single-family homes. They are also less drawn to owning their own cars. There will likely be more risk-transfer trades, using securitization to moderate balance sheet volatility.
- Securitization’s role in financing corporate assets will likely continue to expand, eventually eclipsing its role in financing consumer receivables.
- Securitization will have a growing role in financing green energy and new technologies.
- The securitization industry is built on innovation. LIBOR is driving a lot of potential change. There needs to be greater transparency about who owns each deal in order to be able to process amendments needed for things like LIBOR.
- The market needs to find a way to make securitization more impactful to the residential mortgage market.

10:00 am: Keynote Presentation: Question Time with Mohamed El-Erian

In a poll of the audience, 77% of respondents state that there are signs pointing to a recession. There are actually many signs that potentially point to a possible recession. However, they might be false signals. For example, the yield curve must be viewed against the backdrop of conditions in Europe. Europe is suffering economic malaise, and the European Central Bank (ECB) is using low (even negative) interest rates. That influences the dollar yield curve. Likewise, US manufacturing is slowing, but so is manufacturing in the rest of the world.

It is unlikely that the next recession will occur before the 2020 election unless there is a policy mistake, such as shutting down the government for two or three months. Another risk, however, is that the market continually overestimates available liquidity.

We are coming out of the golden age of central bank independence. Political leaders, including President Trump, are increasingly trying to influence central bank policy. We are in the midst of a global phenomenon of a loss of trust in the expertise of central banks. The ECB is likely doing more harm than good and the Federal Reserve is ineffective. US interest rates are unlikely to become negative. It would be terrible if they do. The market is not built for negative yields. Negative yields encourage bad resource allocations. They create a high risk of financial disruption.

13 See Madden v. Midland Funding, 786 F.3d 246 (2d Cir. 2015), https://www.govinfo.gov/content/pkg/USCOURTS-ca2-14-02131/pdf/USCOURTS-ca2-14-02131-0-0.pdf.
The politics of anger has taken over around the world. Examples include Brexit, Macron, Italy, and Trump. The politics of anger is dangerous because it is about tearing things down without have replacements, which creates risks that are hard to price. The market response is to ignore such risks as tail risks. That is dangerous because the likelihood of tail risks materializing is rising.

The cessation of LIBOR and the possible transition to the Secured Overnight Financing Rate (SOFR) will likely be more disruptive than market participants expect.

Last week’s repo market disruption (overnight repo rates spiking to 10%) shows the fragility of liquidity in the system and the limits of central bank effectiveness.15

The pendulum has swung too far to passive investing and is likely to swing back to the active side over the next five years.

The financial industry has been slow to recognize how big data, artificial intelligence, and mobile technology will change the day-to-day operation of fixed-income trading floors.

The US-China trade war is not likely to be resolved soon. The Trump administration’s posture rejects the idea that trade is a voluntary, cooperative activity. The smart move for China would have been to make concessions. It did not do so. Additionally, the US has made the trade war a national security issue. China’s public position on trade will make it hard to correct its initial misstep. The damage to the US economy will be limited. Compared to other countries, only a small portion of the US economy relies on international trade. However, it is likely that the trade war will strongly affect financial markets.

About 15 years ago the world fell in love with managing risk. Slicing and dicing risk was to have been the “next stage” of capitalism. This diverted investments to finance and away from genuine drivers of growth: infrastructure and education. When society could have returned to investment in growth drivers, it instead turned to central banks that could print money. This is one of the causes of low global interest rates.

Central bank gold purchases are caused partly by distress in Europe, which is diminishing the appeal of the euro as a reserve currency. Another driver of demand for gold is the realization that Bitcoin and other digital currencies are not going to replace gold and the major reserve currencies.

There is increasing uncertainty about the future. In virtually all areas, the “belly of the curve” is under pressure (i.e., the status quo or the most likely scenario is becoming less likely). Unexpected scenarios—those in the tails of distributions—have become more likely. That creates a challenge because people naturally operate assuming the status quo will continue or that the most likely scenario will occur. People tend to dismiss or grossly underestimate the likelihood of tail scenarios occurring. They make three types of cognitive errors. One is denial; they develop a blind spot with respect to scenarios other than the most likely one. The second is “reframing,” which is essentially the process of averaging tail scenarios to bring the result back into the comfort zone of the belly of the distribution. The third (and most dangerous) is “active inertia,” which is failing to operationalize a strategic decision for change. An example was IBM’s failure to execute its 1980s strategy to be a major force in personal computers.

10:40 am: Navigating the Global LIBOR Crossroads

SOFR is a “broad measure of the cost of borrowing cash overnight collateralized by Treasury securities.”16 SOFR can be volatile, but compounding SOFR or a term SOFR smooths out the volatility.17


17 There are various other proposals for bootstrapping 1-, 3-, and 6-month term rates from overnight SOFR. See Loan Syndication and Trading Association (LSTA), “The Great Migration Away
The UK FCA is not requiring banks to continue submitting LIBOR fixings after 2021.

The Alternative Reference Rates Committee (ARRC) is a private-sector working group that is promoting SOFR.\footnote{Id.; ARRC, “Practical Implementation Checklist for SOFR Adoption” (September 19, 2019), https://www.newyorkfed.org/medialibrary/Microsites/arc/files/2019/ARRC-SOFR-Checklist-20190919.pdf.} The US Treasury is trying to facilitate private sector activities toward addressing the demise of LIBOR. The demise of LIBOR will affect every financial business. Firms cannot afford to wait for others to act first and then plan on copying the market leaders.

About two-thirds of market participants have not taken any action to deal with the cessation of LIBOR. Only about a third of the financial industry has sent or received communications about the LIBOR cessation. A key issue is that many companies have computer systems that use LIBOR as an input or assumption for analysis and risk management even if they do not hold LIBOR-based floating-rate securities.

The UK has moved quickly in dealing with the demise of LIBOR. The replacement rate there is called Sterling Overnight Index Average (SONIA).\footnote{Bank of England, “SONIA Key Features and Policies,” https://www.bankofengland.co.uk/markets/sonia-benchmark/sonia-key-features-and-policies.} Since April, there has been £14.9 billion of securitization issuance linked to SONIA, representing about 85% of total securitization issuance during the period. SONIA has gained wide acceptance in the UK. Term SONIA is determined by compounding in arrears.

In the US, there has been more than $230 billion of SOFR-based issuance over 31 deals. Initially there was a premium on SOFR deals because they were a novel product. However, the premium is shrinking as the amount of outstanding SOFR paper grows.

**Legacy deals.** There are roughly 12,000 to 14,000 rated securitizations in the US that reference LIBOR in some fashion (i.e., coupons pegged to LIBOR, assets based on LIBOR, or LIBOR swaps). It is a laborious task for a rating agency to go through all the deals that it has rated to figure out what happens when LIBOR goes away.

Deal documents differ, some call for an informal poll of banks and a small minority call for using the last available LIBOR quote. That approach essentially converts a floating–rate deal to a fixed–rate deal.

Issuers and borrowers have a range of responses to the demise of LIBOR. Some are just getting acquainted with SOFR. Some borrowers that are in the process of refinancing their loans have realized that the typical “base rate” calculations could make their loans revert to the Prime Rate, which they consider unacceptable. They push for a different base rate definition. Issuers of new deals include some form of LIBOR transition language in the governing agreements. Legacy deals do not yet have a solution. There is both tax risk and litigation risk associated with legacy deals. Issuers and sponsors can seek amendments, but amending a deal’s interest rate typically requires unanimous investor consent. Another possible strategy is to seek a court order to approve an amendment without consent.

Six key takeaways about the LIBOR cessation and the switch to SOFR:

- The federal government is on the issue and working hard to find and execute solutions. For example, the SEC has issued guidance on the subject.\footnote{Division of Corporation Finance, Division of Investment Management, Division of Trading and Markets, and Office of the Chief Accountant, Securities and Exchange Commission, “Staff Statement on LIBOR Transition,” (July 12, 2019), https://www.sec.gov/news/public-statement/libor-transition.}
- Managing the transition from LIBOR to SOFR is hard. Companies should refer to the ARRC checklist.\footnote{ARRC, “Practical Implementation Checklist for SOFR Adoption” (September 19, 2019), https://www.newyorkfed.org/medialibrary/Microsites/arc/files/2019/ARRC-SOFR-Checklist-20190919.pdf.}
- Switching to a new reference rate is possible. The UK is already doing it with SONIA.
- The US is beginning to switch.
- Switching from LIBOR to SOFR may have significant implications for credit ratings.
- Handling the transition for legacy deals will be challenging from a legal perspective.

**12:00 pm: ABS Liquidity: The Traders’ Panel**

**Impact of the TRACE system.** TRACE is the reporting facility for fixed-income transactions executed
by FINRA members. ABS have been on the TRACE system since 2015. The information reported on ABS trades is somewhat less than is reported for corporates and agency MBS TBA trades. Average daily secondary trades of ABS number about 400, which is up 20% from 2016. The average number of daily trades has increased each year. The number of trades of ABS backed by auto loans, credit card receivables, and manufactured housing (MH) contracts has increased. The average number of trades of ABS backed by student loans and small business loans has decreased. Compared to prior years, 2019 has smaller average daily par value traded. Another metric is the number of dealers. The number of dealers active in the ABS space has been constant. Average trade size has increased across all products, with the exception of MH and SBA loans. The proportion of trades of $25 million or more has slightly increased (with the exception of credit cards and MH).

One panelist is critical of price dissemination through the TRACE system. Price dissemination makes sense for the most liquid parts of the ABS market. However, price dissemination for less-liquid products is another matter. The dissemination of prices may be detrimental for investors in less-liquid ABS. The issue is that a single trade at an off-market price (e.g., selling a small denomination security during a period of disruption) can establish a reported price that forces other holders to remark their positions. Another panelist adds that price dissemination can cause a snowball effect of falling prices, such as when an investor seeks to sell a large position in multiple trades spread out over time. If trades are infrequent, price dissemination can essentially amount to spreading stale information.

The opposing view is that all information is good and TRACE provides more information to the market. Even reported prices on off-market trades can create an opportunity for understanding why the reported prices do not reflect true values. It is not appropriate to view a single trade as necessarily resetting the whole market. In a sense, every trade is the actualization of a disagreement; the buyer and seller must disagree about value or there would be no trade.

FINRA has received requests from investors for expanding the coverage of the TRACE system.

LIBOR transition. Swap rates currently serve as the pricing benchmark for most fixed-rate ABS. However, swap rates are determined relative to LIBOR, which is going to disappear. This means that the pricing for fixed-rate securities will be affect by the LIBOR transition. It remains unclear what will be the replacement pricing benchmark for fixed-rate ABS. One panelist asserts that the most likely replacement will be a new swap rate determined by reference to SOFR. The structured finance market most likely will not revert to using Treasury yields as the pricing benchmark for fixed-income securitizations.

Traders also need to price operational risks and uncertainty with respect to legacy deals that have LIBOR-based coupons, underlying assets, or swaps.

The investor base. One panelist asserts that current conditions are the Belle Époque for cash surrogate securities (i.e., short-term, high quality securities). Investors are waiting to see what comes next. Another panelist remarks that the hedge fund community is struggling to find its identity in the securitization market now that much of the crisis-era distressed paper has been retired. Also, hedge funds have had to lower their fees to attract assets. Hedge funds previously sought returns in the range of 10% to 15%. Now their demand for investments is bifurcated: they accept low yields on high quality, short duration paper, while also looking for opportunities in “non-CUSIP” investments.

Relative value opportunities in the current environment:

- Subordinate tranches at the triple-B and double-B credit grades. However, investors need to be able to weather the occasional adverse TRACE pricing.
- Triple-B-rated tranches from subprime auto ABS.

200 pm: Non-QM RMBS Market Outlook: Promising Signs of Life for Private Label Issuance

The term “non-QM” refers to loans that do not qualify for “qualified mortgage” status under regulations. Issuance of MBS backed by non-QM loans

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was more than twice the level of MBS backed by prime jumbo loans and more than the volume of GSE credit risk transfer deals (Exhibit 3). The weighted-average credit score of borrowers on securitized non-QM loans is 720. Non-QM loans are not necessarily subprime.

Nearly all prime-quality mortgage loans with full documentation of borrower income and assets meet the requirements for QM classification. Accordingly, in practical terms, the population of non-QM loans consists mostly of loans that would have been classified as “subprime” or “alt-A” during the US mortgage bubble. One of the standards for QM loans is a maximum debt-to-income ratio of 43%. Loans with higher DTI ratios primarily comprise the sub-prime component of the non-QM space. The alt-A side consists of a combination of loans on investment properties (i.e., non-owner-occupied properties) and loans originated based on alternative or reduced documentation of the borrowers’ income.

There are three main reasons why loans fall into the non-QM category:

- Income documentation issues (~50%)
- Debt-to-income ratios (DTIs) above 43% (~25%)
- Loans on investment properties (~15%).

The total size of the non-QM market is in the range of $30 billion to $35 billion. Some of it resides on the balance sheets of small banks. The remaining volume available for securitization is roughly $25 billion. The non-QM MBS sector is the fastest growing segment of the private-label MBS market. So far in 2019, there has been roughly $19 billion of non-QM MBS issuance.

The credit performance of securitized non-QM loans has been generally good. Delinquencies are below 1%. Of 75,000 non-QM loans securitized since 2015, only about 100 have gone through foreclosure.
documentation. Loans on investment properties also have performed well. Non-QM MBS have credit enhancement levels in the range of 20% to 30% for the senior (triple-A-rated) securities. Many of the early non-QM MBS have received credit rating upgrades because of strong performance, which may be attributable to the supportive economic environment.

As the non-QM MBS space has grown, the investor base also has expanded. Deals are often over-subscribed. Some investors favor non-QM MBS over prime-jumbo MBS because of the shorter average lives.

Prepayment speeds on non-QM loans have been fast (as have prepayment speeds on other residential mortgage loans). Credit curing is likely a strong factor driving prepayments on many non-QM loans. Borrowers with lower FICO scores are prepaying more quickly than higher-FICO borrowers. The likely explanation is that higher-FICO borrowers had reduced documentation, which creates hurdles for refinancing.

Non-QM is merely a regulatory designation. Analyzing the credit risk of non-QM loans is the same as analyzing the credit risk of residential mortgage loans. The typical non-QM loan has an LTV in the low 70s and a FICO score of 720. Alternative documentation and DTI are where the risk is higher than for conforming loans (Exhibit 6). Non-QM loans also have a somewhat higher prevalence of prior credit events (i.e., major derogatories on a borrower credit report). Representations and warranties in MBS backed by non-QM loans are somewhat weaker than in post-crisis prime-jumbo MBS.

Another panelist agrees that the full-doc credit repair story is the key driver of prepayments on non-QM loans. Loans on investment properties have slower prepayments. It is possible that the non-QM sector will split into distinct subsectors for each product sub-type. Panelists have differing views about whether it would be better to separate the distinct product sub-types into separate deals. Some panelists favor diversification across product sub-types while others favor the opposite.

Investors are highly focused on the underwriting process and the potential for underwriting standards to loosen. Standards for alternative/reduced documentation loans have recently loosened. Loans originated on the basis of bank statements now require statements covering 12 months rather than 24. Other aspects of today’s alternative documentation programs are also becoming looser. Nonetheless, the product is better than the “low-doc” and (notorious) “no-doc” loans of the mid-2000s.24

There has definitely been a loosening of credit since 2014.

Banks and insurance companies continue to favor prime-jumbo MBS. Asset managers account for larger share of the investor universe for non-QM MBS. Non-agency MBS in general, and non-QM MBS in particular, have lots of room for growth. However, it remains unclear how much more investor demand will grow. One panelist expects growth to continue at a moderate pace. However, regulatory changes could disrupt it. Rating agencies are prepared to handle the anticipated growth in non-QM MBS activity.

One panelist explains that originators would be willing to extend loans with much higher LTVs if they could get investors to accept them. Appraiser independence is a partial mitigant to higher LTVs. 25

2:50 pm: The Flight to Whole Loan Trading

What about volume trends in non-agency securitization and whole-loan trading? Post-crisis, most jumbo loans are on lenders’ balance sheets. Only about 5% get securitized. Non-QM loan origination volume is quite small but a high proportion gets securitized. Most non-conforming production volume remains as whole loans. One panelist asserts that the whole loan market has been consistent. Another panelist explains that the non-QM market is only about $20 billion relative to a mortgage market of $1.8 trillion. Investors like non-QM because it offers more spread (Exhibit 5).

Why choose whole loans vs. Non-agency securities? One panelist explains that investing in whole loans allows an investor to have greater granularity in the data about the loans. A whole-loan investor receives property address-level data even at the bidding stage. Once an investor purchases a package of whole loans, it can work the data more intensely. A whole-loan

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25 Better appraiser independence is certainly a good thing, but it is far from clear that it will protect deals and investors from appraisals that reflect unsustainable housing bubble conditions, such as occurred in California, Florida, and certain other areas in the mid-2000s (see Exhibit 4).
buyer also has greater latitude to steer the servicing of purchased whole loans and to place different loans with different servicers.

Another panelist echoes the advantage of getting more information in a whole loan purchase. Additionally, if an investor has the size and the staff to handle whole loans, it is simpler to buy whole loans than to buy MBS. Buying whole loans is a different mind-set and a different skill set than buying MBS.

A third panelist agrees and adds that a whole-loan investor can perform better due diligence and has better legal protections. The better legal protections are a key

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**Exhibit 4**
California FHFA Home Price Index

![Graph of California FHFA Home Price Index]

*Source: Federal Housing Finance Agency.*

**Exhibit 5**
US First-Lien Residential Mortgage Loan Origination Volume

![Graph of US First-Lien Residential Mortgage Loan Origination Volume]

*Source: Mortgage Market Statistical Annual 2019, p. 3.*
EXHIBIT 6

Non-QM Prime vs. Expanded Prime Pool Attributes

<table>
<thead>
<tr>
<th></th>
<th>Non-QM Prime Pools</th>
<th>Non-QM Expanded Prime Pools</th>
</tr>
</thead>
<tbody>
<tr>
<td>FICO &lt; 700</td>
<td>3%–5%</td>
<td>20%</td>
</tr>
<tr>
<td>LTV &gt; 80%</td>
<td>&lt;10%</td>
<td>25%</td>
</tr>
<tr>
<td>FICO &lt; 700 and LTV &gt; 80%</td>
<td>&lt;1%</td>
<td>3%–4%</td>
</tr>
<tr>
<td>Moody’s Expected Loss</td>
<td>30 bps–40 bps</td>
<td>1%</td>
</tr>
<tr>
<td>Moody’s Aaa Credit</td>
<td>4%–5%</td>
<td>10%</td>
</tr>
<tr>
<td>Enhancement</td>
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feature. Another panelist strongly agrees about importance of stronger legal protections and a greater degree of control in whole-loan purchases.26 However, whole loans are less liquid than CUSIP securities and fewer investors are equipped to handle them. Therefore, it is important to fix the problems with private-label MBS because whole-loan transactions will not suffice to absorb an eventual contraction of the GSEs.

The “GSE patch” provides that any loan purchased by Fannie Mae or Freddie Mac is a QM regardless of whether it complies with other criteria for QM status.27 The patch is scheduled to expire in January 2021.28 About 30% of current GSE volume is covered by the QM patch, primarily because the loans have DTIs higher than 43%. When the patch expires, the loans will either vanish or have to go to the FHA or other non-GSE programs.

26 In the aftermath of the mortgage meltdown, non-agency MBS investors suffered huge losses that were at least partly attributable to misrepresentation and fraud by non-agency MBS issuers and other transaction parties. In many non-agency MBS transactions, the underlying loans were not as represented in the prospectuses or in the governing agreements. The legal framework of investor protection generally failed to provide remedies. The federal securities laws were largely ineffective because most investors did not realize the nature of their claims until after the time limit for bringing lawsuits had expired. Many investors sued non-agency MBS transaction parties for breach of contract, claiming that they breached their obligation to repurchase defective loans (i.e., loans with missing or defective documentation or that fail to satisfy applicable representations and warranties). However, investors had only limited success with those efforts; again, because the time limit for pursuing contractual remedies also had expired in many cases. More recently, some investors have sued the trustees of non-agency MBS deals, claiming that the trustees failed to perform their duties, particularly the duty to enforce the obligations of other transaction parties to repurchase defective loans.

28 Last year, an industry newsletter reported on the continuing effect of unfulfilled investor expectations regarding the enforcement of representations and warranties in MBS deals. See “Buy-Side Impasse Obscures MBS Outlook,” Asset-Backed Alert (September 21, 2018).

• Representations and warranties allocate the risk of “defective” mortgage loans between the issuers of non-agency MBS and the investors who purchase them.
• The ASF model representations and warranties were designed to express “customary” representations and warranties and to provide a baseline against which investors and rating agencies could compare individual transactions.
• The ASF model representations and warranties were designed to “clearly allocate origination risks between issuers and investors and provide enhanced investor protections over what had been previously provided in ‘pre-crisis’ transactions.”

One panelist asserts that mortgage investors would be willing to buy non-QM loans and they would establish their own credit standards for doing so. The smartest investors would make well informed standards but others might have overly lax standards and excessive appetites.

One panelist emphasizes that some of the major mortgage investors are staying away from non-agency MBS because the deals do not provide protections that were revealed to have been lacking in pre-crisis deals.29 Rather, many of the new non-agency MBS deals create greater protections for the issuers, who want to avoid getting sued like they did after the mortgage meltdown. Another panelist agrees and notes that the large investors can avoid non-agency MBS while still participating in the mortgage sector through whole loans.

Another panelist asserts that goal of the RMBS 3.0 initiative is to achieve the intended allocation of losses between investors and issuers by having an effective enforcement mechanism for the allocation of losses.30 Also, there is a key distinction between “expanding access to credit” and “expanding access to sustainable...
credit.” The 2008 crisis revealed that the former is an inappropriate goal. The latter should be the goal of the U.S. housing finance and securitization system.

4:10 pm: Relative Value of Agency CMBS vs. Bank Conduit CMBS

Agency multifamily CMBS are backed either by ordinary multifamily properties or by healthcare properties. By contrast, bank conduit MBS can be backed by any commercial property type: retail, office, multifamily, healthcare, industrial, lodging, self-storage, etc. Agency multifamily MBS spreads are in the range of 60 bps while conduit CMBS spreads are about 90 bps.

Agency multifamily underwriting is consistently strong and likely explains the excellent performance of agency multifamily loans. Losses over the past decade have been too low to allow for meaningful analysis.

Loans in recent conduit CMBS have had generally improving characteristics. However, the proportion of interest-only loans has been rising. Post-crisis CMBS have performed well, with cumulative losses below 1%. Most property types other than retail have shown single-digit growth in net operating income.

According to the FHFA plan for the GSEs, each one can originate up to $20 billion of multifamily loans per quarter for the next five quarters.31 Conduit CMBS volume is about $40 billion per year.

Maturity vs. term defaults. Agency multifamily CMBS and conduit CMBS treat maturity defaults differently. If a loan defaults at maturity in an agency multifamily CMBS deal, the agency buys the loan out of deal. If a loan defaults at maturity in a conduit CMBS deal, the deal faces the possibility of extension risk.

One panelist states that conduit CMBS provides investors with greater opportunity to achieve superior returns because the deals are more idiosyncratic and have greater variety of underlying property types.

The panelists offer recommendations for agency multifamily CMBS and conduit CMBS:

• Mezzanine tranches of conduit CMBS are attractive. Keep spread duration short.

• Fannie Mae DUS CMBS offer defeasance protection, which makes them attractive to buy-and-hold investors. A total return money manager should favor the 12-year DUS CMBS over the 10-year.

• The most senior tranches of conduit CMBS are attractive.

TUESDAY, SEPTEMBER 24, 2019

9:00 am: The Good, the Bad, and the Ugly: Identifying the Positive Developments, Possible Risks, and Major Hurdles to Promoting a Well-Functioning Marketplace

What has changed for the better and for the worse since 2009? One panelist states that a key improvement is the expansion of the TRACE system to include ABS. Another improvement is that there are more rating agencies, which allows certain investors a broader selection of investments.32

Another panelist states that today’s structured market has better alignment of interests because of risk retention requirements.33 Risk retention requirements have made originators more careful about how they originate assets. The initial growth of the non-QM MBS market is a good sign for the market’s future. Another positive sign is the gradual expansion of securitization activity in the area of new and esoteric assets (whole


business securitizations, etc.). Lastly, a key strength of the securitization market is that it is not dominated by passive investment strategies like other areas of the investment landscape. A different panelist challenges the assertion that risk retention requirements have had a significant effect. He asserts that lawyers have found ways to circumvent the risk retention requirements.34

Another panelist asserts that risk retention requirements have undoubtedly had a beneficial impact, but that it might not be as large as some would like.

One panelist asserts that securitization helps to keep the supply of credit flowing, which is a huge benefit to the US economy. Securitization allows lenders to offer credit to borrowers with tarnished credit. In 2007, the US securitization market has issuance volume of $750 billion per year, of which only 10% comprised deals backed by esoteric assets. Today US annual securitized issuance volume is only $400 billion to $500 billion, but 25% of it involves esoteric assets. A key difference between 2007 and today is that the line has blurred between investors and issuers. Today there are investors who have become issuers (e.g., selling a senior interest in a position in order to synthetically create a mezzanine exposure).

One panelist explains that for the past several years the market has focused on securitizing only pristine assets. That is starting to change. Weaker assets are starting to come into the market. Rating agencies generally need to hold the line on their credit enhancement levels. Rating agencies also should speak out when they have been excluded from a deal and have a different view from the other agencies.

Structuring cannot improve the credit quality of a weak asset pool. More pointedly, structural complexity generally is a bad thing.

Special servicer discretion has been constrained in newer CMBS deals. This is a response to perceived abuses by CMBS special servicers that used self-serving strategies for resolving distressed loans.

One panelist asserts that there is still too much confusion between today's CLOs and crisis-era CDOs. CLOs have performed much better. It is probably wrong to say that there is bubble in the leveraged-loan and CLO sectors. On the other hand, it is absolutely clear that some cracks are starting to emerge in the CLO area, such as larger triple-C buckets; the high prevalence of covenant-lite loans; and EBITDA add-backs. One panelist asserts that leveraged-loan investors should favor borrowers that do not use EBITDA add-backs and that periodically hold informational calls with investors. Another panelist asserts that trading CLOs does not "feel" like trading bonds because it is necessary to get so deeply involved with the underlying assets. Cracks are likely to emerge in both the CLO sector and in the aviation sector, where the leasing companies have very little skin in the game.

Protecting investors from fraud. One panelist explains that originators can use technology to verify a potential borrower's income and assets. Another panelist states that, compared to the past, there is now greater emphasis on pre-closing asset reviews. A third panelist states that a warning sign for investors is any reduction in the stringency of agreed-upon procedures and the stringency of asset reviews.

Banks and dealers now run their businesses with a primary focus on regulatory capital requirements rather than fundamentals. They provide less liquidity than in the past (i.e., they hold smaller trading inventories). Technology platforms can replace some of the lost liquidity by providing new means of matching buyers and sellers.

There is a potential for a wave of downgrades among triple-B corporates. If that happens, it could have significant effects on securitization market.

Panelists state what they want for 2020:

- Market participants should be more proactive in preparing for the transition from LIBOR to other reference rates.
- EU risk retention rules need clarification.
- In the area of secondary trading, it takes too long to be awarded bonds from a bid list. Dealers should respect investors and view them as partners in the market.
- There needs to be better data quality about securitized assets. Everything begins and ends with the underlying assets. Also, the increasing popularity

of “big data” analysis amplifies the risk of confusing causation with correlation.

- Transparency should be improved. Issuers sometimes refuse to provide requested data because giving it to one investor would require them to give it to all investors.

9:50 am: Keynote Speaker: Mike Cagney, Co-Founder & CEO, Figure Technologies

Financial system intermediation can potentially be reduced using blockchain technology. The roles of custodians, administrators, and trustees can be streamlined. Blockchain may make it possible to perform pledging, settlement, and reconciliation with leaner staffing levels. Enormous costs are associated with inefficiency in the financial system.

One of the challenges of blockchain is that it has not lived-up to the initial hype. Figure Technologies sought to do something tangible to demonstrate the benefits of blockchain technology. It did the first securitization using blockchain technology. The deal involved underlying digital assets originated using blockchain technology.

Another challenge is that most implementations of blockchain technology—cryptocurrencies such as Bitcoin and Ethereum—use blockchain systems that are well suited for trading digital tokens but not well suited for trading loans or securitizing an asset. A fundamental feature of the cryptocurrency blockchains is that they seek to eliminate the need for trust (e.g., trusting the issuer of a fiat currency). However, that idea is essentially incompatible with using blockchain technology for securitizations because there must be some level of trust that an actual underlying loan exists and is represented by data in the blockchain system.

Figure Technologies built a distributed-stakeholder blockchain system based on IBM’s Hyperledger product. When Figure Technologies originates a loan, it embeds all the original source information about the loan with the “tokenized” loan itself on the blockchain system. The use of blockchain technology makes the information immutable. The system records all the steps of funding a loan as well as all payments on the loan. Thus, the system establishes the provenance of each asset. The company calls the system Provenance blockchain.

Figure Technologies has funded about $1 billion of loans. It is now starting to securitize those loans.

Other lenders are using Figure’s Provenance blockchain for their own loan originations. One is Caliber Home Loans. About 20 more are in the process of getting on the system.

Jeffries Securities provides a warehouse facility on the Provenance blockchain and was the banker for Figure’s first securitization.

Figure asserts that using the Provenance blockchain system produces savings of 65 bps on origination, 65 bps on sale and financing, 20 bps on securitization, an indeterminate benefit in the cost of ratings, and 50 to 100 bps on execution, producing total economic benefit in the range of 200 to 250 bps.

Figure Technologies is a venture-backed business that offers home-equity lines of credit (HELOCs), closed-end mortgage loans, and consumer loans. Figure created the Provenance blockchain but spun it off and no longer owns or controls it. The system has a built-in form of ownership tokens and voting rights, called “Hash.” Figure currently owns 72% but does not vote. The system sets usage fees equal to one third of the estimated value of the economic benefit from using it.

A further extension of blockchain technology could be into mortgage notes and property deeds. Electronic notes are currently accepted. County recording offices generally require physical deeds.

The Provenance blockchain system does not require the stakeholder banks to place their proprietary data in the blockchain database. Instead, the blockchain stores unique checksums (calculated from the data) that are used for validating the data at each stakeholder bank.

10:10 am: DLT: How Large of an Impact Will it Have on the Evolution of Securitization?

[Note: DLT refers to “distributed ledger technology,” which is an approach to storing a computer database so that it is not controlled or administered by a single entity. Rather, multiple copies of the database are stored on the computers of many separate entities that collectively control and administer it. DLT is not the same thing as blockchain technology, though the two are often used together. Blockchain technology is...]

Winter 2020
a system for mathematically linking successive entries ("blocks") in a database so that they cannot be subsequently altered.

Figure Technologies originates HELOCs in about four days, compared to an industry average of 45 days. Figure could process everything in one day, but it has to allow for the borrower’s three-day right of rescission. Upon closing, the digital copy of the loan file becomes the definitive copy and is recorded on the blockchain database. The company’s warehouse lenders use the blockchain records as the as basis for warehouse lending.

The use of blockchain technology can facilitate analysis by rating agencies because it makes the most current performance data available and provides a vehicle for disseminating relevant models together with data.

Figure Technologies created a blockchain system called Provenance, which is available for use by other lenders. Caliber Home Loans uses the Provenance system.

One panelist asserts that using blockchain technology is a better way to originate loans and to keep the data organized.

From a rating agency perspective, a key issue with using blockchain technology is the potential risk of legal challenges and the risk of factors outside the blockchain that could potentially require changes to “immutable” records. Another panelist explains that although the blockchain records are immutable, it is possible to add updates and corrections. The blockchain provides a clear “paper trail” of corrections and updates.

With five-minute approval and four-day funding of HELOCs, how does the Figure Technologies’ system deal with identify theft? Figure uses a strong anti-fraud process that lowers the incidence of fraud. However, investors and consumers still have ordinary legal recourse for identify theft or other instances of fraud. Figure uses new “big data” resources for checking borrower credit quality (including income verification) and collateral valuation (e.g., using automated valuation models).

The key benefits of embracing blockchain technology are improving efficiency and reducing the cost of originating and securitizing loans. Improving efficiency may displace the roles of some service providers, but it will ultimately improve the market for issuers, investors, and consumers.

**Key changes in mortgage finance since 2007.**

In 2007 there were three main categories of securitized (non-agency) residential mortgage loans: subprime, alt-A, and jumbo. There were also small amounts of HELOCs and closed-end second-lien mortgage loans. Later, additional types of housing-related securitizations entered the market: non-performing and reperforming loans (NPLs and RPLs), servicing advances, credit risk transfer (CRT) deals from Fannie Mae and Freddie Mac (together, the GSEs), and single-family rental (SFR) deals. Until the QM rule was released, it was hard for originators to operate because of uncertainty about which loans would satisfy the definition. Once the rule was finalized, there was sufficient certainty for originators and issuers to operate at meaningful scale. Non-QM activity has been growing quickly and is likely to be the largest non-agency market subsector. Today’s non-agency residential mortgage market has many more subsectors.

During the housing boom from 2004 to 2007, lending standards were very loose, and there was a proliferation of affordability products. Newer loans have been originated under tougher standards. There are far fewer adjustable-rate mortgage loans. This has put the US housing market on much healthier footing. However, one dimension on which underwriting standards have loosened is borrowers’ capacity to repay (as measured by a borrower’s debt-to-income ratio or “DTI”). Non-QM activity has been growing quickly and is likely to be the largest non-agency market subsector. Today’s non-agency residential mortgage market has many more subsectors.

The “QM patch” encourages the GSEs to securitize many loans with DTIs above 43%.

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[36] “Capacity” is one of the “three Cs” of mortgage loan underwriting, along with “credit reputation” and “collateral.” See Freddie Mac, “The 3 Cs of Underwriting Factors Used in Freddie Mac’s Automated Underwriting Assessment,” http://www.freddiemac.com/corporate/au-works/factors.html; Freddie Mac, Single-Family Seller/Servicer Guide § 5102.1(a) (September 18, 2019).

Today’s loans have less risk layering and better income documentation. The underwriting is better. MBS backed by non-QM loans require risk retention, which helps to align the interests of issuers and investors. Issuers today provide better information about borrowers. Some of the challenges include the proliferation of new products in the non-QM space, such as bank-statement loans and asset-based loans. The framework of representations and warranties is generally weaker in non-QM deals than in QM deals. Also, there is a greater prevalence of non-bank servicers in non-QM deals. None of the new types of transactions have gone through a stressed environment.

**STACR recent developments.** Freddie Mac has issued more than $50 billion of CRT deals, including $35 billion in its Structured Agency Credit Risk (STACR) deals and $15 billion in reinsurance programs. It has done 52 CRT transactions in the capital markets and 49 via reinsurance, collectively covering more than $1.3 trillion of loans. STACR deals started with 10-year terms. Later deals had 12-year terms, and the most recent ones last for the life of the underlying loans. In the most recent STACR deals, Freddie Mac retains only the first 10 basis points of loss. The STACR deals give investors the opportunity to invest in mortgage credit risk at various levels. There are 20 to 30 investors at the single-B level. Freddie Mac is planning the first REMIC CRT deal for later in the year.

**CRT collateral performance.** Delinquencies have been somewhat higher on newer loan vintages compared to the 2013 vintage, but still remain lower than on pre-crisis loans. As their capital structures de-lever, the STACR securities receive rating upgrades.

GSE CRT transactions went through three phases. When they were introduced in 2013, the CRT deals issued notes that were unsecured general obligations of the GSEs. In 2015, the loss allocation changed from a fixed (assumed) loss severity on defaulted loans to actual losses. Also, the maturities of the CRT deals were increased to 12½ years. Today’s GSE CRT deals are issued from bankruptcy remote trusts in order to shield investors from the potential bankruptcy risk of the GSEs.

**Single-Family Rental (SFR).** SFR was a post-crisis crisis development. It was born of the post-crisis environment of depressed home prices. Success in operating SFR properties is correlated with scale, so there has been consolidation. The companies with larger holdings of SFR properties have been acquiring the companies with smaller holdings. The stock market favors SFR companies with lower leverage, which is constraining the supply of new SFR securitizations. In the future, it seems likely that there could be mergers of companies that operate multifamily properties with those that operate SFR properties because both are in the housing business. Loans on SFR properties are not consumer mortgage loans, but rather business-to-business transactions. It would create difficulties if they were classified as consumer mortgage loans.

**Demographics and housing demand.** Household formation is the key driver of demand for housing, whether owned or rented. Individuals in their late 20s and 30s tend to form households more rapidly than other age cohorts. However, the Millennial generation—comprising individuals from age 23 to age 38—are forming new households at a much slower rate than past generations. On the other hand, the Millennial generation is very large, and it is projected to form new households at a rate of 1.2 million per year for the next five years. That should provide a boost in both ownership demand and rental demand.

**Blockchain.** There is an idea that blockchain has the potential to streamline operations and reduce costs in origination and securitization. However, it is unlikely to gain wide acceptance until there is government endorsement or sponsorship of a system that becomes the universal standard. Using a blockchain system might call for new types of representations and warranties about the system.

**HELOCs and second-lien mortgage loans.** HELOCs and second-lien mortgage loans can be good products and are potentially securitizable. However, the production volume is very low. Rating agencies have the ability to rate securities backed by HELOCs and second-lien loans. A key factor is the utilization rate on HELOCs. A special issue for HELOCs is the funding of future draws. One approach is to use principal collections to fund future draws and to obligate the servicer to fund draws if principal collections are not enough.

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39 It may be more accurate to characterize bank statement loans and asset-based loans as revivals of old affordability products, rather than as truly new products.
Crowdfunding might have a role in helping homebuyers to fund their down payments. It does not otherwise really have a role. A crowdfunded down payment is like a gift-funded down payment, which is riskier than a down payment with the borrower’s own funds.

**Investor protection.** One panelist explains that the prospectus for an MBS deal includes representations and warranties about the subject mortgage loans. If the actual loans do not match the representations and warranties, then there is a breach, and investors have to look to the underwriter to reimburse any loss. The understanding is that investors are relying on any representation that is in the prospectus. The securities laws require that the representations be true. Another panelist adds that today’s securitization market is different from the one that existed before the financial crisis. The risk-retention rules and the ability-to-repay rules did not exist before the financial crisis, and they help to address some of the issues.

1:20 pm: Assessing Your Investment Strategy in the New Issue Non-QM RMBS Market

Non-QM MBS is the fastest growing subsector within residential MBS. Non-QM issuance volume has been roughly $20 billion so far in 2019, and is projected to reach $25 billion of non-prime and “expanded-prime” deals for the full year (representing an increase of 100% compared to 2018). There are about 130 investors in non-prime deals. There are about 20 issuers, including issuers of both non-prime and expanded-prime deals. Credit standards have expanded (loosened) to offer a variety of programs for borrowers:

- Near prime
- Dented credit history
- self-employed
- Investor properties
- Foreign-nationals (with Individual Tax Identification Number rather than SSN)

A panelist asserts that there are 40 million self-employed individuals in the US. That figure seems too high. According to the US Bureau of Labor Statistics (BLS), the number of nonagricultural, self-employed, unincorporated persons is somewhat less than nine million. BLS, “Charting the Labor Market: Data from the Current Population Survey (CPS),” at 9 (October 4, 2019), https://www.bls.gov/web/empsit/cps_charts.pdf.

- Six-month and 12-month bank statement (i.e., reduced documentation)

Another panelist asserts that non-QM means more than non-prime. The key categories are:

- Self-employed borrowers (who qualify using bank statements)
- Investor borrowers (underwriting considers cash flow from the investment property)
- Non-prime borrowers, particularly those who have recently experienced a “life event” and who cannot qualify for an FHA loan
- Foreign nationals
- Loans made on the basis of the borrower’s assets rather than income

Over time, the proportion of non-QM loans made to self-employed borrowers and to finance investment properties have increased. The proportion of non-QM loans to non-prime borrowers has declined.

One panelist states that the prime segment of non-QM lending comprises loans that are “near misses” for QM status. Examples include loans where the debt-to-income ratio (“DT”) is very slightly above 43% or where there are very slight document deficiencies in the loan file. The expanded prime segment includes loans originated on the basis of bank statements, often in combination with the borrower’s tax return for a single year. Other examples of expanded prime loans include those with minor (technical) deficiencies in documenting the borrower’s ability to repay, loans with DTIs above 43%, situations involving asset depletion to provide income, investor loans, and interest-only loans.

A benefit of using bank statements to underwrite a loan is that doing so allows a view of the borrower’s residual income. The length of the period covered by bank statements is important because it may be possible to manipulate bank balances for the short-run. Compared to the prime segment of non-QM lending, the expanded-prime segment has lower FICOs, more loans with DTIs above 43%, and more loans with LTVs above 80%.

According to HMDA data, the main reason for loan denials is DTIs. This creates an opportunity for non-QM lending.
The greatest proportion of non-QM loans receive that classification because of Appendix Q defects. Appendix Q specifies the documentation of income that a lender must get from a borrower in order for a loan to be a QM. Appendix Q specifies the documentation for a wide range of income sources including overtime pay, bonuses, commissions, second-job income, self-employment income, alimony, child support, investment income, and others. Borrowers frequently do not have the required items of documentation, which means that their loans will be non-QM loans.

All loans must comply with the ability-to-repay (ATR) rule. That rule allows a borrower to sue a lender if the lender does not determine the borrower’s ability to repay the loan. The rule also provides for a borrower defense in foreclosure in the form of a set-off. Qualifying for QM status creates a presumption of compliance with the ATR rule. Non-QM loans do not have a presumption of compliance. Additionally, the CFPB and state attorneys general can bring enforcement action and impose fines for violations of the ATR rule.

Underwriting standards today are completely different than they were before the financial crisis. Underwriting guidelines today came from a starting point of extremely strict credit standards. Additionally, appraiser independence is producing better appraisals. The estimates of property values are more accurate. Third, technology is better for getting direct access to documentation for verifying borrower employment, income, and assets. Fourth, the workflow for loan underwriters is more deliberate than before the crisis; they handle one to three loans per day, rather than 10 or more.

There are some negative trends, however. There is a growing prevalence of loans with just one-month of bank statements. Having a rent roll can be a compensating factor on a one-month bank statement business loan. There is a growing share of lower FICO scores on business-purpose loans. There is a trend toward reduced documentation of borrower assets. There is greater reliance on automated appraisals, but there are also methods for validating automated valuations.

The biggest issue for the non-QM market is the expiration of the GSE QM patch, which has the potential to significantly increase the flow of non-QM loan production.

Non-QM prepayment speeds are fastest for loans with full documentation of borrower income. Bank statement loans, investor loans, and expanded credit loans display slightly slower prepayment speeds.

The credit performance of securitized non-QM loans has been very strong: only 94 loans have been liquidated and only seven have had a loss.

Modeling non-QM loan performance is a challenge because it is unclear what is the most relevant historical data. Issuers and bankers assert that performance data on pre-crisis subprime and alt-A loans is not relevant. The major components of today’s non-QM segment are loans to self-employed borrowers, loans secured by investment properties, and cash-out refinancing loans. Pre-crisis deals backed by subprime and alt-A loans arguably had somewhat different underlying loans. Another approach is to try to benchmark the new types of loan products against prime-quality loans.

**Representation & warranty framework.** Many investors remain skeptical of their protections from representations and warranties. There is some amount of standardization in the area of MBS backed by prime-quality QM loans. That standardization has not reached the non-QM segment. The framework for reviewing loans, making repurchase claims, and enforcing claims that has become prevalent for MBS backed by prime-quality QM loans is generally not present or is not fully present in deals backed by non-QM loans. There are not standard triggers for reviews in the non-QM space. There are sometimes optional loan reviews based on realized losses, which come later in a deal’s lifecycle. Also, the party charged with performing the reviews is often an affiliate of the sponsor, which creates inherent conflicts of interest. Two factors that partly compensate for weaknesses in the non-QM representation and warranty framework are risk retention and 100% pre-closing reviews of the loans in a deal.

In addition to representation and warranty issues, investors are focusing on counterparty risk and
liquidity risk. Breach reporting quality has been very inconsistent and not very transparent. The industry needs to worry that in a weaker credit environment, the lack of consistency and transparency could become real problems.

Most of non-QM loan production comes through mortgage brokers. Correspondent and retail channels account for some share of production, but the largest component is brokers.

2:10 pm: The Slowing Pace of PACE ABS: A Market Update

[Note: PACE stands for “property assessed clean energy.” It is a method for financing energy efficiency improvements (or other approved types of improvements) with loans that have super-priority status and become senior to existing mortgage loans. The loans generally are repaid through an assessment on the tax bill for the subject property. Because of the super-priority status of PACE loans, Fannie Mae and Freddie Mac do not accept mortgage loans on properties that have PACE financing. Likewise, the FHA does not insure mortgages on properties with PACE financing.]

There has been a small flow of PACE ABS deal this year. The ability-to-pay (ATR) rule is blamed for the reduction in origination volumes. The reality is that contractors are not pushing residential PACE improvements because of the delays caused by getting the required ATR documentation.

From a rating agency perspective, stronger consumer protections likely improve credit quality.

The CFPB is considering federal oversight of PACE programs. The CFPB released an advanced notice of proposed rulemaking in March 2019 and received 119 comments. Many regular truth-in-lending issues and concerns do not apply in the context of PACE loans.

Aggregate PACE financing on commercial properties (“commercial PACE” or C-PACE) amounts to somewhat less than $1 billion. Some investors repeatedly ask about C-PACE investment opportunities even though they are skeptical of residential PACE (partly because of the GSEs’ position on PACE financing).

New York was one of the first states to introduce a PACE program, but it was seriously flawed. A company called Energize NY PACE is rolling out a C-PACE program. The company will be a program administrator. It has lined-up 12 third-party capital providers and it expects to get all of New York’s 129 municipalities to sign-up for the program. The program keeps the loan payments off a property’s municipal tax bill. The company bills the property owner with instructions to remit payments directly to the capital provider. In the event of foreclosure, the company handles the process and follows the regular municipal foreclosure process. The New York program currently applies only for retrofits, not for new construction. The law is expected to change next June to cover new construction. It also seems likely that New York will expand the availability of PACE financing to cover storm hardening and resiliency in addition to energy efficiency.

A key challenge for C-PACE programs is that lender consent is required. Getting lender consent is also important from a practical perspective in preventing the sort of lender backlash that occurred on the residential side.

PACE is an interesting product area because it brings together very different areas including the tax collection system and municipal administration.

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