ARTICLE

Structured credit in a crisis

COVID-19 - Impacts on structured credit and valuation challenges

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The coronavirus 2019 (COVID-19) outbreak has resulted in unprecedented supply and demand shocks to the world economy. Despite central banks and governments' interventions, many economies remain frozen, supply chains broken, and businesses and households exposed to sustained financial pressure. In that context, securitised credit instruments are facing market, operational, legal, and economic challenges, which will make their valuation harder.

To ease the burden of reduced income, many governments provide support to banks and eligible households by deferring or waiving loan repayments and rent payments, preventing eviction in case of non-payment, and providing income support via unemployment claims.

In a similar way, governments support businesses by providing government-guaranteed bridge loans, providing financial support for, or allowing the deferral of rents on commercial real estate, and making their staff eligible for temporary and (often) partial unemployment claims.

Despite central banks' stimulus packages, the unprecedented halt economic activity and the heterogeneous government actions round the world create uncertainty on how creditworthiness and default risk will be assessed in the short term.

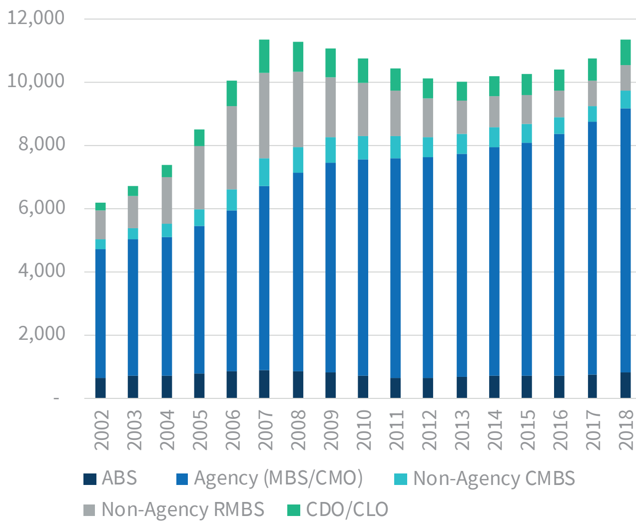
Structured credit

Structured credit products securitise a diversified pool of debt instruments across a diversified pool of borrowers, industries, sectors and sometimes geographies. They provide investors with choices in terms of level of repayment priority and therefore return and risk. The structured credit market encompasses various types of financial products, referencing actively managed or static collateral, such as:

- mortgage-backed securities (MBS): referencing commercial and residential real estate;
- asset-backed securities (ABS): referencing loans from small and medium enterprises, car financing, consumer finance, credit cards, utility bills financing;
- collateralised debt obligations (CDO): referencing corporate bonds and/or asset-backed securities; and
- collateralised loan obligations (CLO): referencing corporate loans.

The structured credit market is significant and represented c. USD 11.3 trillion of outstanding notional and about USD 2.4 trillion new issuance in the United States, and c. EUR 1.2 trillion of outstanding notional and about EUR 300 billion new issuance in Europe in 2018.

FIGURE 1: US SECURITIES OUTSTANDING



Note: in USD billion.
Source: SIFMA.

In the universe of MBS, ABS, CDOs and CLOs there is a spectrum of products that are subject to different valuation considerations:

- on one hand, there are the vanilla products, for which there are usually standard documentation and structure, traditional collateral, with vanilla embedded derivatives or no derivative at all, traditional guarantees and insurance mechanisms, a reasonably liquid secondary market and standard "off-the-shelve" models available to provide valuations; and
- on the other hand, there also exist complex products with very bespoke documentation and structures, referencing esoteric and illiquid collateral, with exotic embedded derivatives, with innovative guarantees and insurance mechanisms. For these products there is little to no secondary market, and tailored modelling needs to be developed. As a result, these products are challenging to value.

The structured credit market has a direct link to various components of the real economy such as small businesses, households, and corporates operating in vital economic sectors such as energy infrastructures or transports.

Depending on their nature, structure, composition, vintage, complexity, and stakeholders' circumstances (e.g. if a counterparty defaults), structured credit instruments will not all react in the same way to the current market context, and therefore will be harder to value, particularly where instruments heavily rely on assumptions and proxy data.

Market update

As a result of the increased uncertainty resulting from COVID-19, credit rating agencies (such as S&P Global, Moody's, Fitch and DBRS) have communicated numerous rating downgrades and credit outlook revisions on corporate debt. This marks the fastest pace of rating downgrades on record since at least 2002, according to a research report published by Bank of America.

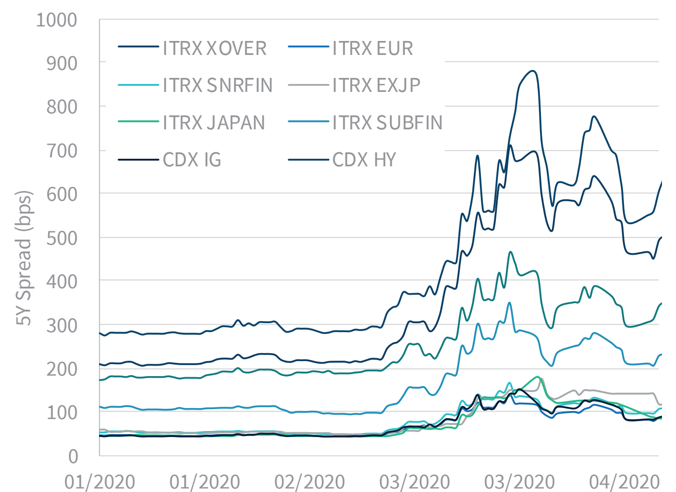
A record amount of USD 90 billion of debt fell to junk status in March according to Deutsche Bank, while Bank of America warns that the total for the year could reach USD 200 billion.

Economic indicators indicate a steep drop in consumption, will affect credit quality. Sectors such as leisure, automotive, oil and gas, air transport, retail and discretionary spending are expected to be significantly affected, when compared to other sectors such as healthcare or telecommunication. Credit spreads have widened across all sectors.

Distressed credits reached record highs at record speed according to S&P: as an example, oil and gas have hit a distressed ratio as high as 94%.

To illustrate further the systemic stress under which credit markets have been, as can be seen in Figure 2, Figure 3, and Figure 4, all types of collateral and structured credit instruments have exhibited a price shock.

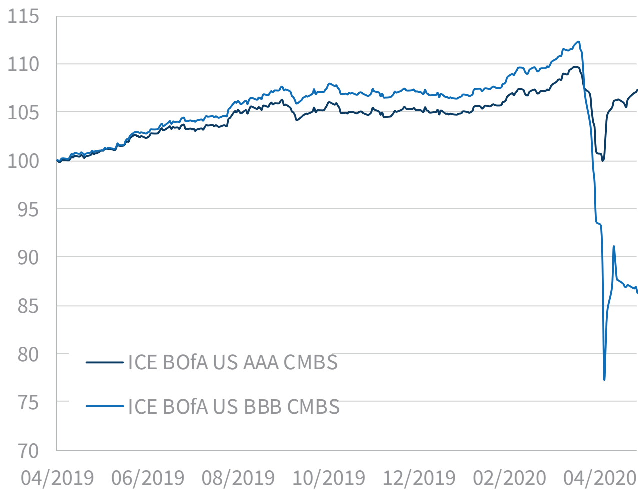
FIGURE 2: FTSE 100 DECLINE IN 2008 AND TODAY (000S)



Note: 5-year spread in basis points.
Source: Bloomberg.

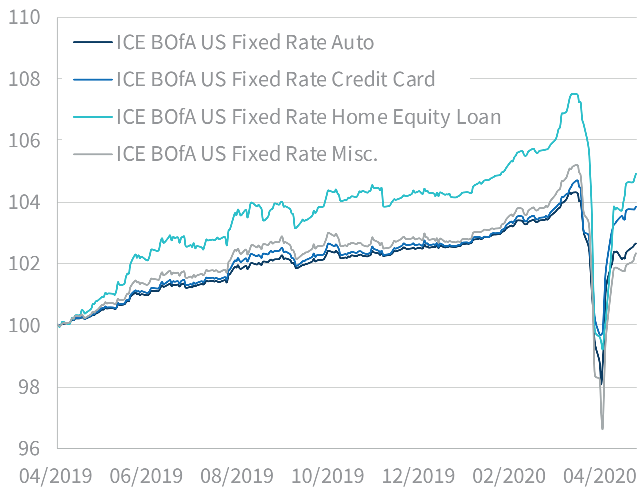
Leveraged loan prices have sharply declined in response to a sell-off affecting CLOs and lower levels of new issuances. CLO equity net asset values have dropped significantly, and spreads widened across tranches surpassing peak levels reached during the Great Financial Crisis. US leveraged loans trading in secondary markets plunged c. 13% during Q1, the biggest slump since 2008.

FIGURE 3A: TOTAL RETURN PERFORMANCE OF US COMMERCIAL MBS INDICES



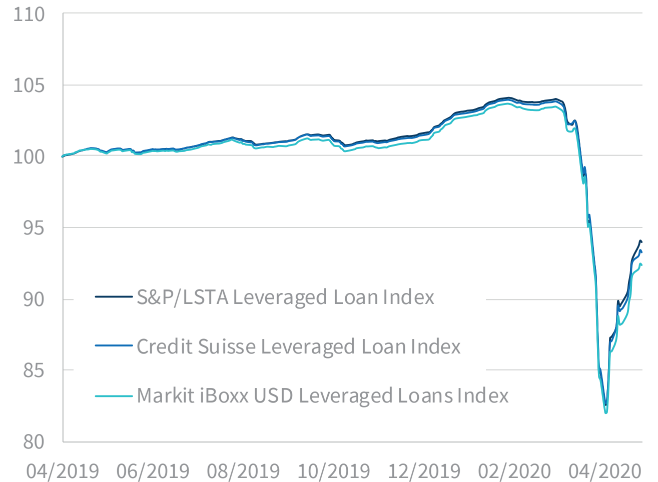
Note: relative performance of the indices over the last one-year period.
Source: Bloomberg

FIGURE 3B: AAA RATED ABS ON CONSUMER CREDIT INDICES



Note: relative performance of the indices over the last one-year period.
Source: Bloomberg

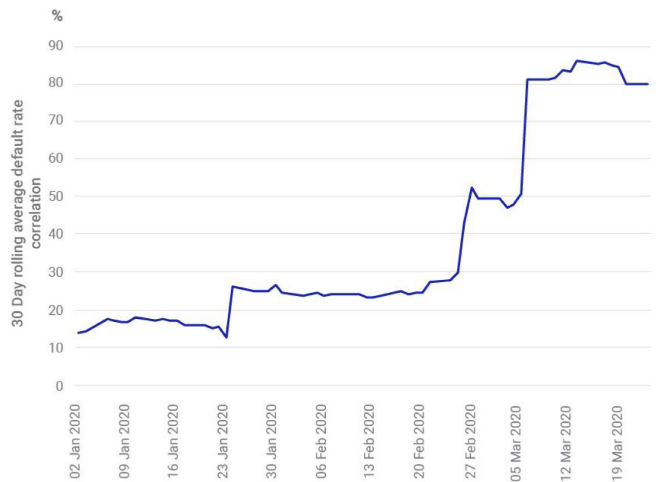
FIGURE 4: TOTAL RETURN PERFORMANCE OF LEVERAGED LOANS INDICES



Note: relative performance of the indices over the last one-year period.
Source: Bloomberg

The 30-day rolling average of the correlation between sectors' implied default rates shows that the correlation rose from below 30% to above 80% within weeks, as can be seen in Figure 5. As a result, even securitised products referencing diversified pools of corporate debt have been negatively impacted.

FIGURE 5: 30-DAY AVERAGE CORRELATION OF DEFAULT RATES



Note: cross-sector rolling default rate correlations (%).
Source: MSCI

The uncertainty in credit quality and difficulty in differentiating good from bad credit within a sector or geography in a short amount of time has added systemic selling pressure on prices and frozen the secondary market.

To supplement banks' existing liquidity buffer, central banks have been deploying stimulus packages to support banks and economies for some time. Several drastic rate cuts, meant to spur the economy by encouraging spending and investment, have already happened. There have been 85 central banks rate cuts in 2020 around the globe, including 62 rate cuts in March 2020. Some noticeable ones are summarised in Table 1. Other monetary policy tools beyond rate cuts are being implemented by central banks to provide liquidity to markets such as the Fed's Primary Dealer Credit Facility, which went into effect on 20 March.

TABLE 1: NOTABLE RATE CUTS IN MARCH 2020

Date	Geography	Rate affected	Level in % (cut in bps)
19 Mar	United Kingdom	Bank Rate	to 0.10 % (- 15)
16 Mar	Hong Kong	Base Rate	to 0.86 % (- 64)
15 Mar	USA	Funds Rate	to 0.00 - 0.25 % (- 100)
13 Mar	Canada	Target ON Rate	to 0.75 % (- 50)
11 Mar	United Kingdom	Bank Rate	to 0.25 % (- 50)
04 Mar	Canada	Target ON Rate	to 1.25 % (- 50)
03 Mar	Hong Kong	Base Rate	to 1.50 % (- 50)
03 Mar	USA	Funds Rate	to 1.00 - 1.25 % (- 50)

Source: Bloomberg

Challenges when valuing securitised debt

A number of issues will make valuations harder in the context of COVID-19.

CREDIT AND FUNDING RISKS

Some government measures to support businesses and households will not be sufficient or some businesses and households may simply not be eligible for such support. This may accelerate or defer certain events of default. While deferral of payments or waivers on the collateral pool may be good news for borrowers, they may not be for structured notes holders if there is not sufficient cash to catch-up with the repayment of their scheduled coupon. This is particularly true for holders of subordinated tranches which do not have the option to restructure.

The mismatch between collateral cash flows and coupons promised on structured notes, and lack of access to short term emergency funding, could translate into restructurings and defaults. Some companies and households that are self-funding their survival through COVID-19 will deteriorate as a result of a deteriorating financial profile. For example:

- businesses approaching debt covenants (for example, JCPenney missed a debt payment on 15 April), such as minimum occupancy, rental yields, debt coverage ratios or maximum loan to values will struggle; and
- households may be in breach of affordability checks, preventing re-mortgaging. They will need to adapt their investments and spending to avoid default until their financial resources return to a sustainable level.

As a result, historical probabilities of default will not be sufficiently reliable to value debt instruments. The sustained financial pressure which households and businesses will likely be exposed to might make such valuation issues persistent, and defaults might take some time to materialise.

ACCOUNTING CONSIDERATIONS

Various market authorities have advised to relax some of the criteria for loans classifications under IFRS 9, in order to provide a flexible accounting framework and avoid unreasonable acceleration to default through this crisis. However, some markets such as consumer lending are taking time to adjust their lending rates and respond to the recent wave of central banks rates cuts.

It is therefore unclear whether the most exposed to this unprecedented stop in economic activity (e.g. those that do not qualify for loan payments deferrals or emergency funding), will be able to survive until rates adjust to their advantage.

MARKET LIQUIDITY

Downgrades of underlying credits, and the knock-on effect on structured credit notes' ratings may put institutional investors in breach of investment restrictions, and trigger forced sales. This, and the expected slow-down in primary issuance, will likely create opportunities for buyers as demand in the secondary market for structured credit notes dries up.

Low rated or unrated junior and mezzanine tranches referencing bespoke pools of instruments with esoteric economic and legal features and concentrated on adversely affected industries (airport, retail, hotels, subprime and buy to let RMBS, CMBS) that are not eligible for collateralised

lending with central banks will be increasingly harder to value. This is likely to be the case for complex CLOs which tend to be highly concentrated to a sector.

Despite central banks interventions, the lack of secondary market for structured credit poses a number of challenges when valuing securitised products, making mark-to- market models unreliable. This will create valuation arbitrage opportunities and result in substantial discounts, particularly for transactions that are hard to value and need industry or sector expertise to manage the non-performing positions going forward.

Default and collateral liquidation may depress asset valuations, and recovery rates assumptions will, in turn, need to be scrutinised for valuation purpose. Historical recovery rates might not be sufficiently reliable. Opportunistic buyers with sector expertise will be able to distinguish good quality assets from poor quality ones. With more accurate valuation assumptions of non-performing or defaulted positions, such buyers could successfully bid at yields allowing them to manage such positions profitably.

OPERATIONAL AND DOCUMENTATION CONSIDERATIONS

The ability to continue servicing debt and reach out to borrowers has decreased due to the lockdown. This may affect the quality and accuracy of collateral reports, which in turn will make valuations more challenging. Loan tapes often lack transparency even in stable economic environments. In the current context of an unprecedented stop of economic activity, complex securitised products (with hard to value collateral and complex financial engineering involved) will require a thorough due diligence on the collateral to:

— revise and calibrate prepayment rates assumptions; and

— understand what constitutes and what does not constitute events of default (interpretation of credit covenants in the context of COVID-19), and the likely timing and level of recovery upon default.

In the event of defaults, the current situation could be a barrier to the enforceability of the liquidation process. The containment measures are practical barriers to legal actions. Depending of the underlying credits, key stakeholders of the liquidation may be unable to fulfil their duty (real estate agents cannot go on-site to value properties, car dealerships are closed, etc.). Default mitigation may only be temporary for certain creditors that were about to default and deferring payments would simply delay default, and would ultimately affect the performance of securitised products.

A number of law firms have already reacted and expressed opinions and published legal updates on the topic of structured credit and how the economics of such transactions are rooted into the legal terms of agreements between parties involved at all levels of the structure (on the collateral and assets side but also between arrangers, portfolio managers and debt servicers, guarantors, insurers, derivatives counterparties, prime brokers, and noteholders). We do not discuss those legal challenges here, but these are fundamental drivers of valuations assumptions.

EMBEDDED DERIVATIVES

Some structured credit deals involve derivatives agreements. These may be used to:

— convert heterogeneous streams of debt repayment (in terms of interest and principal amortisation, fixings and timing of payments, and interest rate benchmarks) into simplified cash flows to service the structured notes waterfall of coupons and principal repayment;

— convert assets denominated in a currency and/or indexed onto a floating or fixed interest rate benchmark into another currency and/or a fixed or floating interest rate respectively; and

— transfer credit risk. Some structured credit notes simply use a credit risk transfer mechanism, as opposed to holding the collateral, and are often referred to as "synthetic" structures.

Derivatives may need to be valued for reporting purposes, or in the case of default, liquidation or termination of a structured credit note. Such derivatives can prove hard to value, particularly where complex asymmetric payoffs are involved. Because structured credit notes can come with complex principal amortization schedules and terms, one of the challenges in valuing these derivatives is usually to determine the notional amount outstanding at the time of the valuation date. This may be challenging to determine at a time where loan performance is difficult to assess and in light of the practical operational limitations resulting from the lockdown.

DATA AND MODELS

Because of all the challenges discussed in the previous paragraphs, data quality will be key. Using appropriate data, cleaning it and ensuring one understands the limitation of such data (particularly when relying on proxy information) before using it in valuation models is a critical step. In absence of a market or helpful proxy valuation data to calibrate models, expert judgement and both micro and

macro-economic indicators will be necessary to inform valuation assumptions on idiosyncratic and systemic default risk, likely timing and value of recoveries upon default.

Standard models and arithmetic will need to be revised and adapted to factor in the modelling assumptions associated with pandemics like COVID-19. For bespoke deals, a deep dive on the collateral and more fundamental modelling approach may be more suitable than statistical modelling. In any case, statistical models, default correlations and distribution assumptions may be reconsidered in this context.

How FTI Consulting Capital Market Services EMEA can help

We cumulate decades of experience in trading, investment management, valuation, risk management and regulation covering a wide range of complex financial instruments and derivatives across asset classes. Our team is composed of industry experts, having worked for global and leading financial institutions, and bring quantitative expertise in developing models and risk analytics in complex trading environments.

Having been involved in many precedents market turmoil FTI Consulting has a long track-record at providing independent valuation solutions in special situations such as restructurings and transactions advisory, and providing independent expert opinions and testimonies in the context of disputes, litigations, arbitrations.

It is not possible to determine at this stage how structured credit valuations will be challenged on a case by case basis, and the combination of legal, operational and economic arguments that will be advanced in such unprecedented market circumstances. FTI Consulting will continue to monitor market developments in order to best assist its clients when the need arises. We have developed computationally efficient valuation frameworks and stand ready to provide high quality valuations in complex situations like the state of markets today.

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