ICMA
International Capital Market Association

The European investment grade corporate bond secondary market & the COVID-19 crisis

An ICMA Secondary Market Practices Committee (SMPC) market report

May 2020

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About the SMPC

The ICMA Secondary Market Practices Committee is an open forum for sell-side and buy-side ICMA member firms active in the international, cross-border secondary bond markets. Through open dialogue and engagement, as well as through its subsidiary working groups and work-streams, it seeks to be the representative body of the international, cross-border secondary bond markets: addressing practical issues directly relevant to market practitioners; standardising market best practice; disseminating relevant market information; and promoting the best interests of efficient and liquid markets.

More information about the SMPC can be found on the ICMA website:
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Executive Summary

- Liquidity in the European IG credit market became severely impaired during the period of late February and early-to-mid March, and by March 18, considered to be the nadir of the 'liquidity crisis', some report that the market had become dysfunctional. Furthermore, there are suggestions that liquidity in the week following March 18 was perhaps even worse than the week leading into it.
- One of the most vivid representations of the crisis is the rapid and acute widening of credit spreads, followed by their subsequent extensive retracement. Respondents report that largely as a result of years of assertive central bank monetary policy, IG credit had become a technically driven market, where fundamental valuations had come to take second place. The Covid-19 crisis has to some extent corrected this aberration, returning to a more fundamentals-based repricing of risk.
- During the peak of the crisis, for the most part, electronic trading in the European corporate bond markets broke down as participants resorted to voice trading. This was not so much due to technological challenges, but rather because the market became too volatile and too illiquid for dealers to risk providing pricing across electronic platforms. However, while overall e-trading volumes reduced dramatically relative to voice, overall volumes on venues seemed to have remained high, registering record volumes at certain points. Meanwhile, some protocols appear to have fared better than others.
- While many banks did 'step up to the plate' to continue providing liquidity and making markets for their clients, albeit with significantly wider bid-offer spreads, this was not the case for all market-makers, and overall dealer capacity appears to have shrunk at a time when it was needed most.
- Central bank intervention, particularly the announcement of the ECB's PEPP on March 18, is viewed as critical in ensuring that the European secondary bond markets continued to function. Not only did this provide a backstop bid for a large section of the market, more importantly it restored confidence. There is a counterview that this could be more problematic in the longer term as it creates a market dependency on central bank intervention in order to function effectively, particularly in times of stress.
- One of the key factors in bringing some stability to the corporate bond secondary market seems to be the surge in new issuance following the ECB's March 18 intervention. Not only did this new supply satisfy pent-up demand, it also helped to provide a point of reference for secondary valuations.
- Some respondents note that the one-directional nature of the orders in the bonds underlying corporate bond ETFs helped to exacerbate the market moves, which possibly explains the large discounts and premiums witnessed in ETF prices compared to the net asset value. The counter argument is that corporate bond ETFs performed well through the crisis and that it remained possible to recycle risk in the secondary market, while also being able to meet the heightened investor outflows and inflows. The observed dislocations reflect the loss of liquidity in the underlying market, with the ETF providing a more accurate valuation.
- During the Covid-19 crisis the role of CDS indices as both a means to trade and hedge credit risk appears to have been pivotal and volumes in index CDS increased notably during this period. Participants report that it was more difficult accessing the single name CDS market. However, European SN-CDS traded volumes for both financial and non-financial names did increase in absolute terms following the ECB's PEPP announcement.
- Repo and lending activity for corporate bonds saw a notable increase through the middle of March, followed by a subsequent decline, mirroring underlying market moves. However, survey respondents identify the lack of liquidity in the credit repo market as one of the major underlying contributors to the reduction of liquidity in the underlying bond market during the crisis.
- It is reported that there was a sizeable, albeit temporary, increase in settlement fails during the height of the crisis, which is largely attributed to operational challenges. This increase in structural settlement fails has accentuated concerns about the EU's CSDR mandatory buy-in provisions and raises questions as to how this would have impacted the market if it had been in place during the Covid-19 turbulence.
- Respondents suggest that despite some initial challenges, the physical relocation and separation of trading teams and associated functions has worked successfully. While many seem to have enjoyed working from home, the most common complaint relates to the loss of information flow and the immediacy of human interaction that come from being on a trading floor, which inevitably impacts overall efficiency, and market liquidity.
- Perhaps the main lesson learned from the crisis is to be reminded how corporate bond secondary markets function and how liquidity is created, with market-makers at their core. Constraining the ability of market-makers to take prudent and appropriately priced and capitalized risk will inevitably impact market liquidity and, potentially, efficiency, particularly in times of market stress. Whether the screens are switched on or off, it is the dealer-client relationship that ultimately holds the market together.

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Overview

The market moves and dislocations experienced during the onset of the recent global Covid-19 pandemic are unprecedented in recent times, and arguably surpass those seen during the Global Financial Crisis of 2007-09. This report documents how the European investment grade corporate bond secondary market performed during the last weeks of February through March and April 2020. Drawing on interviews and surveys of sell-side and buy-side market participants, as well as market data and analysis, it attempts to identify the key themes and dynamics of the 'Covid-19 crisis', the challenges faced by market participants, and the extent to which the market was able to adapt and respond. The report also looks to provide some potential lessons learned from the recent turbulence.

Liquidity

- Liquidity in the European IG credit market became severely impaired during the period of late February and early-to-mid March, and by March 18, considered to be the nadir of the 'liquidity crisis', some report that the market had become dysfunctional.
- There are suggestions that liquidity in the week following March 18 was perhaps even worse than the week leading into it.

The surveys and interviews provide a consistent and compelling view that liquidity in the European IG credit market became severely impaired during the period of late February and early-to-mid March, and that while conditions have improved since, they have not yet returned to their pre-crisis levels. Furthermore, while the general decline in liquidity seems to have applied across all asset classes, it appears to have been driven by a number of contributing factors and dynamics, impacting different market segments and trading flows as the crisis evolved.

More sellers than buyers

Many contributors remark on both the speed and scale of the change in market sentiment as being a major consideration. Respondents report that as the scale of the Covid-19 pandemic became clearer toward the end of February, and as countries began to go into lockdown, so predominantly passive funds, en masse, became sellers of risk assets; partly as they began to reassess the risk associated with certain credits (including the potential for downgrades), but also in anticipation of fund outflows. Sell-sides report a buy-to-sell enquiry skew going into early March as high as 20:80 to 10:90, noting that in previous corrections during this multi-year rally this would not rise much above 40:60. The greater this skew (in either direction), and the quicker it happens, the more pressure this puts on market-makers' balance sheets, both in terms of their capacity to warehouse risk and their ability to recycle it.

As we moved further into March, and as the sell-off gained momentum, so market participants increasingly relocated and physically separated their trading and support staff, either moving to various disaster recovery sites or working from home. With this came initial technical challenges, the extent and duration of which seem to vary across individual firms, but which undoubtedly put more strains, at least initially, on performing everyday trading functions. This too seems to have exacerbated the erosion of market efficiency and liquidity.

By March 18, considered to be the nadir of the 'liquidity crisis', some buy-sides report that the market had become dysfunctional. The ECB's seismic intervention with the announcement of the Pandemic Emergency Purchases Programme (PEPP), along with related initiatives to support the market, seems to have been both timely and pivotal in providing much needed confidence. The intensity of the ensuing snap back in credit spreads was felt to be even greater than that of the preceding sell-off.

More buyers than sellers

Some buy-sides report that liquidity in the week following March 18 was perhaps even worse than the week leading into it. Sell-sides, similarly, report that the buy-to-sell enquiry skew fully reversed, to close to 90:10, as asset managers came back into the market looking to redeploy funds and rebalance risk. Once again, market-maker capacity appears to have become stretched in the face of predominantly one-directional flow.

By the end of March and early April, a slew of new issuance would seem to have helped to meet investor demand as well as to anchor pricing, while fund inflows and outflows also began to stabilize. While respondents report that liquidity conditions were still some way off from pre-crisis levels, they were nonetheless much improved, and the market had begun to take on a sense of near-normality.

Bid-offer spreads

While bid-offer spreads in dealer-based markets are primarily a function of underlying market volatility, they are also influenced by a number of other factors, including dealer balance sheet cost and capacity, hedging accessibility and costs, funding costs, and the expected time to recycle risk: variables that are also intrinsic to measures of market liquidity. A notable observation over this period is that bid-offer spreads widened significantly. Ordinarily bid-offer spreads also tend to be influenced by trade size, particularly in less liquid markets, however it would seem that dealer spreads widened generically, including for smaller transaction sizes. Furthermore, while these are not as extreme as experienced at the height of market volatility, they remain substantially wider than pre-crisis level.

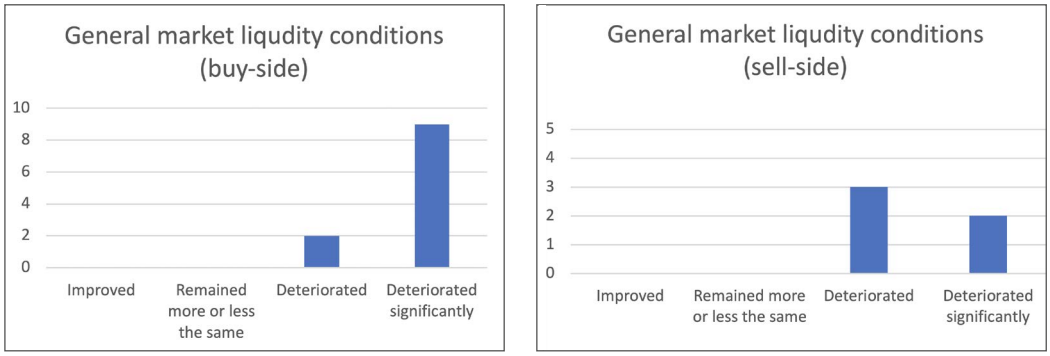
One buy-side respondent shared their analysis suggesting that the generic bid-ask spread for European IG credit was around 10bp prior to the crisis, but widened to 43bp at its peak. This subsequently contracted, but by the end of April was still at 21bp: twice pre-crisis levels.

Trading volumes

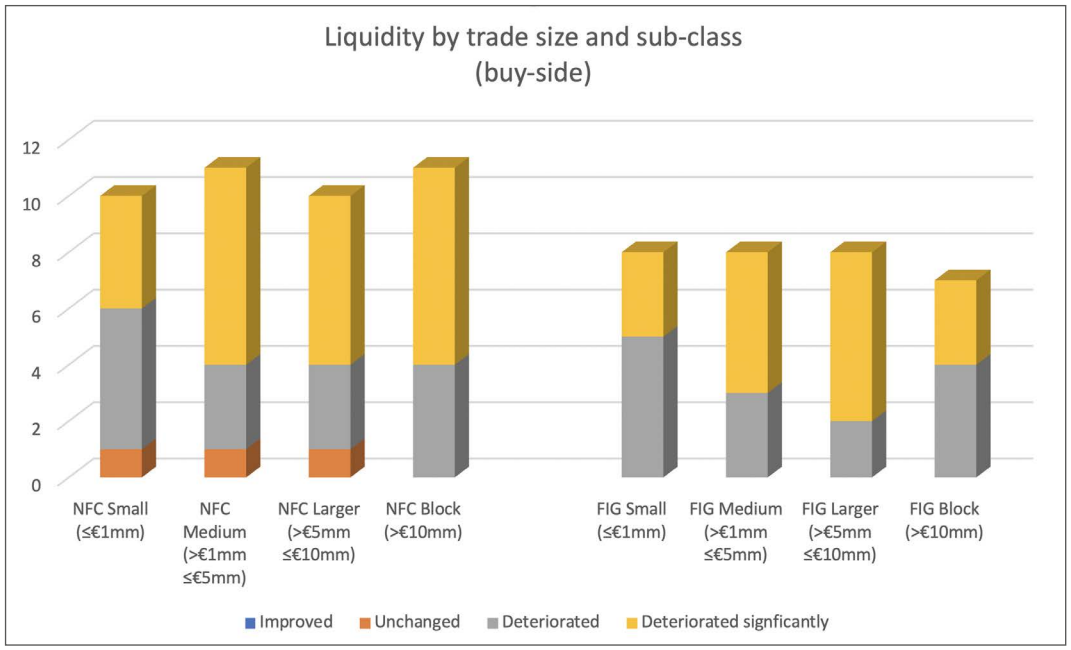
Notably, secondary trading volumes in European IG corporate bonds do not appear to have reduced significantly during the crisis, and despite a small decrease in early-to-mid March, they seem to have increased post March 18.[1] This seems consistent with participant testimonies. What the data does not capture, however, is that volumes did not keep up with orders, which increased significantly during this period. One sell-side contributor suggests that enquiries through late February and early March increased by 100-150% while another, consistent with this observation, reports hit-rates (the ratio of requested quotes provided to executed trades) dropping from a typical level of around 75% to 30-45%.

As is often the case when it comes to measuring liquidity, it is the number of unexecuted orders that tells the full story.

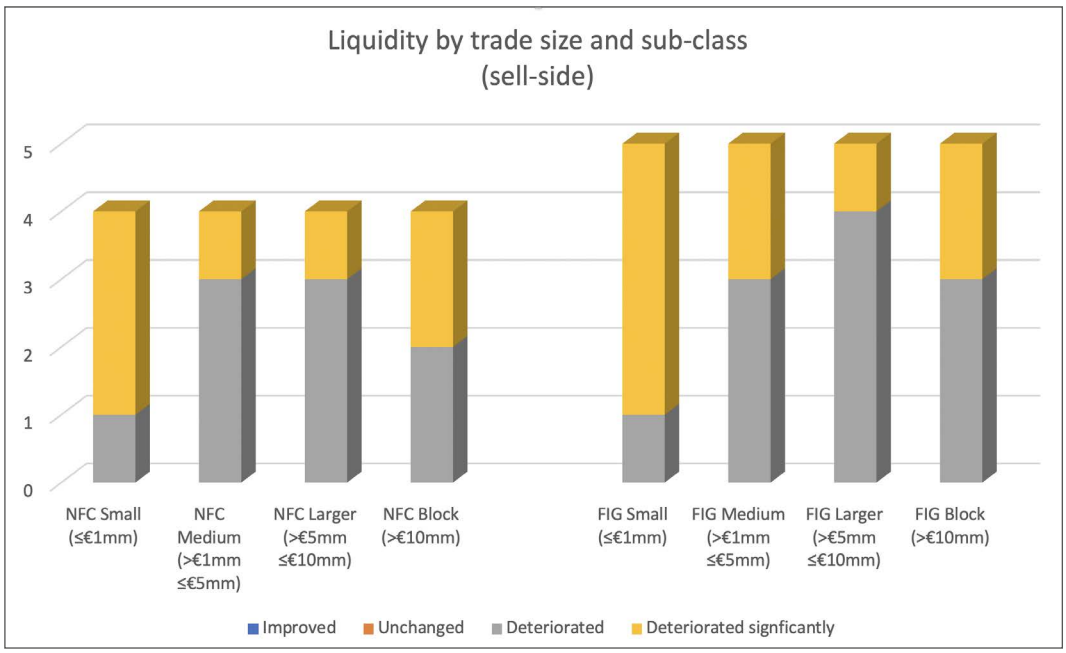
Survey Question 1: General market liquidity conditions



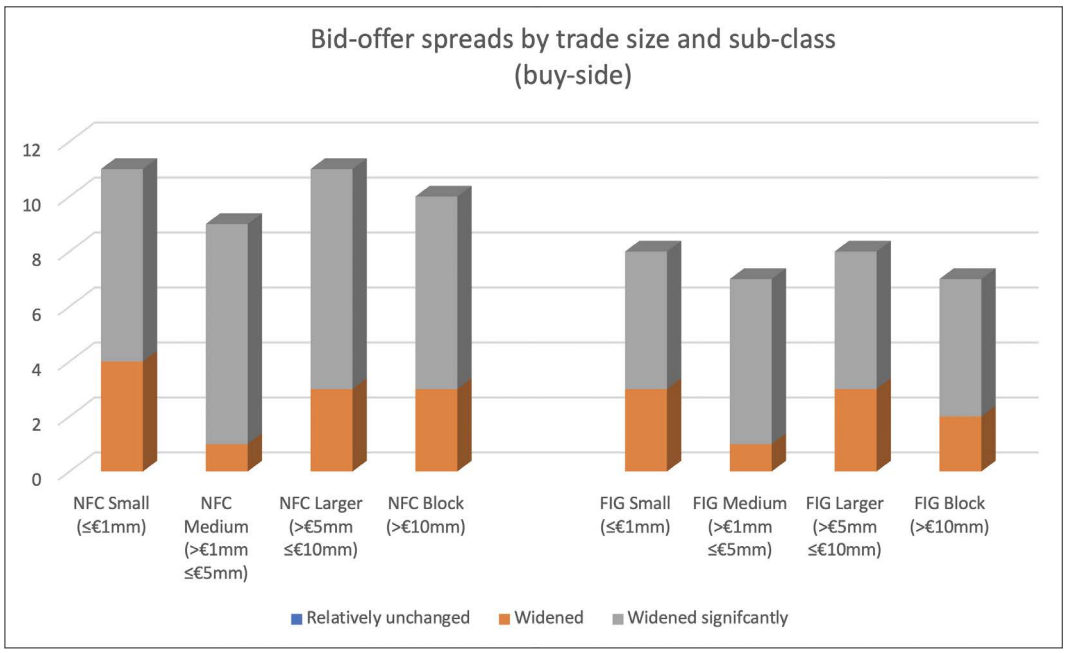
Survey Question 2: Liquidity by trade size and sub-class

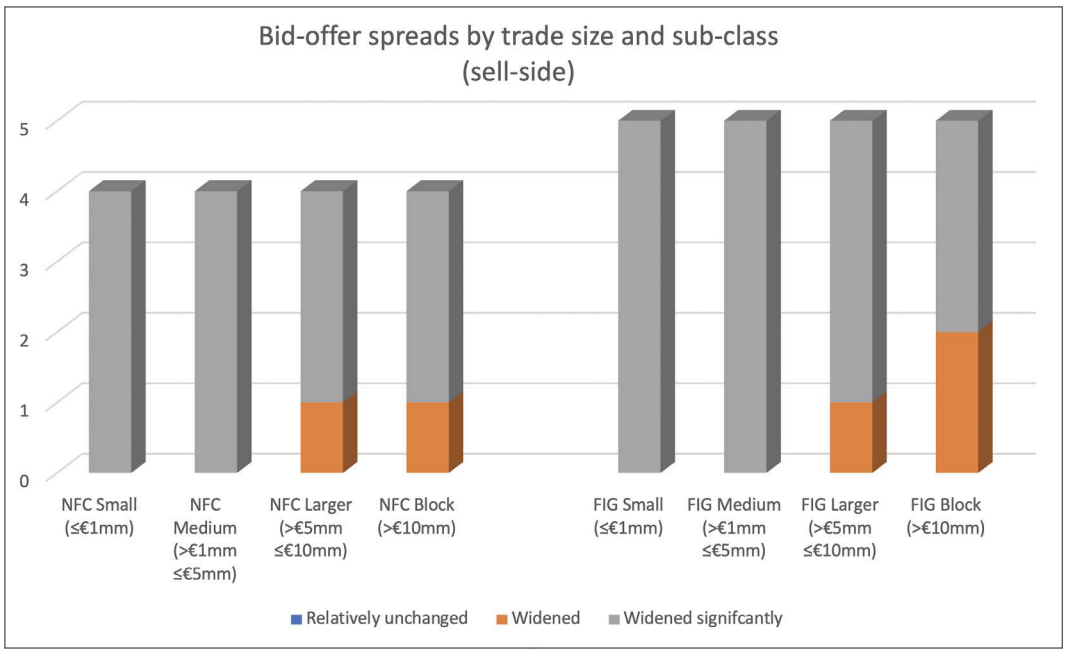


1 This contrasts with trading volumes in sovereign bonds which increased at the height of the crisis.



Survey Question 3: Bid-offer spreads by trade size and sub-class





Survey Question 4: General market liquidity conditions in recent weeks

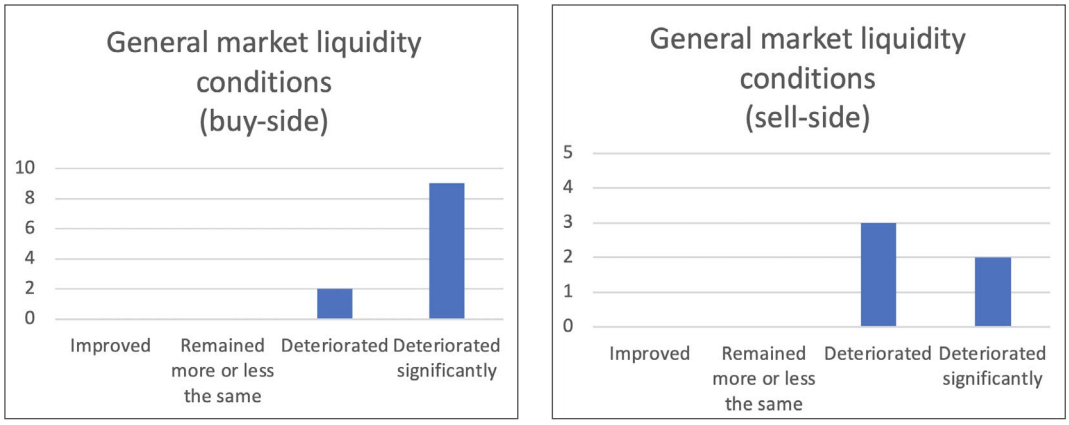
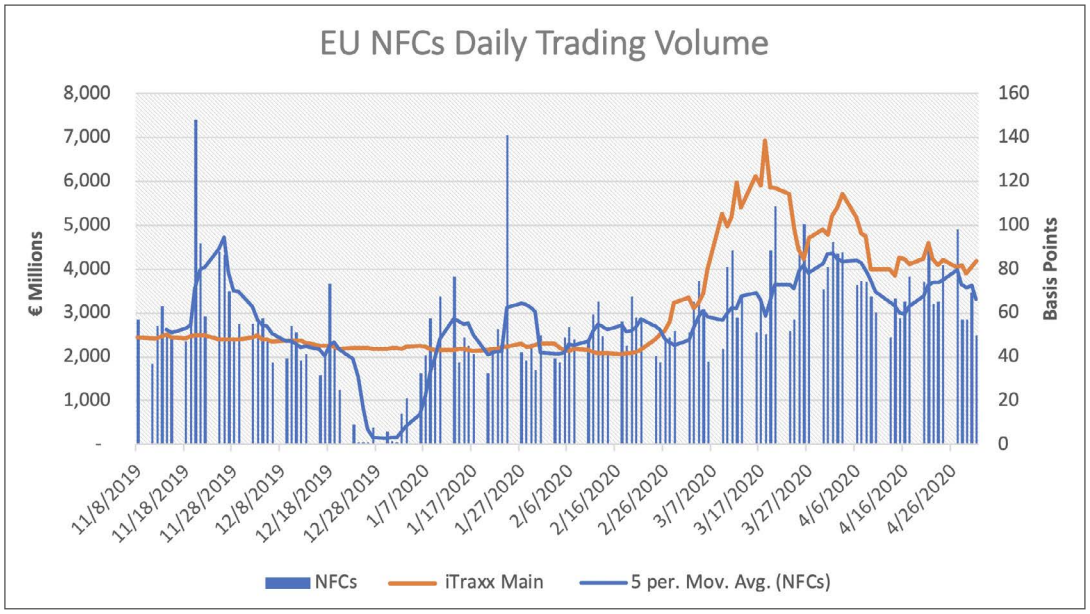
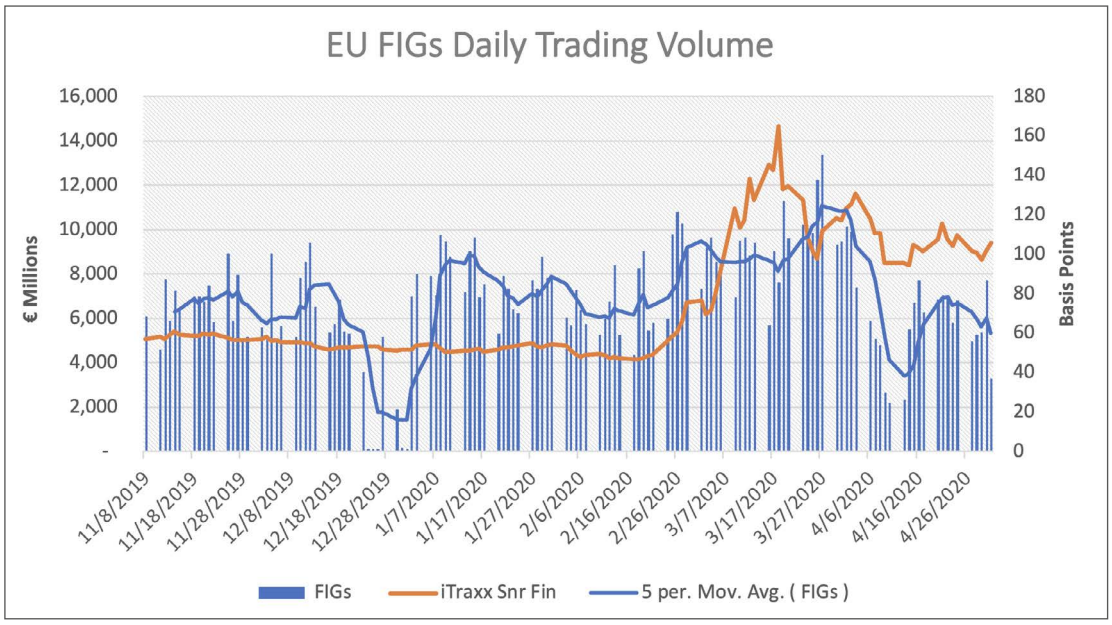


Figure 1: Daily trading volumes (EEA IG Non-Financial Corporates): MiFID data



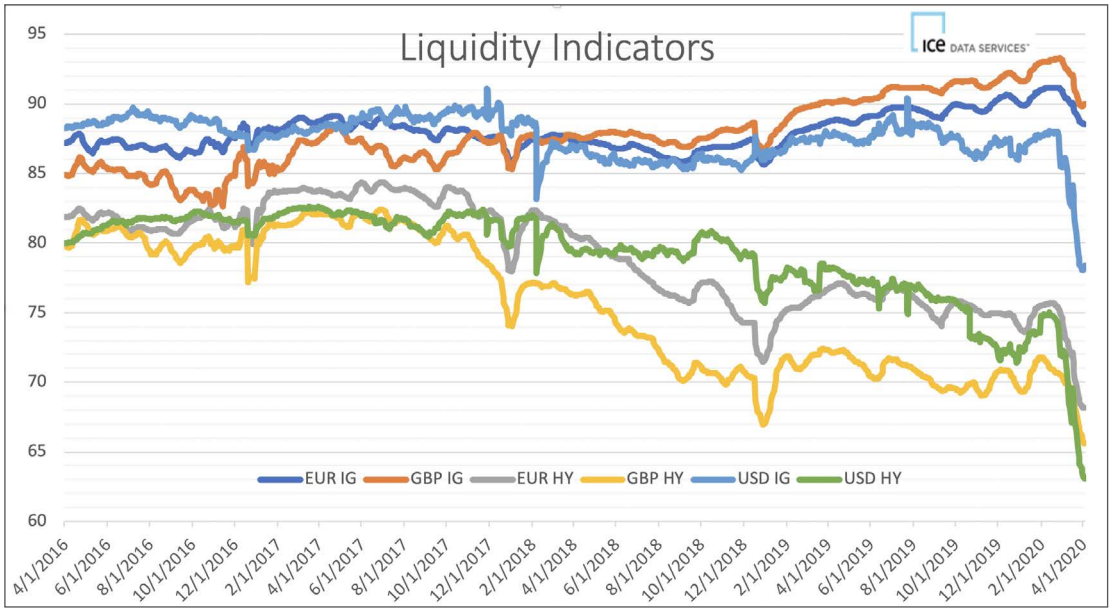
Source: ICMA analysis using Bloomberg data

Figure 2: Daily trading volumes (EEA Financial Investment Grade Corporates): MiFID data



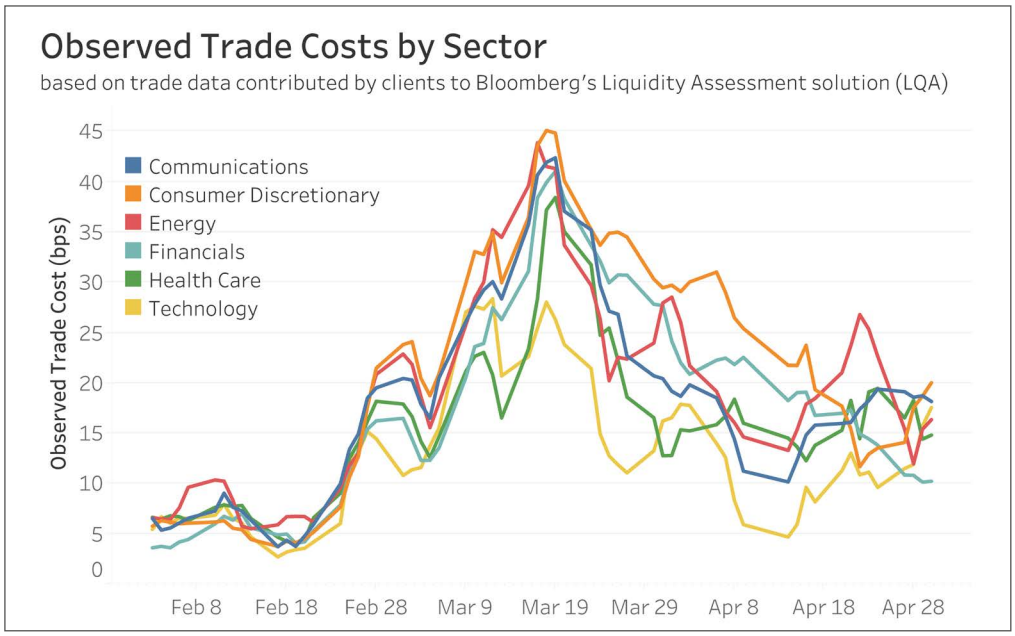
Source: ICMA analysis using Bloomberg data

Figure 3: ICE Data Services Liquidity Indicators™



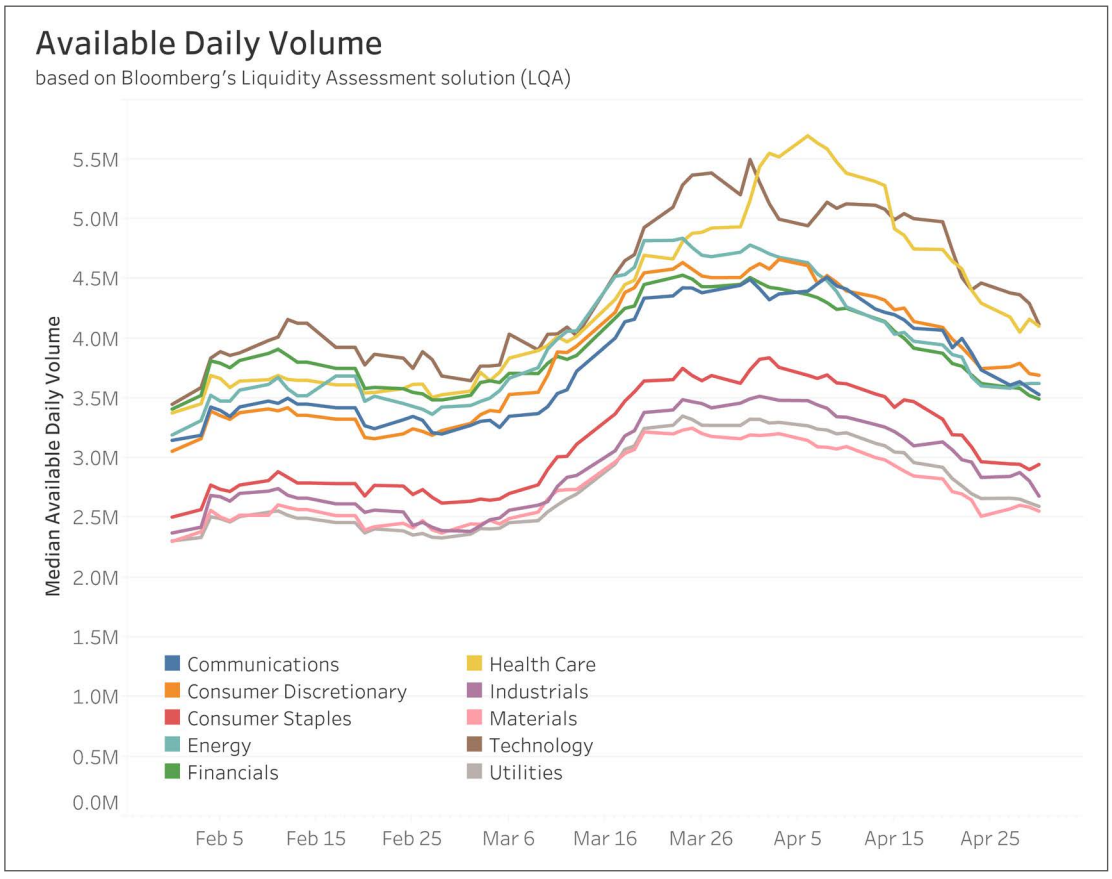
ICE Data Services' Liquidity Indicators are designed to reflect the average liquidity across the three major currencies by tracking the changes in weighted-average liquidity costs over time for both portfolios of Investment Grade and High-Yield securities. The cost calculation used in these indicators is based on an estimate of market price impact. This price impact metric incorporates security-level features, including projected trading volume capacity, transaction costs, price volatility, etc. to estimate the liquidity cost measured as a percentage of the bid price.

Figure 4: Observed trade costs by sector



Using Bloomberg liquidity metrics (based on its LQA Liquidity Assessment solution) for securities in the Bloomberg Barclays Euro Aggregate total return index (but removing government bonds from this population to leave around 4,500 corporate IG bonds), Bloomberg disaggregated the analysis by the Bloomberg Industry Classification Systems (BICS) to show results by sector. This analysis shows the response to the crisis from trade costs. Both consumer discretionary and energy sectors saw the quickest reaction into the sell-off, and amongst the slowest responses to recover.

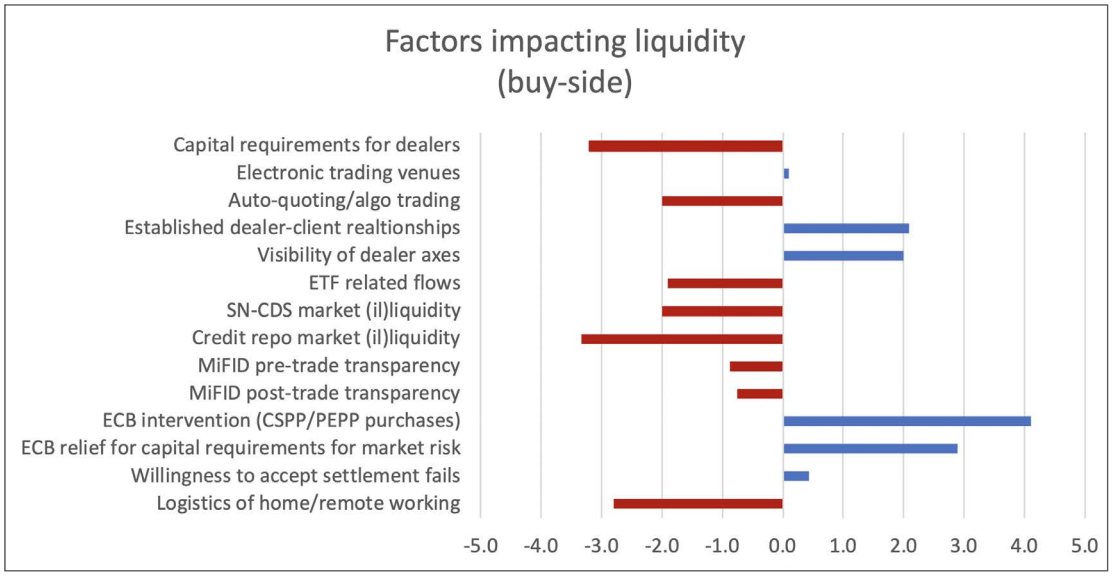
Figure 5: Available daily volume

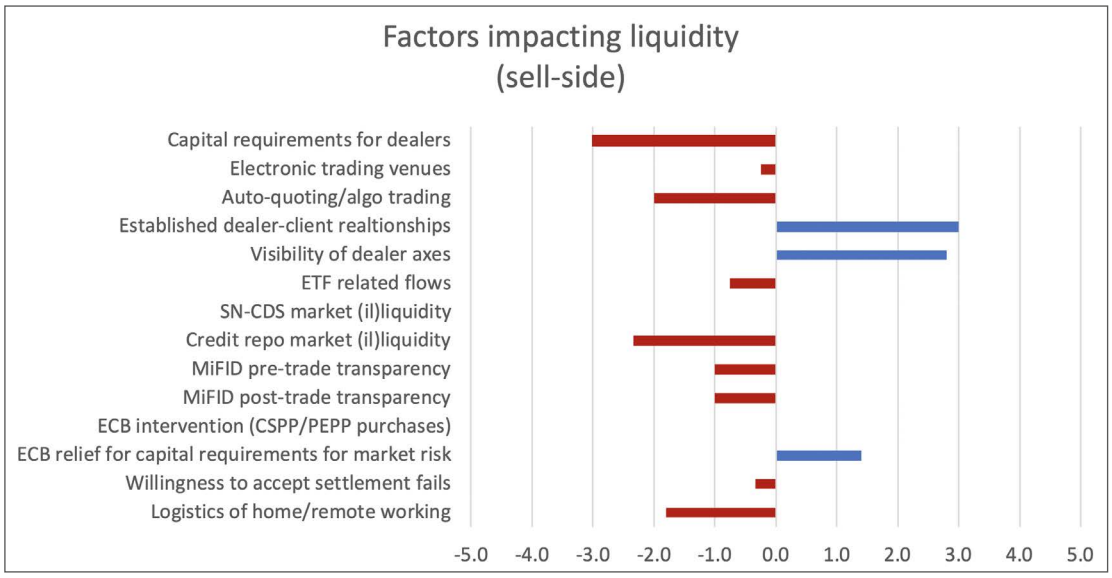


Again using Bloomberg's LQA, based on the IG corporate component of the Bloomberg Barclays Euro Aggregate total return index, this analysis illustrates how the expected daily trading volume has reacted through the crisis. The measure assesses the potential average daily market capacity per bond, disaggregated by sector.

Survey Question 5: Factors impacting liquidity

Respondents were asked to score the below factors based on their contribution to market liquidity during the crisis, where -5 is considered very negative, and +5 very positive, with 0 neutral. The below shows the average scores, disaggregated by buy-sides and sell-side respondents.





Market moves

- One of the most vivid representations of the crisis is the rapid and acute widening of credit spreads, followed by their subsequent extensive retracement. Underlying these moves appear to be a number of factors.
- Respondents report that largely as a result of years of assertive central bank monetary policy, IG credit had become a technically driven market, where fundamental valuations had come to take second place. The Covid-19 crisis has to some extent corrected this aberration, returning to a more fundamentals-based repricing of risk.

One of the most vivid representations of the crisis is the rapid and acute widening of credit spreads, followed by their subsequent extensive retracement (see Figure 6). Underlying these moves appear to be a number of factors. Partly these reflect the significant shifts in demand and supply, as already described, but also a reversion to more fundamental assessments of credit valuations from what had become a primarily technically driven market. Respondents also point out that driving many of these moves was a repricing of risk, rather than this being volume driven, and that the price action is defined largely by 'gapping', and not continuous transaction-based market moves.

Cash is king

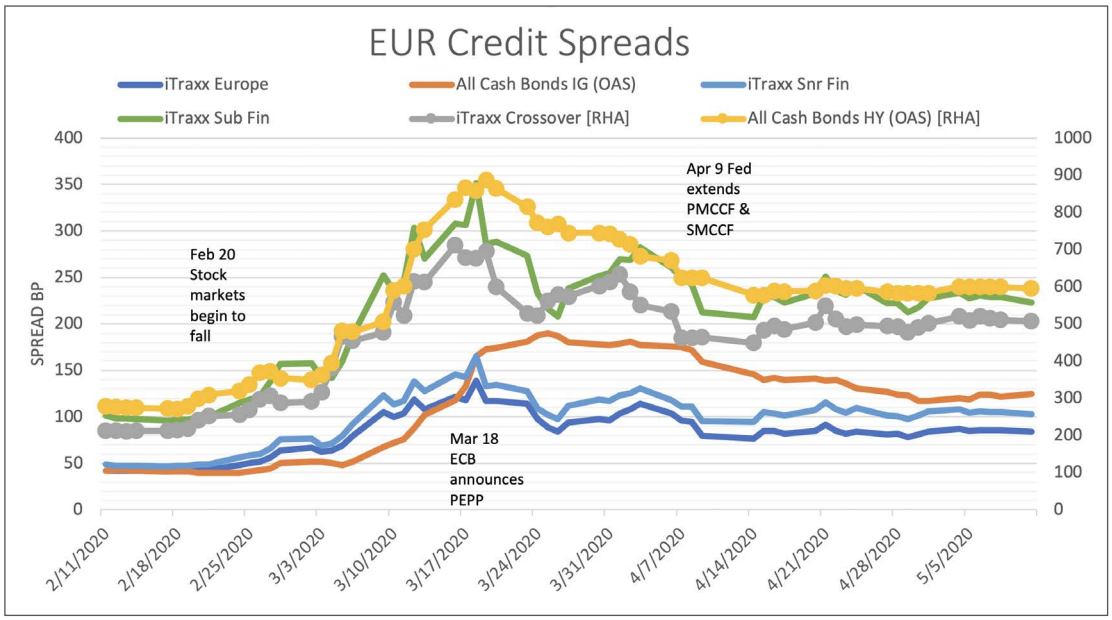
The initial moves in spreads seem to have been driven more by a need for funds to generate cash in the wake of actual and anticipated redemptions, which put pressure primarily on higher-rated shorter-dated holdings (liquidity buffers). As the sell-off gained momentum, this seems to be where the most pain was felt, with a disproportionate number of sell orders focused on the very short end of the curve. Buy-sides report struggling to find bids for bonds with maturities under two years. It is observed that in these cases the market seemed to stop trading on spread or yield, which became meaningless, and reverted to price: in effect becoming a market for deeply discounted liquidity transformation. The flattening of credit curves (where time premia for holding credit risk is effectively eliminated) is a normal observation in stressed credit environments (and as default risk becomes more extant), but in this case it would seem to be more liquidity driven. It is also notable that the European credit curve remains considerably flatter than pre-crisis levels (see Figure 11).

Repricing risk

Respondents report that largely as a result of years of assertive central bank monetary policy, including the direct purchases of corporate bonds (through the Corporate Sector Purchase Programme, or CSPP, in the case of the ECB), IG credit had largely become a technically driven market, where fundamental valuations had come to take second place. Accordingly, spreads were artificially compressed, with a reduction in meaningful distinction in relative value between individual credits or even sectors. The Covid-19 crisis has to some extent corrected this aberration, with a more fundamentals-based repricing of risk.

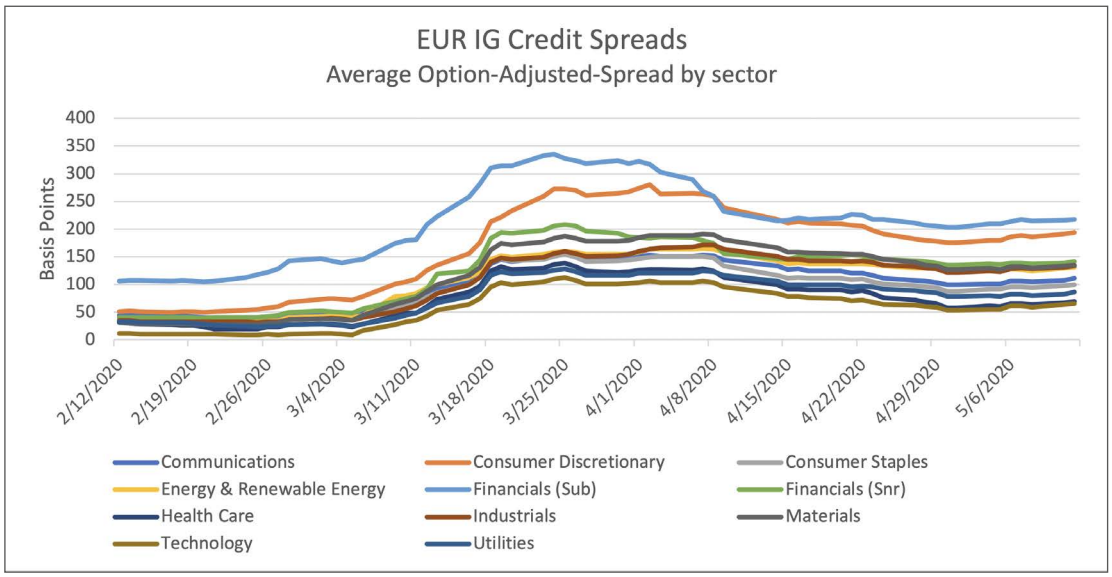
As the sell-off from late February to mid-March took place, there was greater delineation between underlying credits, based both on credit ratings and cyclical risk, with lesser credits and cross-over (falling just below investment grade status), as well as financials and consumer discretionaries, being the hardest hit (see Figure 7). As the market rebounded, at least in the initial stages, it was the better credits and more defensive sectors that outperformed. It was only later, in early-to-mid April that the spreads of lower credits began to compress as the Federal Reserve, and later, but more implicitly, the ECB, began to extend their market support to cross-over credits. (Figures 8 to 10 illustrate the movement in generic credit curves by credit rating buckets.)

Figure 6: EUR corporate credit spreads



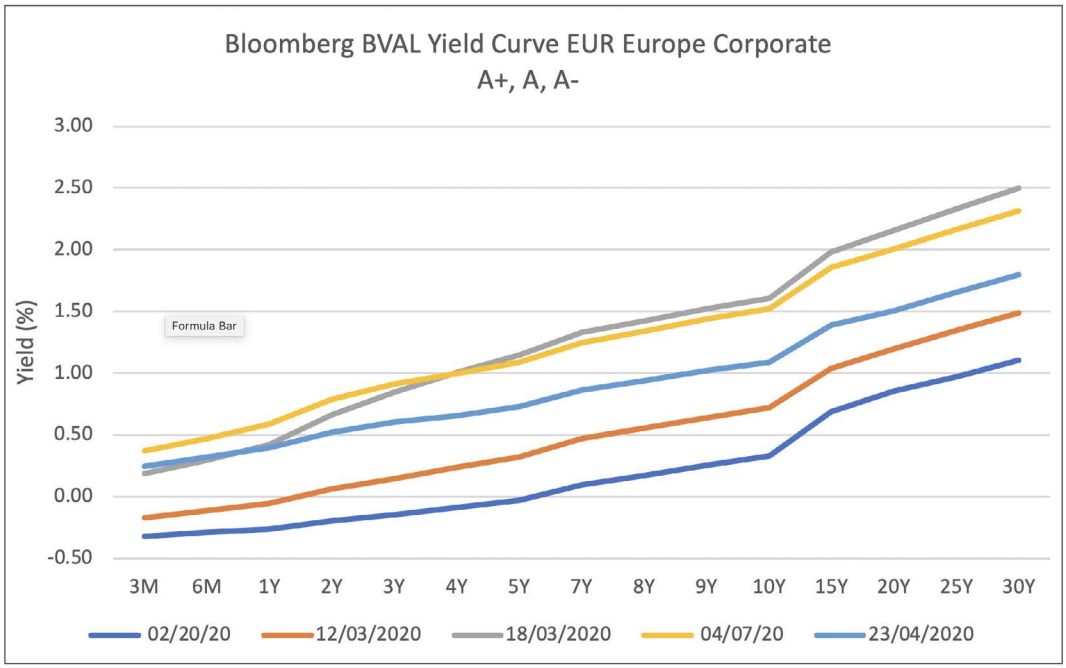
Source: ICMA analysis using Bloomberg data

Figure 7: EUR IG corporate bond market spreads by sector



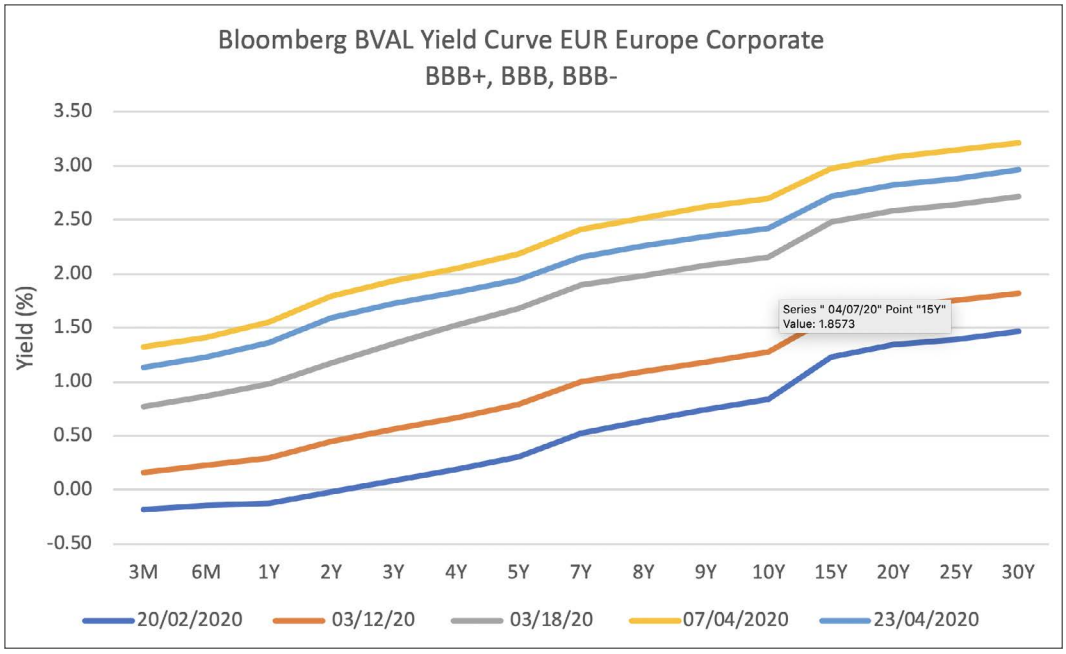
Source: ICMA analysis using Bloomberg data

Figure 8: EUR corporate bond yield curve moves (AA+, AA, AA-)



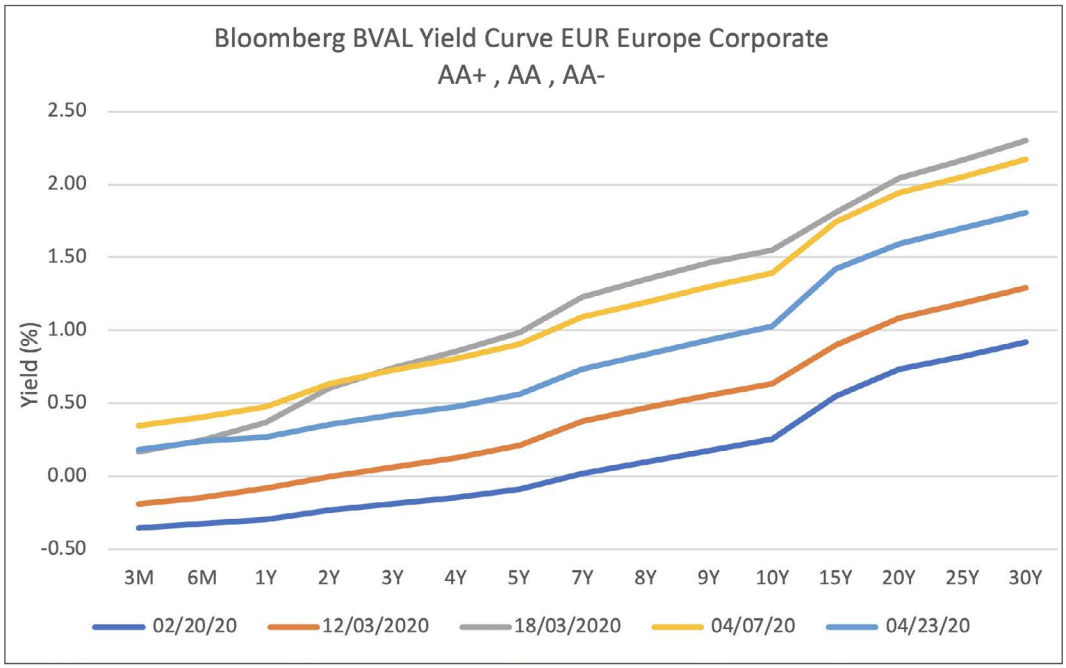
Source: ICMA analysis using Bloomberg data

Figure 9: EUR corporate bond yield curve moves (A+, A, A-)



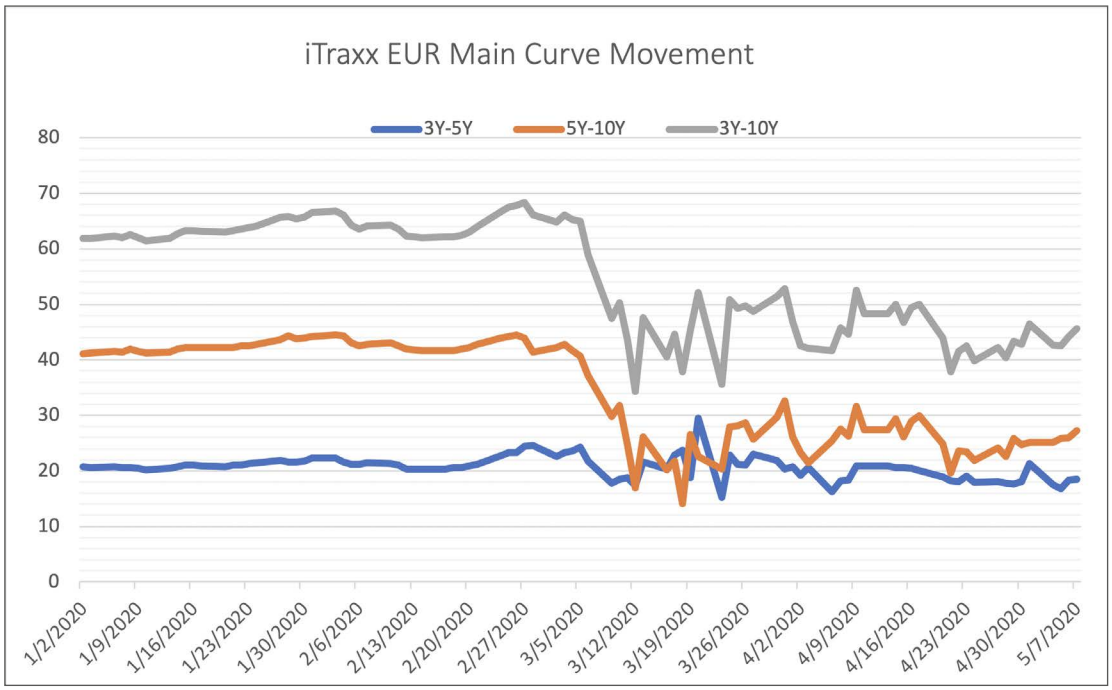
Source: ICMA analysis using Bloomberg data

Figure 10: EUR corporate bond yield curve moves (BBB+, BBB, BBB-)



Source: ICMA analysis using Bloomberg data

Figure 11: iTraxx credit curve



Source: ICMA analysis using Bloomberg data

Market structure

- During the peak of the crisis, for the most part, electronic trading in the European corporate bond markets broke down as participants resorted to voice trading. This was not so much due to technological challenges, but rather because the market became too volatile and too illiquid for dealers to risk providing pricing across electronic platforms.
- Respondents suggest that while many banks did 'step up to the plate' to continue providing liquidity and making markets for their clients, albeit with significantly wider bid-offer spreads, this was not the case for all market-makers, and overall dealer capacity appears to have shrunk at a time when it was needed most.

Aside from the perennial debate about market liquidity, perhaps the most prominent focus of discourse in recent years with respect to the European credit markets has been related to its structural evolution, and in particular the rapid growth of venue-based trading and automation. What many studies and reports have highlighted is that despite the ever-increasing complexity and digitalization of the market infrastructure, the elemental structure of the corporate bond market remains fundamentally unchanged as a dealer-centric model that attempts to fulfil the need for otherwise scarce liquidity. The Covid-19 crisis would appear to have provided a useful opportunity to strip-back the layers of technological development of the past decade to reveal its intrinsic core: a dealer-based market, where market-makers remain the primary source of executionable prices, and liquidity is reliant on their capacity to assume and recycle market risk.

E-trading in a crisis

Respondents confirm that during the peak of the crisis, for the most part, electronic trading in the European corporate bond markets broke down as participants resorted to voice trading. This was not so much due to technological challenges with firms relocating from their trading floors, but rather the consequence of market conditions. Essentially the market became too volatile and too illiquid for dealers and other liquidity providers to risk providing pricing across electronic platforms.

Participants note that a significant proportion of flow in the European corporate bond markets is automated, particular for smaller sizes and more actively traded ISINs, with requests for quotes (RFQs) being automatically routed into the market, via order management systems (OMS) or execution management systems (EMS), and with dealers responding to RFQs or providing price streaming by means of algorithms. This so called 'low touch' activity can be as much as 60-to-70% of an asset manager's flow, leaving more time for them, and their dealer counterparts, to focus on the more difficult, price sensitive, 'high touch' flow, involving larger sizes and less liquid bonds.

As volatility increased it is reported that algo trading, in many cases, had to be shut off. One participant suggests that many pricing models are designed to sustain market moves of five standard deviations, in itself a rare event. In the days leading up to and out of March 18, the market was experiencing moves of up to ten standard deviations. However, one sell-side respondent argues that this was not the case for every bank, and that some were able to continue auto-quoting, albeit with much wider bid-offer spreads. They further suggest that in some respects algos used in the European market tend to be more robust than those used in the US since they are less reliant on actual trade data in their modeling, utilizing synthetic composite prices instead, and largely as a consequence of less immediate post-trade data.

Whether feeding prices onto platforms automatically or manually, however, it would seem that this was largely with the intention of dealers encouraging clients to pick up the phone and negotiate a tighter price. Buy-sides also note that any prices that could be found on platforms were unlikely to be executable, while in many cases electronic RFQs did not return quotes. As one buy-side participant explains, everything effectively became 'high touch', involving direct messaging or a phone call with a salesperson. Meanwhile, to the extent that buy-sides were able to continue to rely on their OMS/EMS functionality, this required far greater flexibility in their price tolerance parameters.

While overall e-trading volumes reduced dramatically relative to voice, overall volumes on venues are reported to have remained high, registering record volumes at certain points. Meanwhile, some protocols appear to have fared better than others. A number of respondents report that as it became more difficult to find the three or more quotes that are often required as part of firm's best execution policy, they turned to all-to-all RFQ functionality to reach a broader base of potential liquidity providers. Similarly, anonymous trading venues (sometimes referred to as 'dark pools') also found traction. Additionally, it would seem as if portfolio trading, whereby dealers provide an overall price for a list of multiple bonds on an all-or-nothing basis, took on more value as working individual orders became manually too intensive. Perhaps unsurprisingly, the most utilized venue protocol during this period appears to have been 'move to venue' (also referred to as 'processed trades'), whereby trades are negotiated over the phone or via messaging, and then, once

agreed, 'consummated' through a platform in order for the parties to benefit from automated post-trade processes, such as reporting and settlement.

Making markets

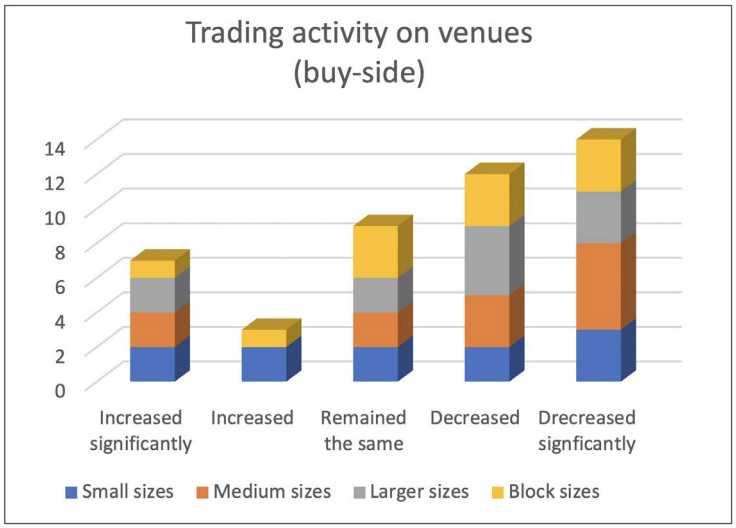
Market-makers are at the core of corporate bond secondary markets, and the primary source of liquidity, whether using trading venues or not. What the Covid-19 crisis seems to have highlighted is the importance of the dealer-investor relationship, which takes on even greater significance in times of market stress. The interviews and survey responses suggest that while many banks did 'step up to the plate' to continue providing liquidity and making markets for their clients, albeit with significantly wider bid-offer spreads, this was not the case for all market-makers, and overall dealer capacity appears to have shrunk at a time when it was needed most.

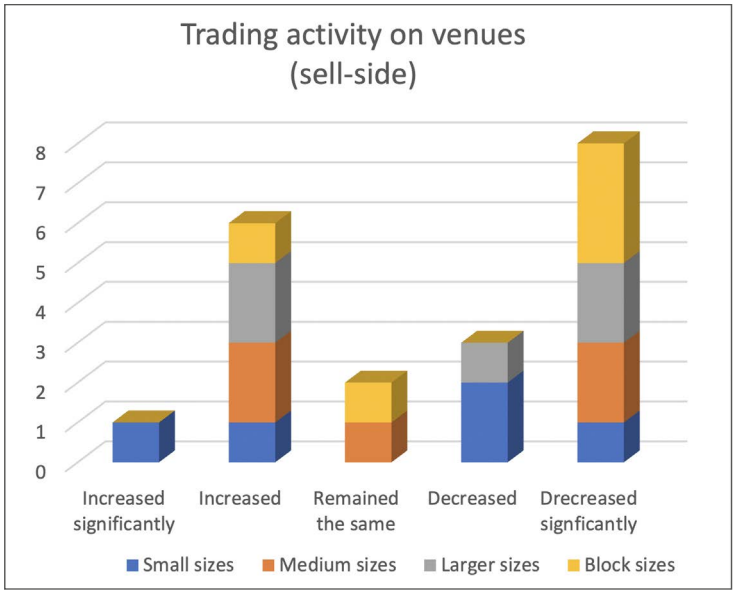
While it would appear that generally stricter capital rules and smaller balance sheets for market-making is an important consideration in this scenario, it is reported that in some cases dealers stepped away from their usual market-making activities. Some respondents suggest that in many cases this may have been a bank policy decision, while another theory is that some desks lacked the experience of heightened market volatility, and viewed the market turbulence as a threat rather than an opportunity; as one interviewee put it, who wants to catch a falling knife? Similarly, with respect to the post-March 18 rebound, it is also reported that some, potentially inventory-light, dealers shied from showing offers, for fear of being 'caught short'.

However, some participants, both sell-side and buy-side, point out that for those traders with the technical know-how and capacity to take risk, this was a chance to make exceptional returns both on the way down and the way up. But when your only experience of trading markets is in an environment of benign volatility and artificially compressed spreads, the moves witnessed in February and March would probably have seemed quite surreal. It is also noted that a lack of market environmental diversity probably did not help, with the loss of market participants such as bank proprietary trading desks and credit relative value hedge funds, which traditionally have provided a contrarian, more value-driven position in the face of extreme market moves, helping to create an alternative source of liquidity for market-makers to access (in effect, 'the other side of the market'), while also smoothing volatility.

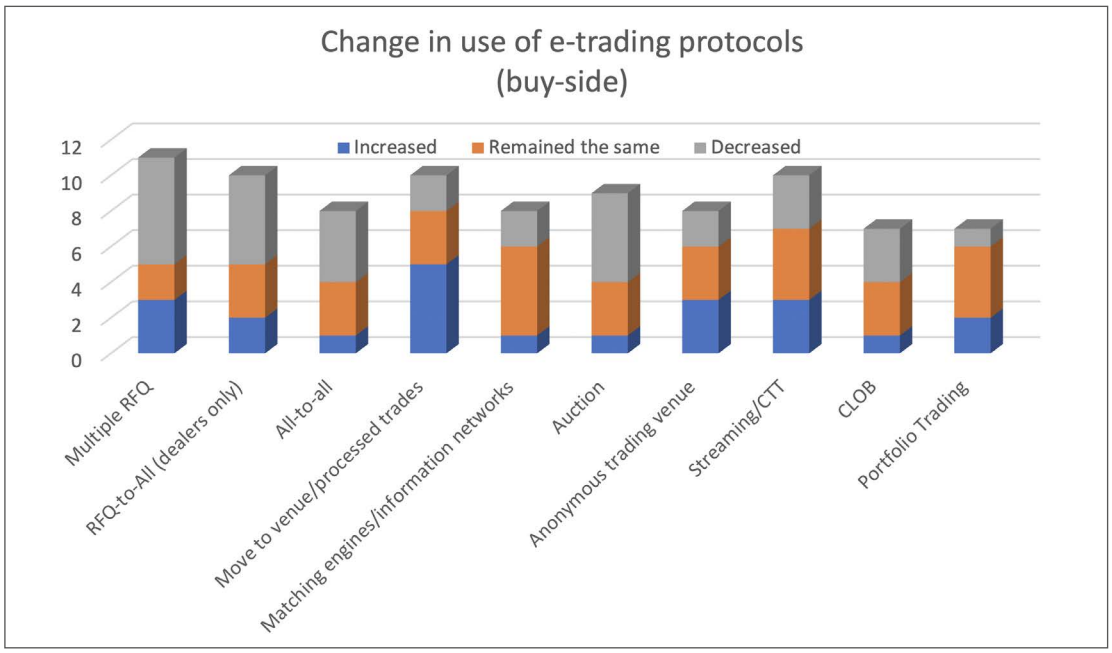
Participants note that moves by both the Federal Reserve and the ECB to relax capital constraints on banks' market-making services were helpful, and allowed banks to expand their liquidity provision. Furthermore, the broadening of central bank purchase programs to include short-dated commercial paper also helped to free up bank balance sheets which had come under pressure as corporates turned to their bank credit facilities to remain liquid. But the main observation of buy-sides seems to be the value of strong relationships with their dealer banks, and also in knowing who will be there when most needed and when the screens go blank.

Survey Question 6: Trading activity on venues

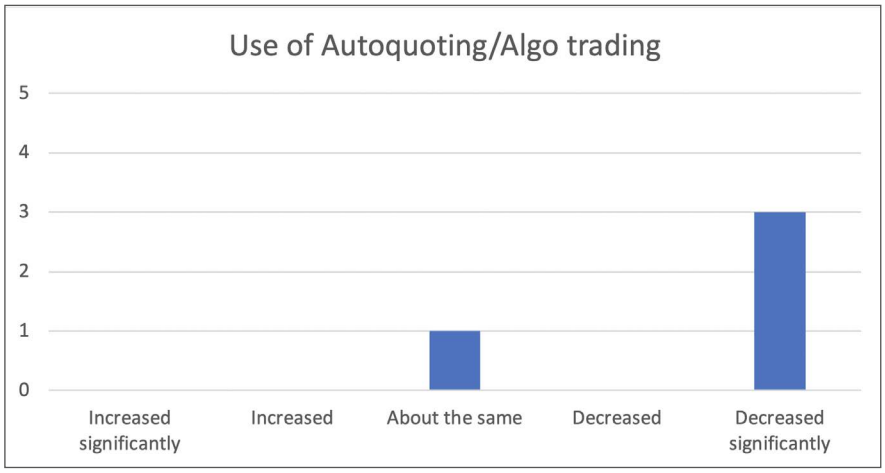




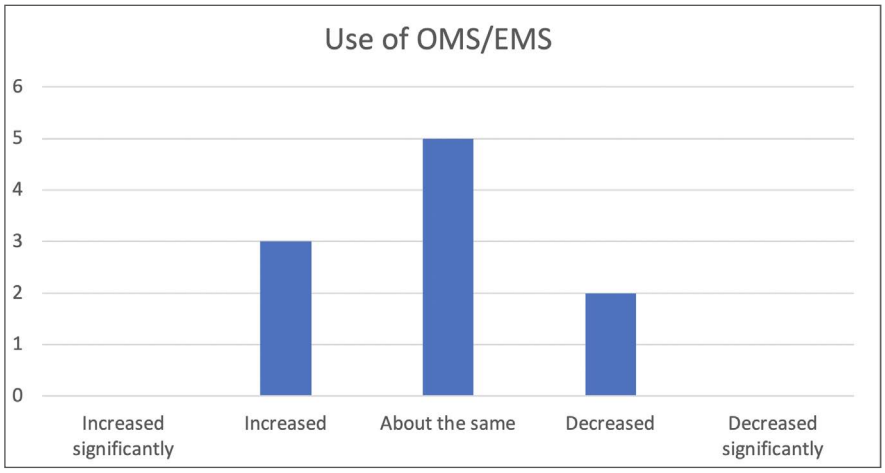
Survey Question 7: Change in use of e-protocols



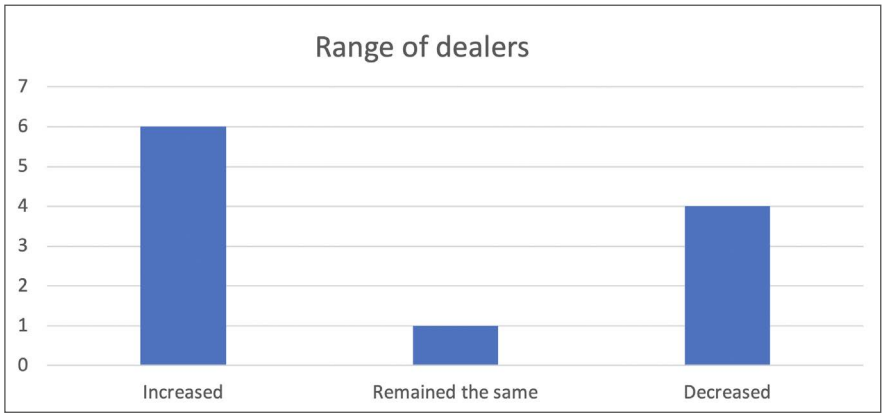
Survey Question 8: Change in use of autoquoting/algo trading



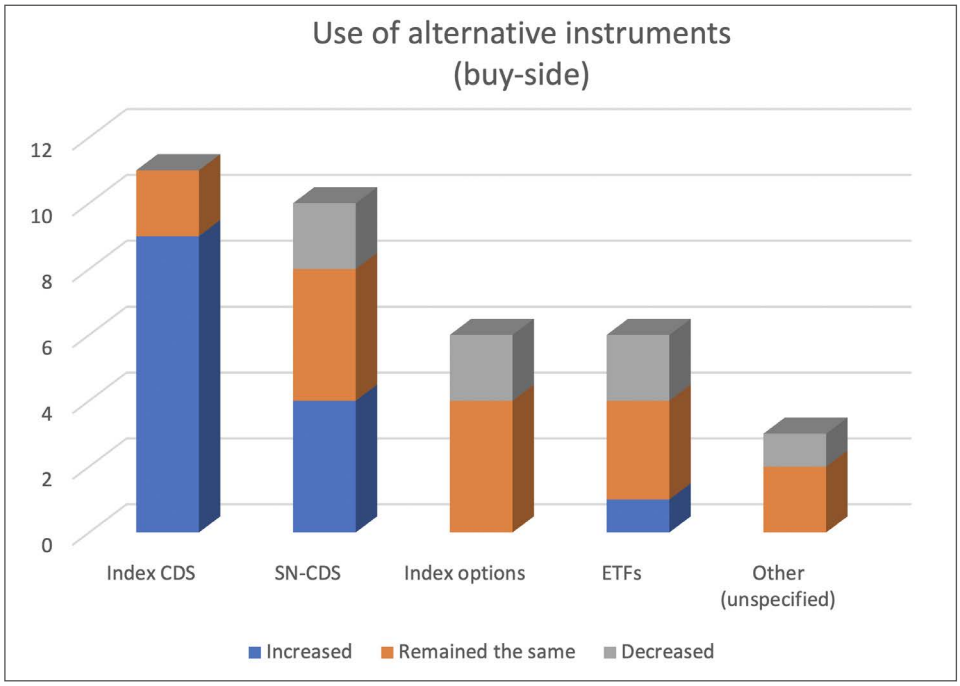
Survey Question 9: Change in use of OMS/EMS



Survey Question 10: Change in number of dealers



Survey Question 11: Use of alternative instruments



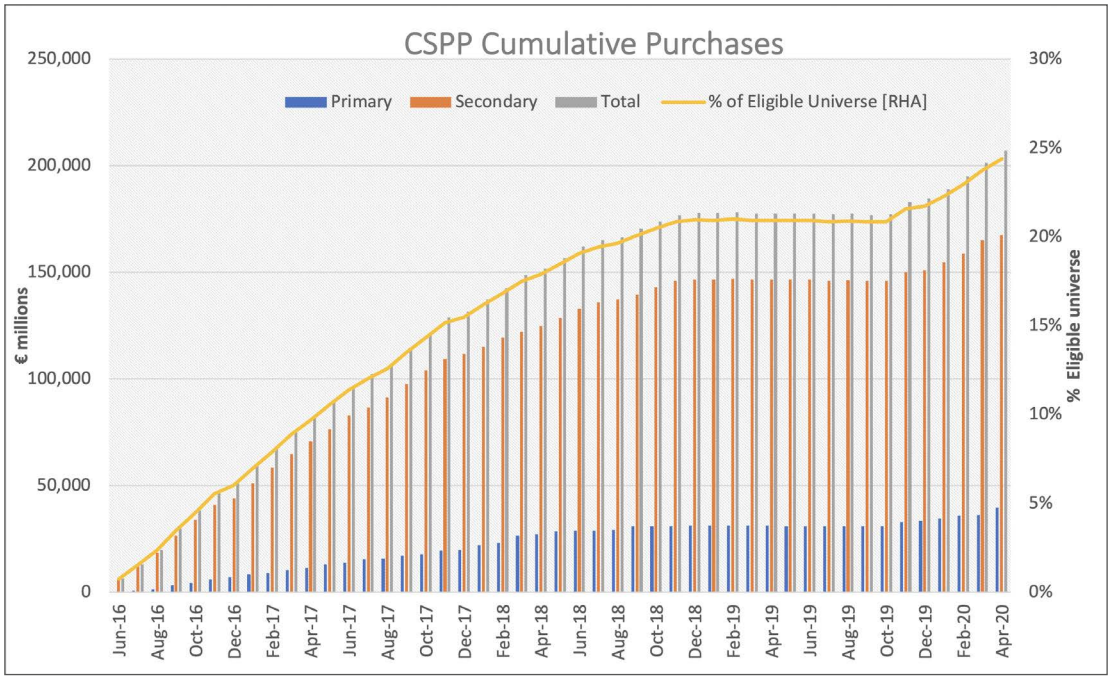
Central bank intervention

- Participants cite central bank intervention, particularly the announcement of the ECB's PEPP on March 18, as critical in ensuring that the European secondary bond markets continued to function. Not only did this provide a backstop bid for a large section of the market, more importantly it restored confidence.
- There is a counterview that this could be more problematic in the longer term as it creates a market dependency on central bank intervention in order to function effectively, particularly in times of stress.

Unsurprisingly, participants cite central bank intervention, particularly the announcement of the ECB's PEPP on March 18, as critical in ensuring that the European secondary bond markets continued to function. Not only did this provide a backstop bid for a large section of the market, more importantly it restored confidence. Implicit in this is also the sense that the ECB will do whatever it takes to ensure market stability, including potentially expanding its purchases of corporate bonds, if required, both in terms of quantum and scope.

However, there remains a counterview to ongoing central bank purchases, which is perhaps reflected in the sell-side survey responses (see Survey Question 5), that this could be more problematic in the longer term. In particular, as the Corporate Sector Purchase Programme (CSPP) ratchets up its overall market share, this crowds out genuine investors (who may be forced into riskier assets), while also perpetuating artificial credit valuations and a mispricing of risk. Furthermore, and as we have possibly already seen, it creates a market dependency on central bank intervention in order to function effectively, particularly in times of stress.

Figure 12: ECB CSPP



Source: ICMA analysis using ECB data

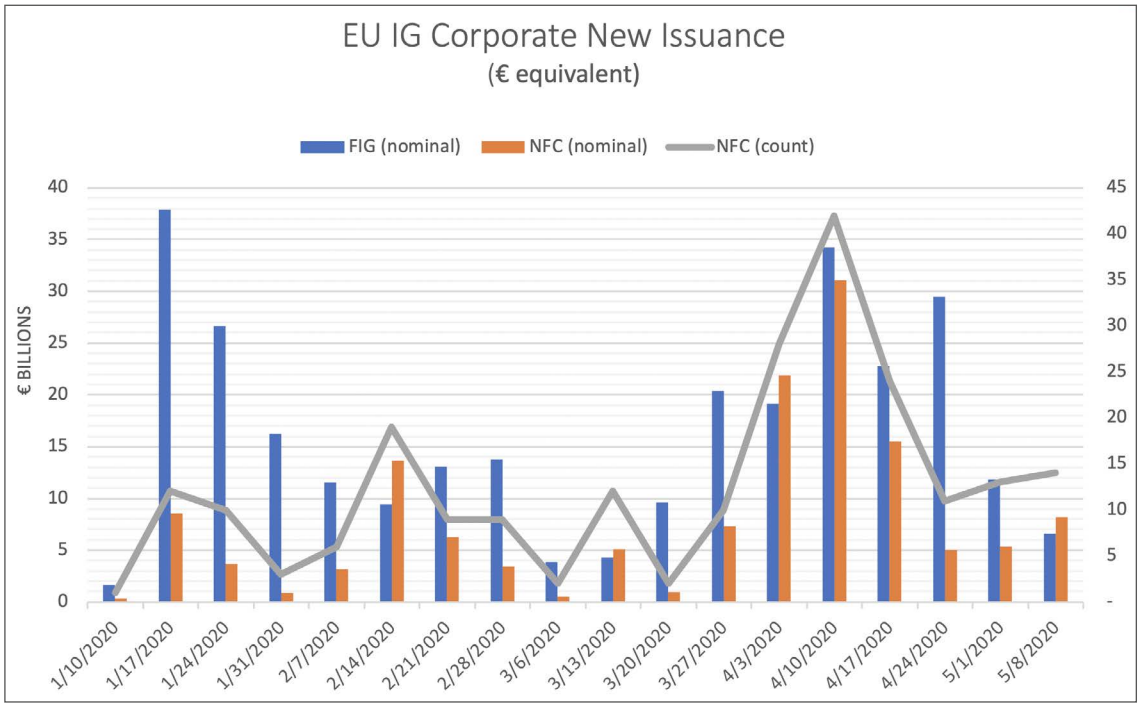
New issuance

- One of the key factors in bringing some stability to the corporate bond secondary market seems to be the surge in new issuance following the ECB's March 18 intervention.
- Not only did this new supply helped to satisfy pent-up demand, it also helped to provide a point of reference for secondary valuations

Perhaps one of the key factors in bringing some stability to the corporate bond secondary market was the surge in new issuance following the ECB's March 18 intervention. New issuance from corporates had pretty much dried up completely in the first half of March, save for some limited bank issuance. However, the second half of March saw a flood of new issues coming to market that made for a record month for 2020, and that continued into early April.

Participants explain that this was helpful for secondary market liquidity for a number of reasons. Firstly, in the sharp retracement that followed March 18 as investors scrambled for paper, this new supply helped to satisfy much of that pent-up demand. Secondly, while much of the new issuance came to market at what were clearly deep concessions, it did help to provide a point of reference for secondary valuations. While ordinarily the secondary market is used as the reference point for pricing new deals, secondary liquidity had become so stretched at this time that this dynamic was actually reversed. Thirdly, the majority of secondary trading in any corporate bond takes place in the first few days following its issuance, which also helped to stimulate liquidity through switching activity against more seasoned bonds.

Figure 13: EEA Corporate IG Issuance 2020



Source: ICMA analysis using Bloomberg data

ETFs

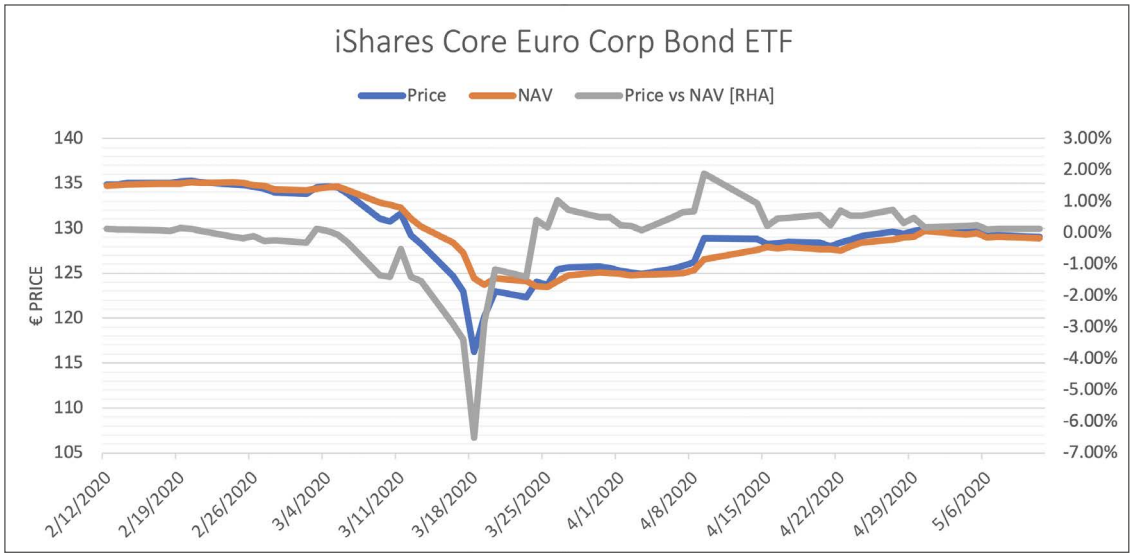
- Some respondents note that the one-directional nature of the orders in the bonds underlying corporate bond ETF baskets helped to exacerbate the market moves, which possibly explains the large discounts and premiums witnessed in ETF prices compared to the net asset value.
- The counter argument is that corporate bond ETFs performed well through the crisis and that it remained possible to recycle risk in the secondary market, while also being able to meet the heightened investor outflows and inflows. The observed dislocations reflect the loss of liquidity in the underlying market, with the ETF providing a more accurate valuation.

In ICMA's recent report, *Time to Act*,[2] the growth of the European corporate bond ETF market is identified by market participants as one of the most important developments of recent years, not only facilitating an alternative investment vehicle for the asset class, but by generating additional flows, and liquidity, in the underlying bonds of the proxy baskets through the creation and redemption process. With respect to their contribution during the recent Covid-19 turbulence, however, views appear to be more mixed.

Some respondents note that as with any passive investment flows, during more neutral market conditions, a more even balance between selling and buying helps overall liquidity. However, in the case of the recent crisis, with first heavy outflows, followed by significant inflows, the one-directional nature of the orders in the underlying ETF baskets only helped to exacerbate the market moves. They suggest that this probably explains the large discounts and premiums witnessed in ETF prices compared to the net asset value (NAV) of their underlying indices, reaching divergences of around 6% at the height of the crisis (see Figure 14).

The counter argument to this, however, is that corporate bond ETFs actually performed well through the crisis, doing what they were supposed to do, and providing an additional layer of liquidity and an easy access and exit point for the underlying asset class. Participants note that while volumes increased, it remained possible to recycle risk in the secondary market while also being able to meet the heightened investor outflows and inflows. Rather the observed dislocations between prices and NAVs reflect the loss of liquidity, and unreliability of pricing, in the underlying market, with the ETF providing a more accurate valuation.

Figure 14: iShares Core Euro Corporate ETF vs NAV



Source: ICMA analysis using Bloomberg data

2 Time to Act: ICMA's 3rd study into the state and evolution of the European investment grade corporate bond secondary market, ICMA, March 2020

CDS

- During the Covid-19 crisis the role of CDS indices as both a means to trade and hedge credit risk appears to have been pivotal and volumes in index CDS increased notably during this period.
- Participants report that it was more difficult accessing the single name CDS market. However, European SN-CDS traded volumes for both financial and non-financial names did increase in absolute terms following the ECB's PEPP announcement.

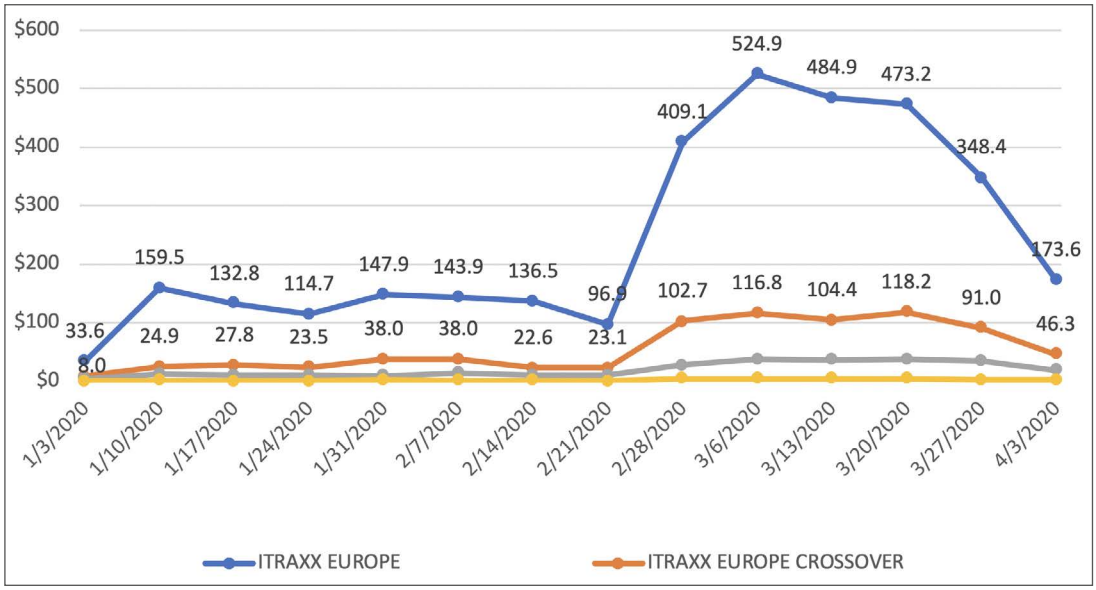
The credit default swap (CDS) market is an essential component of the credit market landscape, providing both an alternative means for investors to assume and offlay credit risk, particularly where liquidity conditions in the underlying market are insufficient, as well as being an important hedging tool for both investors and liquidity providers. There is a strong correlation between corporate bond market liquidity and a healthy and vibrant CDS market.[3]

During the Covid-19 crisis the role of CDS indices as both a means to trade and hedge credit risk appears to have been pivotal. While it became more difficult to find prices in underlying cash bonds, particularly in large sizes, liquidity in CDS indices remained robust, with participants reporting that trading €50 or €100 million clips, at least in the on-the-run 5-year iTraxx main and cross-over indices, remained easy, with relatively tight bid-offer spreads. Unsurprisingly, volumes in index CDS increased notably during this period (see Figure 15).

However, while index CDS liquidity held up, participants report that it was more difficult accessing the single name (SN) CDS market. While index CDS provides a vehicle to transfer more generic credit risk, based on an underlying basket of credits, SN-CDS facilitates the risk-transfer of specific credits. The decline in liquidity of the SN-CDS market has been frequently highlighted as a cause for concern in recent years, and it would appear that, similar to the underlying cash market, liquidity became stretched during the crisis, with wide bid-offer spreads and limited size capacity. To some extent this can be seen in the dislocation between index prices and their intrinsic value (i.e. the basis of the index price and the prices of the individual single name components). This tends to move positive in sharp widening moves, and negative in the case of rapid flattening. Although, as one respondent commented, while €5 or €10 million may not sound like large clips for SN-CDS, this is still significantly better than the sizes being quoted for many corporate bonds. Furthermore, European SN-CDS traded volumes for both financial and non-financial names did increase in absolute terms following the ECB's PEPP announcement (see Figure 16).

In terms of hedging specific corporate bond credit risk, it is reported that in some cases, as sourcing liquidity in the underlying markets became challenging, some participants resorted to selling equities as proxy hedge. While far from perfect, this did at least provide one avenue of liquidity. However, it is also noted that the introduction of short-selling restrictions in some EU jurisdictions unhelpfully closed even this outlet.

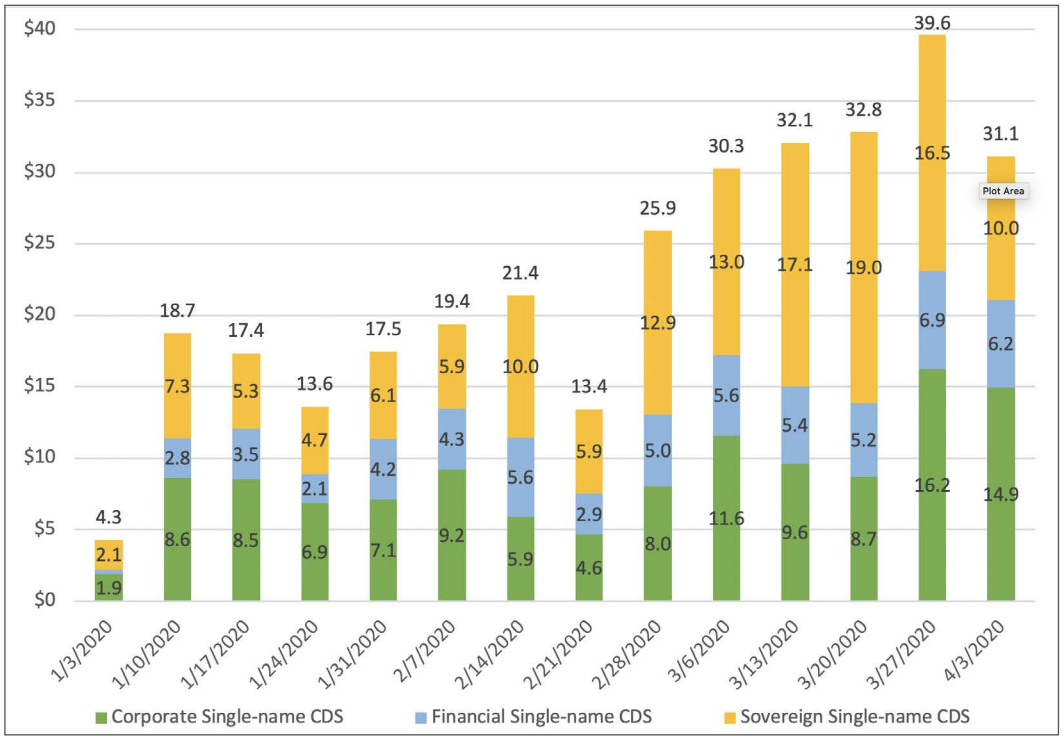
Figure 15: iTraxx Index CDS Weekly Market Activity (US$ billions)



Source: ISDA analysis using DTCC TIW data

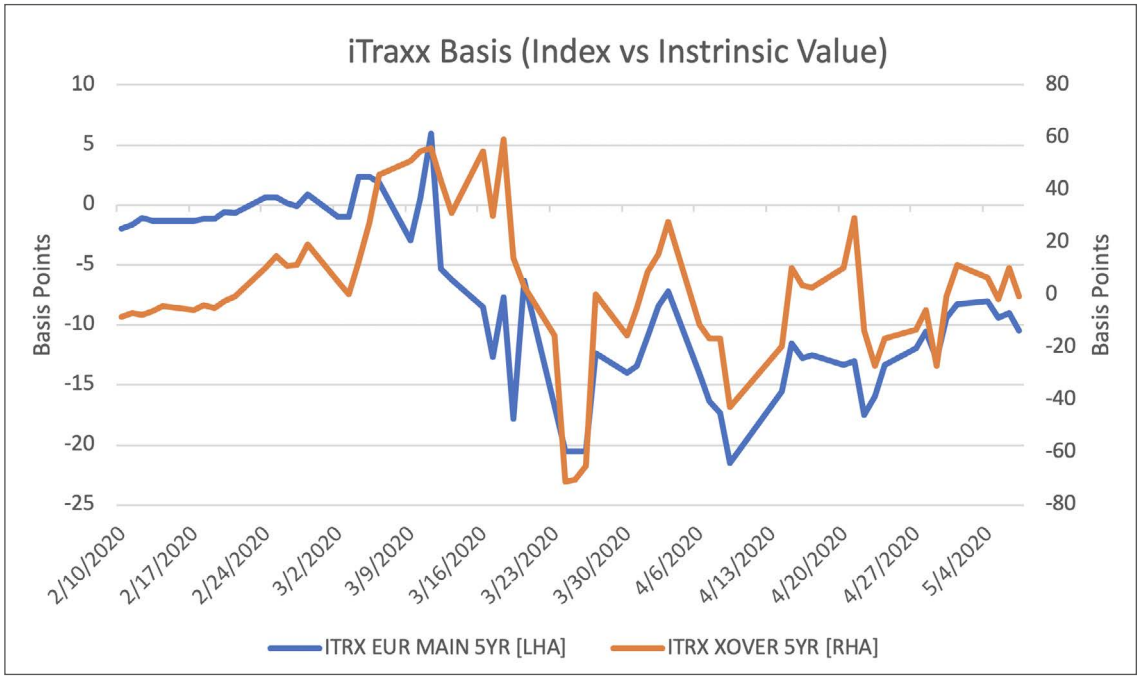
3 See: ICMA, 2018, The European Corporate Single Name Credit Default Market

Figure 16: European Single-Name CDS Weekly Market Activity (US$ billions)



Source: ISDA analysis using DTCC TIW data

Figure 17: iTraxx EUR 5yr Main and Cross-over CDS Basis



Source: ICMA analysis using Bloomberg data

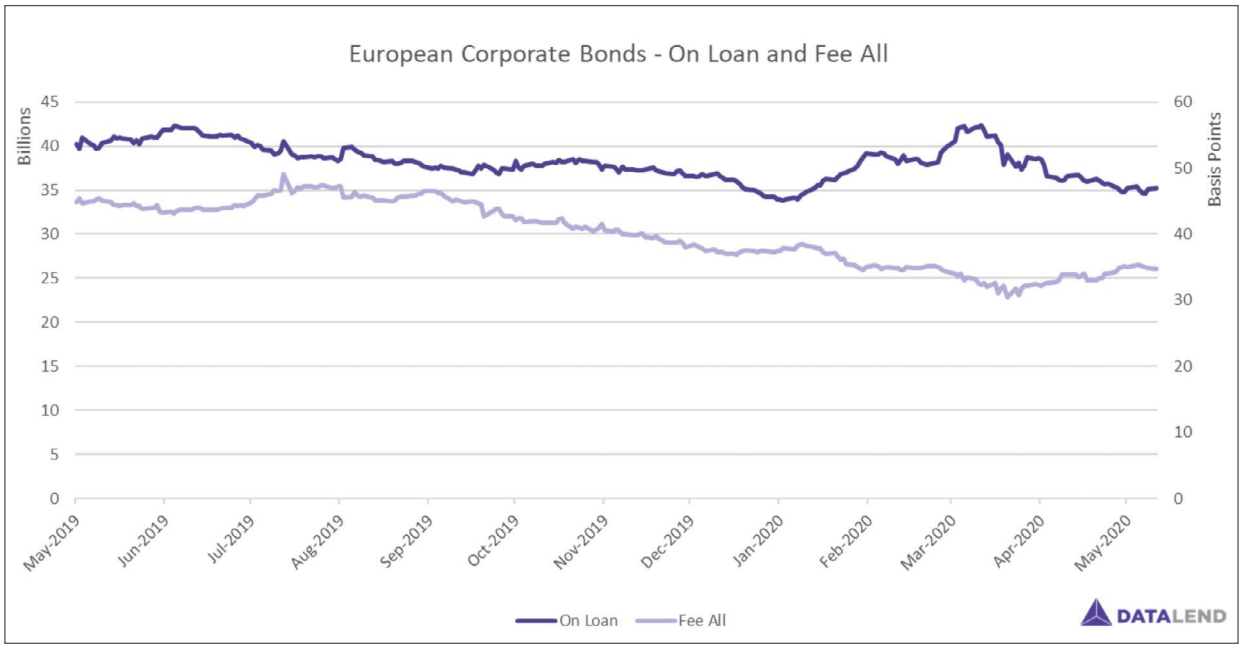
Credit repo

- Repo and lending activity for corporate bonds saw a notable increase through the middle of March, followed by a subsequent decline, mirroring underlying market moves. However, survey respondents identify the lack of liquidity in the credit repo market as one of the major underlying contributors to the reduction of liquidity in the underlying bond market during the crisis.

The recent ICMA report on how the European repo market performed during the Covid-19 crisis[4] concludes that the market held up relatively well under extreme conditions, despite a number of technical and operational challenges, including collateral bottlenecks, increased settlement fails, and difficulties managing intraday liquidity and collateral. In terms of credit repo, it is perhaps not surprising that demand for specifics increased, in line with underlying market activity and direction, and while it would seem that some institutional lenders temporarily deprioritized their lending activity, the market functioned relatively well during this time. Data from DataLend, which provides a reliable proxy for overall market repo and lending activity, shows a notable increase in balances of European corporate bonds on loan through the middle of March, followed by a subsequent decline: largely mirroring the underlying credit market price moves. Somewhat interestingly, average borrow fees appear to have decreased through the first half of March, whereas one would normally expect relative repo rates for specific corporate bonds to widen significantly. However, this could be explained by lenders being slow to adjust repo and lending pricing, as well as an indication of relatively deep lending pools. It may also reflect anecdotal reports that banks responded to heightened volatility by increasing haircuts, particularly with respect to non-ECB eligible securities, which become more relevant than pricing in times of market stress.

That said, survey respondents, both sell-side and buy-side, identify the lack of liquidity in the credit repo market as one of the major underlying contributors to the reduction of liquidity in the underlying bond market (see Survey Question 5), perhaps reflecting the more general decline in market liquidity over recent years.[5]

Figure 18: European Corporate bonds on loan and average fee



Source: DataLend

4 See: ICMA, 2020, The European repo market and the COVID-19 crisis
5 See: ICMA, 2017, The European Credit Repo Market: the cornerstone of corporate bond market liquidity

Settlement fails

- It is reported that there was a sizeable, albeit temporary, increase in settlement fails during the height of the crisis, which is largely attributed to operational challenges.
- This increase in structural settlement fails has accentuated concerns about the EU's CSDR mandatory buy-in provisions and raises questions as to how this would have impacted the market if it had been in place during the Covid-19 turbulence.

It is noted by a number of buy-side and sell-side participants that there was a sizeable, albeit temporary, increase in settlement fails during the height of the crisis. This is largely attributed to operational challenges related to transitioning middle- and back-office teams to disaster off-sites and home-working, as well the impact of lockdowns on outsourced settlement teams (such as those based in India), at a time when overall trading volumes were significantly above average. As some explained, it was important, at least for a short-while, to tolerate settlement fails in order for the market to continue to function.

Nonetheless, it is evident that the market did take steps to contain settlement risk during this period, including Euroclear notably opening on a weekend (on March 28) in order to process the growing backlog of settlement instructions. Both buy-sides and sell-sides also report issuing contractual buy-in notices in selective instances to help expedite the settlement of 'sticky fails' (while acknowledging that successfully executing an actual buy-in would have been challenging, and the settlement-chain ramifications too difficult to contemplate). By early April it would appear that settlement efficiency rates normalized.

This increase in structural settlement fails has accentuated concerns about the EU's CSDR mandatory buy-in provisions, due to come into force in early 2021, and raises questions as to how this would have impacted the market if it had been in place during the Covid-19 turbulence. The general view of participants is that it would have turned a crisis into a catastrophe. Firstly, the time and resources required to manage the buy-in process (which requires operational, trading, and legal input) would have been a significant drain on already stretched staff. Secondly, trying to buy-in illiquid securities in an already stressed and often chaotic market would only have exacerbated market volatility, while compromising market stability. And thirdly, as previously highlighted, anything that further restricts market-maker capacity would have been an additional blow to liquidity at a time when it was most needed. A number of participants express their hope that the regulatory community use this experience as an opportunity to reconsider, and possibly recalibrate, this unhelpful regulatory initiative.

Trading under lockdown

- Respondents suggest that despite some initial challenges, the physical relocation and separation of trading teams and associated functions has worked successfully.
- The most common complaint relates to the loss of information flow and the immediacy of human interaction that come from being on a trading floor, which inevitably impacts overall efficiency, and market liquidity.

One of the most significant aspects of the Covid-19 crisis is the disruption it created in the form of the physical relocation, and separation, of trading teams and associated functions. Respondents suggest that, for the most part, this has worked successfully, much to the surprise of many. However, it has not been without challenges, and not least in terms of information flows.

It would appear that many firms had already began to split teams across sites before European centres commenced imposing lockdowns, as well as ensuring that staff had the necessary technology to operate effectively from their homes, if required. Virtually all interviewees describe technical difficulties, at least in the first few days, which perhaps also played a role in reducing liquidity. But otherwise the story seems to be one of a market being largely well prepared and quick to adapt to its new circumstances.

The most common grievance, however, relates to the loss of information flow that comes from being on a trading floor. It is difficult to replace the immediacy of communications between salespeople and traders, or portfolio managers and execution desks, as well as those between different product desks that help to provide an overall picture of what is happening. As one interviewee explains, while you can still share information electronically or over a phone call, being on the trading floor allows you to soak up vast amounts of information without even having a conversation. Other key communication lines, such as between traders and risk managers or compliance teams, also become less fluid, which can make the trading process disjointed. There is general agreement that overall efficiency, and market liquidity, inevitably suffers from this, at least to some degree.

And while some report that they do not miss their daily commutes, and are enjoying more time with their families, others point to a loss of camaraderie as a consequence of teams being physically separated, and the support of having your team mates around you, particularly during a stressful time. As one participant explained, one of the biggest challenges of working remotely is trying to maintain team morale.

Lessons learned

The Covid-19 crisis perhaps also provides a number of lessons from which market participants and other stakeholders can potentially learn, and which may help to inform future market developments related to structure, innovation, and regulation: not least since it is safe to assume that a return to the 'old normal' is unlikely, at least any time soon.

- The market infrastructure held up through the crisis, and both buy-side and sell-side traders were quickly and successfully able to adapt to operating remotely. The observed increase in voice trading, relative to e-trading, was largely a consequence of market volatility and liquidity conditions, and not because of any technological deficiencies.
- Constraints on dealer balance sheets limit the extent to which market-makers can provide liquidity when markets become heavily directionally skewed, which in turn exacerbates market moves and price gapping. However, it is also observable that some dealers choose to reduce their propensity to take risk under stressed conditions.
- While central bank intervention is critical in a crisis, it is also a double-edged sword. The announcement of the ECB's PEPP on March 18 effectively brought the market back from 'the brink', restoring confidence for both investors and liquidity providers. However, it also becomes clear that sustained central bank bond purchases result in artificial credit valuations and a mispricing of risk.
- While the corporate bond ETF market appears to have functioned well during the crisis, sustaining heightened inflows and outflows amidst significant price volatility, there is also a view that the associated flows in the underlying baskets helped to amplify moves in the bond market.
- The loss of liquidity and depth in critical ancillary markets that help to hedge and recycle risk, in particular the SN-CDS and credit repo markets, are viewed as exacerbating the crisis.
- While the imminent EU mandatory buy-in regime is expected to reduce corporate bond market liquidity and efficiency in benign conditions, it is widely believed that this will prove to be disastrous in a stressed scenario.
- While there are benefits to working from home (both psychological and environmental), there is also a loss of both synergy and camaraderie that the trading floor environment engenders. It may be that the future for trading will embrace a hybrid model.

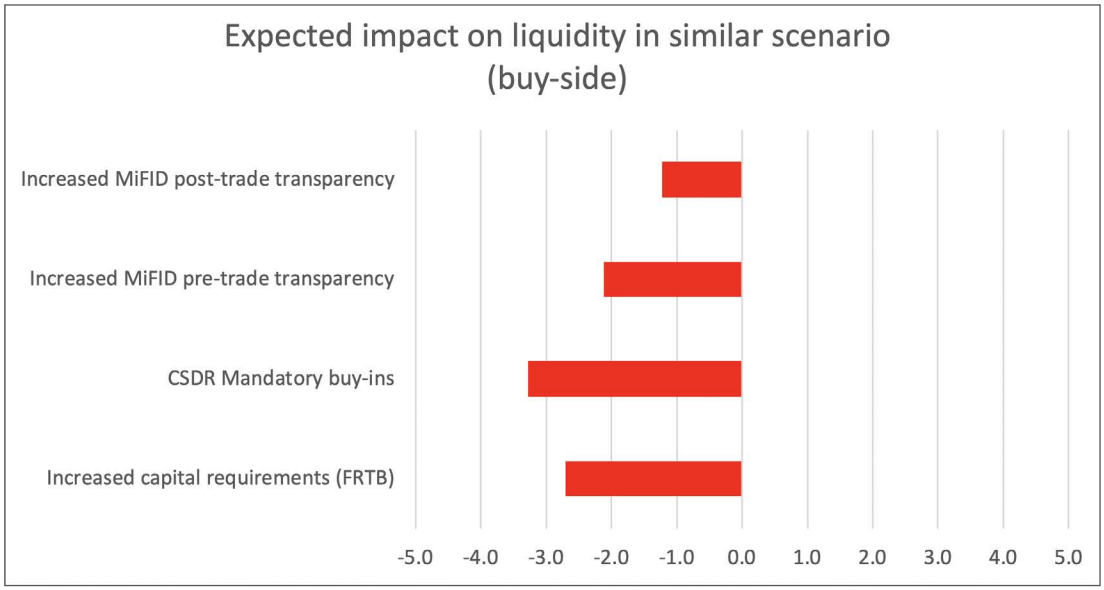
Perhaps the main lesson learned from the crisis, however, is to be reminded how corporate bond secondary markets function and how liquidity is created. The structure of corporate bond markets is fundamentally different to that of the equity market, and while over a decade of technological innovation has provided significant efficiencies as well as facilitating new ways in which to access liquidity, this simple reality has not changed. Market-makers remain at the core of credit markets, and it is their capacity and willingness to assume and recycle risk (both long and short) that allows the secondary market to function. This has been a central message of ICMA and the wider market for a number of years.

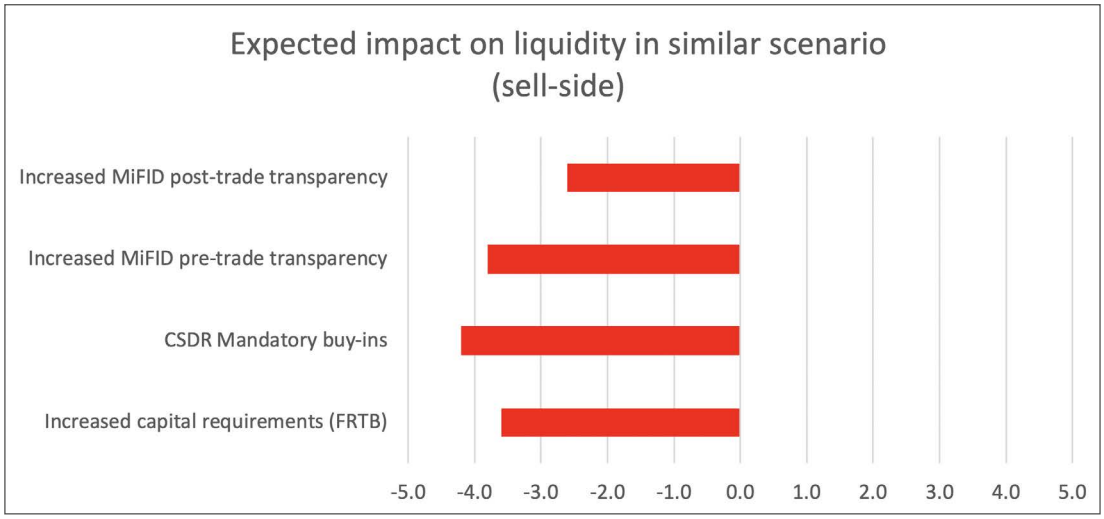
This recognition of how bond markets function needs to be reasserted as a central consideration when designing and calibrating regulation intended to be implemented in corporate bond markets. The fact that global prudential regulation related to trading activity has been recalibrated in response to an environment of market stress would appear to support this view.

Anything that constrains the ability of market-makers to take prudent and appropriately priced and capitalized risk will inevitably impact market liquidity and, potentially, efficiency. This includes capital and liquidity rules, pre- and post-trade transparency calibrations, access to ancillary hedging and financing markets, as well as the projected EU mandatory buy-in provisions. If we are to learn anything from the recent crisis, it is that whether the screens are switched on or off, it is the dealer-client relationship that ultimately holds the market together.

Survey Question 12: Expected impact of future factors on liquidity in similar scenario

Respondents were asked to score the below future factors based on their expected contribution to market liquidity in a similar scenario, where -5 is considered very negative, and +5 very positive, with 0 neutral. The below shows the average scores disaggregated by buy-sides and sell-side respondents



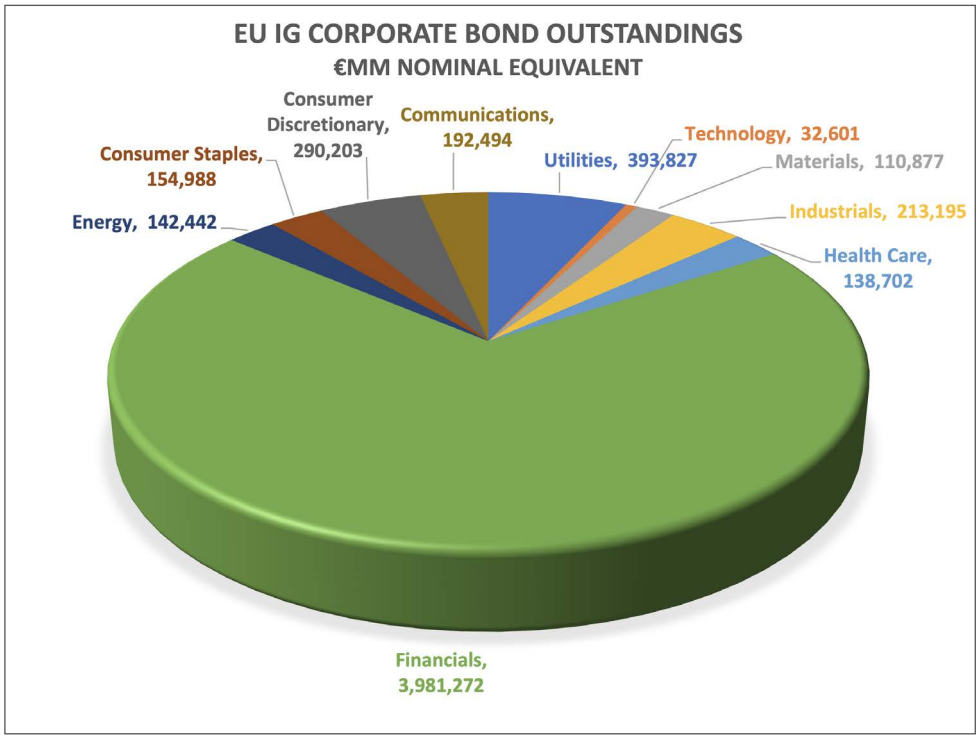


Annex: The European IG corporate bond market

Unless otherwise indicated, the analysis in this report is based on the European investment grade corporate bond market (including financial and non-financial corporate issuers). This takes into account the publicly listed bonds of issuers incorporated in the EEA (including Switzerland), and denominated in an EEA currency (including CHF). Investment grade is determined by a bond possessing a minimum investment grade rating from at least one of the three main European ratings agencies.[6]

As of May 2020, this is estimated to constitute 17,094 individual ISINs, with a combined equivalent nominal value of approximately €5.65 trillion.

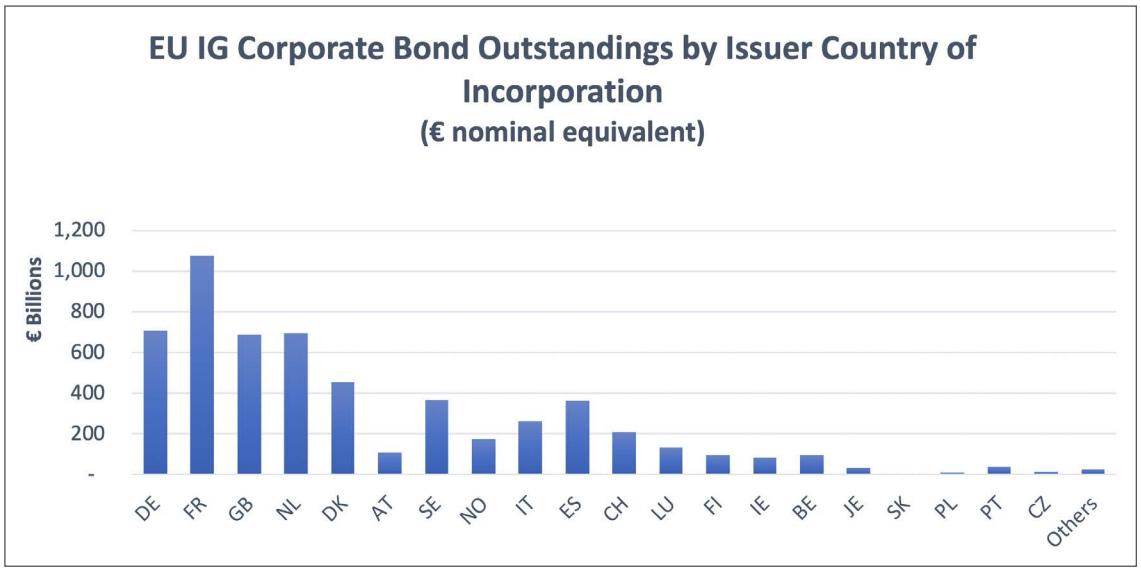
Figure A: Size and sectorial breakdown of the European IG corporate bond market



Source: ICMA analysis using Bloomberg data

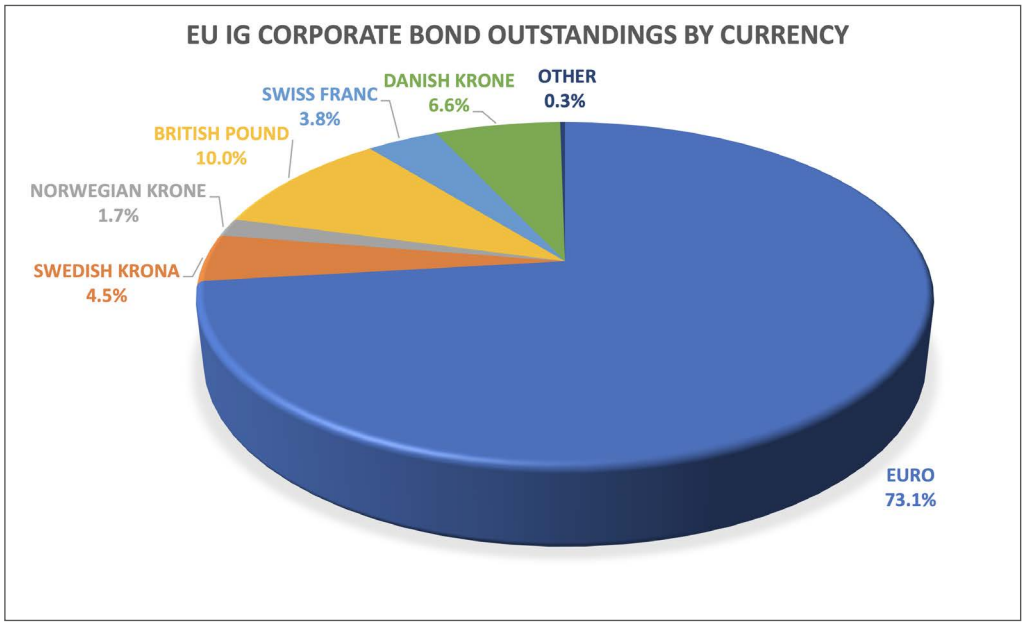
6 Fitch, Moodys, and Standard & Poors

Figure B: European IG corporate bond market by issuer country of incorporation



Source: ICMA analysis using Bloomberg data

Figure C: European IG corporate bond market by currency



Source: ICMA analysis using Bloomberg data

Acronyms used in this report

AP	Approved Participant
BICS	Bloomberg Industry Classification System
bp	Basis Point (1/100th or 1%)
BVAL	Bloomberg's Evaluated Pricing service
CDS	Credit Default Swap
CLOB	Central Limit Order Book
CSDR	Central Securities Depository Regulation
CSPP	Corporate Sector Purchase Programme
DTCC TIW	Depository Trust & Clearing Corporation Trade Information Warehouse
ECB	European Central Bank
EEA	European Economic Area
EMS	Execution Management System
ETF	Exchange Traded Fund
EU	European Union
FIG	Financial Investment Grade (issuer)
FIN	Financial (issuer)
FRTB	Fundamental Review of the Trading Book
HY	High Yield
ICMA	International Capital Market Association
IG	Investment Grade
LQA	(Bloomberg) Liquidity Assessment
ISDA	International Swaps and Derivatives Association
ISIN	International Security Identification Number
mm	Millions
MiFID	Markets in Financial Instruments Directive
MiFIR	Markets in Financial Instruments Regulation
NAV	Net Asset Value
NFC	Non-Financial Corporate (issuer)
OAS	Option Adjusted Spread
OMS	Order Management System
PEPP	Pandemic Emergency Purchase Programme
PMCCF	Primary Market Corporate Credit Facility
RHA	Right Hand Axis [used in charts]
RFQ	Request For Quote
SN-CDS	Single Name Credit Default Swap
SMCCF	Secondary Market Corporate Credit Facility
SMPC	(ICMA) Secondary Market Practices Committee
Snr	Senior (debt)
Sub	Subordinated (debt)

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