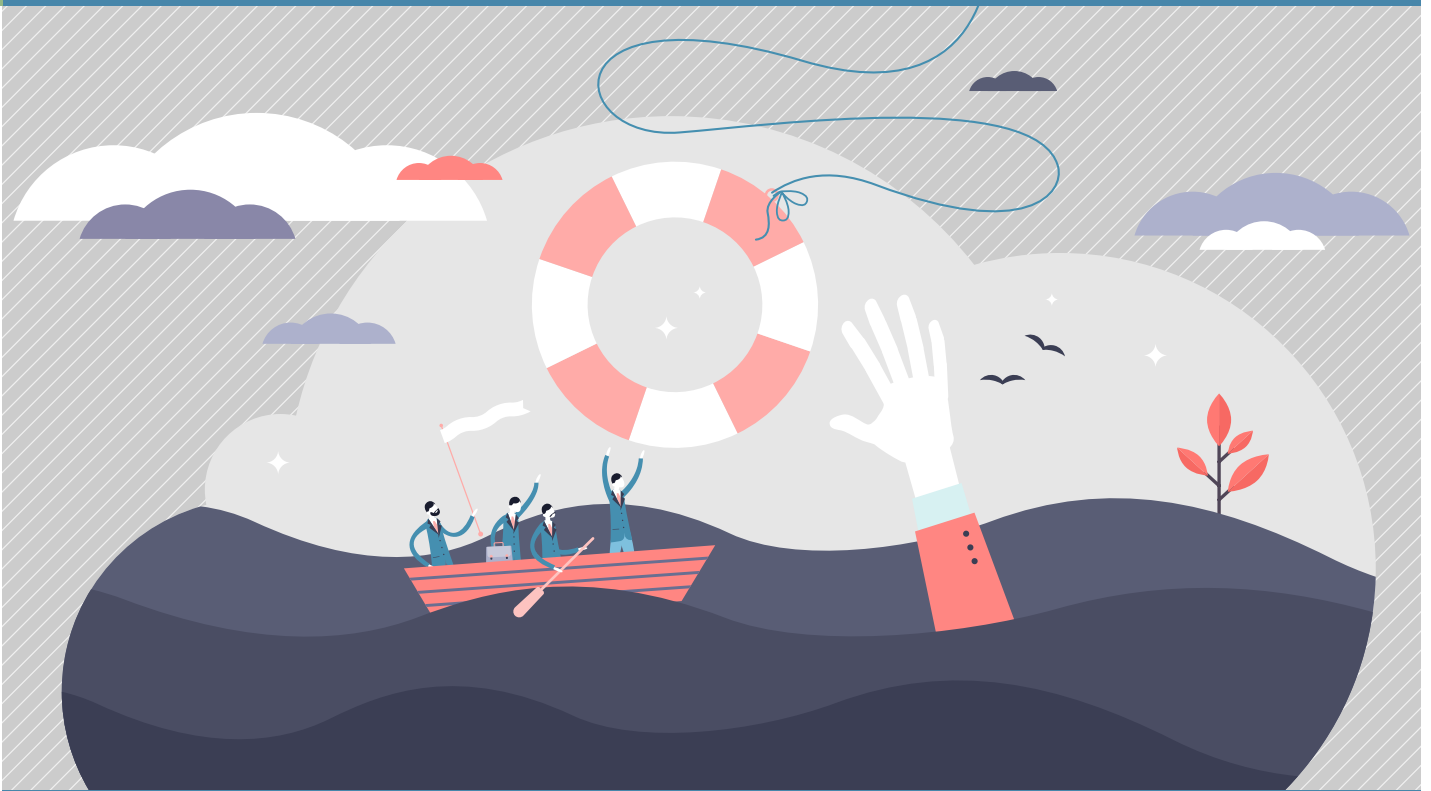
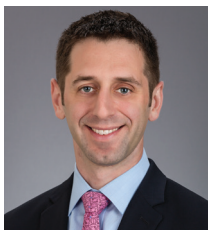


The Impact of COVID-19 and Government Intervention on Swaps Market Liquidity



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Managing Director Kevin McPartland is the Head of Research for Market Structure and Technology at the Firm.

57%

OF INSTITUTIONAL INVESTORS FELT CREDIT CRISIS REFORMS REDUCED THE BANK'S CAPACITY TO PROVIDE LIQUIDITY IN THE CURRENT CRISIS

67%

OF STUDY PARTICIPANTS FOUND U.S. FEDERAL RESERVE AND TREASURY SUPPORT TO BE EFFECTIVE OR EXTREMELY EFFECTIVE IN RESTORING MARKET LIQUIDITY

Executive Summary

Liquidity in the swaps market and in other global markets came under extreme pressure in late February and early March 2020 as the true nature of the COVID-19 crisis began to unfold around the world. Credit fears on the back of widespread business shutdowns and work-from-home orders drove markets into a panic. The panic drove risk asset prices down and kicked off a massive flight to quality and demand for liquid assets and U.S. dollars in particular that resulted in strains in the cash and short-term funding markets, as investors sold out of assets, spreading the contagion to bond and otherwise risk-free assets. This combination of factors ultimately led dealers to widen spreads and reduce the size they were willing to trade. This was the first time since the 2008–2009 financial crisis that banks' reduced ability and willingness to take risk due to strict capital buffers was on full display.

Ultimately, the U.S. Federal Reserve jumped into the market in a major way, by directing banks to reduce excess capital buffers and injecting trillions of dollars of liquidity where it was needed most. While not everyone agrees on the size and scale of the intervention, the market's reaction proved the government action in aggregate had the desired effect. Markets quickly regained their footing and began the long road of processing the true impact of COVID-19 on the global economy and the work needed to understand how individual companies and assets would hold up over time.

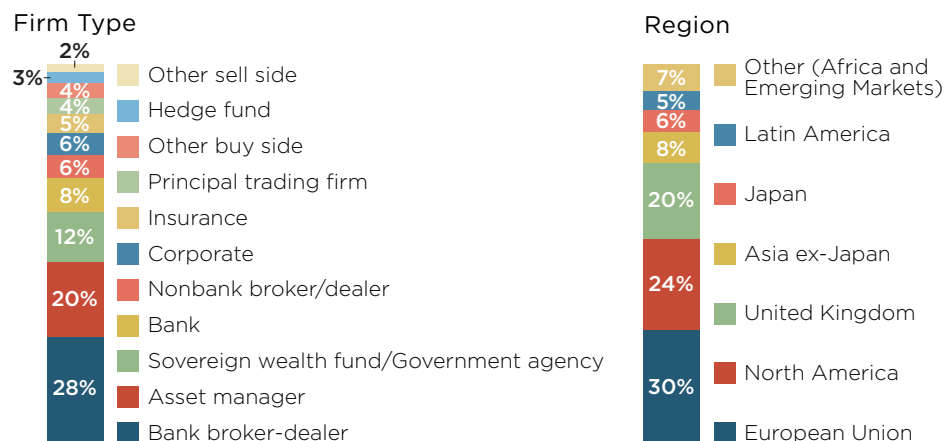
In an effort to better comprehend the market's reaction both before and after government intervention, Greenwich Associates worked with ISDA to speak with over 170 market participants from around the world. The results, examined in this Greenwich Report, help to explain the major factors contributing to the market illiquidity, how illiquidity impacted different parts of the swaps market in different parts of the world, the impact of government intervention and the potential for market structure changes going forward.

While the dust has yet to fully settle on the current crisis, it is important for all market participants and policymakers to understand exactly what happened in each major market in the hopes of being better prepared for future shocks.

METHODOLOGY

Throughout May 2020, Greenwich Associates collected electronic responses from 172 market participants around the world. The questions focused on market liquidity before and after central bank intervention, the impact of that intervention and other issues related to the market's functioning throughout the current crisis.

RESPONDENTS



Introduction

Global markets liquidity came under extreme pressure in late February and early March as fear and uncertainty related to the spread of COVID-19 gripped the world. While market infrastructure, including exchanges, trading venues, clearing services, data providers, and others, held up remarkably well amid the historic volume and volatility, the buy side found it difficult to execute orders, particularly for larger trade sizes. Dealers were forced to pull back to ensure they didn't break risk limits and regulatory-driven capital requirements.

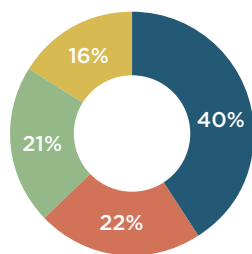
The swaps market was not immune to these liquidity challenges. Case in point: 96% of U.K.-based swaps market participants who participated in this research noted a decline or large decline in overall interest-rate swap (IRS) liquidity before government intervention. In varying degrees, this view was also expressed by investors and dealers around the world in both IRS and FX derivatives markets. Nevertheless, the cause was not one of market functioning, as it was in the credit crisis.

While the spread of COVID-19 was the root cause of the market's upheaval, it was the expected economic impact that drove market volatility and volumes. More specifically, 40% of study respondents cited increased credit concerns as the most significant economic trigger,

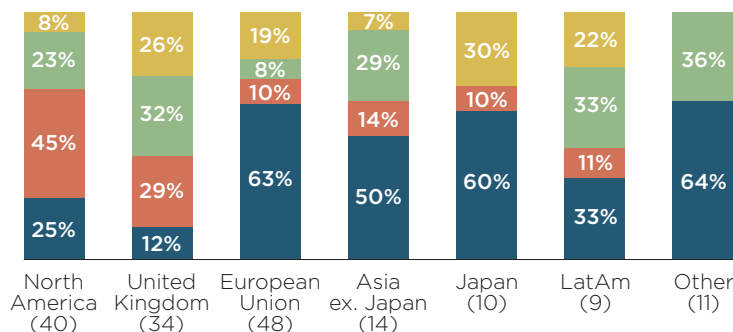
including the declining credit quality of some borrowers and the sudden demand for short-term funding, as the global lockdown cut off revenue sources and the exposure of financial and non-financial firms to those borrowers. Interestingly, market participants in the U.S. and U.K. were less concerned about credit issues and more focused on the impact of forced business closures and work from home (WFH) requirements (although the two, of course, are inextricably linked).

TOP ECONOMIC CONCERNS RELATED TO COVID-19 CRISIS

Most Significant Trigger



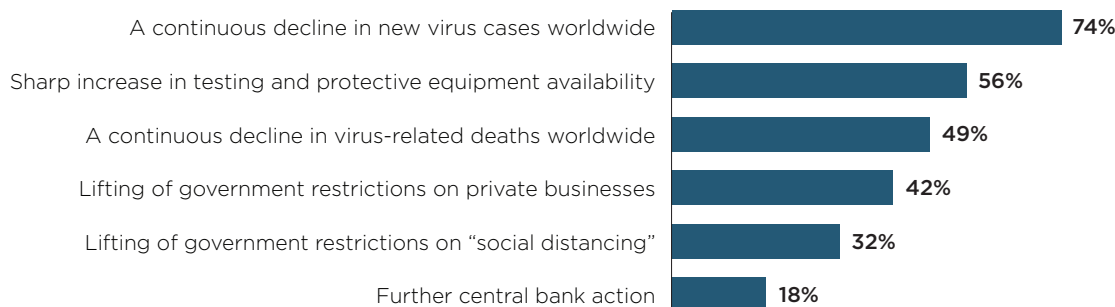
By Region



- Declining corporate sales and profits
- Flight to quality and global efforts to ensure adequate supply of and access to USD funding
- Mandated business closures and work from home requirements
- Increased concerns about credit quality and credit exposures

Note: Numbers in parentheses represent number of respondents. May not total 100% due to rounding.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

RETURNING MARKETS TO “NORMAL”



Note: Based on 170 respondents.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

In the long run, returning markets to “normal” will be driven primarily by the continuous decline in new virus cases around the world and a sharp increase in testing and protective equipment—not further central bank action. However, the need for central bank intervention in the short term was, and remains, critical to market functioning. While markets would have arguably corrected themselves over time, finding an equilibrium of supply and demand as the virus’ impact became more clear, the bottom would

have been lower, the duration longer and the impact on the real economy greater. That said, market participants remain uncertain as to whether more government intervention will be required in the months ahead as global lockdowns ease, and exactly what shape and size intervention should take.

HOW WELL INTEREST RATE SWAP LIQUIDITY HELD UP DURING THE COVID CRISIS—U.K.



Note: Based on 22 respondents. May not total 100% due to rounding.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

The intervention of governments and central banks around the world—mostly notably the U.S. Federal Reserve—injecting trillions of dollars of liquidity into markets was necessary and caused an immediate positive impact on liquidity. While nearly all U.K. swaps market participants noted a decline in liquidity before central bank intervention per the above, conversely 60% noted an improvement immediately after. This impact can also be seen in other metrics: Volatility declined, volume started coming back to normal levels, and the equity market’s free fall reversed. While the long-term ramifications of this swift action are unknown as yet, the short-term impacts were nearly immediate and broadly positive.

The Cause

The spread of the virus led to a never-before-seen shutdown of businesses across the globe, which caused credit concerns, strained short-term funding markets, and then in turn, caused investors to panic—that much is clear. But that still leaves open the question of exactly what caused liquidity in the swaps market to come under such stress.

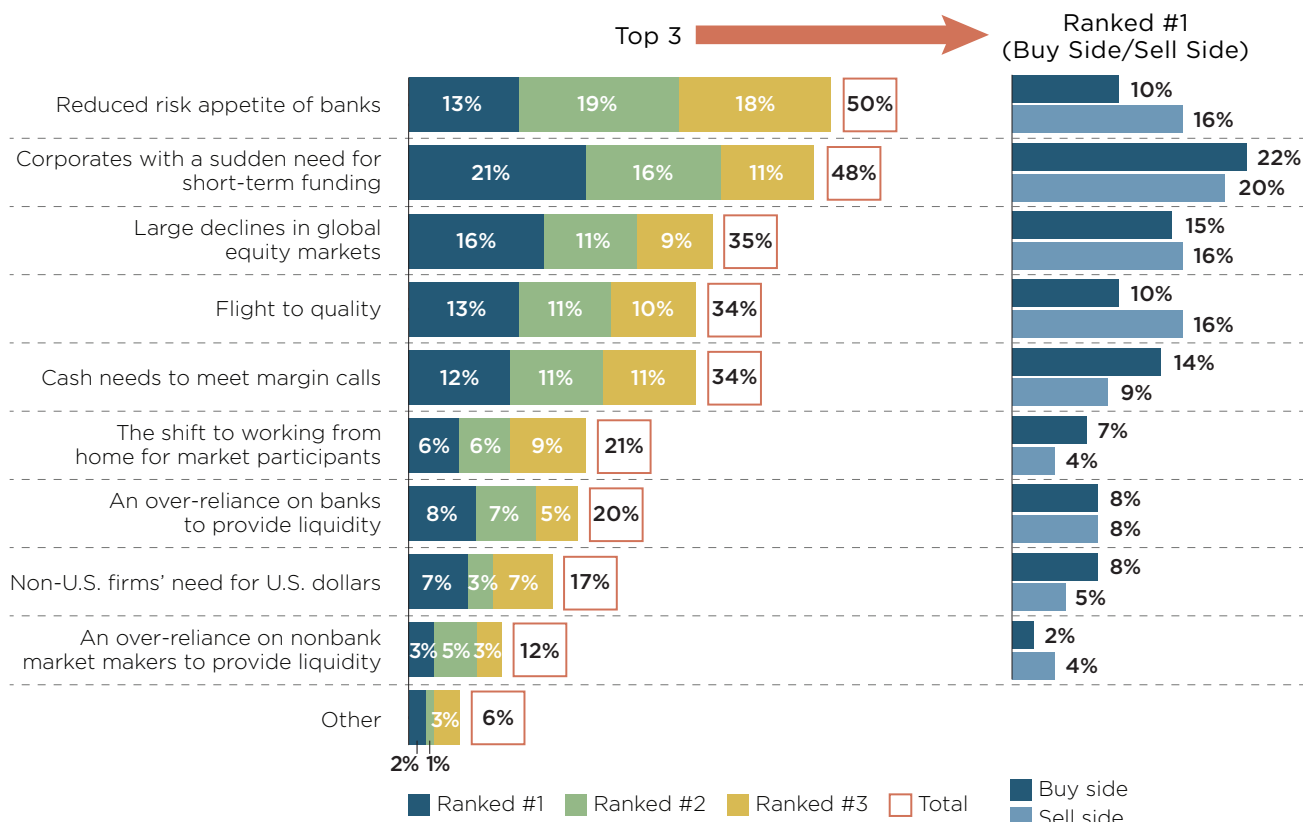
As is often the case in today’s global and interconnected market, there is no single cause. Broadly speaking, a sudden demand for cash resulted in massive selling of usually safe and liquid assets, such as government bonds, which caused yields to spike, negatively impacting major economies. Strong demand for U.S. dollars also caused strain in the foreign exchange market, driving the value of the dollar up sharply, while liquidity disappeared across a variety of currency pairs.¹

These issues then rippled across nearly every major financial market. Digging a bit further below the surface, swaps market participants on the buy side and sell side agreed on several key catalysts to the liquidity decline.

¹ Speech by Jon Cunliffe, Deputy Governor of the Bank of England, June 6, 2020—
<https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/financial-system-resilience-lessons-from-a-real-stress-speech-by-jon-cunliffe.pdf?la=en&hash=68025EDB90D936B24560429761646BFEEAE2D2D74>

The top financial event affecting liquidity in the swaps market was perceived to be the reduced risk appetite of the banks. In fact, more sell-side firms noted this as their top choice (16%) than did buy-side firms (10%)—evidence that this view was more than mere perception. Bank investors (and regulators) have rewarded steadier and less risky revenue streams for global banks, such as agency trading and wealth management, that are less prone to disruption from a market shock. That idea is viewed as having been proven true, although at the cost of broader market liquidity.

FINANCIAL EVENTS RELATED TO COVID-19 THAT DISRUPTED LIQUIDITY



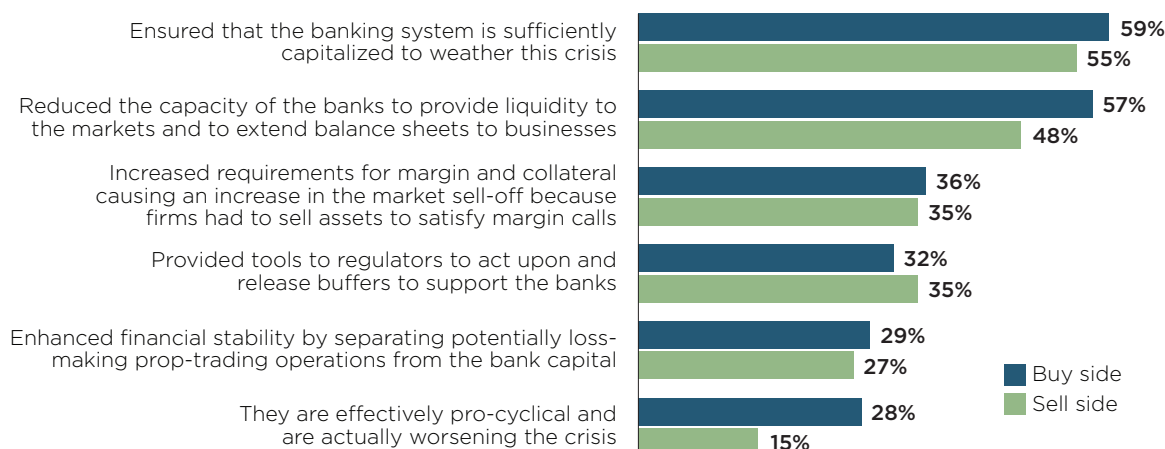
To that end, both the buy and sell side felt that credit-crisis-era financial reforms ultimately made the banking system safer and better able to weather this current storm. However, almost as many swaps market participants also felt that those reforms reduced the capacity of the banks to provide liquidity to the markets and to extend balance sheet to businesses. Further, more investors felt this negative impact (57%) than did the dealers themselves (48%), reflecting their collective market experience rather than hopes for less stringent rules to boost business.

There were numerous other causes and effects of the liquidity drain. In line with the aforementioned credit concerns, corporations found

themselves with a sudden need for short-term funding, something many banks weren't willing or able to do due to a lack of information and/or the sheer size of the demand. The race for cash was also driven by a flight to quality, swaps traded in London but hedged in New York in U.S. dollars and the need to satisfy unexpected margin calls, as exchange-traded derivatives and equity markets around the world kept declining. And as is often the case when the market panics, signs of stress in one place creates stress in another—and on down the chain it goes.

We must also acknowledge that the movement of trading floors from large corporate offices in major market centers to hundreds of thousands of private homes around the world was disruptive to market functioning. While the technology and people involved proved to be amazingly resilient under the circumstances, it would be naïve to ignore the fact that not every individual seamlessly transitioned from office to home with zero loss of productivity, particularly given the stressed market at that time. Lack of a multi-monitor setup, slow home internet and home-schooled children all had an impact. Thankfully, these challenges are largely managed at this point, even if another wave arrives later this year.

IMPACT OF 2007-2008 FINANCIAL CRISIS REFORMS ON CURRENT CRISIS



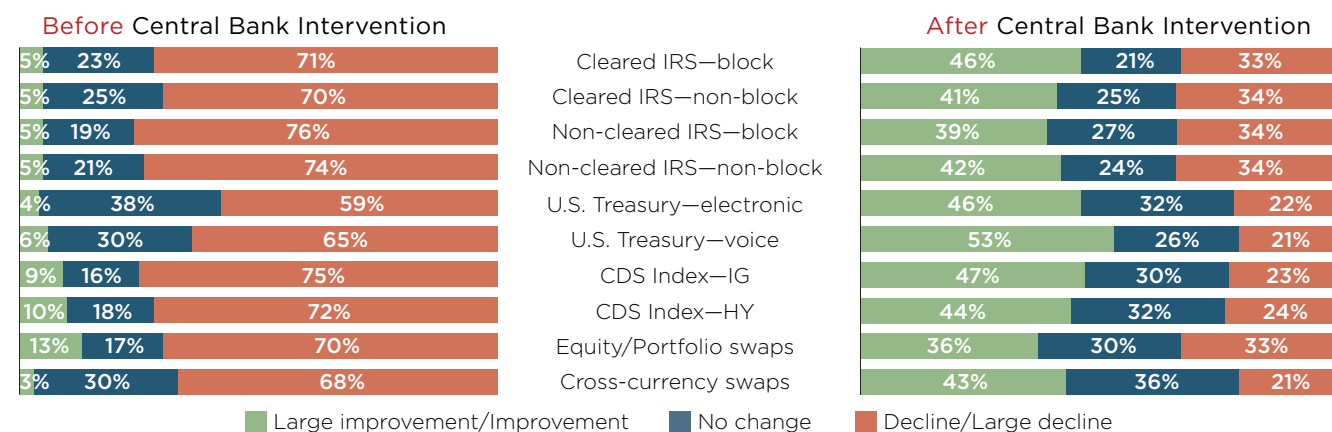
Note: Based on 172 respondents.

Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

Swaps Market Liquidity

Swaps market illiquidity was pervasive ahead of central bank intervention but was not uniform across the spectrum of traded instruments or regions. Cleared IRS fared better than non-cleared IRS, for instance, which is not surprising, given the standard nature of the product and reduction in counterparty-risk clearing providers. Block trades were also hit harder, with banks less willing to take on large positions of new risk in a fast-moving market with limited capital to deploy.

QUALITY OF LIQUIDITY ACROSS PRODUCTS DURING THE COVID CRISIS



Note: Based on 172 respondents. May not total 100% due to rounding.
 Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

Market participants in the U.K. were particularly negative on liquidity, with more citing declines or large declines in blocks, electronic liquidity, dealer liquidity, and nonbank liquidity than in any other region. Given the U.K.'s central role in the swaps market, both before and after central clearing became pervasive, this finding is particularly notable.

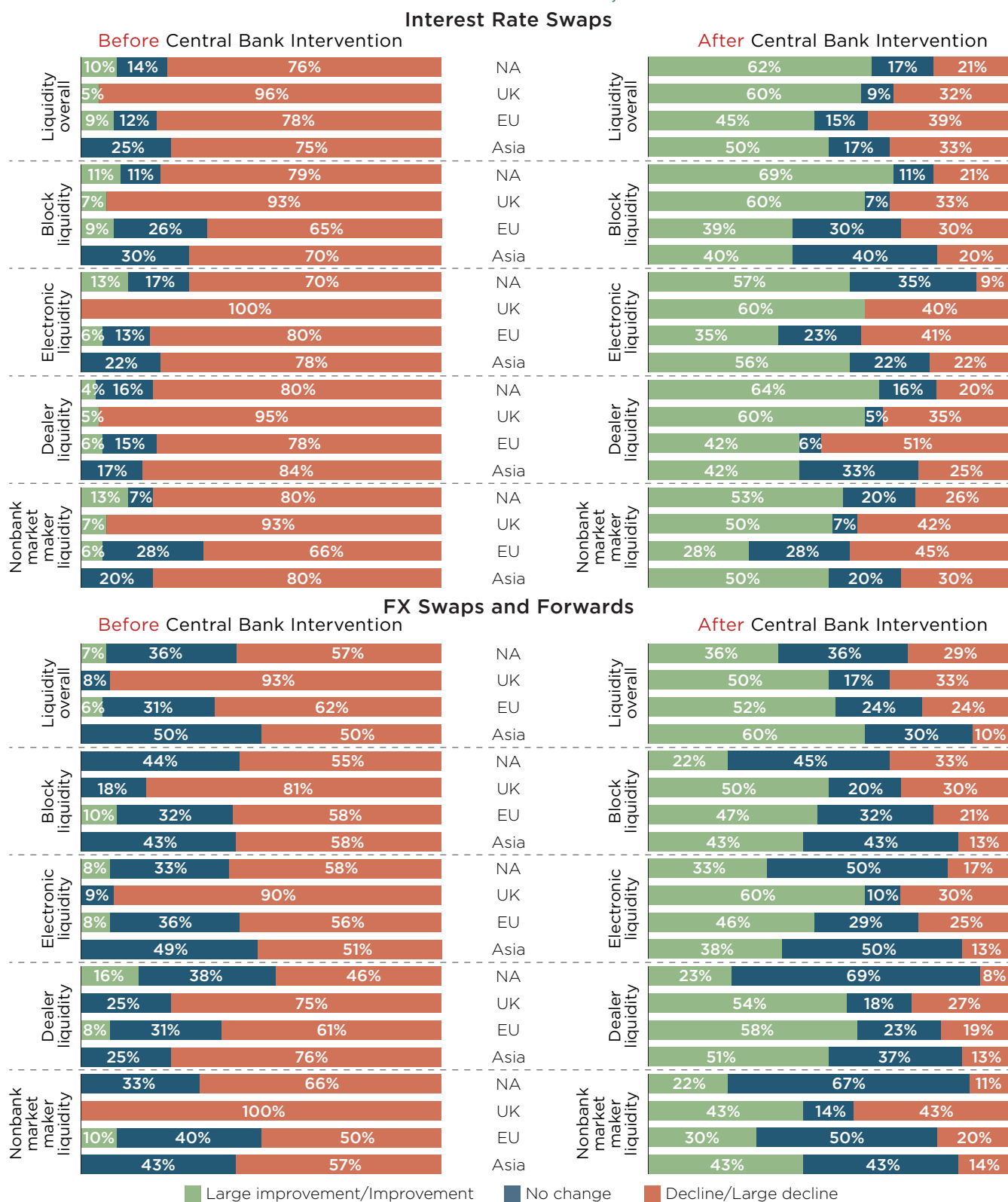
An interesting counterpoint: Liquidity in the U.S. Treasury market, which is tightly linked to the IRS market, was seen by fewer market participants as having a dramatic liquidity decline. The robust nature of electronic trading in those markets certainly played a role, as did the diversity of market participants. However, a much larger portion of volume in U.S. Treasuries in March was traded over the phone—42% in March compared to 29% in February, which speaks to customers working directly with their dealers to both source liquidity and understand market dynamics, given the market uncertainty.

CDS markets were hit particularly hard, which also is not surprising, given the central role of credit concerns in this crisis.

Moving to credit markets: CDS markets were hit particularly hard, which also is not surprising, given the central role of credit concerns in this crisis. The riskiest of high-yield borrowers, many of whom are also in the hard-hit energy sector, became even riskier in the minds of traders and investors, driving the cost of credit protection on the high-yield CDX index dramatically higher. This explains the 44% of market participants, the highest amount of all categories measured in this study, that witnessed a “large decline” in high-yield index CDS liquidity ahead of central bank action.

Lastly, U.K. swaps markets were seen as being hit particularly hard from a liquidity perspective. For IRS overall, block, electronic, dealer and nonbank liquidity were viewed by more market participants as having a decline in liquidity than the U.S., EU and Asia. The same holds true for FX markets. While liquidity concerns were less pervasive for FX as compared to IRS in the U.S., EU and Asia, over 90% of those in the U.K. saw a liquidity decline.

MARKET PARTICIPANT VIEWS ON LIQUIDITY BY REGION, PRODUCT AND TYPE

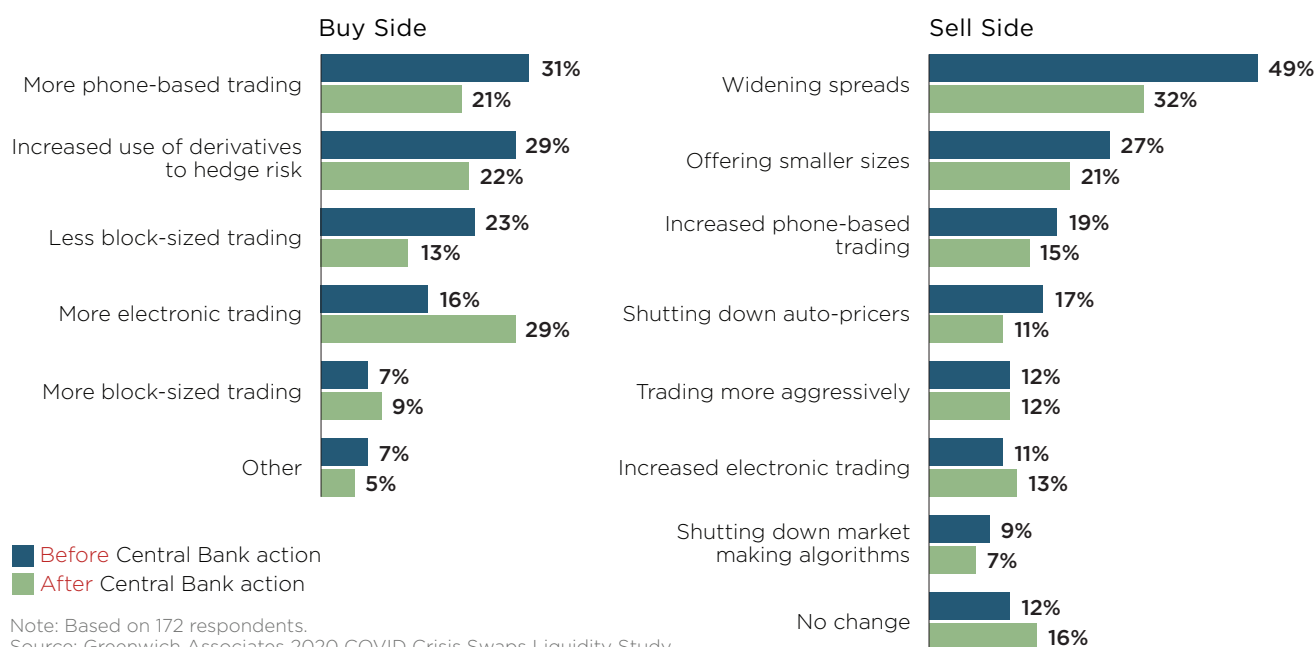


Note: Based on 172 respondents. May not total 100% due to rounding.
 Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

Market Participant Reactions

Investors and dealers reacted differently in the face of market uncertainty and volatility, although the actions of one most certainly influenced the actions of the other. Further, many of these actions were both a cause and effect of the broad market illiquidity we have discussed thus far.

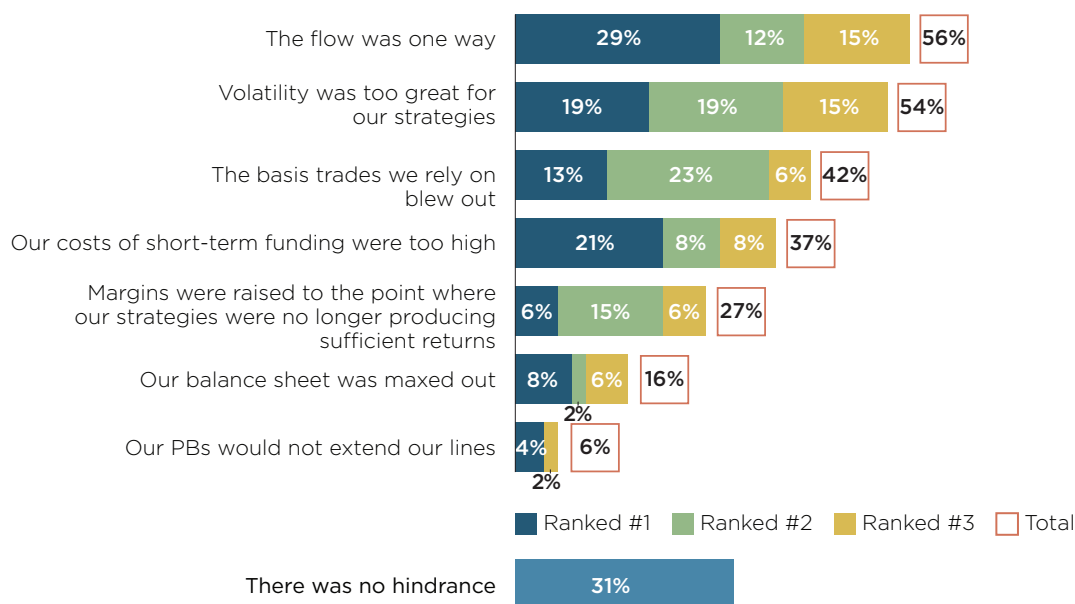
RESPONSE TO MARKET UNCERTAINTY/VOLATILITY



The most common reaction of liquidity providers was to widen spreads, cited by almost half of those in our study. This is unsurprising and a standard reaction to uncertain market conditions. To explain why, when examining what liquidity providers saw as their biggest obstacles to providing liquidity, it was noted by more than half that volatility became too high for their trading strategies to work effectively. This leads to spread-widening. One-way flow (i.e., everyone was selling), the cost of short-term funding (which was cited much more in Asia and the EU than in the U.S. and U.K.) and the breakdown of common basis trading strategies (which are often used to manage risk) were also cited as obstacles to liquidity provision. Interestingly, a diverse 31% of respondents, which included firms from all regions, liquidity provider types and firm sizes, felt their ability to provide liquidity was unhindered.

MAJOR OBSTACLES TO PLAIN VANILLA SWAPS LIQUIDITY DURING THE COVID-19 CRISIS

Before Central Bank Intervention



Note: Based on 75 respondents, liquidity providers only.

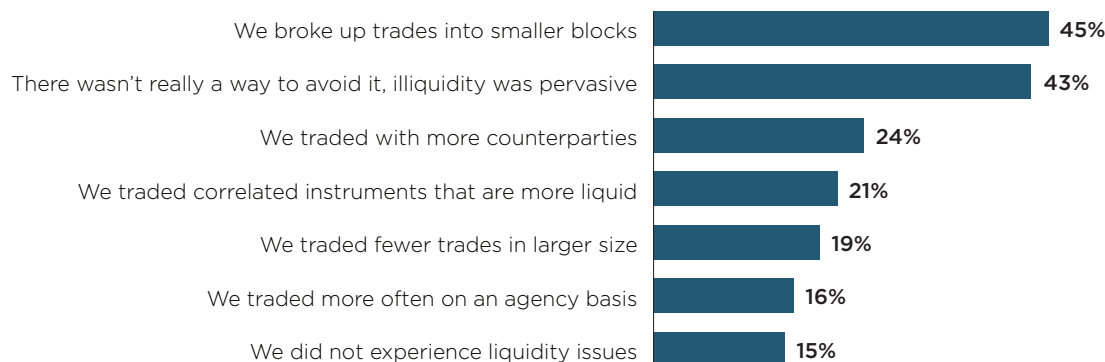
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

In addition to widening bid-ask spreads, many also began offering smaller sizes while shutting down auto-pricers and moving more trading back to the phone. These liquidity provider actions reflected the buy-side approach in both the U.S. and Europe to managing liquidity issues before the central bank intervened—breaking down trades into smaller blocks.

Further, the most-cited buy-side reaction to market uncertainty more broadly was more phone-based trading, a potential reaction to liquidity providers offering less liquidity on the screen and the aforementioned difficulty trading in block size.

MANAGING LIQUIDITY ISSUES DURING THE COVID-19 CRISIS

Before Central Bank Intervention



Note: Based on 172 respondents.

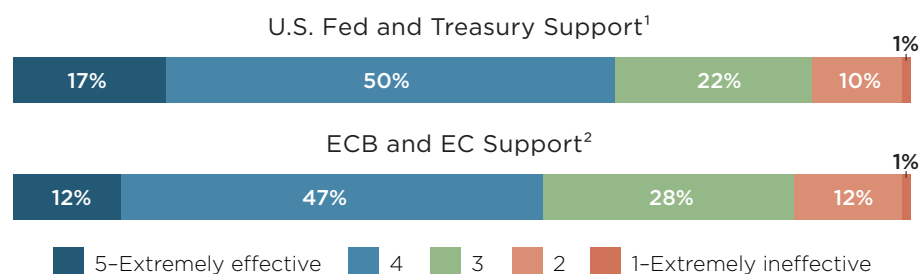
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

It is also worth noting investors' increased use of derivatives to hedge. Data from Greenwich MarketView shows that the CME U.S. Treasury futures complex traded 24.7 million contracts on February 25th, and U.S. dollar IRS peaked on March 4th, trading \$27.5 billion of notional in a single day. This also speaks to the 59% of study participants who felt that IRS trading via SEF held up well before the central bank intervened (and 86% who felt that way after the central bank stepped in).

Government Intervention

By all accounts, government interventions around the world yielded the hoped-for result. Sixty-seven percent of study participants found U.S. Federal Reserve and Treasury support to be effective or extremely effective in restoring market liquidity, with 59% saying the same for the ECB and EC. The simple fact is that markets quickly calmed and liquidity improved once the Treasury and the Fed effectively stated they would do anything to keep markets afloat. As our data has shown, volatility and volume dropped while swaps market liquidity and market participant sentiment improved.

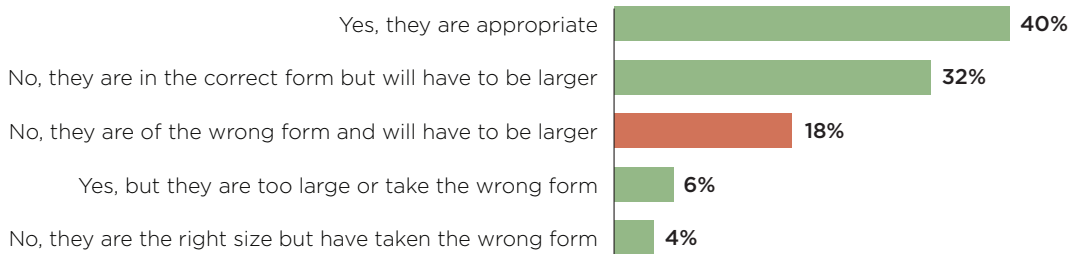
EFFECTIVENESS IN RESTORING MARKET LIQUIDITY



Note: ¹Based on 115 respondents. ²Based on 127 respondents.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

However, the views of respondents as to the proper size and form of government intervention varied. While 82% of our study participants felt that, at least in part, the government response was correct, only 40% felt that they were appropriate in their current form. The rest questioned the size of the response—some thought it was too large, some too small—and others questioned the form.

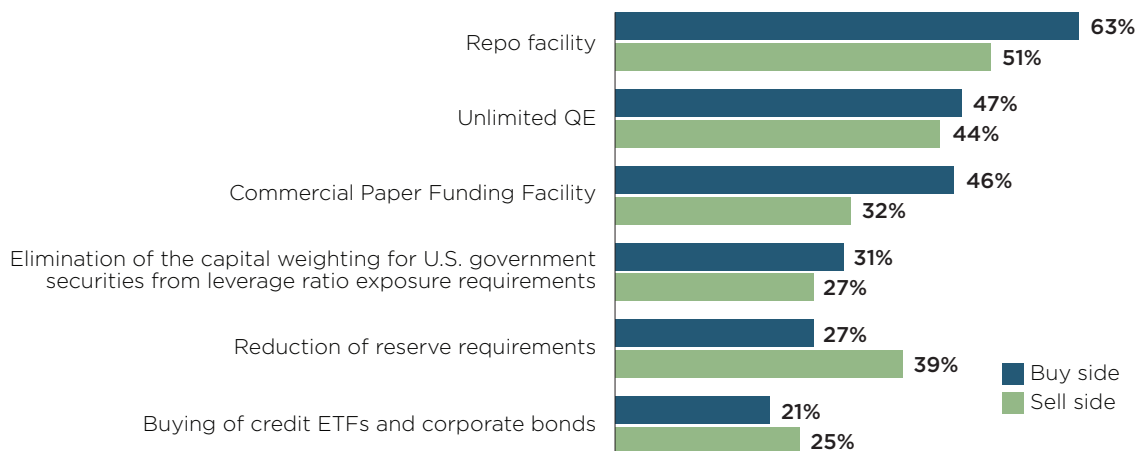
WAS GOVERNMENT INTERVENTION APPROPRIATE AND ADEQUATE?



Note: Based on 126 respondents.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

The Fed's temporary repo facility (FIMA Repo Facility) was noted most frequently as the best government intervention for supporting marketing liquidity, as it specifically targeted strains in the short-term lending market. Furthermore, 71% of study participants found the Repo Facility either effective or extremely effective.

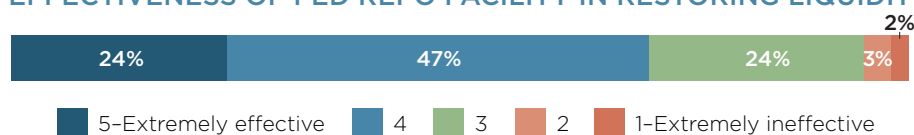
BEST GOVERNMENT INTERVENTIONS FOR MARKET LIQUIDITY



Note: Based on 172 respondents.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

The Commercial Paper Funding Facility was also seen as helping the short-term lending market and, just as with the repo facility, was noted more often by the buy side than the sell side as supporting market liquidity. Unlimited quantitative easing was also frequently noted, as it provided a major backstop to interest-rate markets that drove liquidity improvements and a reduction in volatility across the board.

EFFECTIVENESS OF FED REPO FACILITY IN RESTORING LIQUIDITY



Note: Based on 123 respondents.
Source: Greenwich Associates 2020 COVID Crisis Swaps Liquidity Study

Looking Forward

While the swaps market, like other segments of the financial markets, experienced illiquidity during the COVID crisis, it raised little or no concerns from a systemic risk standpoint, reflecting the impact of reforms over the past decade. However, while our study participants appreciated that banks are safer now than they were before 2008, they also expressed concern that they were all restrained from stepping into markets to restore calm as they might have done 15 years ago. While few wish for the days of highly levered institutions taking risks collateralized by customer deposits, finding a middle ground is a worthwhile endeavor. Furthermore, strains on short-term funding markets proved to be particularly acute, with the sudden demand for cash coming from a variety of sources. Examining potential improvements to this market is certainly a worthwhile undertaking.

This crisis also serves as a good reminder that markets are interconnected and related in ways that we don't always remember. Credit and equity markets, cash and derivative markets and markets in the U.S., Europe and Asia all support and utilize one another. While no one wants the current situation we are in, an examination of global markets in the coming months and years will inevitably lead to market improvements going forward.

We believe it is important to note that government intervention specifically targeted two critical issues that were at the foundation of market turmoil. The first was access to liquidity, not only in cash and near-cash equivalents but also in other risk-free assets such as government bonds. The second was access to U.S. dollar liquidity across the globe. As such, the COVID crisis and resulting market reaction does not imply that the market structure of the swaps market is broken. When economic shocks of any kind leave markets feeling that it is difficult to price assets, it is expected that there will be a major buyer-seller imbalance.

That said, this is not a financial crisis like the 2008 credit crisis. The financial markets were not the cause of the crisis, but they were forced to help manage it. And as the results of this research show, central bank intervention has thus far largely performed as designed.

However, the extraordinary efforts by central banks to provide essential financial and monetary policy solutions create only temporary remedies. Policymakers, together with market professionals, should work to better understand how the source, transmission and mitigation of this crisis can provide critical lessons learned. In particular, examining demand for and available sources of market liquidity including but not limited to cash, money market funds and bank balance sheets will likely provide insight into how future crises might play out.

Further, it seems clear that additional steps should be taken to improve access to U.S. dollar swap lines in a non-crisis environment. This would ensure that global central bank counterparties and entities like the International Monetary Fund and World Bank are fully prepared to respond to future market shocks.

The situation, of course, continues to be fluid. Market participant views on the impact of government intervention will evolve alongside the government intervention itself. It is also important to note that while some government programs were seen as more impactful than others, ultimately it was the combination of several programs working in parallel that kept the market above water.

About ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has more than 900 member institutions from 74 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org. Follow us on [Twitter](#), [LinkedIn](#), [Facebook](#) and [YouTube](#).

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