CAPCO

COVID-19, RISK MANAGEMENT CHALLENGES, SHORT-TERM VOLATILITY AND ILLIQUIDITY

WHAT NEXT FOR CAPITAL MARKETS?

SPEED READ

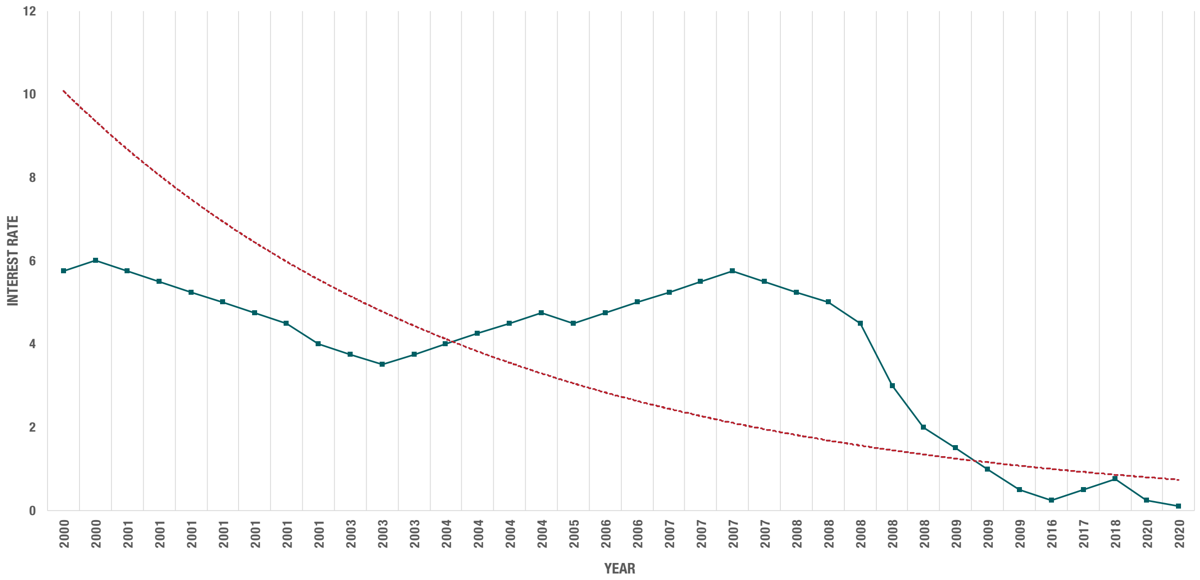
- The industry has largely weathered the initial impacts of COVID-19 through the adoption of remote working and existing business continuity plans. Some enterprises have benefitted from the short-term market volatility and trading volume spikes.
- Specific risk management and operational risk challenges will become evident (e.g. the resilience of offshore captives) and there will also be challenges to economic returns across the industry.
- The crisis will serve as a catalyst for transformation initiatives, driving the adoption of operating models that are more automated, increasingly data driven and supported by technologies such as Cloud, Machine Learning and Distributed Ledger. These will help deliver lower cost operating models (and in part a variable cost structure), a long-desired goal for the industry.

INTRODUCTION & BACKGROUND

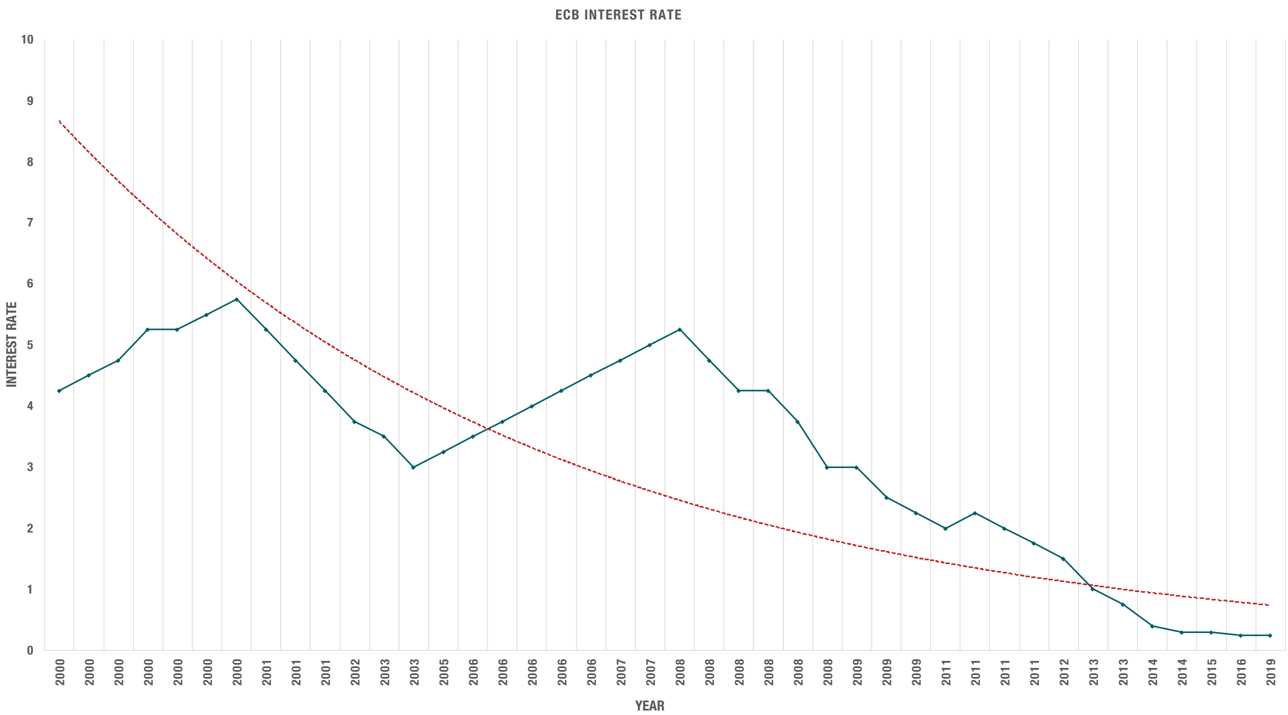
While its full and lasting impact is yet to be understood, COVID-19 will amplify existing challenges arising from the cycle of low volatility, debt expansion and low interest rates that presently exists within the world economy and global capital markets.

Across the financial structures that make up global markets, the tightening grip of COVID-19 during February 2020 had a considerable impact on demand and supply across the world economy. This triggered significant volatility and a potentially dangerous feedback loop arising from that trifecta of low interest rates, increased debt provision and the price volatility of assets themselves (and the underlying modelling associated with those assets).

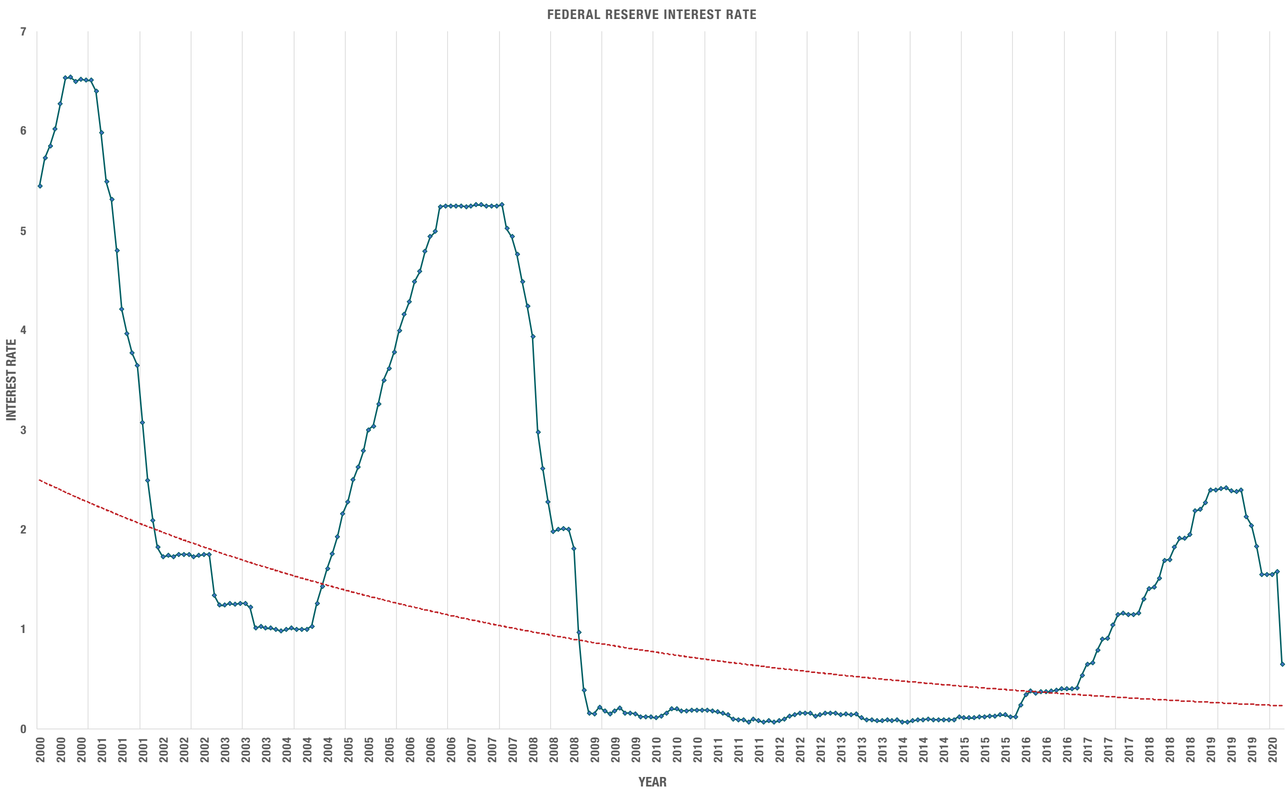
BANK OF ENGLAND INTEREST RATE



SOURCE: BANK OF ENGLAND

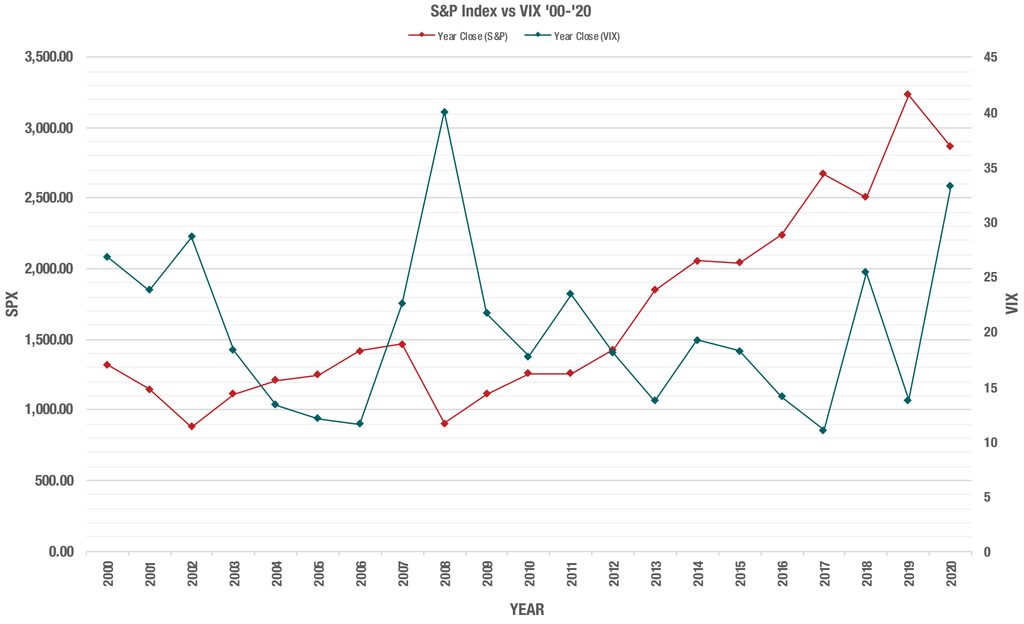


SOURCE: EUROPEAN CENTRAL BANK



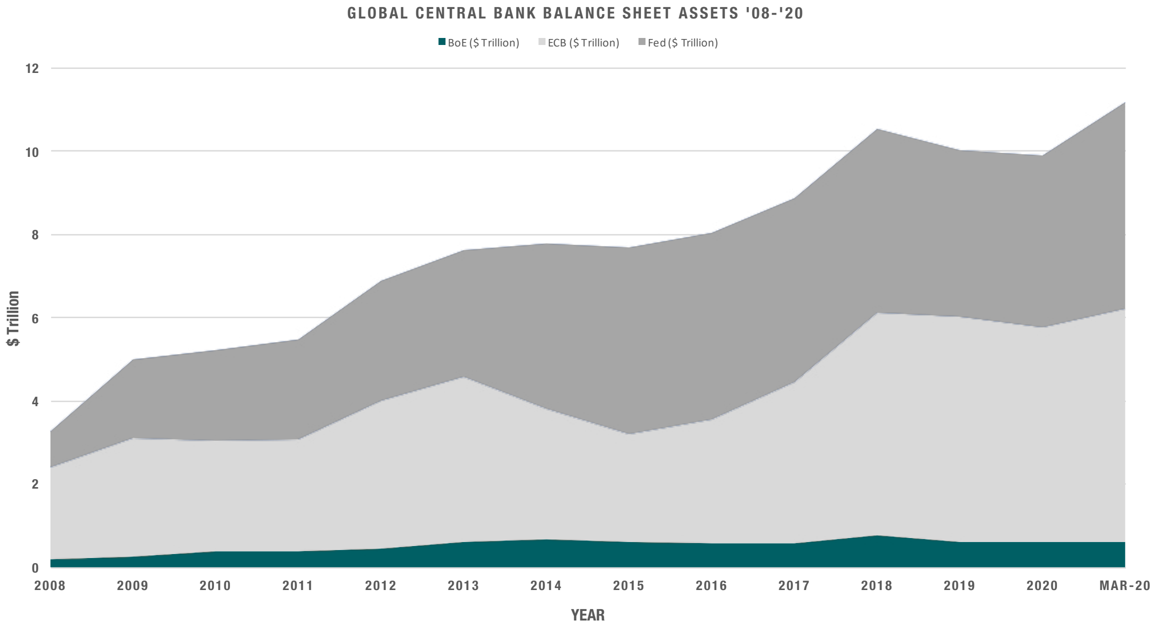
SOURCE: THE FEDERAL RESERVE

As risk is determined and allocated on the basis of these volatility models, it is possible to underestimate both the significant threat posed by short volatility and the sensitivity of that modelling to extreme price movements. When the capital markets ecosystem is predicated on chasing yield via the shorting of volatility, a widespread risk arises to the economic viability of a number of enterprises around the world. With the system finely balanced and interconnected, a shock to the system will have immediate and detrimental impacts to the global economy and the financial health of enterprises globally.



SOURCE: BLOOMBERG

As things stand, lower volatility begets still lower volatility. Hedges and long or short positions are made on the basis of markets remaining stable and predictable over an extended period. When times are good, businesses can rely on cheaper debt and easier access to funding. However, as interest rates start to rise, so the risk of defaults and market stresses also increases, impacting this delicate balance and hence the financial viability of various firms. That said, the short-term volatility and volumes observed have benefitted many capital markets players and may offset - at least in part - some of these more egregious impacts. As stated above, the full and lasting impact of the pandemic is yet to be understood.



SOURCE: BLOOMBERG

RISK MANAGEMENT CHALLENGES, SHORT-TERM VOLATILITY & ILLIQUIDITY

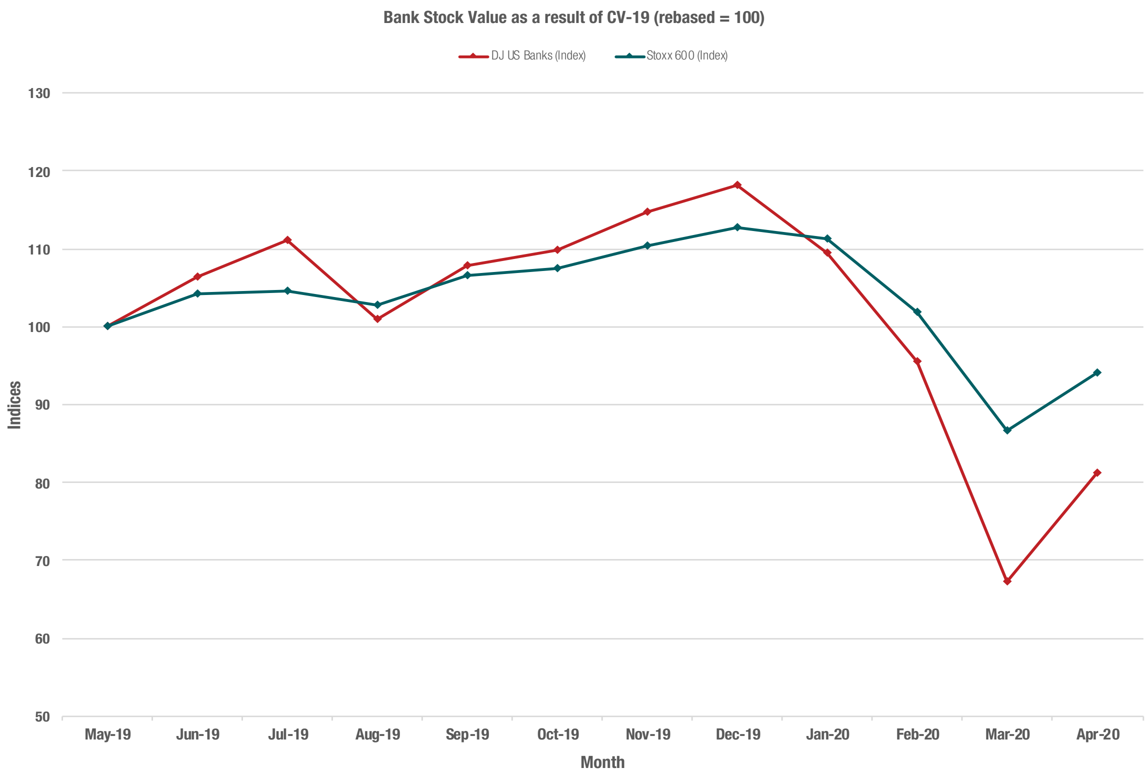
The global capital markets industry has seen significant investment and transformation over the past decade in order to manage macro risks. Since the 2008 financial crisis, a raft of regulatory initiatives have sought to make the industry safer. This has also resulted in additional layers of complexity and significant additional costs to achieve regulatory compliance.

A key tenet of that compliance has been the prioritisation of data, its quality (lineage, control, governance) and the associated technology stacks that support data quality and connectivity (e.g. BCBS 239 and CCAR). The intelligence derived from this data has been used to redefine risk management approaches and strategies. However, the explosion of volume and complexity of this data means that significant inefficiencies still exist. The critical data principle of 'adaptability' will now be tested from a risk management perspective.

Moreover, such compliance - whilst valuable - may not be sufficient to properly manage the various credit, market and operational risks that are emerging due to ingrained human attitudes to risk-taking. Markets are no stranger to speculation - and such behaviours are deeply ingrained, as past bubbles from 17th century 'tulip mania' through the convulsions of the Gilded Age in late 19th century America to the 1997 Asian financial crisis attest.

Market volatility has morphed into far more than the opportunity to short an option: it has itself become a tradeable product. Financial engineering has paved the way for investment strategies to over-expose themselves to a myriad of volatility, gamma, interest rate and correlation-based risks.

Such engineering will only be encouraged as trillions of dollars' worth of central bank stimulus is calculated, hedged and pumped into economies using volatility as a measurement for risk-taking, not for calculating risk. This potential misinterpretation of volatility will leave any system or environment that plays solely by those rules over-exposed to market movements.



SOURCE: BLOOMBERG

THE CURRENT LANDSCAPE AND THE COVID-19 EFFECT

Consider the current landscape:

- spreads are on the up, and relative value trades have in certain circumstances become unprofitable or are about to face challenges;
- illiquid products and strategies are operating on massive leverage.

Once funding costs go up, those participants who are over-exposed to short volatility quickly plunge into unprofitability. They are then stuck with two choices: to either access repo funding on unfavourable terms; or having to unwind and realise massive losses. There may be no immediate palatable funding options, and this potentially gives rise to major challenges for capital markets participants.

The industry is facing short volatility (VAR), short liquidity and short rates: the perfect storm. This is not the first time we have seen this happen. The 1987 Black Monday meltdown was the first time we saw the perils of building feedback loops that serve to magnify losses - a 'warning shot' for the markets regarding the inherent dangers of over-exposure to interest rate movements.

If there was a silver lining to Black Monday, however, it was that it occurred during a boom. COVID-19 has arrived just as risk parity was teetering on the verge of an implosion, and it has forced the industry to challenge the assumption that volatility would not get any lower.

WHERE WE ARE AND WHAT WE HAVE OBSERVED: IMPLICATIONS FOR CAPITAL MARKETS FIRMS

While these are early days, it is evident that capital markets enterprises have weathered the initial COVID-19 storm. With the vast majority of the industry initiating remote working or split rotas for front office staff, the 'plumbing' of the financial system continues to operate unimpeded - and indeed, has managed major volume spikes without high profile disruptions or outages. It also seems few challenges have arisen from a cybersecurity or risk perspective, although time will obviously tell.

However, for many firms it has exposed weaknesses in the business continuity plans around both the ability to rapidly mobilise remote working effectively and having sufficient capacity to deal with peak volumes. A light has been shone on operating model efficiency and the ongoing reliance on manual processing to support certain products and processing.

For many firms, transformation of their operating models was about becoming more automated and data-driven, and to leverage technologies such as Cloud, Machine Learning and Distributed Ledger. The goal was to reduce costs, increase efficiency and scalability. Additionally, there was a push to deliver a lower variable cost-in respect of operations and to service clients digitally (e.g. from an on-boarding perspective). This also entailed significant investment in improving cyber security capabilities.

We expect the crisis to give renewed impetus - and indeed acceleration - to these transformation efforts, including a reassessment of global captive resilience operating models. This could be described as a 'new normal', where an individual firm's operations are more automated end-to-end (and are more data-driven and cloud-based), relying less reliant on manual processes and servicing from global captive centres.

Firms are now moving through their immediate response to the crisis to a transitionary phase that will be the precursor to the 'new normal' that will follow. The impacts of the changes are wide-ranging and will cut to the core of some firms' strategies: how they service their customers and make money, how they organize internally, their discipline around financial and risk management, and the likely change in the regulatory expectations placed upon them.

We can summarise in the following table (Figure 1) the key areas for consideration as capital markets firms negotiate the challenges arising from the COVID-19 crisis: **Figure 1: Response Phases for COVID-19 Challenges**

RAPID RESPONSE

INCREASING CAPACITY

REMOTE WORKING SUPPORT:
Through lockdown and the transition to normality, keep front, middle and back office teams operating productively as they are split across office locations and homes.

VOLATILITY & RISK:
As the markets respond to the pandemic, transaction volumes have increased, volatility is at peak levels, market and settlement risks are higher than before and changing rapidly. Ensuring systems and processes can deal with increased capacity whilst adapting quickly to the changing risks is critical.

ADAPT & ENHANCE

REINTEGRATING THE WORKFORCE

HYBRID WORKING SUPPORT:
As lockdown measures ease, ensuring a seamless transition from remote working to hybrid remote/office working will require significant focus to prevent further disruption, maintain effectiveness and adapt to new norms.

OPERATIONAL RESILIENCE:
Review of business critical processes and applications across the trade lifecycle, to ensure BCM plans are robust enough to handle months of remote working.

Reduce reliance on offshore captives to prevent single region dependency in the event of future lockdowns and build dynamic capacity planning capabilities across regions.

Focus on cybersecurity to ensure appropriate controls are in place to enable compliance in remote environments.

PROTECT REVENUE & REDUCE COST

DATA DRIVEN INSIGHTS:
Use data science and machine learning techniques to gain deeper insights into clients and their associated risk. Predict which clients are too high risk or no longer be profitable and exit them, predict which prospective clients are worth onboarding, enhance KYC processes with new insights.

DIGITISATIONS, AUTOMATION & SIMPLIFICATION:
Build on existing RPA capabilities with more intelligence. Utilise OCR, Machine Learning and AI to automate a wider range of the most critical processes to keep operating costs down.

Focus on key journeys such as digitizing KYC and onboarding as they are key bottlenecks with large simplification and automation benefits.

Leverage chatbots, API connectivity and modern data tools to further enhance back office efficiency.

THE NEW NORMAL

SIMPLIFICATION

CLOUD ADOPTION:
Accelerate the use of cloud technology, enabling rapid reaction to changing circumstances through enhanced agility and scalability. This will reduce the dependency on on-site management and pivot focus to modern architecture and digital engineering.

MODERN ARCHITECTURE DESIGN AND DELIVERY:
Build out the next generation of Capital Markets technology solutions focused on distributed ledger technologies and microservices, cloud based architectures which enable truly borderless, performant, scalable, 24/7 systems with an ultra low operating cost and real-time view of risk, capital and liquidity.

Considerations are expected to be as follows:

PHASE 1: RAPID RESPONSE (0-2 MONTHS)

The industry has largely weathered the initial response to the crisis and has managed to cope with a sudden transition to remote working, increased volumes and severe market volatility. The impact across Business Model, Operating Model, Financial and Risk Management and Regulatory dimensions is as follows:

Business Models

- Initial challenges to business models will be based on client behaviours. It is likely that we will see a change in demand for financial products (notably additional credit) from some clients while others will become increasingly risk-averse (reduced new business, enhanced focus on BAU). This requires capital market participants to offer additional flexibility to clients.
- Market volatility will deliver increased opportunities for the many firms operating a significant global markets business, as clients seek to manage their risk and shift portfolios. Conversely, there are likely to be challenges from an M&A advisory perspective as corporate deal-making activity slows.
- There is a risk that capital markets become less accessible during the crisis response phase. If COVID-19 continues piling pressure onto the markets in respect of pricing and valuations and primary activity consequently slows, it is likely that we will see a tightening of credit standards and increased illiquidity. It is important to recognise the cashflow challenges this poses to business models in these early stages.

Operating Models

- The rapid introduction of remote working has tested many firms, but has largely been facilitated through immediate investment in collaboration technologies. Productivity has largely been maintained, although - perhaps inevitably - certain workplace inefficiencies and challenges have surfaced on the back of such a rapid introduction.
- The industry has been required to scrutinise and where necessary address the integrity and durability of operational resilience models. In particular, there has been a focus on stemming any 'bleeding' - remaining liquid during such a sustained period of illiquidity poses some tricky questions for organisations.

- The ability to cope with often massive daily volume swings would test capital markets firms' infrastructure even in 'normal' times; but when much of the support organisation for that infrastructure is working remotely, it presents a greater challenge from an operational risk perspective. Moreover, should problems arise due to volume spikes these will likely require a major effort to remediate, further exacerbating the challenge.

Financial & Risk Management

- It is expected that high frequency and algo trading will continue to function as expected given they are highly automated. However, the current unprecedented market conditions have added complexity to traders' oversight role; this in turn may impede their ability to act as a backstop to counteract over-enthusiastic liquidity-chasing algos and so prevent market freefalls. In addition, given the current unprecedented market conditions, algorithmic models may well be tested beyond 'normal' tolerances, leading to unpredictable outcomes.
- Capital markets firms face the biggest potential operational risk challenge since perhaps the Flash Crash or even the Millennium Bug. Operational and market risk methodologies should acknowledge and factor in the inherent risks of sustained remote working, notably cybersecurity breaches and data leakages, given the increased focus on data security and the potential for significant reputational risk and regulatory sanctions in the event of lapses

Regulatory

- During this crisis phase, we are seeing the industry react swiftly to government and regulator mandated actions designed to prevent defaults or situations that might lead to widespread bankruptcies in the wider economy. In this environment, firms will continue to be very responsive to regulatory advice to avoid any degradation to their operations.
- Many interim regulatory milestones have been subject to short-term deferral, but the final deadlines have not been changed – the LIBOR transition being a prime example. It is therefore important that firms maintain momentum as regards these important compliance programmes during this phase. Where some activities that have been outright cancelled (such as the European Banking Authority's 2020 stress tests), firms have an opportunity to redirect resources to planning for the future 'new normal', as set out below.

PHASE 2: ADAPT & ENHANCE (2-6 MONTHS)

This phase will mark the beginning of a period of transition for the industry, with a focus on optimisation and adjustment in the wake of their initial crisis response. Fleet-footed firms will likely benefit the most.

Business Models

- We may start to see a return of M&A activity and deal-making as firms take advantage of depressed asset prices (although this may not manifest itself materially until Q4 2020).
- It is expected that global markets players and wealth managers will see continued higher volume activity, generating good returns.
- An assessment of client profitability and creditworthiness will be set in motion for those market segments deemed most at risk.
- Unprofitable or higher cost activities will come into sharp focus, with business simplification, product rationalisation and/or client exit strategies implemented to help reduce costs.

Operating Models

- There will be intense internal activity and debate when it comes to likely scenarios pertaining to 'the future of work'. Firms will need to plan for this, including the scoping or acceleration of end-to-end digital enablement as well as default remote working scenarios.
- There will be priority activities and projects designed to build upon the recent rapid adoption of remote working practices.
- Another focus will be planning for workforce reintegration in line with both government guidelines and the realities of a 'new normal' of blended remote and office-based working based on individual and business needs.
- Where it can be proven to deliver 'quick wins', there will be a rapid roll-out of robotic process automation (RPA) to reduce or even eliminate manual processes, particularly in middle and back-offices.
- Also customer and client facing digital channels will be enhanced to ensure more can be delivered via these channels.
- Operational resilience and methods will be a big focus.

Financial & Risk Management

- The following areas are expected to be prioritised to protect the enterprise and ensure additional stability from a risk and financial viability perspective:
    - Investigation of cash account depletion and drawdown patterns by leveraging internal data;
    - Identification of 'domino effects' across global supply chains: identify second and third order risk through a combination of internal, external and payments data;
    - Enhancement of real-time risk capabilities to manage and monitor credit risk exposure and flag when credit limits are coming under pressure;

- Increased digital connectivity with enhanced collateral processing capabilities to enhance collateral management operations; use of automation and advanced data analytics to implement solutions that offer a unified view of collateral pools while reducing errors in order to maximize straight-through processing.

Regulatory

- We expect to see a high degree of engagement with regulatory bodies, both to ensure that new priorities and the nature of potential shifts in regulation are clearly understood and to allow lobbying as required.
- Support teams (such as Operations, Compliance, Tax, Legal and Financial Reporting) will need to be well educated about (and staffed to deal with) any additional measures requiring priority implementation during this period. Such changes will need to be logged and incorporated into compliance programmes and existing/new internal processes, and may well involve requests for information on liquidity and lending data.

PHASE 3: THE NEW NORMAL (6+ MONTHS)

This phase will be characterised by an acceleration of transformation efforts to remediate deficiencies exposed during the pandemic. This will include projects to enhance digital channels and deepen end-to-end automation, as well as leverage data-driven concepts. Cost reduction-related transformation will be a key theme. Remote working will be further ingrained within operating models.

Business Models

- There will be an evaluation of business strategy to cater for an inevitable slowdown in the global economy. This will prompt a review of customer segments and strategies to balance business decisions between supporting economic recovery on the one hand and stopping short of engaging with uneconomic enterprises.
- There will be a review of risk-weighted asset decisions as capital markets businesses look to strike a balance between risk-taking and seizing market opportunities in line with the prevailing global economic backdrop.

Operating Models

- Operating model simplification will be a key theme to both cut costs and deliver greater operational resilience. High on the agenda throughout the crisis, cost-cutting will likely feature more prominently than ever during this phase. Programmes will be set in motion to deliver that transformation, and these will heavily leverage digital channels, the Cloud and 'virtual' operating models as outlined below.
- Operating models will be redesigned to support refreshed business priorities and strategies; this will be supported by a move towards greater automation and being more data driven, while leveraging technologies such as Machine Learning, Distributed Ledger and Cloud. By delivering cost reductions and greater efficiency and scalability, this will help to achieve both a lower and more variable cost around operations and to service clients digitally (e.g. from an onboarding perspective).
- Remote working is likely to be a permanent feature across all enterprises (and in some cases, the default), and roles within the workforce will accordingly need to be re-evaluated in line with this 'new normal; likewise, real estate footprints may need to be 'right-sized'.
- We will see an acceleration in the use of Cloud technology to allow faster responses to changing circumstances via enhanced agility and scalability. This will reduce firms' dependency regarding 'on-premises' infrastructure (and its management), allowing them to pivot their focus and resources to modern architectures and digital engineering.
- Other features of this new normal will include:
  - Implementation of new operational resilience strategies, leveraging data and scenario modelling techniques supported by machine learning;
  - Embedding new Ways of Working at the organisational unit level (e.g. digital co-location);
  - The review of location strategy and a rationalisation of physical presence. Reliance on global supply chains and the risks arising from its weakest link has already put offshore-based processes under the spotlight. It is likely a more balanced model will emerge, with some operations reshored to bolster contingencies should future resilience type events occur.

Financial & Risk Management

- Redesign non-financial risk management, operational and conduct risk to reflect more remote working and fewer manual processes.
- An increasing use of event driven data to inform current risk assessments, KYC, and other use cases, with a view to minimising compliance and operational risks.

Regulatory

- Firms will need to align with new regulatory agenda and schedules. This will include ensuring that current programmes for existing major regulatory programmes (such as Basel III) are appropriately reconfigured to accommodate deferred milestones; and mobilising on an individual and industry-wide basis around driving and influencing newer initiatives such as operational resilience.

NEXT STEPS AND THE FUTURE OUTLOOK

The global capital markets industry has seen out the initial COVID-19 storm and continues to operate, albeit in business continuity mode. Many of the structural reforms implemented over the past decade have swollen the capital reserves held by capital markets participants, allowing them on the whole to withstand this kind of systemic shock.

However, while the industry may not find itself in immediate peril, it remains to be seen what awaits once the dust has settled on COVID-19. In particular, what will be the real and lasting effects of pandemic-induced economic shocks and the risk parity 'blow-out' across these businesses? Will the 'new normal' include a more fundamental shift whereby remote working becomes the default for employees?

Recent demonstrations of resilience and the swift emergence of a path forward instils faith in firms' ability to transform both themselves and the way capital markets work. COVID-19 has shone a fierce light on market inefficiencies (from a risk management point of view) and firms' own shortcomings (around operational resilience).

Assessed from a global perspective, it seems inevitable that further stimulus will be pumped into economies as the world struggles to contain and overcome COVID-19. Both the US and UK governments have initiated a secondary round of policies as they brace for a hard-hitting recession. At the time of writing, the precipitous drop in oil prices and the G10's second-quarter GDP decline could trigger the biggest economic shock ever experienced.

More positively, this period also presents an opportunity for firms to reassess, revaluate and challenge the efficiency and effectiveness of their business model, operating model and strategy. Consolidation does not mean retreat or retrenchment; digitisation does not mean cyber-attacks and data leakages; and risk management does not mean shorting volatility to chase yield.

Indeed, consolidation, enhanced digitisation and enhancements to risk management will all be key features of the transformation ahead. This is the moment to reassess and reimagine operating models through new technology and new ways of working, tapping into the cost and risk benefits offered by automation, digital enablement, data insights and next-level operational resilience. The winners who emerge from this period of global misfortune will be those industry players that recognize and embrace this opportunity.

AUTHORS

Murray Longton
Principal consultant
murray.longton@capco.com

Jibran Ahmed
Executive Director
jibran.ahmed@capco.com

CONTACTS

Owen Jelf
Partner
owen.jelf@capco.com
(Global)

James Arnett
Partner
james.arnett@capco.com
(UK Digital)

George Black
Partner
george.black@capco.com
(North America)

Andreas Pfeil
Partner
andreas.pfeil@capco.com
(Europe)

Peter Kennedy
Partner
andreas.pfeil@capco.com
(UK Technology)

ABOUT CAPCO

Capco is a global technology and management consultancy dedicated to the financial services industry. Our professionals combine innovative thinking with unrivalled industry knowledge to offer our clients consulting expertise, complex technology and package integration, transformation delivery, and managed services, to move their organizations forward.

Through our collaborative and efficient approach, we help our clients successfully innovate, increase revenue, manage risk and regulatory change, reduce costs, and enhance controls. We specialize primarily in banking, capital markets, wealth and asset management and insurance. We also have an energy consulting practice in the US. We serve our clients from offices in leading financial centers across the Americas, Europe, and Asia Pacific.

To learn more, visit our web site at www.capco.com, or follow us on Twitter, Facebook, YouTube, LinkedIn and Instagram.

WORLDWIDE OFFICES

APAC
Bangalore
Bangkok
Hong Kong
Kuala Lumpur
Pune
Singapore

EUROPE
Bratislava
Brussels
Dusseldorf
Edinburgh
Frankfurt
Geneva
London
Paris
Vienna
Warsaw
Zurich

NORTH AMERICA
Charlotte
Chicago
Dallas
Houston
New York
Orlando
Toronto
Tysons Corner
Washington, DC

SOUTH AMERICA
São Paulo

WWW.CAPCO.COM

CAPCO
THE FUTURE. NOW.