

International Association of Hedge Funds Professionals (IAHFP)

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Dear members and friends,

We will start with an interesting presentation from Commissioner Hester M. Peirce, U.S. Securities and Exchange Commission (George Washington University, Law School, Regulating the Digital Economy Conference).



Atomic Trading

Thank you, Reni [Saula] for that introduction. It is a pleasure to be with all of you today. I will start with the usual disclaimer that my views are my own and not necessarily those of the Securities and Exchange Commission or my fellow Commissioners. The momentous market events of several weeks ago are relevant to the theme of this year's conference—regulating the digital economy—and thus motivate my remarks.

The market events to which I am referring are, of course, the Reddit-threaded run-up in the prices of a number of meme stocks, the subsequent run-down in prices, and the many attendant colorful stories.

At the top of the non-financial news feed were the market volatility, trading volumes, regular Joe-to-riches stories, hedge fund losses, short squeezes,

gamma squeezes, glee at sticking it to the “suits,” anger at trading limitations, a jumble of emotions as stock prices fell from their highs, and debates about the intricacies of market structure. Movies to elucidate these events are on their way.

The Securities and Exchange Commission, along with other regulators and market watchers, is still sorting through the many layers of those events, so I cannot give you a definitive assessment of what took place, let alone whether any significant regulatory changes or enforcement actions will result.

Instead, I will offer some musings on the challenges that lie before the Commission as we decide whether and how to react to these events with new or modified regulations and, more generally, as we think about stepping up our game as a regulator of the digital economy.

The digital economy enabled the past month’s remarkable market events—trading strategies crowdsourced in real time on widely available social media platforms, instant retail access to the capital markets through handy mobile trading apps, institutional high frequency trading enabled by powerful computing and communications technology responding to and interacting with the retail flows, and sophisticated technology at trading venues and clearinghouses capable of handling record trading volumes. Add some primal emotions into the mix, and the regulator’s job in the digital economy can be a difficult one.

Before turning to the challenges of regulating the digital economy, though, I think it is helpful to recognize that, even as our markets undergo technological transformation, our jobs in many ways will remain much as they always have been.

After all, the economy, whether analog or digital, is driven by people; even regulators, at least until the robots replace us, are people. People, with their swirling mix of rationality and emotions are unique, interesting, and complicated.

People are also fallible, frail, and often tempted to abuse power. People respond to incentives. Any effective and fair regulatory framework has to start with a recognition and understanding of people.

A book I read recently about a very different set of market events in a very different time brought the constancy of people’s peopleness home to me. These events, like the ones of last month, featured a colorful cast of characters whose fortunes rose and fell and who made their way onto the big screen.

The book tells the story of the uranium markets in the mid-twentieth century, the flames of which were stoked, choked, and revived by the changing policy of the U.S. government's Atomic Energy Commission.

The book's principal author had a bad case of uranium fever, which led him to engage in all sorts of daring adventures to stake uranium claims in the western desert and to raise money to finance them.

He describes to his wife, as she lies in the hospital recovering from an operation, his plan to sell claims to the public in what he explains might be "a real estate deal, a security deal, something similar to an oil lease," or something else.

His wife raises the possibility of jail time, which the author takes as evidence that he "should have known better than to talk business with my wife; she never has the positive-thinking attitude."

His other family members, however, were more positive-thinking; one brother explained:

I've already got blue-chip stock. I've got gilt-edge bonds. I've got my house and car paid for. I've got insurance. If I'd wanted to invest, I know where I could have put my dough. But this was a gamble! I don't want another sure thing. I want to go for the big bundle!

That, the author explained, showed that his family "had the fever. Make it or lose it, but nothing safe, sound, and secure." You may find this hard to believe, but I promise you, I did not pull these lines off Reddit.

A lot of other people had the fever too. The author found them and, through a mailing campaign, got them to send him money:

In mailing, I'd aimed at ordinary Joes, not the professional class, not the ones who were constantly being approached with the deals. I wanted the little people who might never again in their lives have a chance to go for the big bundle for ten dollars down. And the little people liked my deal.

The author reminisces about "the big boom in penny uranium stocks," during which "everyone in the frantic game of trading penny stocks knew that most of them were wallpaper, but that one of them—which one, he didn't know—would be struck by lightning. So buy, buy, buy, and wait for the thunderbolt from the blue."

He further observed that "[w]hen a company admitted that it didn't own its claims and there was absolutely no evidence of uranium, the public rushed to buy stock from such honest people."

The boom went bust when the Atomic Energy Commission pulled its support for further uranium production, which did not trouble the author too much: “There’d be another deal. . . Except for the stockholders. I’d used other people’s money.”

The book, despite a labyrinth of detours into wholly unrelated topics, contains many other insights into investor psychology, but I think you get the point. People love participating in hot markets, often do so with eyes wide open to the potential for losses and fingers crossed for big gains, and frequently lose real money in the process, and not always money they can afford to lose.

Because the human participants in the digital economy are people, some aspects of regulating the digital economy look a lot like regulating any other kind of economy. One of our regulatory obligations that does not change much with the times, for example, is—while respecting people’s right and capacity to make their own decisions—to remind people of some basic truths about participating in the markets. The medium may change, but the message is the same.

The Commission’s Office of Investor Education and Advocacy, for example, issued an investor alert at the end of January to help investors “understand the significant risks of short-term trading based on social media.”

The alert contained tips that also would have been helpful for the uranium investors of last century, including a warning about “the rapid rise in the price of an investment, reflecting a high degree of collective enthusiasm or exuberance regarding the investment’s prospects [that] is usually followed by a wide-scale selling of the investment that causes a sharp decline in the investment’s price” and reminders that you should “[n]ever feel pressured to invest right away” and that you should “not let short-term emotions about investments disrupt your long-term financial objectives.”

Although the Commission’s delivery method has changed with the times, our investor empowerment message is pretty much the same in the digital world as it was before the digital era. Mr. Taylor’s uranium investors would have benefited from such a message as much as today’s investors.

So too, our role in policing the markets for fraud has not changed much. As in the past, people often use lies to induce buys, and we bring a lot of enforcement actions to pursue these fraudsters. Although the means of disseminating the lies are digital, the nature of the conduct is not new.

The projects for which funds are being raised may be crypto mining rather than uranium mining, but the fraudsters’ plans for the funds raised are generally the same as always—a nice house, fine dining, private school

tuition, and maybe some plastic surgery just in case there is a parallel criminal action and a mug shot.

Digital economy regulators are also susceptible to the same incentives and temptations regulators always have faced. Unchanged in the digital world is our obligation to balance our enforcement mission with the need to respect Americans' civil liberties.

We may have new digital tools that make it easier than ever to find bad actors, but they also make it easier to trample over individual rights while doing so. As we put these tools to work for us, we need to bear in mind that when the government watches too much of what a free people do, those people are no longer free.

We have greater and faster insight into trading activity. We can store massive amounts of data. We have computing power and sophisticated software to analyze and work with the data we collect.

Technology enables us to examine individual registered entities remotely, rather than through in-person visits. Structured data allows us to analyze particular registrants or look for trends or patterns across many registrants with the click of a button.

We have access to effective blockchain analytics. And, we have people expert in the use of these tools and the data they generate. One day we may even have easily machine-readable rulebooks, which will foster compliance by regulated entities.

Our regulatory mission will remain the same even as technological developments bring new ways for the capital markets to achieve their core objectives: capital formation and investor enrichment.

To translate that into something more tangible, the goal of our markets is facilitating the flow of investors' money to real companies so they can serve other people's needs and then return money to investors so they can build wealth for themselves and their families.

Technology has the potential to turbocharge the capital markets' ability to achieve this objective. Technological turbocharging is not about speeding up this virtuous cycle. Technology that facilitates unpredictable volatility can undermine the markets' ability to serve investors and companies.

After all, building companies into societally beneficial ventures and building investment nest eggs are slow processes that demand patience, deliberation, and self-discipline. Rather, technology can help markets to deploy capital well, in part by encouraging more of the population to

benefit both from contributing capital and using capital to build companies.

But technology does not change our regulatory objectives of protecting investors, facilitating capital formation, and fostering market integrity.

For technology to have its maximum benefit, we will need to change our attitude. Specifically, we tend to look at technological innovation in the markets with deep suspicion, and that mindset has to change.

Attempts to create a good experience using an attractive, easy-to-navigate interface run headlong into a dusty set of regulations written with paper, snail mail, and precise legalese in mind.

We have designed these rules to provide us with static records that are easy to examine rather than to provide actual investors with information in a format they can digest. Investors, conditioned by their experiences with companies in all other sectors, expect more, and our rules should not prevent financial institutions from meeting these expectations.

As one commentator explained, regulators ought not to complain when “online broker-dealers provide an attractive user experience” just as other tech firms do.

Embracing, rather than frowning upon, technology is the only way to achieve our objective of ensuring that investors receive, absorb, and take into account the information they need to make wise investment decisions.

Another part of ensuring that we are not hamstringing the ability of technology to make markets work better for more people is remembering that our role is to protect investors and markets, not incumbents.

Incumbents by definition have adapted themselves well to the existing regulatory framework, market infrastructure, and established technological tools.

They may be slower to adopt new technology; indeed, it may not be in their interest to do so. Resisting regulatory changes that would permit new ways of doing business (or insisting on regulatory changes to forestall technological innovation) may be a matter of life or death for some of these legacy firms.

We regulators should refuse to allow ourselves to be used to block new firms from coming into the industry with fresh, new ways of doing things. We must do what is best for investors and markets.

Decentralized finance will provide a very good test for our ability to regulate with an eye toward protecting the interests of investors and markets, not incumbents.

The anti-Wall Street sentiments coursing through the market events of recent weeks and the growing realization of the power that private and public centralized entities wield in our lives have inspired some to call for throwing the legacy financial system out entirely. In its place, they would put decentralized finance (“DeFi”).

The nascent DeFi industry—a rapidly growing corner of the crypto world with significant money involved—is working on building an alternative to the legacy centralized financial system (“CeFi”) run through smart contracts rather than financial intermediaries. DeFi facilitates lending, trading, and investing in crypto-assets. DeFi users trust in smart contracts rather than counterparties.

Although a work in progress with all the growing pains and rough edges that implies, DeFi’s promises of democratization, open access, transparency, predictability, and systemic resilience are alluring.

The Federal Reserve Bank of St. Louis recently published a primer on the complicated, multi-layered, fascinating DeFi landscape, which warns of risks including security vulnerabilities, scaling problems, and faux decentralization, but concludes that there is promise in the innovation happening in DeFi.

We regulators, mindful of the potential upsides and downsides, need to provide both legal clarity and the freedom to experiment so that DeFi can compete with CeFi to offer investors financial services.

So what do all of these principles for regulators in the digital era mean for how we will respond to the events of the last several weeks? Some of the sentiment driving the meme stock events seemed to have been rooted in a suspicion that the markets are not for everyone, but that their purpose is to serve only wealthy individuals and institutions.

Some participants seem to have viewed these price rallies and attendant short and gamma squeezes as a way to serve Wall Street a poisonous meal of its own making.

Popular antipathy toward Wall Street fueled by bailouts in the financial crisis of 2007-2009 is still raw, aggravated by ongoing government policies that are viewed as disproportionately benefiting large asset holders now in exchange for an inflationary tab in the future that will hit working Americans hardest.

As securities regulators, we cannot address those concerns directly, but we do need to look for ways to ensure that the markets are working for everyone. Technology is already being used to draw new investors into the markets and to bring capital to companies and entrepreneurs for whom capital raising has until now been difficult.

Increased participation in our markets is beneficial for the markets themselves because, as one commentator explained, “[i]t creates a number of atomized agents providing hopefully unique stimuli and insights to create a more effective and efficient market.”

We need to be open to technological improvements that make the markets work better and encourage and equip more people to participate in them. Some commentators have criticized broker-dealers for making investing too easy, or even worse, too much fun, and fun does not necessarily sit well with securities regulators either.

Of course, an appealing user interface is no substitute for ensuring that investors have access to the information that they need to invest wisely in light of their objectives and circumstances, but the same technology that makes investing fun can be used to educate and inform. Indeed, as one commentary on the GameStop events suggested, regulators should be using these same technologies to reach and teach retail investors.

We also could be more proactive in embracing technology to address some of the other concerns that the events of the past month brought to light. While the market machinery worked extremely well under the weight of record trading and high volatility even in the work-from-home COVID world, additional integration of technology into all aspects of the post-trade process might make the system work even better.

Although trading in the digital economy is fast, the process for settling trades is not. Indeed, until 2017, settlement did not occur until three days after the trade date, known as T+3. A regulatory change brought the settlement cycle down to T+2.

As many have been discussing in recent days, further shortening the cycle to T+1 or T+0 could yield additional benefits, including lower risk associated with open positions and reduced collateral demands.

In last week’s Congressional hearing, the CEO of Robinhood went even further and called for real-time settlement.

After all, crypto transactions settle quickly and effectively without a central counterparty.

Smart contracts and distributed ledger technology could make the entire clearing and settlement process in the equity markets faster and more efficient.

While new technology may make real-time settlement possible, before deciding whether it is the right solution, we should fully analyze the costs and benefits.

Real-time settlement would address many of the concerns around central clearing and margin calls that we saw late last month. Widespread adoption of real-time, or at least near real-time, settlement of transactions in equity securities, however, would require a major overhaul in the way equity markets work and could harm liquidity by raising the cost of making markets.

Certain elements of our financial system as it is currently structured work precisely because of the delay between execution and settlement.

An expected drop in margin requirements might not make up for the inability to net transactions, much less the operational risks—and ensuing costs—of settling transactions on a gross basis and transferring large amounts of cash and securities throughout the day.

In addition, the time built into the settlement cycle now makes error correction easier and allows for human intervention, a feature that a smart contract is designed to eliminate.

These uncertainties suggest that a less ambitious approach, focusing on less immediately exciting technological improvements—such as modernizing the post-trade settlement process, which is still excessively dependent on manual intervention and non-standard practices—may allow us to reduce settlement times and clearing costs in a more incremental, yet still significant, way.

Another use for technology is in improving transparency. Many retail investors avail themselves of commission-free trading. Most broker-dealers that offer this benefit to customers offset it with payments from market makers in exchange for the opportunity to interact with retail order flow.

On balance, this practice likely has benefited retail investors, as it has reduced the cost of making a trade and often results in a small improvement of their execution price over the official national best bid or offer.

At the same time, critics are correct when they point out the potential for conflicts of interest on the part of the broker, who may be tempted to send trades to a market-maker who offers worse execution pricing (which hurts the investor) but better payment for order flow (which benefits the broker).

The way to address this potential conflict, though, is not to ban the practice—which would eliminate a potential conflict at the cost of a likely increase in costs to the investor—but to require better disclosure.

As the cost of data processing, presentation, and delivery continues to plummet, our priority should be to leverage technology to ensure that investors receive accurate disclosures about these practices and their effect on execution quality.

Whether we are talking about trading uranium claims for the atomic energy of the past, building communities of atomized retail investors on social media today, or enabling atomic swaps in the DeFi of the future, people's ingenuity and enthusiasm keep us regulators on our toes. In many ways, the regulator's job is unchanged even though the stage is set with more modern scenery.

The digital economy does pose some new regulatory challenges, but it also gives us new tools to meet those challenges. We should use those tools with genuine care for the freedom of the people we regulate. We should welcome the new technology's potential to improve the way markets work and to make them work for more people.

The payoff is high: a successful regulatory framework for the digital economy will unleash its ability to empower individuals to build better futures for themselves, their families, and their communities.

BIS Quarterly Review, March 2021, International banking and financial market developments

How much stress could Covid put on corporate credit? Evidence using sectoral data



- This article provides a framework to translate sectoral macroeconomic scenarios into sectoral corporate credit losses, and applies it to the G7 economies, China and Australia.
- Because the pandemic has affected some sectors more severely than others, projected credit losses reflecting sectoral growth paths are very different from those based on projections of aggregate GDP growth alone.
- Despite substantial losses in the sectors most affected by the pandemic, total corporate credit loss rates (ie losses in relation to the stock of debt) could fall short of those during the Great Financial Crisis of 2007–09 because these sectors account for a smaller share of corporate borrowing than at that time.

Introduction

The Covid pandemic triggered the largest economic downturn since the Great Depression. Although the macroeconomic outlook is currently more favourable than it was at the peak of the crisis in the spring of 2020, the second wave of the pandemic is placing an additional strain on the recovery and reinforcing existing vulnerabilities, at least in some of the major advanced economies.

Non-financial corporate (NFC) bankruptcy rates remain fairly low in most countries, despite the sharp decline in economic activity (Banerjee, Cornelli and Zakrajšek (2020), IMF (2020a)).

However, they are expected to rise as measures to support credit are wound back, new consumption habits and business practices accelerate the downsizing of specific sectors, and some firms run out of liquidity buffers (eg Banerjee, Illes, Kharroubi and Serena (2020)).

The looming increase in corporate bankruptcies will generate credit losses that will need to be absorbed, either by the financial system or by taxpayers.

This article assesses potential corporate credit losses at the sectoral level for the G7 countries, China and Australia. On average, corporate credit accounts for slightly more than half of total private non-financial credit in

these countries (ranging from 31% of total credit in Australia to 73% in China) and typically incurs larger credit losses during recessions than household credit.

As such, the outlook for corporate credit has a significant bearing on overall assessments of the health of the financial system.

We project credit losses, defined as recognised impairments on bank and non-bank debt, until the end of 2022, assuming that the pandemic will have played out by then and its impact on credit losses will have materialised.

We proceed in three steps.

First, we construct sectoral economic projections for each of the nine economies in our sample following the approach in Rees (2020).

Specifically, we use a macroeconomic model with a rich industry structure in both demand and production to estimate the economic disturbances (“exogenous shocks”) that explain the path of activity since the start of the pandemic.

Conditional on assumptions of how these disturbances play out, we then use the model to project the evolution of sectoral output for each country up to 2023.

In the second step, we combine data on bonds and bank loans to derive corporate debt by sector for each of the G7 countries, China and Australia. The construction of sectoral corporate debt fills a data gap in the public domain.

In the third step, we draw on existing estimates from the literature on the GDP sensitivity of credit loss rates (ie losses in relation to the stock of corporate debt) for banks (Hardy and Schmieder (2013)) to translate our sectoral output projections into projected credit loss rates.

In doing so, we assume that the historical sensitivity of bank credit loss rates to aggregate GDP is the same across sectors as well as across bonds and bank loans.

We then scale these sectoral credit loss rates using our estimates of sectoral debt to project total credit losses by sector and country.

We reach three key conclusions.

First, corporate credit loss rates could rise substantially in sectors most affected by the pandemic. The sectoral dispersion in credit loss rates is likely to be wider than during the Great Financial Crisis (GFC) of 2007–09 because of unevenness in sectoral economic conditions as well as the tendency for credit losses to rise more than proportionally with output shortfalls.

Second, aggregate corporate credit loss rates are likely to fall short of those sustained during the GFC, in large part because the sectors most affected by the Covid pandemic account for a comparably small share of total credit.

Third, projected credit losses based on sectoral growth paths are larger than those based on aggregate GDP data alone. This highlights the importance of taking account of sectoral differences in economic conditions and credit exposures when estimating the implications of an uneven recession for corporate credit losses.

To read more: https://www.bis.org/publ/qtrpdf/r_qt2103.pdf

The economic outlook- getting back to "more like normal"

John C Williams, President and Chief Executive Officer of the Federal Reserve Bank of New York, at One Hundred Black Men of New York.



Hello, everyone. I'm really pleased to be joining your meeting today. Your work in bringing together leaders and visionaries in support of Black communities across our city is invaluable.

We're approaching the one-year mark since the pandemic took hold. At this time last year there was an increasing sense of fear and uncertainty about the future. And the events since then have posed tremendous challenges to families, communities, and the economy. The ongoing human toll is a tragedy we won't forget in our lifetimes.

What has been an extraordinary public health crisis also has had profound consequences for the American and global economies. The cause of this recession-a global pandemic-means that our economic future will be determined in large part by the path of the virus and our collective success in overcoming it.

We still face many hurdles on the road to recovery from both COVID-19 and the severe economic hardship that has ensued. A lot depends on the success in quickly getting a large part of the public vaccinated against a backdrop of the spread of emerging new strains of the virus.

Despite these challenges and uncertainties, I have become more optimistic about the medium-term outlook for the economy. I don't expect our lives to look like they did a year ago-our sense of "normal" may be forever altered-but with vaccinations well underway and a significant decline nationwide in confirmed new cases, I do expect that we can start to look toward a time that will be "more like normal."

In my remarks today I'll set the scene for the economic picture locally, and for the U.S. economy as a whole. I'll also highlight some of the disparities we are seeing in the labor market. Finally, I'll share more about the Federal Reserve's response and how I view the path forward.

Before I continue, I need to give the standard Fed disclaimer that the views I express today are mine alone and do not necessarily reflect those of the Federal Open Market Committee (FOMC) or others in the Federal Reserve System.

Dual Mandate

Prior to sharing the outlook, I think it's important to take a step back and explain some of the key factors that my colleagues and I at the Federal Reserve consider in reaching our policy decisions. The Fed has what we call a "dual mandate," which are two goals set by Congress: maximum employment and price stability.

With these goals in mind, our focus is understanding developments that affect labor markets, inflation, and economic growth. But we also collect and analyze enormous amounts of other information, both in the form of data and reports from members of the communities we serve, to help us assess the state of the economy and inform our decision-making.

The Economic Outlook

I'll start off with the most common measure of the overall economy: gross domestic product, or GDP. I expect inflation-adjusted, or real, GDP to rebound sharply this year.

Indeed, with strong federal fiscal support and continued progress on vaccination, GDP growth this year could be the strongest we've seen in decades. Such a robust rebound would be very welcome after the toughest period for the economy in living memory and a winter where the pandemic has been particularly severe.

The resurgence of COVID-19 over the past few months caused consumers to pull back on spending, resulting in significant job losses in some sectors—especially in leisure and hospitality.

In past recessions, we have typically seen a decline in manufacturing jobs, while the service sector—establishments like hotels, bars, and restaurants—was not affected to the same extent. But the pandemic has flipped the script in that regard. Indeed, this time, both the manufacturing and housing sectors have rebounded sharply since last spring, while much of the service sector remains depressed.

The pandemic has had a truly devastating effect on employment. Overall, as of January of this year, we are down nearly 10 million jobs from the pre-pandemic level, a greater shortfall than we saw even at the worst point of the aftermath of the Great Recession.

Locally, we've experienced considerable strain, given that much of New York City's economy hinges on the leisure and hospitality industry. Job losses have been dramatic: New York was hardest hit at the start of the pandemic, and almost a year later the data still show a city under stress. While national employment was 7 percent below pre-pandemic levels at the end of 2020, employment in New York City was 12 percent lower.

I hope that as workers return to their offices and the weather turns warmer we will start to see people frequenting the small businesses that are the lifeblood of our city.

Unfortunately, job losses have not been only highly concentrated in particular industries, but also more concentrated among certain demographic groups. The pandemic and the ensuing economic downturn have done disproportionate harm to women, communities of color, younger workers, and the lowest paid.

The data are particularly sobering when we look at communities of color. Recent research by my colleagues at the New York Fed shows that more Black and Hispanic workers lost jobs compared to white workers, and Black workers have been more likely to drop out of the labor force entirely, making it more challenging to rejoin in the future.

The Black-white unemployment gap, which had reached historical lows in 2019, widened considerably during the spring and summer, undoing much of the progress of the past decade. While the gap has narrowed some since, closing this gap further will be an important part of a full recovery.

Black-owned businesses have also suffered disproportionately. A report released by the New York Fed in August found that Black-owned businesses have been almost twice as likely to shutter during COVID-19 as white-owned firms.

A key area of our focus is to better understand what contributes to economic inequities and to finding solutions.

Through our economic research and outreach efforts, we are working to understand how racial disparities play out in the labor market, and what can be done to change these outcomes.

Now I'll turn to inflation, the other half of our dual mandate. Although we have seen swings in some prices from the effects of COVID, overall the inflation rate has been running below our 2 percent goal.

With our economy and the global economy still far below full strength, I expect underlying inflationary pressures to remain subdued for some time.

An encouraging sign is that measures of longer-run inflation expectations have retraced earlier declines as the economic outlook has brightened and are now at levels seen a few years ago.

As the economy fully heals and reaches maximum employment over the next few years, I expect inflation will sustainably move to levels consistent with our 2 percent longer-run goal.

The Path Forward

While the short-term outlook for the economy is highly uncertain, the longer-term picture is more favorable. With the ongoing vaccine rollout, more people will be able to travel, eat out, and shop in person safely.

In addition, the fiscal package enacted in December provides much-needed support to households and businesses until vaccinations are more widespread. Moreover, additional measures are currently being discussed in the Congress. Fiscal support, combined with highly favorable financial conditions and steady progress on vaccinations, are all reasons to be optimistic the economy will experience a strong recovery this year.

But the speed of the recovery will also depend on the global picture. We are seeing a slower rollout of immunizations in parts of Europe and a more subdued rebound in other parts of the world, which will have an effect on the United States. In addition, the emergence of new strains of the virus could slow the path to a post-COVID world.

Our Response

Given all the factors I mentioned earlier, in January the FOMC decided to maintain the target range for the federal funds rate at zero to $\frac{1}{4}$ percent. The FOMC stated that it expects it will be appropriate to maintain this target range until labor market conditions have reached levels consistent with its assessments of maximum employment and inflation has risen to 2 percent and is on track to moderately exceed 2 percent for some time.

In addition, the Federal Reserve will continue to increase its holdings of Treasury securities by at least \$80 billion per month and of agency mortgage-backed securities by at least \$40 billion per month until substantial further progress has been made toward the Committee's maximum employment and price stability goals.

In other words: Despite uncertainties, we are fully committed to supporting the economy through this period and reaching our maximum employment and price stability goals. We will continue to watch and learn

and remain committed to using our full range of tools to help assure that the recovery will be as robust as possible.

Conclusion

I'll conclude with this: Despite the progress so far in recovering from the recession, some of the numbers that I've shared are staggering. Families, businesses, and communities are struggling. Almost a year into the pandemic, there is still so much uncertainty.

But despite the near-term challenges, the longer-term outlook for the economy has improved, and our actions of the past year position monetary policy well to support a strong, full recovery and achievement of our goals of maximum employment and price stability. With this progress in mind, I am hopeful for a time soon that looks "more like normal."

Thank you.

Cybersecurity Challenges in the Uptake of Artificial Intelligence in Autonomous Driving

Dede, G., Hamon, R., Junklewitz, H., Naydenov, R., Malatras, A. and Sanchez, I., Cybersecurity challenges in the uptake of artificial intelligence in autonomous driving, EUR 30568 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-28646-2, doi:10.2760/551271, JRC122440.



A report by the European Union Agency for Cybersecurity (ENISA) and the Joint Research Centre (JRC) looks at cybersecurity risks connected to Artificial Intelligence (AI) in autonomous vehicles and provides recommendations for mitigating them.

By removing the most common cause of traffic accidents – the human driver – autonomous vehicles are expected to reduce traffic accidents and fatalities. However, they may pose a completely different type of risk to drivers, passengers and pedestrians.

Autonomous vehicles use artificial intelligence systems, which employ machine-learning techniques to collect, analyse and transfer data, in order to make decisions that in conventional cars are taken by humans. These systems, like all IT systems, are vulnerable to attacks that could compromise the proper functioning of the vehicle.

A new report by ENISA and JRC sheds light on the cybersecurity risks linked to the uptake of AI in autonomous vehicles, and provides recommendations to mitigate them.

Vulnerabilities of AI in autonomous vehicles

The AI systems of an autonomous vehicle are working non-stop to recognise traffic signs and road markings, to detect vehicles, estimate their speed, to plan the path ahead.

Apart from unintentional threats, such as sudden malfunctions, these systems are vulnerable to intentional attacks that have the specific aim to interfere with the AI system and to disrupt safety-critical functions.

Adding paint on the road to misguide the navigation, or stickers on a stop sign to prevent its recognition are examples of such attacks. These alterations can lead to the AI system wrongly classifying objects, and subsequently to the autonomous vehicle behaving in a way that could be dangerous.

Recommendations for more secure AI in autonomous vehicles

In order to improve the AI security in autonomous vehicles, the report contains several recommendations, one of which is that security assessments of AI components are performed regularly throughout their lifecycle.

This systematic validation of AI models and data is essential to ensure that the vehicle always behaves correctly when faced with unexpected situations or malicious attacks.

Another recommendation is that continuous risk assessment processes supported by threat intelligence could enable the identification of potential AI risks and emerging threats related to the uptake of AI in autonomous driving.

Proper AI security policies and an AI security culture should govern the entire supply chain for automotive.

The automotive industry should embrace a security by design approach for the development and deployment of AI functionalities, where cybersecurity becomes the central element of digital design from the beginning.

Finally, it is important that the automotive sector increases its level of preparedness and reinforces its incident response capabilities to handle emerging cybersecurity issues connected to AI.

Executive summary:

New generations of cars are making use of advances in the field of Artificial Intelligence (AI) to provide semi-autonomous and autonomous driving capabilities, achieving a technological breakthrough that will strongly impact existing behaviours and practices.

Beyond the undeniable benefits of autonomous driving for many aspects of our societies, the question of the safety and security of this technology, which by definition is intended to operate with limited human supervision, has emerged.

The answers provided by regulatory bodies on these issues are likely to play an important role for the adoption of autonomous vehicles (AVs) in society. This is all the more important given that machine learning (ML) techniques, at the core of the AI components developed to mimic human cognitive capabilities, have been proven to be highly vulnerable to a wide range of attacks that could compromise the proper functioning of

autonomous vehicles, and pose serious threats to the safety of persons, both inside and outside of a vehicle.

In this context, understanding the AI techniques used for autonomous driving and their vulnerabilities in the cybersecurity threat landscape is essential to alleviate the risks and ensure that benefits will not be counterbalanced by stronger safety risks.

Cybersecurity of AVs is classically approached through the angle of the security of digital systems.

This is all the more relevant as modern vehicles are fully controlled by electronic components, vulnerable to physical and remote attacks exploiting classical cybersecurity vulnerabilities.

With this report however, the objective is to raise awareness about the potential risks connected to the AI components in charge of replicating tasks previously addressed by human drivers, such as making sense of the environment or taking decisions on the behaviours of the vehicle.

By their nature, those AI components do not obey the same rules as traditional software: ML techniques are indeed relying on implicit rules that are grounded on the statistical analysis of large collections of data.

While this enables automation to reach unprecedented cognitive capabilities, it opens at the same time new opportunities for malicious actors, who can exploit the high complexity of AI systems to their own advantage.

Securing such systems requires to consider these AI specific issues on top of the traditional cybersecurity risks connected to digital systems, in the context of the full supply chain involved in their development and of their integration with other automotive systems.

This report aims to provide insights on the cybersecurity challenges specifically connected to the uptake of AI techniques in autonomous vehicles.

It starts by describing the dynamic policy context with which this initiative is aligned, at both the European and international levels.

Institutional and private actors have been very active to outline the high-level principles and standards that should govern the development of AV, either explicitly, with dedicated automotive guidelines, or through the definition of sets of practices driving the expansion of AI and cybersecurity.

In this respect, the European institutions have conducted various initiatives for developing trustworthy AI, where cybersecurity and intelligent transportation play a significant role.

Subsequently, this report delves into the technical aspects of AI in the automotive sector, with the aims to better comprehend the technological concerns of AI, as well as to get a sense of the level of integration of AI in AV.

This includes an extended description of the areas in which AI plays a role, to ensure the proper implementation of cognitive capabilities inside automotive systems.

Autonomous driving requires addressing a host of smaller subtasks (recognizing traffic signs or roads, detecting vehicles, estimating their speed, planning the path of the vehicle, etc.), each of them trivially performed by humans, but requiring carefully engineered AI systems to automatically address them.

AI software components in an AV do not form a monolithic system, but rather rely on a complex combination of large and varied collections of data, themselves obtained by several types of sensors, and a rich set of AI methodologies, based on scientific works from statistics, mathematics, computing, and robotics.

Starting from the high-level functions, an extended description of the landscape combining AI techniques, sensors, data types, and cognitive tasks highlights the sheer abundance of approaches and ideas that have made AV a reality.

We claim that the understanding of these technical elements in the automotive context is essential to put into perspective their cybersecurity implications of these AI-based components.

A mapping of automotive functions to AI techniques is provided to highlight the connections between automotive and scientific concepts, making direct links between automotive functionalities, intermediate subtasks, and ML techniques.

After this technical presentation, a state-of-the-art literature survey on security of AI in the automotive context discusses the main concepts behind the cybersecurity of AI for autonomous cars.

Security of AI in general lies outside the scope of this report, and the interested reader is referred to the recently published ENISA AI Threat Landscape to get the full picture on this matter.

Instead, a focus is specifically made on adversarial machine learning that regroups a set of techniques that are currently the main approaches susceptible to compromise AI components of AVs.

They allow a malicious actor to design specific attacks that could deceive AI systems while staying undetectable by human supervisors.

Concretely, carefully crafted patterns can be disseminated in the environment to alter the decision-making process and induce unexpected behaviour of the vehicle.

Typical examples include adding paint on the road to misguide the navigation, or stickers on a stop sign to prevent its recognition.

Despite the complexity to undertake these kinds of attacks, and in particular to make them undetectable by human eyes, the dire consequences in terms of safety should encourage car manufacturers to implement defence mechanisms to mitigate these type of AI risks.

The description of these attacks, which may not necessarily require access to the internal system of the vehicle, is accompanied by real-world cases involving autonomous or semi-autonomous cars fooled by attackers.

This is subsequently illustrated, both theoretically and experimentally, by realistic attack scenarios against the AI components of vehicles, extending the discussion to other types of vulnerabilities of AI.

In conclusion of this report, a set of challenges and recommendations is provided to improve AI security in AVs and mitigate potential threats and risks.

This is motivated by the importance of relying on the pillars that have been at the core of cybersecurity methodologies developed along the years for traditional software, while at the same time taking into account the particularities of AI systems.

In light of the connections between AI and AVs brought forward in this report and their consequences in terms of security, the following recommendations are put forward.

To read more: <https://www.enisa.europa.eu/publications/enisa-jrc-cybersecurity-challenges-in-the-uptake-of-artificial-intelligence-in-autonomous-driving/>

Levels of Driving Automation SAE J3016

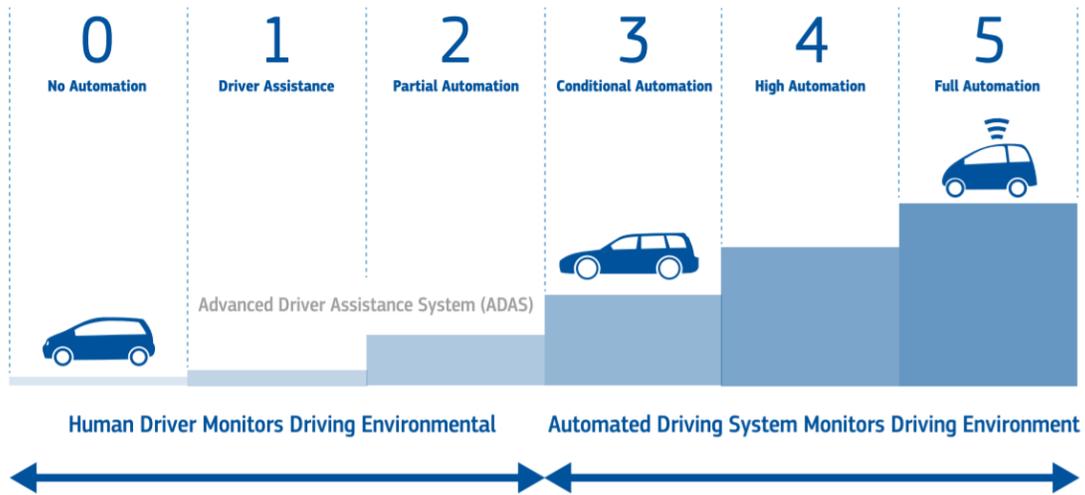


Figure 1. Vehicles automation levels as defined in SAE J3016.

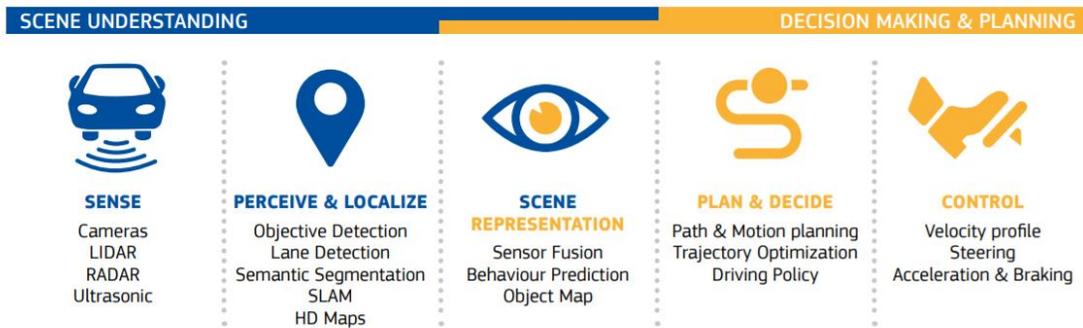


Figure 2. Typical elements of autonomous driving systems. Inputs from the environment are obtained from the sensors of the vehicle or external mapping information. They are used to perceive and understand the environment, plan the trajectory of the vehicle, and act on the vehicle's commands.

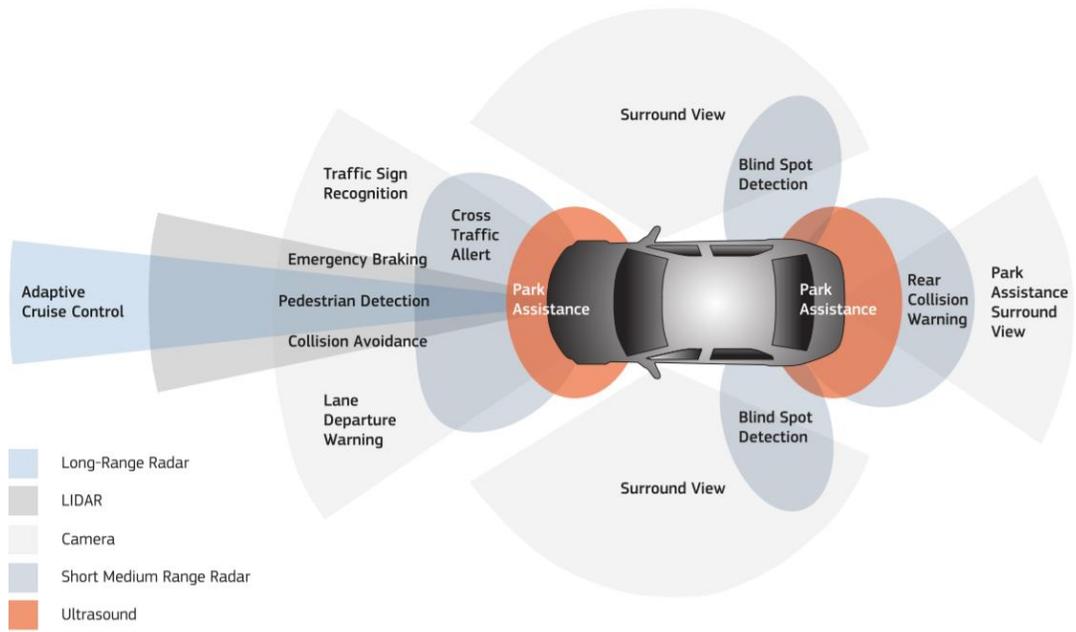


Figure 5. Localization of the sensors on the vehicle and their main uses.

Financial stability implications of support measures to protect the real economy from the COVID-19 pandemic, February 2021



The ESRB Working Group on monitoring financial stability implications of fiscal measures to protect the real economy in the context of the coronavirus (COVID-19) pandemic (henceforth, the WG) was established in June 2020 under the auspices of the General Board.

It builds on the work of a related ad hoc ESRB Steering Committee Workstream. It was mandated to develop a regular EU-wide monitoring of the financial stability implications arising from the temporary measures that governments have put into place in response to the COVID-19 pandemic, with a focus on cross-border and cross-sectoral implications.

This report summarises the work conducted and was approved by the ESRB General Board on 15 December 2020.

The pandemic has intensified risks and vulnerabilities in the real economy, but prompt action by governments has provided crucial relief to households and non-financial corporations (NFCs).

Fiscal measures such as loans with public guarantees and direct grants have helped to prevent the loss of viable businesses and contain the impact of the pandemic. Moratoria schemes have also been providing liquidity support during the health emergency.

So far, backed by government support, monetary policy and regulatory easing, the financial system has continued to provide funding to the real economy and losses in banking books have been contained. However, the financial stability implications still need to be monitored.

This Report provides a framework for monitoring financial stability implications of the measures and illustrates some initial results and policy findings.

The Working Group proceeded in four stages.

First, it developed a conceptual monitoring framework to analyse the financial stability implications of fiscal measures. Core to this framework are the transmission channels of the fiscal measures in terms of solvency and liquidity issues in the real economy and therefore the ability of these measures to shield the financial sector from the effects of the pandemic. Because these fiscal measures were mostly transmitted through the

banking system, this channel was the focus of the report. Section 2 describes this framework.

Second, based on these transmission channels the Working Group derived a set of key indicators to monitor the financial stability implications of the fiscal measures put in place during the pandemic.

These will serve as a basis for the ESRB's quarterly monitoring. A longer list of supplementary indicators may complement this at national level.

The Working Group explored information collected directly by the ESRB, as well as from the EBA and the ECB. A description of these indicators is provided in Section 2 and Annex A. Section 3 describes the data sources used.

Third, the Working Group identified and started analysing key issues relevant to monitoring financial stability implications in more depth. It started to describe how the drivers of fiscal programmes are related to the structure and to the vulnerability of the real economy and the financial system to the COVID-19 pandemic.

Then it focused on the solvency and liquidity of borrowers and the implications for credit markets and the solvency of the financial sector. It also elaborated on the quality of balance sheet information, as there is a time lag before borrowers' vulnerabilities have an impact on banks' balance sheets.

The report further considered the potential cliff effects related to the expiry of fiscal measures that warrant attention from the authorities. Section 4 details these issues.

Fourth, key findings and policy priorities are summarised at the end of this report.

Based on this initial monitoring work, the WG has now completed its mandate. Going forward, the ESRB will continue with regular monitoring, based on the indicators and transmission channels identified.

Relevant analytical topics will be addressed in future work including, in particular, the analysis of cross-sectoral and cross-country spillovers.

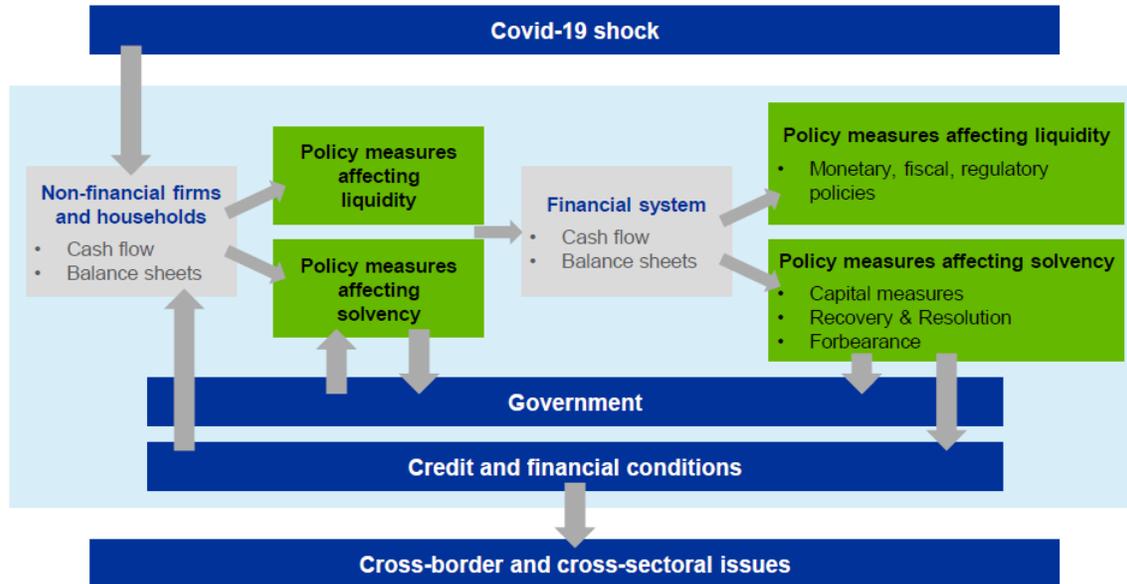
So far these have been contained by the fact that the COVID-19 shock has not been transmitted in full to the financial sector. However, such spillovers may become more important in future adverse scenarios.

To read more:

https://www.esrb.europa.eu/pub/pdf/reports/esrb.reports210216_FSI_covid19~cf3d32ae66.en.pdf

Figure 1

Transmission mechanisms of financial stability implications of fiscal measures



Source: ESRB.

Implementation of Basel standards, February 2021



BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY

1.1 This Consultation Paper (CP) sets out the Prudential Regulation Authority's (PRA's) proposed rules in respect of the implementation of international standards through a new PRA Capital Requirements Regulations (CRR) rule instrument.

1.2 The purpose of these rules is to implement some of the set of international standards that remain to be implemented in the UK.

This CP also sets out the proposed new PRA CRR rules in full, including parts of the onshored CRR that are not changing but are being transferred into PRA rules (although, where these do not change, they do not form part of this consultation).

1.3 This consultation is relevant to banks, building societies, PRA-designated investment firms and PRA-approved or –designated financial or mixed financial holding companies (firms).

Background

1.4 In response to the financial crisis of 2007-8, the Basel Committee on Banking Supervision (BCBS) agreed a series of reforms to the financial services regulatory framework intended to enhance the resilience of internationally active banks.

These measures are known as 'Basel III' standards. Some of the standards were implemented into EU law² and subsequently converted into UK law through:

- the CRR; and
- related onshored EU level 2 regulations that are made under the CRR (CRR level 2 Regulations).

1.5 However, some Basel III standards were not implemented in the EU before the end of the transition period and so remain to be implemented in the UK. 1.6 HM Government's Financial Services Bill (the FS Bill) proposes to enable the implementation of those standards.

The FS Bill proposes to give a power to the PRA to make rules that restate elements of the CRR and CRR level 2 Regulations revoked by HM Treasury and also to make new rules in those areas to give effect to the outstanding

Basel III standards and adapted versions of those standards where appropriate (these rules are referred to as ‘CRR rules’).

The proposed new rules therefore broadly correspond with the set of issues covered by the EU’s Capital Requirements Regulation 2 (EU CRR II), which addresses the same set of outstanding Basel III standards.

1.7 The proposals in this CP have been designed in the context of the UK having now left the EU and the transition period having come to an end.

Unless otherwise stated, any references to EU or EU derived legislation refer to the version of that legislation which forms part of retained EU law.

The PRA will keep the policy under review to assess whether any changes would be required due to changes in the UK regulatory framework.

Approach to making CRR rules.

1.8 The PRA’s proposed implementation of the Basel III standards in this CP has been determined in accordance with its statutory objectives and informed by the regulatory principles and the matters to which it must have regard in making policy.

In this specific case, the PRA used the implementation of the standards in the EU CRR II as an initial basis for developing many of the proposed draft rules.

1.9 This approach facilitates efficient and effective implementation. The EU CRR II was designed to implement the Basel III standards set out above and was proposed, negotiated and agreed between 2016 and 2019, before the UK’s exit from the EU and the UK contributed significantly to its design.

1.10 Where replication of the standards set out in the EU CRR II would not be fully consistent with the PRA’s objectives, a different approach has been taken to Basel III implementation.

The rationale for this approach is to:

- achieve closer alignment with Basel III standards;
- enhance proportionality; and
- enable the new PRA rules to interact clearly and effectively with the requirements that remain in the CRR, and to be supported by a

consistent suite of the UK version of revised supervisory Common Reporting (COREP).

1.11 The PRA's proposed approach would enable these Basel III standards to be implemented by firms from Saturday 1 January 2022; provide sufficient time for firms to embed the related supervisory reporting; and build on the progress firms have already made towards implementation.

1.12 The proposed rules have been written in a style and structure that maintains consistency with the onshored regime, with Article numbers that, where possible, correspond to the CRR and CRR Level 2 Regulations.

To read more: <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/consultation-paper/2021/february/cp521.pdf?la=en&hash=430FBE3BF2D03AC61F86794BD9F09CDAE031E0E8>



BANK OF ENGLAND
PRUDENTIAL REGULATION
AUTHORITY

Consultation Paper | CP5/21

Implementation of Basel standards

February 2021

EIOPA defines its supervisory convergence priorities for 2021



The European Insurance and Occupational Pensions Authority (EIOPA) published its 2021 Supervisory Convergence Plan.

In 2021 EIOPA intends to complete the priorities stemming from the previous plan, while allowing for flexibility to continue monitoring and mitigating the impact from the Covid-19 pandemic.

Similarly to the previous plan, the priority areas fall within the following building blocks:

- Practical implementation of the common supervisory culture and further development of supervisory tools;
- Risks to the internal market and the level playing field which may lead to supervisory arbitrage; and
- Supervision of emerging risks.

In the area of practical implementation of the common supervisory culture, EIOPA will, amongst other priorities, continue working on common benchmarks for the supervision of internal models, supervisory assessments of conduct risks but also work on the areas where the need for further development was identified, for example the application of proportionality in Solvency II.

Furthermore, EIOPA intends to continue working on supervisory convergence tools such as assessing internal models outcomes or promoting supervisory convergence in Technical Provisions' calculation.

The work related to the supervision of emerging risks will advance for example by developing a set of principles of digital responsibility, by establishing a system for the exchange between National Competent Authorities of information regarding cybersecurity and cyber-attacks as well as by implementing objectives and goals set in the Cyber Underwriting Strategy defined in February 2020.

EIOPA also identified three new priorities for 2021 and will take the following actions:

1. Take step-by-step measures for integrating the environmental, social and governance risks into prudential and conduct supervision;

2. Address supervisory concerns arising from the recent market development of multi-employer IORP providers; and
3. Further analyse and identify potential risks to the internal market following the identification of inconsistencies in the way national competent authorities treat reinsurance undertakings with the head office located in third countries.

Further information about a common supervisory culture and EIOPA's supervisory convergence tools, including the list of all priorities is available in the plan.

To read more:

https://www.eiopa.europa.eu/sites/default/files/publications/eiopa_supervisory-convergence-plan-2021.pdf



One of the main goals of the European Insurance and Occupational Pensions Authority (EIOPA) is to ensure a high, effective and consistent level of supervision across Europe, with the aim of guaranteeing a similar level of protection of policyholders and beneficiaries across jurisdictions, preventing supervisory arbitrage and guaranteeing a level playing field.

<https://www.eiopa.europa.eu>



Criminals stole over USD 100 million in cryptocurrencies by hijacking phone numbers

Sim-swapping attacks against celebrities



A total of 8 criminals have been arrested on 9 February as a result of an international investigation into a series of sim swapping attacks targeting high-profile victims in the United States. These arrests follow earlier ones in Malta (1) and Belgium (1) of other members belonging to the same criminal network.

The attacks orchestrated by this criminal gang targeted thousands of victims throughout 2020, including famous internet influencers, sport stars, musicians and their families.

The criminals are believed to have stolen from them over USD 100 million in cryptocurrencies after illegally gaining access to their phones.

This international sweep follows a year-long investigation jointly conducted by law enforcement authorities from the United Kingdom, United States, Belgium, Malta and Canada, with international activity coordinated by Europol.

A network of sim hijackers

Initiated in the spring of 2020, the investigation uncovered how a network composed of a dozen criminals worked together to access the victims' phone numbers and take control of their apps or accounts by changing the passwords.

This enabled them to steal money, cryptocurrencies and personal information, including contacts synced with online accounts. They also hijacked social media accounts to post content and send messages masquerading as the victim.

This type of fraud is known as 'sim swapping' and it was identified as a key trend on the rise in the latest Europol Internet Organised Crime Threat Assessment.

It involves cybercriminals taking over use of a victim's phone number by essentially deactivating their SIM and porting the allocated number over to a SIM belonging to a member of the criminal network.

You may visit: <https://www.europol.europa.eu/activities-services/main-reports/internet-organised-crime-threat-assessment-iocta-2020>

This is typically achieved by the criminals exploiting phone service providers to do the swap on their behalf, either via a corrupt insider or using social engineering techniques.

Europol's involvements

Europol's European Cybercrime Centre (EC3) supported the case from the onset by providing the following:

- Organised operational meetings to coordinate the international activity;
- Facilitated the information exchange between all partners and cross-checked data sent in by the partners against Europol's databases;
- Supporting the action day by setting up a Virtual Command Post to provide to the investigators in the field real time and secure exchange of information and analytical support.

Don't be the next victim.

It's not just celebrities who are under attack. Anyone and everyone with a mobile phone can fall victim to sim swapping. Here are a few tips to help you stay one step ahead from the criminals after your personal information:

- Keep your devices' software up to date,
- Do not reply to suspicious emails or engage over the phone with callers that request your personal information,
- Limit the amount of personal data you share online,
- Try to use two-factor authentication for your online services, rather than having an authentication code sent over SMS,
- When possible, do not associate your phone number with sensitive online accounts.

FSB Chair's letter to G20 Finance Ministers and Central Bank Governors



For the past year, the imposition of containment measures across the globe (the “COVID Event”) in response to the outbreak of COVID-19 has overshadowed the global economy.

At the outset of the COVID Event, the Financial Stability Board (FSB) focused on emergency measures and actions for what we hoped would be a short-term shock; however, the duration of the Event continues to test our resolve in many ways.

Although the FSB, like many others, faced unprecedented challenges, this year also highlighted certain strengths that the FSB has honed since its inception.

Building on this foundation, three key features of the FSB have characterized members’ actions over the past year:

- i) responsiveness to crisis;
- ii) coordination in action; and
- iii) adaptability.

These attributes will certainly help us tackle our most pressing needs going forward, which include addressing vulnerabilities in the global financial system exposed by the COVID Event, as well as ongoing vigilance and monitoring of new and emerging risks.

Through the resilience and adaptability already shown, we will meet our charge of identifying and addressing these risks.

Moving into 2021, the pathway to a post-COVID world is still uncertain. The responsiveness and coordination of the global regulatory community therefore remains as critical now as it was during the past year.

Against this backdrop, the FSB 2021 work program remains ambitious. It seeks to address vulnerabilities directly related to COVID-19 and to increase resilience of non-bank financial intermediation (NBFI).

It also aims to support strong, sustainable, balanced and inclusive growth in a post-COVID world, not least by improving efficiency and access to cross-border payments, and by enhancing our understanding of climate-

related financial risks and measures to address these risks, among other key topics.

Addressing COVID-19 Related Vulnerabilities

We have seen some easing of financial market conditions, in part as a result of the significant policy actions taken by G20 members last year; however, challenges to financial stability persist.

The continual assessment of vulnerabilities in the global financial system, therefore, remains a priority and provides a robust basis for cataloging and assessing the impact of COVID-19 policy responses.

Our work to support international coordination on these policy responses includes examining factors needed to prepare for an orderly unwinding of COVID-19 support measures when it is appropriate to do so, including avoiding adverse cross-border spillovers.

Additionally, developing a better understanding of challenges that rising debt levels in the corporate sector may pose is another crucial area of focus. We will report to you on this work in April.

Further, the FSB will provide the G20 an assessment of initial lessons learned from the COVID Event for financial stability, with an interim report in July and a final report in October.

In coordination with other standard setting bodies (SSBs), we will look at financial institutions' use of capital and liquidity buffers and how well crisis management and operational resilience arrangements have functioned.

This work will also examine whether and how procyclicality has affected the financial system.

Any lessons learned at this stage will be preliminary due to the ongoing nature of the COVID Event, but we must begin developing those lessons now, including whether the reforms the G20 put in place following the 2008 Global Financial Crisis are working as intended, and where they may not be.

The FSB will also continue addressing issues identified by the evaluation of too-big-to-fail reforms for banks, the final version of which will be sent to you in April.

Increasing the Resilience of Non-bank Financial Intermediation

One area where we have already begun to draw lessons is NBFI. Our Holistic Review of the Market Turmoil in March 2020 is the basis for a comprehensive and ambitious work program for strengthening the resilience of NBFI.

My November 2020 letter to G20 Leaders highlighted the key areas of this work program, including: examining and addressing specific risk factors that contributed to amplification of the shock; enhancing understanding of systemic risks in NBFI; and investigating policies to address systemic risks in NBFI. This work remains a top priority.

To read more: <https://www.fsb.org/wp-content/uploads/P250221.pdf>



THE CHAIR

24 February 2021

To G20 Finance Ministers and Central Bank Governors

Statistical release: BIS residential property price statistics, Q3 2020 - Summary of latest developments



- Global real house price inflation accelerated to *2.5% year on year (yoy)* in the third quarter of 2020, a period marked by the continued impact of the Covid-19 pandemic and significant fiscal and monetary stimulus.

This was primarily due to a significant and relatively widespread expansion in real residential property prices in advanced economies (AEs), by 4.4% on average, the fastest yoy growth rate observed since 2016.

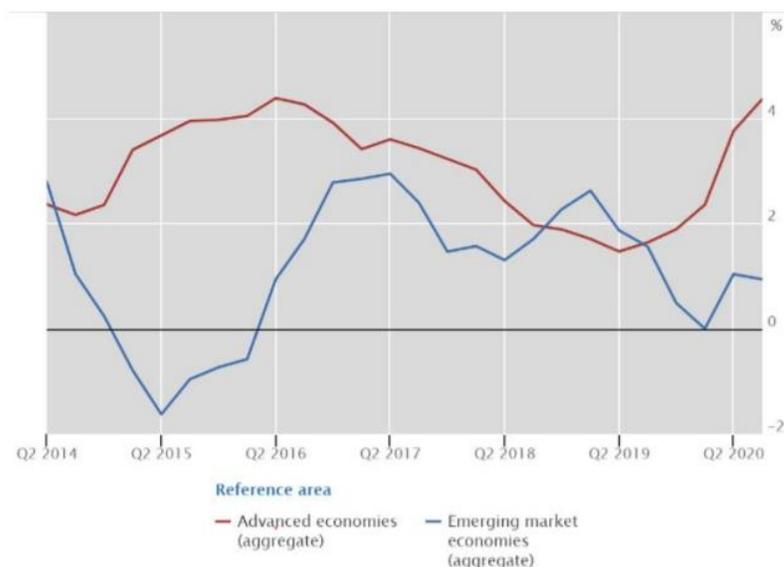
In contrast, real price growth remained subdued (+0.9% yoy) in emerging market economies (EMEs) (Graph 1), with significant differences between central and eastern Europe (+7%), Latin America (+1%), emerging Asia (0%) and the Middle East and Africa (−2%).

- In real terms, global house prices now exceed by 19% the average level recorded immediately after the Great Financial Crisis (GFC) of 2007–09 – and by 23% and 16% for AEs and EMEs, respectively (Table 1).

Aggregate developments in real residential property prices

Year-on-year changes

Graph 1



Source: BIS

Source: BIS selected residential property price series based on quarterly average data.

Regional developments in real residential property prices, in per cent,
Q3 2020

Table 1

| | Cumulative changes since 2010 | Year-on-year |
|--|-------------------------------|--------------|
| All reporting countries | 19.3 | 2.5 |
| Advanced economies | 23.4 | 4.4 |
| Non-European countries | 30.5 | 4.1 |
| Euro area | 10.4 | 5.1 |
| European countries outside the euro area | 24.2 | 3.1 |
| Emerging market economies | 16.1 | 0.9 |
| Latin America | 17.2 | 1.3 |
| Emerging Asia | 24.9 | -0.4 |
| Central and eastern Europe ¹ | -15.6 | 7.4 |
| Middle East and Africa | 9.5 | -1.6 |

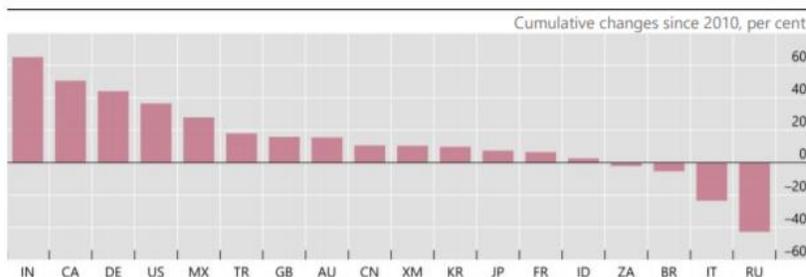
Estimated weighted quarterly averages based on rolling GDP and PPP exchange rates.

¹ Not including members of the euro area.

Source: BIS calculations.

Real residential property price developments in selected countries since the GFC

Graph 2



AU = Australia; BR = Brazil; CA = Canada; CN = China; DE = Germany; FR = France; GB = United Kingdom; ID = Indonesia; IN = India; IT = Italy; JP = Japan; KR = Korea; MX = Mexico; RU = Russia; TR = Turkey; US = United States; XM = euro area; ZA = South Africa.

Source: BIS selected residential property price series based on quarterly average data.

Among G20 economies, real prices have soared over the past decade in India and, though to a lesser extent, in Canada, Germany, Mexico and the United States. At the other end of the scale, they have remained well below their post-GFC levels in Italy and Russia (Graph 2).

To read more: https://www.bis.org/statistics/pp_residential_2102.pdf

The tale of the three stabilities - price stability, financial stability and economic stability

François Villeroy de Galhau, Governor of the Bank of France, at the Financial Stability Review Conference.



It is a great pleasure for me to welcome you to the publication today of the 24th edition of the Banque de France Financial Stability Review. We have a set of very distinguished speakers.

I would like to thank them and all the contributors to the review, as well as the Banque de France's teams who helped prepare this issue, which focuses on macroprudential policy in the midst of the Covid crisis.

The past twelve months have seen some of the most dramatic events since World War II, with this unprecedented pandemic. For this reason, and given that today is about the Financial Stability Review, I will focus on the concept of stability itself.

Other sources of instability have affected the world economy in the past decade or so: the Global Financial Crisis and ensuing recession, the European Debt Crisis, or more recently rising trade tensions.

It seems that the world has become more unstable. Against this backdrop, stability is all the more important for our fellow citizens, and it has different dimensions, but I will focus mainly on three key aspects.

I will start (and it will be a surprise to no one) with price stability. I will then turn to financial stability, which is essential for the effectiveness of monetary policy (by preserving its transmission channels).

Finally, I will talk about economic stability and the way monetary policy, in combination with fiscal policy, can smooth the business cycle and foster a robust and sustainable recovery from the covid crisis.

Clearly, these different aspects are closely intertwined: monetary policy, while pursuing its primary objective of price stability, can affect financial stability; fiscal and monetary policy closely interact with each other, as do monetary and macroprudential policy. But for the sake of clarity I will tackle each concept in turn.

I. Price stability

To achieve the ECB inflation objective, we are determined to maintain, as long as necessary, a very accommodative monetary stance. We continue to stand ready to adjust all of our instruments, as appropriate, including possibly a lowering of the DFR if needed.

And to guarantee the full transmission of this accommodative stance, we pay particular attention to ensuring that both bank and market financing conditions remain favourable for all agents (governments, firms and households).

This leads us to monitor a large set of indicators, with a multifaceted and holistic approach.

Let me add some comments about the recent increase we have seen in long-term rates, following although to a lesser extent the move in the US. This increase has different causes, and hence calls for different reactions and instruments.

First, in the euro area, the latest consumer price data have surprised on the upside, and there are some signs of an upturn in inflation expectations. This is actually good news, as Philip Lane noted last week.

That said, this rise shouldn't be overstated; it primarily reflects temporary factors rather than a persistent and significant change in the inflation path. The euro area economy is in a different situation compared with that of the US (in terms of real activity, output gap and fiscal stimulus). There is no risk of overheating in Europe.

Second, this less disinflationary environment shouldn't raise questions about our future monetary policy, and our reaction function. Let me reiterate a strong conviction about our inflation objective: it is flexible, symmetric and medium-term.

To put it clearly, these last two imperatives mean that we cannot completely ignore the past inflation shortfalls, and that in the future we should be ready to accept inflation above target for some time.

As necessary, our forward guidance could be strengthened to make this tolerance explicit.

And third, there are other elements in this tightening of financing conditions, including excessive spillovers and tensions on the term premia.

In so much as this tightening is unwarranted, we can and must react against it, starting with an active flexibility of our PEPP purchases, which

we have made possible since its inception in March 2020, and enhanced last December.

To read more:

<https://www.bis.org/review/r210304d.htm>

EBA issues new supervisory reporting and disclosures framework for investment firms



- The new reporting and disclosures framework reflects the prudential requirements for investment firms as defined in the Investment Firms Regulation (IFR).
- The final draft ITS take into account the different classes of investments firms to ensure requirements are proportionate to the nature, size and complexity of investment firms.
- Consistency and integration between both reporting and disclosures will facilitate the implementation of these new requirements.

The European Banking Authority (EBA) published today its final draft Implementing Technical Standards (ITS) on the supervisory reporting and disclosures of investment firms.

These final draft ITS, which are part of the phase 1 mandates of the EBA roadmap on investment firms, will ensure a proportionate implementation of the new prudential framework for investment firms taking into account the different activities, sizes and complexity of investments firms.

You may visit:

https://www.eba.europa.eu/sites/default/documents/files/document_library/Regulation%20and%20Policy/Investment%20firms/884436/EBA%20Roadmap%20on%20Investment%20Firms.pdf

Figure 1: Thematic areas covered by the EBA mandates



The implementing technical standards included in this package set out the main aspects of the new reporting framework in relation to the calculation of own funds, levels of minimum capital, concentration risk, liquidity requirements and the level of activity in respect of small and non-interconnected investment firms.

The ITS propose a different set of templates to cover small and non-interconnected investment firms, and to include information that is proportionate to their size and complexity.

In addition, the ITS includes a standardised set of templates for the disclosures of own funds. The EBA is issuing a single set of standards with integrated Pillar 3 disclosures and supervisory reporting requirements and standardised formats and definitions with a view to improving consistency between reporting and disclosures requirements, which will facilitate compliance with both requirements.

Implementation and remittance date

The disclosure requirements will be applicable from 26 June 2021.

The first reporting reference date is September 2021 (for quarterly reports) and December 2021 (for annual reports).

DOCUMENTS

- › [Final Draft ITS on Reporting and disclosures for investment firms](#)
- › [Annex I - Reporting for Class 2 investment firms](#)
- › [Annex II - Reporting for Class 2 investment firms](#)
- › [Annex III - Reporting Class 3 investment firms](#)
- › [Annex IV - Reporting for Class 3 investment firms](#)
- › [Annex V - DPM and validation rules](#)
- › [Annex VI - Disclosure of own funds](#)
- › [Annex VII - Disclosure of own funds](#)
- › [Annex VIII - Reporting on group capital test](#)
- › [Annex IX - Reporting on group capital test](#)

LINKS

- › [Reporting framework 3.1](#)
- › [Regulatory Technical Standards on prudential requirements for investment firms](#)
- › [Technical Standards on reporting and disclosures requirements for investment firms](#)
- › [Investment firms](#)
- › [Supervisory reporting](#)
- › [Transparency and Pillar 3](#)

Legal basis and background

The EBA has developed these draft ITS according to Article 54(3) and Article 49(2) of the IFR - (EU) 2019/2033 - which mandates the EBA to develop a reporting framework and a disclosure requirements for investment firms.

The Investment Firms Prudential Package consists of the Directive (EU) 2019/2034 and the Regulation (EU) 2019/2033, which were published in the Official Journal on 5 December 2019 and establish a new prudential framework for investment firms authorised under MIFID.

To read more: <https://www.eba.europa.eu/eba-issues-new-supervisory-reporting-and-disclosures-framework-investment-firms>

2020 Annual Report



Large Bank Supervision

For state nonmember banks with assets exceeding \$10 billion, the FDIC generally employs a continuous risk management examination program, whereby dedicated staff conduct targeted examinations and ongoing institution monitoring based on a comprehensive annual supervisory planning process.

Consumer protection and CRA examinations are generally conducted on a point-in-time basis, although DCP initiated a pilot program during 2020 to employ a continuous supervision model.

The Large Insured Depository Institution (LIDI) Program remains the primary instrument for off-site monitoring of these institutions.

The LIDI Program provides a comprehensive process to standardize data capture and reporting for large and complex institutions nationwide, allowing for quantitative and qualitative risk analysis.

The LIDI Program focuses on institutions' potential vulnerabilities to asset, funding, and operational stresses, and supports effective large bank supervision by using individual institution information to focus resources on higher-risk areas, determine the need for supervisory action, and support insurance assessments and resolution planning.

In 2020, the LIDI Program covered 106 institutions with total assets of \$3.7 trillion.

The Shared National Credit (SNC) Program is an interagency initiative administered jointly by the FDIC, OCC, and FRB to promote consistency in the regulatory review of large, syndicated credits, as well as to identify risk in this market, which comprises a large volume of domestic commercial lending.

In 2020, outstanding credit commitments in the SNC Program totaled over \$5 trillion.

The FDIC, FRB, and OCC report the results of their review in an annual joint public statement.

Information Technology and Cybersecurity

The FDIC examines information technology (IT) risk management practices, including cybersecurity, at each bank it supervises as part of the risk management examination.

Examiners assign an IT rating using the FFIEC Uniform Rating System for Information Technology (URSIT).

The IT rating is incorporated into the management component of the CAMELS rating, in accordance with the FFIEC Uniform Financial Institutions Rating System.

During 2020, the FDIC conducted 1,319 IT examinations at state nonmember institutions, issuing 24 enforcement actions.

The FDIC also examines the services provided to institutions by bank service providers.

In addition to routine examination procedures, this year the FDIC, FRB, and OCC horizontally reviewed services provided by a sample of service providers to understand system capabilities for a potential zero interest rate environment, to assess readiness for the transition from LIBOR as the standard reference rate, and to obtain a high-level understanding of their ability to manage applicable aspects of the CARES Act.

To read more: <https://www.fdic.gov/about/financial-reports/reports/2020annualreport/2020ar-final.pdf>



Announcements on the end of LIBOR



The FCA has announced the dates that panel bank submissions for all LIBOR settings will cease, after which representative LIBOR rates will no longer be available.

This is an important step towards the end of LIBOR, and the Bank of England and FCA urge market participants to continue to take the necessary action to ensure they are ready.

The FCA has confirmed that all LIBOR settings will either cease to be provided by any administrator or no longer be representative:

- immediately after 31 December 2021, in the case of all sterling, euro, Swiss franc and Japanese yen settings, and the 1-week and 2-month US dollar settings; and
- immediately after 30 June 2023, in the case of the remaining US dollar settings

Based on undertakings received from the panel banks, the FCA does not expect that any LIBOR settings will become unrepresentative before the relevant dates set out above.

Representative LIBOR rates will not, however, be available beyond the dates set out above.

Publication of most of the LIBOR settings will cease immediately after these dates.

As ISDA has confirmed separately, the 'spread adjustments' to be used in its IBOR fallbacks will be fixed today as a result of the FCA's announcement, providing clarity on the future terms of the many derivative contracts which now incorporate these fallbacks.

The Bank of England and the FCA have made it clear over a number of years that the lack of an active underlying market makes LIBOR unsustainable, and unsuitable for the widespread reliance that had been placed upon it.

Accordingly, both have worked closely with market participants and regulatory authorities around the world to ensure that robust alternatives to LIBOR are available and that existing contracts can be transitioned onto these alternatives to safeguard financial stability and market integrity.

Market-led working groups and official sector bodies, including the Financial Stability Board, have set out clear timelines to help market participants plan a smooth transition in advance of LIBOR ceasing.

Today's announcements confirm the importance of those preparations for all users of LIBOR.

Regulated firms should expect further engagement from their supervisors at both the Prudential Regulation Authority and the FCA to ensure these timelines are met.

Authorities have also recognised that there are some existing LIBOR contracts which are particularly difficult to amend ahead of the LIBOR panels ceasing, often known as the 'tough legacy'. The FCA is taking steps to help reduce disruption in these cases.

The FCA will consult in Q2 on using proposed new powers that the government is legislating to grant to it under the Benchmarks Regulation (BMR) to require continued publication on a 'synthetic' basis for some sterling LIBOR settings and, for 1 additional year, some Japanese yen LIBOR settings.

It will also continue to consider the case for using these powers for some US dollar LIBOR settings.

Any 'synthetic' LIBOR will no longer be representative for the purposes of the BMR and is not for use in new contracts. It is intended for use in tough legacy contracts only.

The FCA will also consult in Q2 on which legacy contracts will be permitted to use any 'synthetic' LIBOR rate.

The FCA has also published today statements of policy in relation to some of these proposed new BMR powers.

These statements of policy confirm its policy approach, explain its plans set out above and its intention to propose using, as a methodology for any 'synthetic rate', a forward-looking term rate version of the relevant risk-free rate plus a fixed spread aligned with the spreads in ISDA's IBOR fallbacks.

FCA CEO Nikhil Rathi said:

'Today's announcements provide certainty on when the LIBOR panels will end. Publication of most of the LIBOR benchmarks will cease at the same

time as the panels end. Market participants must now complete their transition plans.’

Bank of England Governor Andrew Bailey said:

‘Today’s announcements mark the final chapter in the process that began in 2017, to remove reliance on unsustainable LIBOR rates and build a more robust foundation for the financial system. With limited time remaining, my message to firms is clear – act now and complete your transition by the end of 2021.’

You can see the FCA’s announcement regarding the future cessation and loss of representativeness of the LIBOR benchmark settings at:
<https://www.fca.org.uk/publication/documents/future-cessation-loss-representativeness-libor-benchmarks.pdf>

BIS Bulletin No 38, Covid-19 bank dividend payout restrictions: effects and trade-offs

Bryan Hardy



Key takeaways

- In the context of the Covid crisis, authorities adopted dividend payout restrictions to enhance bank resilience and support stronger growth in bank lending. Restrictions may reduce short-term equity returns for bank shareholders, especially in the case of banks with a low price-to-book ratio.
- In line with these predictions, bank equity prices fell with dividend restriction announcements, but credit default swap (CDS) spreads indicated that default risk either fell or was unaffected, even in the face of the economic downturn.
- Bank capitalisation rose in jurisdictions which restricted payouts, supporting institutional and systemwide stability; the increased capital was more likely to support greater lending with restrictions present.

Covid-19 presents an ongoing challenge for supervisors and other policymakers charged with ensuring financial stability while maintaining the flow of credit to the economy.

To address these goals, regulators adopted a number of policy measures, including restrictions on bank capital payouts such as dividends.

Payout restrictions were intended to preserve bank capital in case large losses arose and channel bank resources towards lending.

This Bulletin examines how these restrictions affected banks' payouts, capitalisation and lending, and their effect on banks' equity prices and credit default swap (CDS) spreads.

Capital payouts by banks can set at odds the interests of different bank stakeholders, such as shareholders and creditors.

Bank valuations fell in March 2020 during the initial pandemic turmoil, driving incentives to pay dividends to boost short-term shareholder returns (Gambacorta et al (2020)).

However, such payouts erode the existing book capital base and increase riskiness, contrary to the interests of debt investors and depositors.

They also reduce the capital available to support lending, with negative implications for borrowers and the broader economy.

For these reasons, dividend restrictions did not receive unqualified support from all stakeholders. And a number of additional considerations qualify the crisis-time trade-offs outlined above (ESRB (2020)).

Retaining more capital can lower borrowing costs for banks, but it could also discourage future efforts to raise equity.

A sector-wide ban on payouts can remove the stigma for those individual banks that restrict dividends, but it punishes prudent banks with sizeable capital buffers that could safely pay out their profits.

This note sheds light on these arguments in the Covid-19 context, examining the evolution of banks' equity and CDS prices, and their capitalisation and lending around the implementation of payout restrictions.

Equity prices fell in tandem with the anticipated reduction in dividends, but CDS spreads did not rise. Capitalisation rose with restrictions, and such restrictions helped banks better leverage additional capital into more lending.

To learn more: <https://www.bis.org/publ/bisbull38.pdf>

SOCIAL MEDIA MONITORING: A PRIMER

Methods, tools, and applications for monitoring the social media space,
NATO Strategic Communications Centre of Excellence



For the last twenty years, the phenomenon of social media has cemented itself as the new nexus of social interaction. With billions of users across the world, hundreds of online platforms, and a myriad of digital technologies at its backbone, social media is fundamentally reshaping our understanding of the global information environment.

Today, social media is essential infrastructure for personal conversation, public debate, and commercial communication.

While social media provides many opportunities for unprecedented information sharing, the rapid adoption of limitless communication technologies with instant amplification and global reach has also created significant vulnerabilities.

Social media have, in many cases, become a conduit for unsubstantiated information, such as rumours, hoaxes, and conspiracy theories.

Even more worrisome from a national security perspective, hostile actors are deliberately exploiting social media to spread disinformation and to conduct information influence activities with the intent of deceiving and misleading audiences to achieve their strategic aims.

Contemporary conflicts, especially those that fall within the hybrid spectrum, increasingly play out over social media, and actors such as Russia, China, Iran, and Saudi Arabia have recently expanded their efforts to manipulate the social media space.

Malicious use of social media poses a clear security challenge. The opportunities provided by new digital technologies are exploited to undermine trust in democratic institutions and legitimate news sources, to distort public discourse and opinion formation, and to influence elections and short-circuit decision-making processes.

For this reason, it is important for a wide array of stakeholders to understand what is happening on social media.

Effectively listening to conversations online and monitoring and analysing social media content is crucial for both public and private sector actors, as well as for military organisations.

This, however, is easier said than done. The complex social and technical infrastructure of the online environment makes both seeing the big picture and identifying specific pieces of information challenging.

The speed at which information flows between social media users, and the ever-changing types of data generated further complicate the picture.

The deceptive nature of disinformation and information influence activities also make detection and attribution difficult.

It has quickly become clear that attaining perfect situational awareness of the online information environment is a tall order.

Still, while much of today's information environment is essentially characterised by perpetual chaos, it is possible to study and understand it, albeit momentarily.

Even snapshots of a bigger picture are critical for operating successfully in this space.

The importance of understanding what is happening on social media has prompted the development of a wide range of tools to monitor, measure, and analyse metrics and content.

Oftentimes these tools are developed with either a commercial objective—monitoring brand engagement or customer discourse—or with a scholarly mindset— to understand wider patterns and trends.

However, these tools can also be leveraged to gain insights regarding disinformation and other security concerns.

To read more: <https://www.stratcomcoe.org/social-media-monitoring-primer>



Information influence activities

“Information influence activities are activities conducted by foreign powers to influence the perceptions, behaviour, and decisions of target groups to the benefit of foreign powers.”

Pamment et al. (2018) Countering Information Influence Activities: The Start of the Art, MSB

“NATO views **disinformation** as the deliberate creation and dissemination of false and/or manipulated information with the intent to deceive and/or mislead. Disinformation seeks to deepen divisions within and between Allied nations, and to undermine people’s confidence in elected governments.”

NATO (2020) NATO’s approach to countering disinformation: A focus on COVID-19

Final report, National Security Commission on Artificial Intelligence (756 pages)



The report emphasized that with the increased use of AI by foreign powers to spread disinformation online and launch cyberattacks, the U.S. is falling behind in guarding against such threats.

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The report: https://assets.foleon.com/eu-west-2/uploads-7e3kk3/48187/nscai_full_report_digital.04d6b124173c.pdf

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