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The New Normal: Banking in the Age of COVID-19 and Beyond

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AIMS & SCOPE OF THE JOURNAL

The Journal attempts to link conceptualists and practitioners in banking & finance and related aspects of the industry. It is aimed at providing articles that may serve as guidelines in banking and finance operations.

The ABA Secretariat welcomes opinions and comments and will be glad to consider for possible publication articles relevant to the aims and objectives of the Asian Bankers Association (ABA) and of this Journal.

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IN THIS ISSUE (VOL. XXXI, No. 1, 2020)

This issue features insights and analyses on the myriad challenges and unique opportunities that the COVID-19 pandemic has brought to financial institutions and systems alike.

It includes articles published by experts from the International Monetary Fund (IMF) and the Asian Development Bank (ADB).

It also contains materials that appeared in BRINK, the news service of Marsh & MCLennan Insights, a research institute dedicated to analyzing complex risks that are reshaping industries, governments, and societies. BRINK gathers timely perspectives from experts on risk and resilience to inform business and policy decisions on critical challenges.

The editors and staff of the ABA Journal of Banking & Finance would like to take this opportunity to thank the authors for sharing their materials with ABA and its members.

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What Does Diversity and Inclusion Look Like in Financial Services?

Ayçe Nisancioglu
Senior Consultant, Mercer

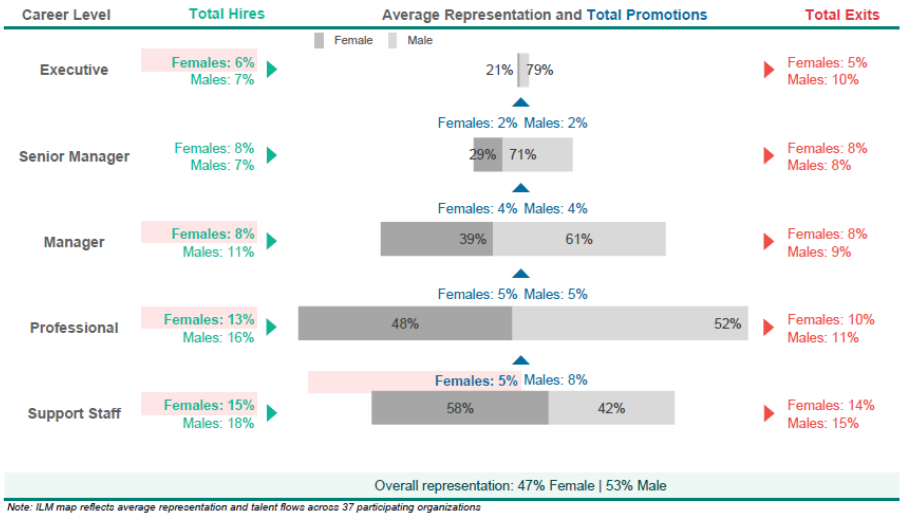
In recent years, there has been good progress in the financial services industry in shifting mindsets on diversity and inclusion (D&I). Leaders have moved from looking at D&I as a box-checking exercise to forming effective business strategies that drive real business outcomes.

Diversity refers to the traits and characteristics that make an individual unique. Although diverse representation of underrepresented groups in an organization is important, inclusion — where behaviors and social norms ensure people feel valued and respected — is equally so.

When Women Thrive, Businesses Thrive is a comprehensive study on workforce gender equality and covers different industries, from energy to financial services. The research includes 126 organizations from financial services, representing close to one million employees in a wide geography of countries including Asia, Australia, New Zealand, Europe, Latin America, the Middle East and Africa, and North America.

Women in the C-Suite

The overall representation of women at an average organization is 47% across all functions and career levels. Women comprise 58% of support staff and 21% of executives. Among financial services organizations participating in the survey, there are fewer women compared to men entering the workforce, and women are hired at lower rates compared to men in all levels, except the senior manager level.



Internal Labor Market Map on Financial Services Organizations
(Source: Internal Labor Market Analysis, Mercer)

The executive committee of a bank in France, ING France, has eight members, out of which five are women — the CEO, the CFO, the CHRO, the COO and the head of wholesale banking — all of whom have profit and loss responsibility. The talent pool one level below is 30% women. The company doesn't just recruit horizontally; it fosters a diverse talent pipeline throughout the organization to achieve gender balance on the executive committee.

The CEO of ING Bank and former secretary of state of economic affairs/minister for foreign trade in the Dutch government, Karien Van Gennip, says "Every time we recruit, I make sure to have at least one woman in the top three for each position. What matters is the awareness at manager level, to promote diversity in recruitment and to enable managers to help their team members grow."

Developing a map, like the one above, using career levels to examine an organization's representation, hiring, promotions and exits by gender can help identify barriers to achieving a balanced gender representation. Actions such as recruitment, promotions and pay equity within a targeted period can also help organizations achieve gender balance, according to 2020 survey results from Mercer.

Developing Diverse Talent

The survey research also shows a shortage of sponsorship and mentorship programs. Sponsors are senior executives who actively support an employee's career and advocate for their success in an organization, and mentors are experienced employees who provide guidance and direction to employees regarding their career advancement. Sponsorship and mentorship programs have the potential to level the playing field between men and women in recognizing high-potential talent — those who have the ability, commitment and motivation to advance to a more senior position in an organization. Globally, only 35% of organizations have high-potential programs for women.

Women and underrepresented employee groups need to be represented fairly in formal development programs such as these, especially those intended for leadership development.

Organizations should identify the roles, jobs and parts of the business necessary for advancing peoples' careers — as well as the people to work with or for.

As Van Gennip advises, "You need to have at least one diverse candidate in the talent pool, and you need to start coaching and mentoring, be a friend, build a network, celebrate each other's success, be inclusive toward other diverse talent, do not see them as a competitor."

Business leaders can take action by integrating cultural competencies and inclusive behaviors into job descriptions and performance measures, equipping managers to support D&I by attending training, sharing learning and modeling inclusive behaviors. Equally important are developing new avenues for mentorship to facilitate networking opportunities, sponsoring underrepresented employees or participating in business resource groups. These programs would need to be set up and carried out with the initiative of HR and the support of leadership.

Engaging Men

Men are involved in D&I at 49% of financial services organizations. This is a bright spot — globally, this figure is up 10 percentage points from our 2016 survey. However, this is clearly still too low! Given that men still hold the majority of leadership roles, it is critical to ensure that they are also aware and trained to support women in the organization.

"Eighty percent of leadership positions are held by men, so if we do not identify more men to support us, we will not get there," says Van Gennip.

Actions range from listening to men's perspectives to engaging men as change agents, managers and partners in developing solutions.

Balancing Work and Life

We see a link between organizations that have a comparatively small number of women in key organizational roles and the lack of flexible working arrangements.

Workplace flexibility is increasingly important, especially for women, who are still more likely to fill caregiving roles — for both children and other family members.

Seventy percent of organizations in financial services offer a variety of flexible work options (for example, remote working, compressed workweeks, part-time schedules). However, only 45% value remote working as much as in-person working and only 42% of leadership actively promotes the uptake of flexible work options for all employees.

"ING is a digital bank; flexible working conditions are very good. Women at ING feel at home. If you make all

people feel included and at ease," Van Gennip adds, "it is much easier to be at ease at work."

Critical actions include formalizing flexible work options by auditing existing practices and needs and identifying the gaps in the current remote or blended work arrangements. Organizations can take steps that can deliver enhanced productivity, profitability and employee well-being. They can also explore innovative accommodations for primary caregivers.

Post-COVID Future of Work

Organizations have a unique opportunity to improve D&I through their COVID-19 response efforts. Determine appropriate cost-management actions or refine the prior actions taken; prepare for employees returning to the workplace; and plan for a different future and opportunities for transformation beyond return-to-work.

"In the post-COVID-19 society," says Van Gennip, "we have to rethink our social contract, our values to achieve a more sustainable and inclusive society. As businesses, we have a role to play to embrace change and make sure that our company is in tune with the expectations of the external world."

Conducting pulse surveys and virtual focus groups will help organizations understand the return-to-work experience of unique segments. Armed with this information, organizations will be ready to redesign the D&I function and overall strategy in preparation for the next wave of D&I transformation.

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Cyber Risk is the New Threat to Financial Stability

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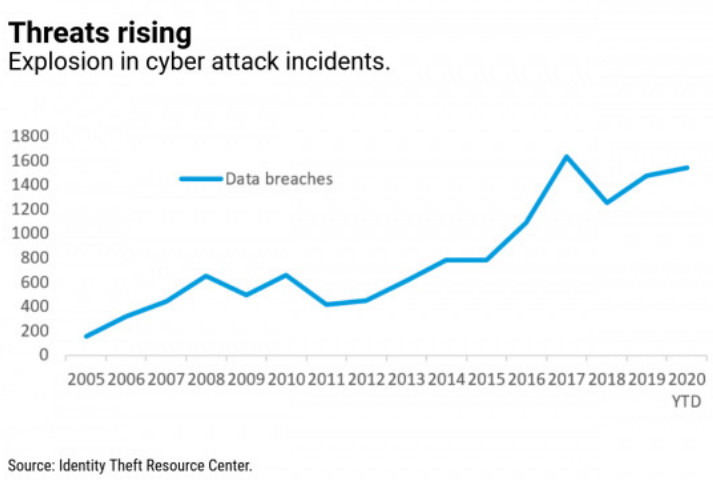
Many of us take for granted the ability to withdraw money from our bank account, wire it to family in another country, and pay bills online.Amid the global pandemic, we've seen how much digital connection matters to our everyday life. But what if a cyberattack takes the bank down and a remittance doesn't go through?

As we become increasingly reliant on digital financial services, the number of cyberattacks has tripled over the last decade, and financial services continue to be the most targeted industry. Cybersecurity has clearly become a threat to financial stability.

Given strong financial and technological interconnections, a successful attack on a major financial institution, or on a core system or service used by many, could quickly spread through the entire financial system causing widespread disruption and loss of confidence. Transactions could fail as liquidity is trapped, household and companies could lose access to deposits and payments. Under extreme scenarios, investors and depositors may demand their funds or try to cancel their accounts or other services and products they regularly use.



Hacking tools are now cheaper, simpler and more powerful, allowing lower-skilled hackers to do more damage at a fraction of the previous cost. The expansion of mobile-based services (the only technological platform available for many people), increases the opportunities for hackers. Attackers target large and small institutions, rich and poor countries, and

operate without borders. Fighting cybercrime and reducing risk must therefore be a shared undertaking across and inside countries.

While the daily foundational risk management work — maintaining networks, updating software and enforcing strong 'cyber hygiene' — remains with financial institutions, there is also a need to address common challenges and recognize the spillovers and interconnections across the financial system. Individual firm incentives to invest in protection are not enough; regulation and public policy intervention is needed to guard against underinvestment and protect the broader financial system from the consequences of an attack.

In our view, many national financial systems are not yet ready to manage attacks, while international coordination is still weak. In new IMF staff research, we suggest six major strategies that would considerably strengthen cybersecurity and improve financial stability worldwide.

Cyber mapping and risk quantification

The global financial system's interdependencies can be better understood by mapping key operational and technological interconnections and critical infrastructure. Better incorporating cyber risk into financial stability analysis will improve the ability to understand and mitigate system-wide risk. Quantifying the potential impact will help focus the response and promote stronger commitment to the issue. Work in this area is nascent—in part due to data shortcomings on the impact of cyber events and modelling challenges—but must be accelerated to reflect its growing importance.

Converging regulation

More internationally consistent regulation and supervision will reduce compliance costs and build a platform for stronger cross-border cooperation. International bodies such as the Financial Stability Board, Committee on Payments and Market Infrastructure, and Basel Committee, have begun to strengthen coordination and foster convergence. National authorities need to work together on implementation.

Capacity to respond

As cyberattacks become increasingly common, the financial system has to be able to resume operations quickly even in the face of a successful attack, safeguarding stability. So-called response and recovery strategies are still incipient, particularly in low-income countries, which need support in developing them. International arrangements are necessary to support response and recovery in cross-border institutions and services.

Willingness to share

More information-sharing on threats, attacks, and responses across the private and the public sectors will enhance the ability to deter and respond effectively. Yet, serious barriers remain, often stemming from national security concerns and data protection laws. Supervisors and central banks need to develop information sharing protocols and practices that work effectively within these constraints. A globally agreed template for information sharing, increased use of common

information platforms, and expansion of trusted networks could all reduce barriers.

Stronger deterrence

Cyberattacks should become more expensive and riskier through effective measures to confiscate crime proceeds and prosecute criminals. Stepping up international efforts to prevent, disrupt and deter attackers would reduce the threat at its source. This requires strong co-operation between law enforcement agencies and national authorities responsible for critical infrastructure or security, across countries and agencies. Since hackers know no borders, global crime requires global enforcement.

Capacity development

Helping developing and emerging economies build cybersecurity capacity will strengthen financial stability and support financial inclusion. Low-income countries are particularly vulnerable to cyber risk. The COVID-19 crisis has highlighted the decisive role that connectivity plays in the developing world. Harnessing technology safely and securely will continue to be central to development and with it a need to ensure that cyber risk is addressed. As with any virus, the proliferation of cyber threats in any given country makes the rest of the world less safe.

Addressing all these gaps will require a collaborative effort from standard-setting bodies, national regulators, supervisors, industry associations, private sector, law enforcement, international organizations, and other capacity development providers and donors. The IMF is focusing its efforts on low-income countries, by providing capacity development to financial supervisors, and by bringing the issues and perspectives of these countries to the international bodies and policy discussions in which they are not adequately represented.

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Navigating Capital Flows — An Integrated Approach

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In a continuous effort to help countries manage volatile cross-border capital flows, the IMF has taken a major step toward a new analytical macroeconomic framework that can guide appropriate policy responses. The work reflects evolving thinking on macroeconomic policy and will feed into the upcoming review of the IMF's Institutional View on the Liberalization and Management of Capital Flows, which currently guides the Fund's advice and assessments of members' policies.

International capital flows provide significant benefits for economic development but can also generate or amplify shocks. This dilemma has long posed challenges for policymakers in many open economies.
While flexible exchange rates can act as a useful shock absorber in the face of capital flow volatility, this mechanism does not always offer sufficient insulation, in particular when access to global capital markets is interrupted or market depth is limited.

Diverse approaches

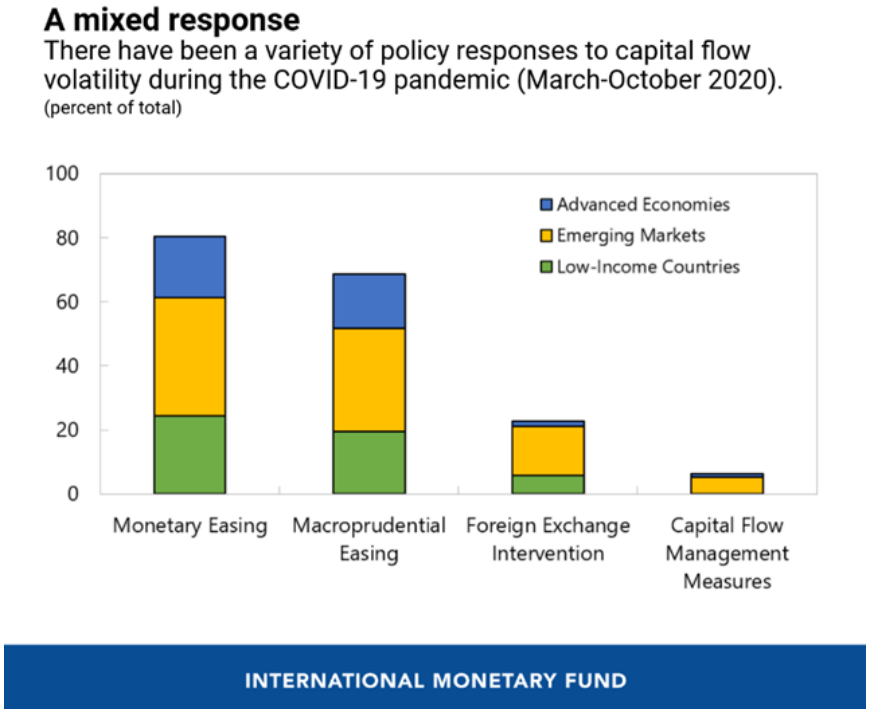
Many policymakers reach for a mix of policy tools to complement interest rate policy when dealing with capital flows. These tools include macroprudential measures, foreign exchange intervention, and capital flow management measures. Such diverse approaches were also used during the COVID-19 crisis, with significant differences in responses between countries.

Despite the widespread use of the various tools, to date, there has been no clear conceptual framework to guide the integrated usage of these tools.

Multiple tools for stability

A new paper, "Toward an Integrated Policy Framework (IPF)," starts filling the gap. It brings together insights from new models, as well as empirical work and case studies and lays out a coherent framework for the use of multiple tools to achieve macroeconomic and financial stability.

Our analysis suggests that there is no "one-size-fits-all" response to capital flow volatility, nor is it a case of "anything goes" or that all policies are equally effective. Optimal policies depend on the nature of shocks and country characteristics. For instance, the appropriate policy response in a country with less developed financial markets and large foreign currency



debts may differ from that of a country that does not have foreign currency mismatches on their balance sheets, or those that can rely on more sophisticated (deep and liquid) markets.

Generally, in countries with flexible exchange rates, deep markets, and continuous market access, full exchange rate adjustment to shocks remains appropriate. However, when a country has certain vulnerabilities, such as shallow markets, dollarization, or poorly anchored inflation expectations, while flexible exchange rates continue to provide significant benefits, other tools can play a useful role as well. In particular, macroprudential measures, foreign exchange intervention, and capital flow management measures can enhance monetary policy autonomy so monetary policy can adequately focus on containing inflation and promoting stable economic growth. The same tools—including precautionary capital flow management measures on capital inflows, applied before shocks hit—can also help lower financial stability risks.

Our findings do not rationalize indiscriminate use of tools. In particular, IPF tools should not be used to maintain an over- or undervalued exchange rate. Also, while IPF tools help cope with shocks, most of the time they cannot fully offset underlying vulnerabilities. Thus, they are no substitute for deep markets, healthy balance sheets, and strong institutions. Efforts to promote the development of markets and institutions remain important to complement sound macroeconomic policies.

Additional steps needed

The new framework represents a significant advance in thinking about when various tools should and should not be used and how these tools can work together to achieve better outcomes. IMF staff is focusing on several areas to complete the analysis:

Long-term impacts. The benefits of IPF tools need to be balanced against possible costs such as slower market development and increased risk-taking. Protracted reliance on some of the tools might perpetuate the very vulnerabilities that rationalize their use. For example, persistent interventions might feed a (false) sense of security about future exchange rate developments that leads firms or households to take on more foreign currency debt, thus increasing balance sheet vulnerabilities.

Fiscal aspects. The fiscal stance and public debt levels matter for countries' vulnerability to shocks, even as fiscal policy itself tends to be less suitable than IPF tools for managing capital flows. The models will be further extended to examine more closely the interaction between different fiscal policies and IPF tools.

Multilateral considerations. A country's optimal policy mix also depends on the actions of other countries and global institutions. Use of IPF tools may have positive spillovers, especially if they improve macroeconomic and financial

stability, and facilitate trade. But there may also be negative spillovers. For instance, capital flow management measures may deflect capital flows to other countries, where such flows may contribute to currency overvaluation and overheating.
Safeguards and metrics. In the IPF framework, the tools are aimed at well-defined macroeconomic and financial stability objectives. In practice, however, tools might be misused and support under/overvalued exchange rates, substitute for warranted macroeconomic adjustment, or impede price discovery and competition. Differentiating between appropriate and inappropriate deployment of IPF tools will require developing suitable metrics for assessing their use.

Work in each of these areas will advance in the period ahead and should result in improved policy guidance for countries facing volatile capital flows.

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The Credit Risk Systems of Most Banks Are Not Fit for Purpose

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As COVID-19 locked down many economies and financial markets erupted in turmoil, bank credit risk departments were faced with a deluge of urgent questions, some of them existential. How large is our direct and indirect exposure to oil and gas companies? For how long can airlines service outstanding credit lines? Will our commercial property portfolio hold up? Under what conditions will we consume our capital buffer?

Confronted with many time-critical analyses to complete, many credit risk departments (re-) discovered an unsettling truth: Credit IT and data infrastructure are not up to the job. Credit systems at many banks are monolithic and inflexible with complex and poorly constructed links to source systems. The data they contain is often inaccurate, incomplete and out-of-date.

As a result, completing even basic sensitivity analyses at a client or portfolio level can be a major headache, requiring extensive manual work. These delays can undermine decision-making and prevent decisive action.
The problem, however, is not new. Most banks experienced similar problems in the wake of the global financial crisis. So, why haven't they managed to fix their credit risk infrastructure?

Too Hard to Fix?

Many banks have relegated their legacy credit risk infrastructure to the "too-hard-to-fix" bucket. Credit risk systems tend to be old and have evolved to comply with successive waves of regulatory requirements over a long period. The resulting legacy environment has become a Gordian knot that is simply too costly and too risky to untie. Credit risk infrastructure can contain thousands of daily data feeds, dozens of different processing environments and millions of lines of code.

However, banks have become adept at workarounds to compensate for poor credit infrastructure. The low cost of labor has allowed banks to deploy large numbers of offshore staff to perform manual analyses and data remediation. In the short run, such an approach was easier and cheaper than replacing existing infrastructure. In the wake of the most recent crisis, however, this approach seems like a false economy.

The upside of sorting out the credit infrastructure mess looks more compelling than ever. The quality and efficiency

of banks' credit risk decision-making will improve across the board, allowing them to manage their capital more effectively. They will be in a better position to proactively manage clients, support the growth strategies of the front-line businesses and realize cost savings from the operational burden of manual work and data remediation.

To re-platform credit risk IT effectively, banks should learn the lessons from peers that have successfully transformed from old to new technology. We have condensed these lessons into the following five areas.

Know Where You're Going

Banks must have a clear and detailed picture of the future credit risk IT architecture and how it supports the future state vision of the credit risk function. Without this north star, banks have no basis to assess whether proposed technology investments are moving toward a strategic solution or not. Agreeing on the architecture also forces banks to debate and resolve the key business trade-offs involved with more difficult architectural decisions. Unresolved core design questions can become highly politicized and block meaningful action to remediate deep-seated technology issues.

Deliver, Deliver, Deliver

Successful credit risk re-platforming is a complex and time-consuming exercise. For the largest multi-national banks, fully decommissioning critical credit infrastructure and switching over to a new environment can take years. Waiting until the end of the journey to deliver all benefits in a "big bang" always ends in disappointment.

Leading banks are following migration paths that deliver benefits from very early in the program, producing tangible improvements at regular intervals. In this way, they build momentum to ensure that all stakeholders continue to engage with and support the program.

Add Disruptors

Pioneer banks are looking to incorporate modern technology concepts — microservices, cloud storage, stateless calculators and data rules libraries — into their solutions.

Risk teams tend to be conservative by nature, especially when it comes to adopting new technology. Many banks replace old systems with new systems that look very similar. Against the backdrop of rapid improvements in data management, storage and calculation technology, such an approach is not only expensive but also will put banks at a competitive disadvantage.

One successful bank is seeding experienced engineers from non-risk backgrounds as technology disruptors into the risk architecture teams to ensure that the new technologies flow into emerging designs.

One Dream Team

Traditional ways of working between risk and IT persist at many large banks — despite extensive efforts to adopt agile methodologies. This involves risk practitioners giving their requirements to change teams that act as go-betweens with IT. IT teams take these requirements and build or procure a system that is tested by the risk practitioners (or change teams). Defects are logged and passed back to the IT team for remediation. And the cycle continues through multiple iterations. This approach is not only lengthy but also often results in systems that are not fit-for-purpose.

Leading banks are employing a fully joined-up approach through the entire development lifecycle. Critically, credit officers, credit control staff, quantitative data analysts, IT architects, and other data specialists commit significant time through the entire design, build and rollout process — and are evaluated on the team's success. Not only does this approach speed up decision-making but also it ensures that the new systems incorporate features that address the most important practical needs of the users.

Clean In, Clean Out

Innovative banks are addressing the perennial issue of poor-quality data as an integral part of their re-platforming efforts, putting in place data management mechanisms to use "golden sources" of credit risk data and ensure that data in these golden sources is correct. Inaccurate, incomplete and out-of-date data has long been the Achilles Heel of credit risk. New calculation engines, data repositories and reporting engines count for little if the data that they are using are of poor quality. It's no coincidence that credit data has become a major focus for regulators.

Looking Ahead

Credit officers and banks with sub-standard credit risk infrastructure are vulnerable in today's highly uncertain and volatile world. Banks that move to a more modern architecture will facilitate informed credit decision-making and enjoy a distinct competitive advantage.

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Emerging and Frontier Markets: Policy Tools in Times of Financial Stress

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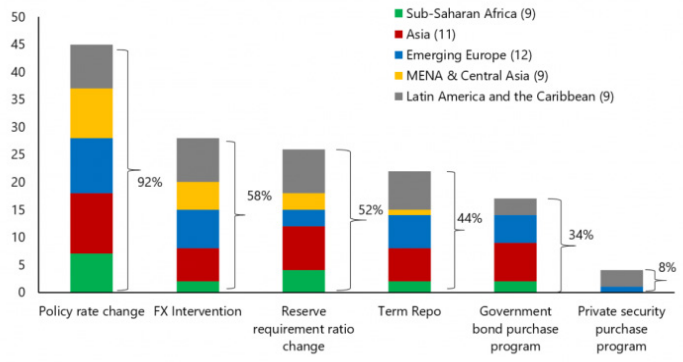
After the unprecedented hit to economic activity in emerging market economies from the COVID-19 pandemic, their economic output is projected to shrink by 3.3 percent in 2020. Central banks across emerging markets responded swiftly and forcefully with an unprecedented response of their own. They did this by using a variety of policy tools and, to a great extent, helped stabilize markets and keep them functioning.

Nearly all central banks cut rates, most of them intervened in currency markets, and about half of them cut reserve requirements for banks, which provided liquidity to the financial system and eased credit conditions. And some 20 emerging market central banks for the first time launched quantitative easing—formally known as asset purchase programs—by buying government and private sector debt to alleviate stress and help keep markets functioning. Our recent analysis in the Global Financial Stability Report shows these asset purchase programs have generally proven effective, including by helping to stabilize local financial markets.

Central bank policy actions
Strong action by central banks helped cushion the severity of the crisis.
(number of central banks on y-axis; percent of sample in brackets)



Sources: IMF central bank intervention database; and IMF staff calculations.

INTERNATIONAL MONETARY FUND

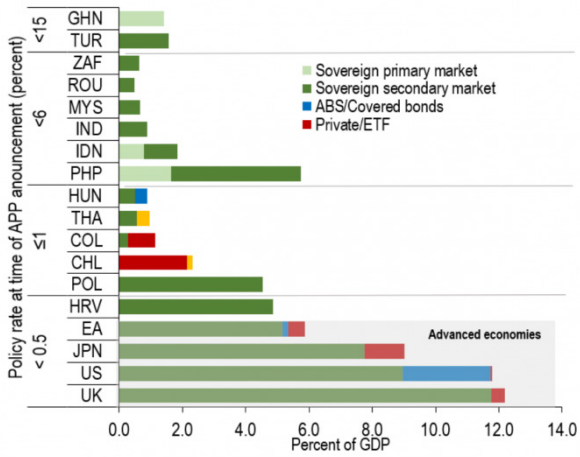
Quantitative easing—a first for emerging markets

The motivation for quantitative easing by emerging market central banks varied across countries. As shown in the chart below, these asset purchases can be grouped into 3 main policy objectives. First, central banks with policy rates well

above zero tended to use asset purchases as a tool to improve bond market functioning (India, South Africa, Philippines). Second, central banks with policy rates closer to the "zero-lower bound" (Chile, Poland, Hungary) partially sought a course similar to advanced economy central banks, where they used quantitative easing to ease financial conditions and provide additional monetary stimulus, as well as for market functioning and liquidity objectives. And, third, some central banks explicitly stated that one of their objectives was to temporarily ease government financing pressure in the face of the pandemic (Ghana, Guatemala, Indonesia, and the Philippines).

Central bank asset purchases

Emerging market central banks bought government and private sector debt to help keep markets functioning.



Sources: National sources; and IMF staff calculations.

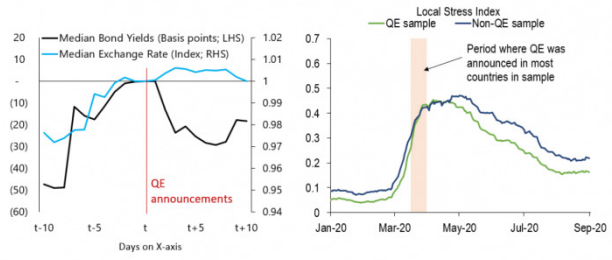
INTERNATIONAL MONETARY FUND

Did asset purchases work?

After almost 6 months of quantitative easing in action, our analysis suggests that these purchases had a generally positive impact on local financial markets. Importantly, this was the case even when accounting for policy rate cuts, additional large-scale asset purchases by the Federal Reserve, and the strong rebound in global risk appetite. In particular, asset purchases by emerging market central banks helped lower government bond yields without seeing accompanying depreciations in local currencies. They also gradually helped lower local market stress.

Effect of asset purchases on bond yields, currencies, and local market stress

Asset purchases helped ease funding costs and market stress.



Sources: Bloomberg, IMF staff calculations.

Note: The left panel plots the changes in bond yields and exchange rates. The blue line going up implies a currency depreciation, and the black like going up implies higher bond yields. The right panel plots an indicator of local market stress for countries that have quantitative easing (QE) programs in place (green), and for countries without QE programs (blue). See October 2020 GFSR Chapter 2 for more information.

INTERNATIONAL MONETARY FUND

An expanding policy toolkit

Beyond the current pandemic, the positive experience with asset purchases may motivate more emerging market central banks to consider unconventional monetary policy as a key part of their policy toolkit, especially when conventional policy space is limited. Asset purchases may be suitable for some central banks, depending on the market conditions they face, and their ability to implement them successfully.

But policymakers should consider both the benefits and potential significant costs of quantitative easing. If asset purchases—especially if large-scale and open-ended—are used regularly in the future, then several risks may arise: institutional and central bank credibility may be weakened; capital outflow pressure may intensify, especially in countries with weaker fundamentals; and concerns about fiscal dominance may arise among investors. These risks need to be weighed before central banks embark on a shift in their policies and their implementation.

More work to do

To sum up, emerging market asset purchase programs can be helpful, but further evaluation is needed as more data become available on their effectiveness, especially if these purchases continue.

A few lessons are already emerging: Asset purchases appear to be more effective when used jointly as part of a broader macroeconomic policy package. Transparency and clear communication are crucial to minimize risks to the credibility of central banks with asset purchases—especially in countries with weaker institutional frameworks. In most cases, asset purchase programs should be limited in time and scale and should be linked to clear objectives. Finally, purchases should preferably be made in secondary markets, as purchases in the primary market or at below market rates can affect the process of determining the fair price of bonds. Primary market purchases can also raise concerns that central banks will sacrifice their price stability mandated objective in order to finance the government (fiscal dominance).

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Fintech is Emerging as a Driver of Innovative Financial Solutions During COVID-19

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Financial technology (fintech), or the fusion of finance and technology, has emerged as a new model for financial innovation. Fintech covers a constellation of complementary technologies—including mobile networks, big data, cloud computing, distributed ledger technology, artificial intelligence (AI), and data analytics—that jointly shape a broad swathe of operations in the financial industry.

The past few years have witnessed the rapid growth of investment in fintech. It has already left its imprint on a wide array of financial services, including microfinance, blockchain, payments, personal finance, digital banking, insurance, wealth management, capital markets, money transfers, and mortgages.

Fintech enhances financial inclusion and broadens access to financial services by capitalizing on technological advances. It mitigates the risks and lack of information associated with underserved households and small and medium-sized enterprises (SMEs) via digital financial services and enhanced risk-assessment skills.

Specialized digital banking businesses serve specific sectors and demographic groups via business-to-consumer and business-to-business debit and credit extended to underbanked and unbanked individuals, households, and SMEs. In doing so, fintech not only improves the variety and efficiency of financial services, but also enhances financial inclusion. According to a recent ADB study, digital financial solutions can address about 40% of unmet demand for payment services and about 20% of credit requirements of poor households and small businesses in Asia.

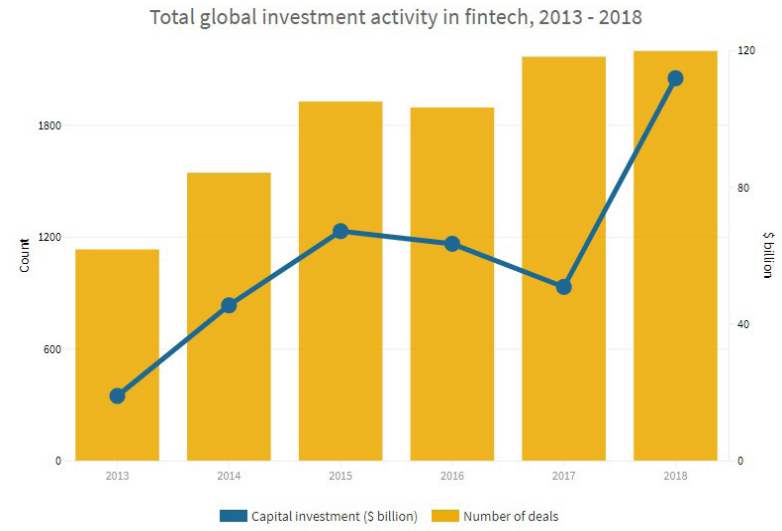
Fintech's role as a driver of financial inclusion is especially pronounced in financially underdeveloped emerging markets. A 2019 study documented a positive association between financial innovation and financial inclusion in a sample of six South Asian countries. A recent report from CB Insights shows that customers in emerging African markets have benefited from digital microfinance, especially mobile payments, microcredit, and saving accounts.

Around Asia, examples can be found of how financial inclusion can be promoted via fintech. For example, an AI-enabled credit score system supported by ADB helped more than 8,000 SMEs in the Greater Mekong Subregion obtain credit of $50,000 each through the end of March 2018. An ADB-backed cloud-based banking app in the Philippines and branchless banking in Indonesia have contributed to financial inclusion in member economies of the Association of Southeast Asian Nations. Asia is now a major player riding the global fintech wave, hosting 34 out of top 100 global fintech innovators at the end of 2019.

The role of fintech in improving financial inclusion comes to the fore during big economic shocks such as the COVID-19 pandemic. The poor suffer disproportionately during such shocks. Their hardship is exacerbated by lack of access to financial services, and they often do not have online bank accounts.

Even in advanced economies like the United States, delivering financial assistance to the unemployed and small businesses has emerged as a major problem during the pandemic. The nimbleness, flexibility, and contactless nature of fintech can facilitate social distancing. For example, on 14 April 2020, PayPal and other fintech companies in the United States were approved to participate in a government program to extend loans to small businesses.

The COVID-19 crisis creates opportunities to further expand the role of fintech in financial inclusion in developing



Source: ADB recreated chart based on data from Consultancy.eu. 2019. Global FinTech Investment More than Doubled to $112 billion.

economies. By extending financial services to vulnerable groups, fintech contributes not only to inclusive growth but also to the economic resilience of the poor and SMEs in times of economic shock.

Developing economies can harness fintech to keep the poor and SMEs connected to the financial system even in the face of crisis. In particular, fintech can efficiently unlock new sources of finance for vulnerable groups that are underserved by banks and other traditional financial institutions.

In developing countries in Asia, fintech companies are coming up with innovative solutions to fund SMEs struggling to stay afloat amid COVID-19. They are providing new turn-key loan origination and underwriting platforms to allow banks and lenders to provide financing for small businesses.

These platforms encompass risk assessment and insurance capabilities. Fintech also offers innovative finance solutions that are valuable to low-income groups during pandemics. For instance, the Indonesian ride-hailing delivery start-up Gojek offers a cash-in, cash-out platform for financial services. India's Eko, a financial transactions platform, is trying to create "human ATMs" out of anyone with a mobile phone and a little cash.

While financial innovation promotes financial inclusion, it also raises regulatory challenges such as cybersecurity, other technical vulnerabilities, data governance, and privacy protection. At a broader level, regulators must strike the right balance between enabling fintech innovations that benefit the poor and SMEs while also monitoring and managing the risks associated with innovation.

Given the frenetic pace of innovation in the fintech sector, which is likely to pick up even more speed in the increasingly digital post-COVID-19 world, regulatory capacity must be strengthened to keep pace with change.
Finally, developing economies must make digital infrastructure investments to improve the interface between the digital and nondigital economies for the poor.

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A Leap Forward on Cross-Border Payments

Tobias Adrian
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When paying for coffee, we swipe, tap, wave, and soon may wink—a quick and painless exchange of coffee for money. But when paying for imports or sending remittances, we often fill-out forms, wait for days, and pay—too much.

Progress to improve cross-border payments has been slow, but is just about to take off. That is how history evolves—one small step at a time, until it suddenly leaps forward. The confluence of new technologies and renewed determination among policymakers are making significant improvements possible. Meanwhile, households and firms have come to expect (and demand) better services.

The stakes are high. Changes to cross-border payments have a bearing on the stability of the international monetary system, on financial inclusion, and on the efficiency of trade and financial markets. And reforms may unlock innovation and much needed growth, particularly following the COVID-19 crisis. But a leap forward will only be possible if the world works together.

And it has—in an exceptional manner. A roadmap to decisively enhance cross-border payments, led by the Financial Stability Board along with a wide set of institutions including the IMF, has just been endorsed by the G20. This is not simply one more report, but a set of concrete reforms, practical steps, and milestones that specific institutions will be held accountable to implement. Meanwhile, the IMF just published a staff paper on the macro-financial implications of new forms of digital money available across borders. Together, these papers provide a clear path forward, mindful of the challenges that lie ahead. If implemented, reforms have the potential to be transformative by making cross-border payments cheaper, faster, more transparent, and more widely accessible.

The next step

While international cooperation has gotten us this far, it will be all the more important to implement, and potentially even surpass, the G20 roadmap. Specifically, we need cooperation in four broad areas to ensure improvements to cross-border payments are effective, sustainable, safe, and equitable.

First, solutions to cross-border payments must be designed and pursued with all countries in mind. Countries differ considerably in implementation capacity, existing infrastructure, and financial sector development. And with different countries come different users. These cover large companies operating in less liquid markets, cost-conscious small- and medium-sized enterprises, and the 1 billion people sending and receiving remittances (which at an average cost of 7 percent are still double the target set by United Nations' Development Goals).

The G20 roadmap is appropriately flexible given this diversity of needs. Some solutions involve improvements to existing systems, such as devising trustworthy digital identities essential for financial inclusion. Others are more exploratory and consider a world in which we can freely trade digital currencies across borders, much like we send emails today. It is

essential that all these solutions continue to be pursued, discussed, tested, and some discarded—with an open mind.

Second, cooperation is essential to overcome countries' "inaction bias," and ensure solutions are widely applicable. A simple example is the operating hours of countries' settlement systems: only when two countries extend hours so they overlap can cross-border transactions be settled in real time. No country will want to act alone. Even then, the two systems must talk to each other. But interoperability is not a given. It requires basic technological, design, legal, and regulatory standards. Cooperation will ensure these satisfy the needs of a wide community, which the IMF can help congregate.

Third, cooperation is critical to build solutions that benefit from the experience and perspective of all relevant actors—such as central banks, regulators, finance ministries, anti-trust agencies, data protection agencies, and international organizations. The Financial Stability Board report was exemplary in this respect. Moreover, the public and private sectors must cooperate, recognizing each other's strengths: private companies to innovate and interact with users, and the public sector to regulate, supervise, and ultimately provide trust to the system. Where possible, public-private solutions should be explored.

Lastly, cooperation means recognizing the macro-financial effects that one country's policies can have on others. For instance, new forms of digital money issued in major reserve currencies could improve domestic as well as cross-border payments. But they could also induce citizens abroad to forego their domestic currency, especially in countries with high inflation and volatile exchange rates. And digital money could potentially facilitate bank runs out of these countries. Meanwhile, source countries could see more volatile capital inflows and central bank balance sheets. Moreover, it is unclear if capital account restrictions, which many countries adopt, can be redesigned so they are not circumvented by digital money. Finally, the use of digital money could raise significant risks to financial integrity. These and other scenarios are detailed in our new paper.

Global links

Monetary policy, financial stability, capital flows, international reserves—all could be affected by transformations in cross-border payments, with implications for the international monetary system. The IMF's founding members understood this link, which to some extent lies behind the vision to "assist in the establishment of a multilateral system of payments," as stated in the Articles of Agreement.

Today, the IMF continues to play an active role in this space, working hand-in-hand with other international organizations. Our near-universal membership can help ensure that the digital revolution benefits people in all countries. And our global perspective can help recognize spillover effects, as well as provide a common forum to address the underlying policy dilemmas. Let's engage on this promising path together.

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Fiscal Policy for an Unprecedented Crisis

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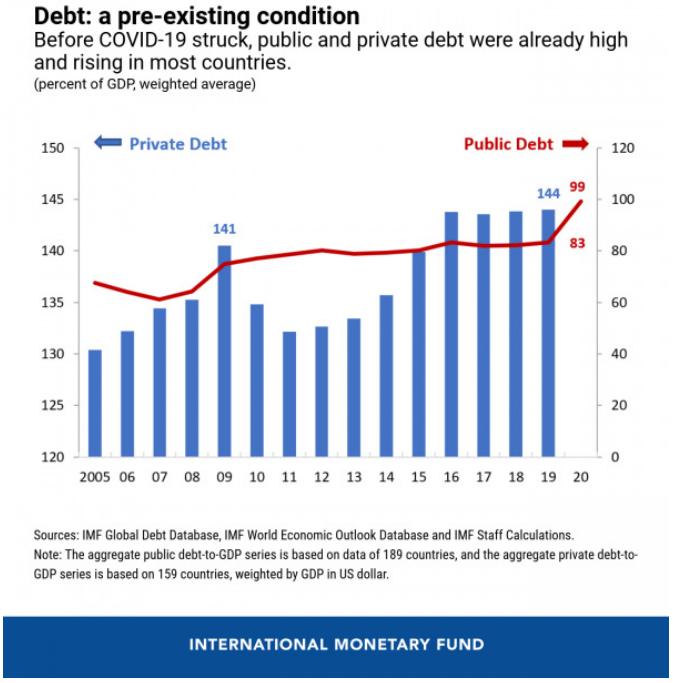
The COVID-19 crisis has devastated people's lives, jobs, and businesses. Governments have taken forceful measures to cushion the blow, totaling a staggering $12 trillion globally. These lifelines have saved lives and livelihoods. But they are costly and, together with sharp falls in tax revenues owing to the recession, they have pushed global public debt to an all-time high of close to 100 percent of GDP.

With many workers still unemployed, small businesses struggling, and 80-90 million people likely to fall into extreme poverty in 2020 as a result of the pandemic—even after additional social assistance—it is too early for governments to remove the exceptional support. Yet many countries will need to do more with less, given increasingly tight budget constraints.

The October 2020 Fiscal Monitor examines countries' experiences managing the crisis and discusses what governments can do in the different phases of the pandemic to save lives, reduce the impact of the recession, and revive growth and job creation.

Policies during the lockdown phase

Since the start of the COVID-19 crisis, governments have focused on doing whatever it takes to limit its consequences. The massive fiscal support provided since the start of the COVID-19 crisis has succeeded in protecting people and preserving jobs.



Public health measures that have contained the spread of the virus—such as large-scale testing, tracing, and public information campaigns—have helped restore confidence and created the conditions for the safe reopening of businesses.

Unemployment benefits and wages subsidies (as in most European economies) have helped preserve jobs or living standards. Cash transfers have been especially useful to support the poor and informal workers and self-employed who lost jobs. Liquidity support to firms have prevented a wave of defaults and mass layoffs. This is especially important for small- and medium-sized firms that represent a large share of employment.

Although the global fiscal response to the crisis has been unprecedented, responses by individual countries have been shaped by their access to borrowing as well as their public and private debt levels heading into the crisis.

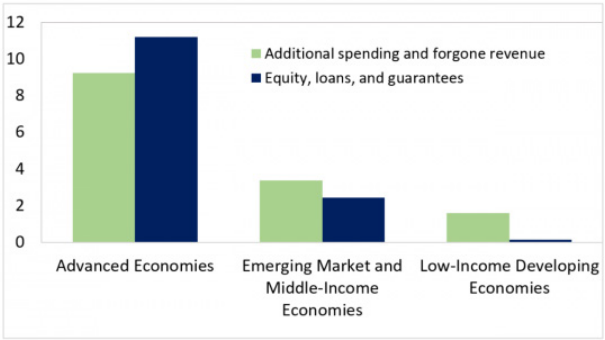
In advanced economies and some emerging market economies, central bank purchases of government debt have helped keep interest rates at historic lows and supported government borrowing. In these economies, the fiscal response to the crisis has been massive.

In many highly indebted emerging market and low-income economies, however, governments have had limited space to increase borrowing, which has hampered their ability to scale up support to those most affected by the crisis. These governments face tough choices.

Limited room for maneuver

High debt burdens have hampered the fiscal policy response, especially in emerging market and low-income economies.

(announced measures as of September 11, 2020, in percent of GDP)



Sources: Database of Country Fiscal Measures in Response to the COVID-19 Pandemic and IMF staff estimates.
Note: The timeframe for the announced measures is country-specific, but the bulk of the measures announced so far are short-term crisis-response measures to be implemented in 2020-21. Country group averages are weighted by GDP in US dollars adjusted by purchasing power parity.

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A fiscal roadmap for the recovery

As economies tentatively reopen, but uncertainty about the course of the pandemic remains, governments should ensure that fiscal support is not withdrawn too rapidly. However, it should become more selective and avoid standing in the way of necessary sectoral reallocations as activity resumes. Support should shift gradually from protecting old jobs to getting people back to work—for example, by reducing job retention programs (wage subsidies), reintroducing job search requirements, and training new skills—and helping viable but still-vulnerable firms safely reopen. With low interest rates and high unemployment, boosting public investment—starting with maintenance and ramping up projects—can create jobs and spur economic growth.

Emerging market and low-income economies facing tight financing constraints will need to deliver more with less, by reprioritizing spending and enhancing its efficiency. Some may need further official financial support and debt relief. Governments should also adopt measures to improve tax compliance and consider higher taxes for the more affluent groups and highly profitable firms. The ensuing revenues would help pay for critical services, such as health and social safety nets, during a crisis that has disproportionately hurt the poorer segments of society.

Once the pandemic is under control, governments will need to foster the recovery while addressing the legacies of

the crisis—including the large fiscal deficits and high public debt levels.

- Countries with fiscal space and major scarring from the crisis, such as large long-term unemployment, should provide temporary fiscal stimulus while planning for an adjustment over the medium term.
- Countries with high debt levels and less access to financing will also need to adjust over the medium term, striving to protect public investment and transfers to lower-income households.

The post-pandemic reset

Looking ahead, countries will need to make it a priority to invest in healthcare systems and education. They should also strengthen social safety nets to ensure that all people have access to food and other basic goods and services.

As economies begin to recover, governments should seize this moment to move away from the pre-crisis growth model and accelerate the transition to a low-carbon and digital economy. Carbon pricing should be a key feature of this transition, because it encourages people to reduce energy use and shift to cleaner alternatives—and, moreover, it generates revenue that can be used in part to support the most vulnerable.

As governments ramp up their public investment and other fiscal measures to foster the recovery, their policy choices will have long-lasting effects. They should make a decisive push to make economies more inclusive and resilient, and to curb global warming through green measures that also boost growth and employment.

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Plugging into Contactless Payment in Post-COVID Asia

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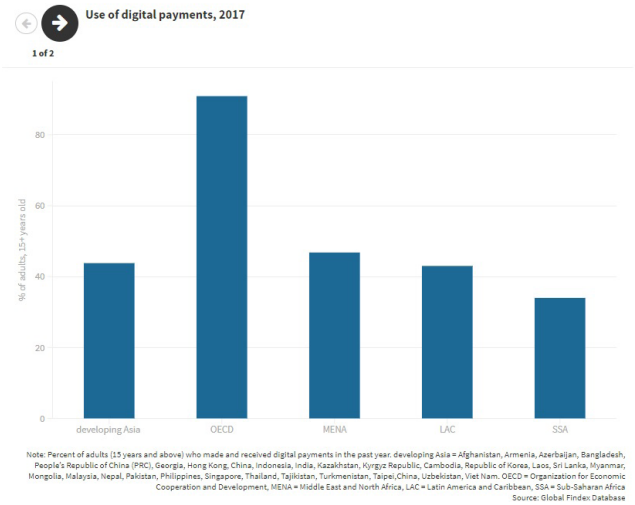
The development of contactless payment technology, which allows payments to be made without any direct or indirect human contact, is being given a big push by the fear of COVID-19 infection. In particular, digital (or online) payment has gained a lot of traction since the outbreak. At a broader level, digital technology is redefining how we work, shop, play, learn, and live in the COVID-19 world.

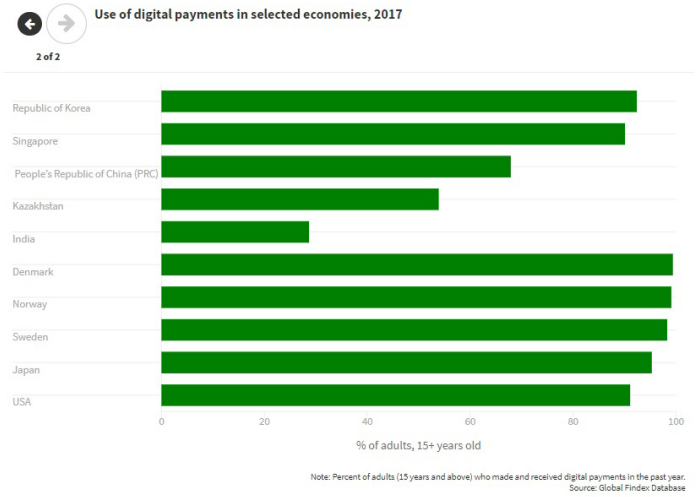
For instance, online shopping is a necessity during lockdowns and community quarantines when physical stores are shut down. Even after the restrictions are lifted, e-commerce is likely to grow in popularity as consumers prioritize health safety and become more aware of the convenience of online shopping. E-commerce requires e-payment, and the post-COVID-19 growth of e-commerce will thus translate into the growth of digital payment.

What does the data say at a broader level about the current state of digital payment in Asia? A sample of 28 economies from developing Asia shows they lag the global average in use of digital payments. While the use of digital payments varies across the region, it is rapidly increasing, with consumers throughout the region using fintech products regularly. Digital banking is also gaining ground in Southeast Asia, with most banks reducing the number of physical branches and improving the convenience and efficiency of online banking transactions.

For example, in the Philippines, the central bank aims to increase the use of electronic payments to 50% of the total volume of financial transactions by 2023. Digital payments have soared in the Philippines since its quarantine restrictions have been the world's longest after being first imposed in March 2020. The country's largest provider of mobile money services reported in May 2020 that the total amount of payments through its platform had increased eightfold from the previous year. The lender also announced plans to roll out electronic payments in transport, telemedicine, and government services by the end of 2020.

The experiences of two of Asia's largest economies, India and the People's Republic of China, provide valuable insights. The use of digital payments in India increased when the government demonetized its currency in 2016, forcing Indian consumers to shift to phone-based, contactless payment apps. Even when the availability of bank notes recovered, the use of electronic payments continued trending upward. Mobile payments through the Unified Payments Interface, where





people link their bank accounts with their phone numbers through payment apps, increased by 163% to $287 billion in 2019. The transition to a contactless payment system began much earlier in the People's Republic of China. Digital payment and e-commerce took off in the aftermath of the 2003 Severe Acute Respiratory Syndrome (SARS) epidemic with the introduction of Alipay and similar payment systems. In fact, in terms of contactless payment, the country has become a global leader. In particular, QR code payment, a contactless method where payment is made by scanning a QR code from a mobile app, is now one of the leading means of payment throughout the People's Republic of China. There is no physical touch required at all, which makes QR code payment ideal for the COVID-19 environment. In the PRC, you can even give alms to street beggars via QR code!

Notwithstanding the rapid ascent of contactless payment in the region, several challenges remain. Digital payment transactions require increased accountability and tracking, to reduce the risk of theft and breach of security. Data privacy presents another major challenge. Digitalization brings new threats such as cyberattacks, digital crimes, data breaches of payment systems, and online fraud. Thus, banks and fintech companies will need to invest heavily in advanced and reliable cybersecurity systems to protect consumer data and transactions. Finally, digital payments, including QR code payments, require a stable internet connection, so a strong digital infrastructure is essential.

COVID-19 is likely to lead to a large and lasting expansion of digital payments. To seamlessly transition to digital payments, which will be an integral part of the more digital post-COVID-19 world, Asian economies must strengthen their regulatory frameworks, and invest in digital networks and infrastructure, such as those that enable the use of digital IDs. Robust identification systems backed by a certification authority, reliable internet networks, and trustworthy financial services are prerequisites for contactless payment systems.

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A Bridge to Economic Recovery: Be Aware of Financial Stability Risks

Tobias Adrian
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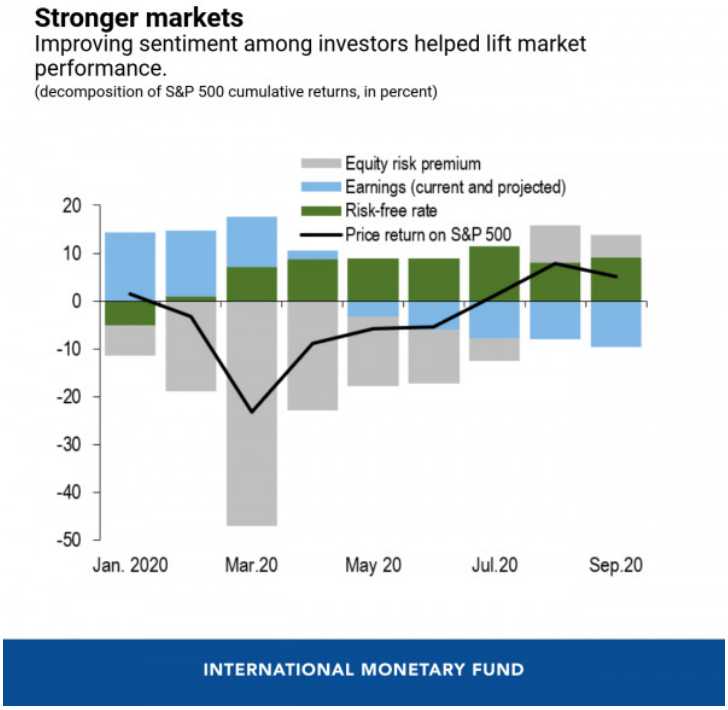
Despite a global economic crisis comparable only to the Great Depression, near-term financial stability risks have been contained with the help of unprecedented monetary policy easing and massive fiscal support across the globe. But many economies had pre-existing vulnerabilities—which are now intensifying, representing potential headwinds to the recovery.

Extraordinary policy measures have stabilized markets, boosted investors' sentiment, and maintained the flow of credit to the global economy. Critically, these measures helped prevent a slowing economy and sliding financial markets from feeding on each other in a destructive vicious cycle.

The rebound in asset prices and the easing in global financial conditions have benefited not only advanced economies, but also emerging markets. In addition, unlike in previous crises, emerging markets this time were also able to respond by cutting policy rates, injecting liquidity and, for the first time, employing asset purchase programs.

Beware of the real-financial disconnect

The significant improvement in financial conditions has helped maintain the flow of credit to the economy, but the economic outlook remains highly uncertain. A disconnect persists, for example, between financial markets—where there have been rising stock market valuations (despite the recent repricing)—and the weak economic activity and uncertain outlook. This gap can gradually narrow if the economy recovers swiftly. But if the recovery is delayed, for example because it may take longer to get the virus under control, the investor optimism may wane.



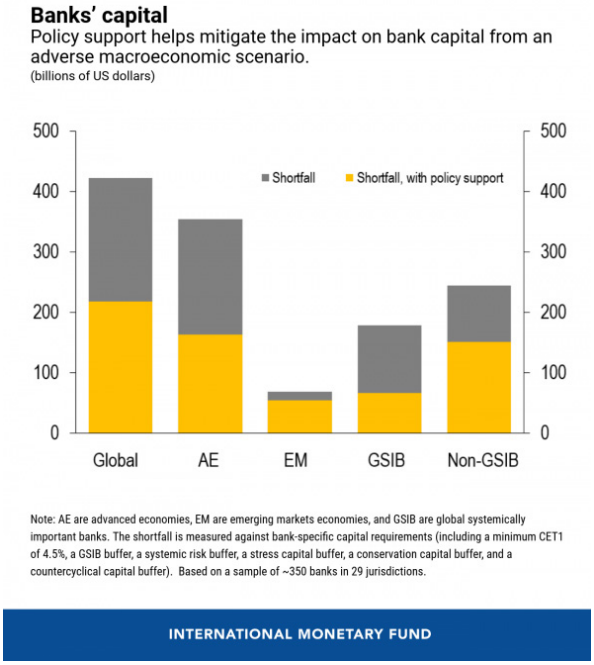
As long as investors believe that markets will continue to benefit from policy support, asset valuations may stay elevated for some time. Nonetheless, and especially if the economic recovery is delayed, there is a risk of a sharp adjustment in asset prices or periodic bouts of volatility.

Corporate sector vulnerabilities are high and rising

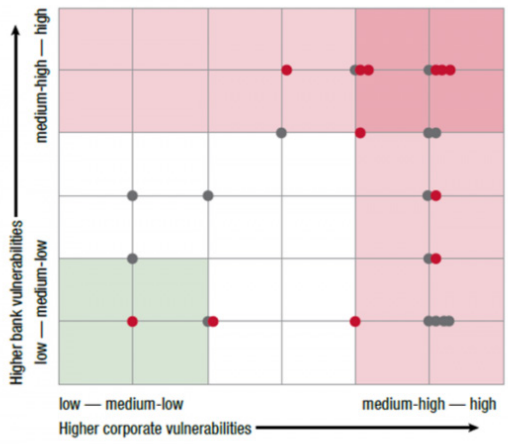
Policy measures have allowed firms to cope with cash shortages experienced during economic shutdowns by taking on more debt. While this additional borrowing has helped avoid a wave of bankruptcies at the early stages of the crisis, it has also led to further rise in corporate debt burdens. But many of these firms already had very high levels of debt before the crisis, and now indebtedness in some sectors is reaching new highs. This means that solvency risks may have shifted into the future and renewed liquidity pressures could easily morph into insolvencies, especially if the recovery is delayed.

Banks' resilience will be tested

The banking sector entered the COVID-19 crisis with stronger capital and liquidity buffers than at the beginning of the Global Financial Crisis. The success of reforms undertaken over the past decade has allowed them to be part of the solution rather than part of the problem so far, as banks continued providing credit to businesses and households during the pandemic. Nonetheless, in an adverse macroeconomic scenario, our analysis shows that some banking systems may suffer significant capital shortfalls because a large number of firms and households will not be able to repay their loans (even after accounting for the currently deployed policy measures) and profitability falters.



Elevated vulnerabilities
6 out of 29 systemically important jurisdictions have elevated vulnerabilities in the corporate, banking, and sovereign sectors (upper-right corner).



Note: Red dots denote countries with medium high to high sovereign vulnerabilities.

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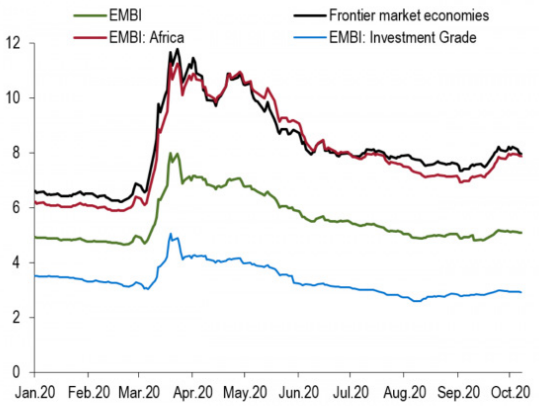
Borrowing costs
Bond yields in emerging and frontier market economies remain elevated.
(percent)



Note: The Emerging Market Bond Index (EMBI) tracks the total return performance of an index composed of U.S. dollar-denominated, emerging market bonds.

INTERNATIONAL MONETARY FUND

More interconnected

The unprecedented scale of the pandemic crisis means that vulnerabilities have risen across multiple sectors. The governments had to run larger fiscal deficits to be able to provide support to firms and households. At the same time, banks and other financial institutions had to purchase more government bonds. Going forward, the fiscal capacity to provide further support may become more limited.

In addition, nonbank financial institutions, like asset managers and insurance companies, now play an important role in credit markets, including in its riskier segments. They have managed to cope with the pandemic-induced market turmoil thanks to policy support, but fragilities, such as liquidity mismatches and exposure to credit risk, remain high. At some point, fragilities could spread through the entire financial system.

Emerging markets' financing challenges

Emerging markets and low-income countries face their own set of financing challenges. The global easing of financial conditions has generally improved the outlook for portfolio flows to most emerging markets and stabilized their access to financing. However, some low-income countries are so heavily indebted that they face imminent debt distress, because of borrowing costs at prohibitive levels.

Policies for the recovery and beyond

Looking ahead, policymakers should carefully sequence their response to build a safe bridge to recovery. They will face stark tradeoffs between short-term support and medium-term macro-financial stability risks, and they need to closely monitor any potential unintended consequences of their unprecedented support.

As economies reopen, monetary policy should remain accommodative to sustain the recovery. Liquidity support should also be maintained, even if its pricing should be gradually adjusted to incentivize the return to normal market funding. A robust framework for debt restructuring will be critical to reduce debt overhangs and resolve nonviable firms. Multilateral support to low-income countries with financing difficulties should be extended.

After the pandemic is under control, a robust financial reform agenda could focus on rebuilding bank capital buffers, strengthening the regulatory framework for nonbank financial institutions, and on stepping up prudential supervision to contain excessive risk-taking in a "lower for longer" interest-rate environment.

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How to Close Asia's Insurance Protection Gap

Arup Kumar Chatterjee
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The demand for insurance in Asia in the coming decade will be shaped by rising household income levels of a rapidly expanding middle-class, policy measures to accelerate financial inclusion, and strengthening social protection and government insurance programs.

Governments are also increasingly making businesses, households, and individuals responsible for managing the adverse financial consequences of risks to assets, lives, incomes, and livelihoods. One can, therefore, expect increased spending on buying protection and an expanding role for the insurance and capital markets to manage contingent liabilities better. The same holds for access to medical care, which will be spurring demand for health insurance.

Also, with people living longer and aging, the need for life insurance and pension-related products is expected to increase. Therefore, it is not surprising to see projections that in 2030, out of the top five countries in terms of percentage of the world insurance market share (in purchasing power parity terms), four will be from Asia (the People's Republic of China, India, Indonesia, and Japan) with a combined share of 46%. This share is twice that of 23% in 2015, contributed by only 3 Asian countries.

While these socio-demographic shifts drive up insurance needs, the coverage remains low with around 3% of GDP in developing countries in Asia, excluding the People's Republic of China, compared to 9% in wealthier more developed OECD countries. Millions are either uninsured or underinsured, thereby pointing towards a significant protection gap -- the difference between insured losses and economic losses.

When the former Governor of the Bank of England, Mike Carney, referred to the 'tragedy on the horizon,' he had the 'property protection gap' or the impact of risks from natural hazards and climate change in mind, which is $134 billion for Asia alone today.

And this is just the tip of the iceberg. We need to deal with many other protection gaps, resulting from extraordinary causes and requiring unique remedies. Asia's mortality protection gap stood at $83 trillion in 2019, with three in four households in financial danger if a breadwinner dies. The health protection gap is $1.8 trillion in 2019 or 10% of the average annual household income. The pensions protection gap stood at $70 trillion in 2015 and is forecast to grow by 5% each year. With the increased use of digital technology, Asia's cyber-risk protection gap is at $27 billion in indirect economic losses.

The protection gaps are, therefore, manifestations of unresolved development problems. The ability to respond and mitigate shocks effectively using countercyclical policy measures is severely undermined as public insurance schemes do not exist or are underdeveloped.

Another related gap is the infrastructure financing gap, which is $26 trillion for hard infrastructure alone. Add in the expected need for social infrastructure funding, such as health and education, the gap almost doubles. Strategies need to be put in place to build resilience in developing countries and address the underlying factors to manage residual risk better and

reduce the impact of potential shocks.

Where standard risk mitigation practices cannot quantify financial stresses, such as those posed by environmental and social factors, they may introduce significant residual risk potential. Investing with a strong focus on environmental, social, and governance principles will endure – and will likely be a vital aspect of the rebuilding that lies ahead.

Closing these gaps is vital for socio-economic prosperity, as it is linked implicitly to many of the UN's Sustainable Development Goals. The insurance industry can contribute by offering affordable fit-for-purpose risk-sharing and transfer solutions to the last mile. These initiatives should be considered:

- Governments can reduce the volatility of financial losses following a shock and manage their economic consequences in a non-inflationary manner by transferring some of their contingent liabilities to the private sector through an annual payment of insurance premium.
- By linking public insurance schemes based on premium subsidies with private insurance solutions, insurance can foster economic and financial inclusion of vulnerable and needy populations and transform livelihoods. It can also help in preserving the governments' balance sheets and respond flexibly in an emergency by providing rapid liquidity in the form of cash transfers.
- Governments can set up insurance pools which aggregates the insured risks in a diversified portfolio. By retaining some of the risks through reserves and capital, it can cover the high frequency and low severity losses; and transfer the less frequent and more severe losses to the insurance, re-insurance and capital markets.

For reducing the impact of the shocks, there is a need to step up investment in sustainable infrastructure, more particularly soft infrastructure, where there has been chronic underinvestment. Social infrastructure would be potentially attractive to long-term institutional investors like life insurance companies and pension funds due to their small exposures. The insurance industry can also play a key role in de-risking investments and mobilizing long-term private capital by wrapping the investment with insurance, technology guarantees, warranties, commercial and political risk insurance.
High transaction costs and lack of risk data have prevented them from fulfilling their expected role. By deploying sophisticated climate, geological, and pandemic models, they can determine vulnerabilities to catastrophes depending on location and underlying exposures. In this way, risk pricing carries crucial market signals; it informs policy-makers of their overall preparedness and supports targeted investment in risk mitigation and reduction measures.

Leveraging technological advances such as the internet of things, big data, artificial intelligence, machine learning, and blockchain, "insurtech" can also cut operational costs by enabling speedier claims reporting and assessment and ensuring better customer engagement. Experts estimate insurtech can cut up to 10% of premium costs and 8% in claims expenses while ensuring stable margins.

The fulcrum of insurance is gradually shifting to Asia. It is this region that will drive the growth of the global insurance market. And it is also here where risks are and where innovation is happening.

Insurtech will be a crucial driver for change as the insurance industry leverages technology for coming up with innovative risk financing solutions for reducing the protection gap and building a sustainable future.

About the Author

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With over two decades of experience in this area, Arup is responsible in his current role for leading financial sector development initiatives in the areas of insurance, private pensions and contractual savings, and financial inclusion. Previously, he worked at the Bank for International Settlements in Basel, Switzerland, and the Insurance Regulatory and Development Authority in his native India.

How Banks Can Support Relief Payment Recipients

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The total amount of money in the U.S. government's economic impact payments is substantial. But this is a brute-force effort by Congress that doesn't provide nearly enough for some and more than is needed for others.

The median-income American household has more than $50,000 in expenses each year, dwarfing the payments. And although the coronavirus pandemic's impact on the economy is vast, even the scariest estimates indicate that for every household suffering from unemployment, there are three or four that, thus far, are not.

The payments represent a rare opportunity for banks to have a positive impact on communities, customers, employees and shareholders — all at the same time.

The IRS has been issuing payments of up to $1,200 per person to 90% of American households, in a disbursement effort that is expected to take months.

So far, unlike with the Paycheck Protection Program, there has been no call to arms for banks to aid in the distribution of this money beyond their normal operations. With no explicit action requested and numerous other priorities to tackle, it would be easy for banks to provide minimal operational support, such as directing customers to appropriate government portals and processing deposits.

But banks have the means to amplify the payments in a way that can help their customers and communities even more. And in doing so, they could generate additional near-term revenue while building long-term customer loyalty.

For bank executives and boards looking to help their communities and meet with the fiscal responsibilities of an uncertain future, investing in the capabilities that will help their clients make the most of this funding represents a tremendous opportunity.

The revenue from the payments could pay for this investment. That's because consumer deposits generate a significant portion of bank earnings. So, if customers who shouldn't spend the money right away opt to budget and save it appropriately instead, the banks will benefit at the same time as their clients. We estimate the potential revenue for banks in optimizing this saving is $1 billion or more.

Banks Can Help in Four Main Ways

Speed of financial relief: Banks can speed up the funding. The Brookings Institution estimates that as many as 70 million households may need to wait weeks or months for paper checks because the government doesn't have their direct deposit details. Banks can help bridge the gap. With at least one upstart bank already making customer loans of up to $200, incumbent banks should consider options to quickly provide similar relief measures.

Financial planning: Banks can provide triage-type financial planning tools. Speed alone will not help the hardest-hit Americans. Enhanced unemployment benefits and the ability to defer mortgage, rent and student loan payments, along with creative prioritization of other bills, may help stretch the stimulus money. Customers that were plunged overnight into this dizzying array of economic challenges need clear guidance on how to make sense of them and, even more, to feel they aren't alone.

Bank contact centers and nonprofit credit counselors are already overwhelmed with call volume and are struggling to handle the complexity of circumstances. Banks can harness their digital capabilities to quickly build tools that help their customers navigate these complex options and connect them to a community facing similar challenges that can provide additional support.

Budgeting support: Banks can provide budgeting tools relevant to the moment. Customers who are fortunate enough not to need the relief immediately still face an uncertain future. For many households not yet affected by job loss, their financial health was precarious to begin with — and the payments offer a chance to jumpstart their future and prepare for further economic challenges. For seniors at or approaching retirement, meanwhile, help is also required to navigate the depressed financial markets.

Banks can demonstrate their dedication to their customers' financial health by providing timely advice and convenient tools to maximize the impact of the payments. One idea would be to simply place the funds in a digital envelope tagged as "coronavirus money." Research shows that money put in a separate bucket tends to be used more thoughtfully.

Purpose-driven accounts: Banks can help the millions of households that may view the stimulus as a windfall to create "savings with purpose." Recipients who would like their stimulus payments to help those less fortunate than themselves, but who can't afford to donate their payments to charity, need purpose-driven account options. This could include savings accounts in which the interest payments are donated to local charities supporting frontline workers or investment funds supporting companies working toward the greater public good.

This combination of advice, community-building and small-dollar lending is likely to generate loyalty from customers and goodwill from legislators that will pay back banks' initial investment many times over. The upstart bank making $200 loans, for example, has already received substantial recognition for its efforts.

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In A Changing World, People are Critical to M&A

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While events driven by COVID-19 have not stopped the world from turning, they certainly have shifted the axis a bit. Amidst the loss and suffering, business leaders are pivoting from responding to these events to planning a path forward for their organizations. A prism of moderating costs, mitigating risks and maximizing value guides this planning — along with an emphasis on empathy as well as economics, as the workforce adjusts to new realities in a post-COVID-19 landscape.

An underlying urgency — rarely, if ever seen before — influences this planning. Leaders face a sobering laundry list of to-dos, such as performing a realistic review on balance sheet health, re-evaluating their business model (including supply chain changes, consumer interaction and workforce environments), and dealing with external pressures from investors and shareholders.

The urgent need to move forward will require a look at both organic and inorganic strategies. This includes a return to deals. For some organizations, divestitures will generate the cash needed to survive in a radically changed environment. For others, the combination of a relatively stable balance sheet and greatly reduced valuations will present an unparalleled opportunity to transform the business through an acquisition or joint venture. What COVID-19 has not changed is this: People remain critical to driving deal value.

A Call to Action — Strategically Addressing People Risks

The idea of capital-P People being the value catalyst in deals is nothing new. The majority of deals fail. One of the most commonly cited reasons is the failure to adequately and strategically anticipate and address people issues. Yet in the 1,200 deals Mercer's global M&A Advisory team works on each year, we continue to see business leaders put people risks in the tactical bucket versus more strategically considered areas such as operations, supply chain, tax planning or legal and regulatory considerations.

It is unlikely that a CEO would say, "Can we just address the tax and regulatory issues of this deal post close?" Yet more often than not, this is the mindset related to people risks. The increased business risk due to the uncertainty and the reduced timeframes due to the opportunistic nature of deals in the current macroeconomic environment make this reactive posture even more likely. Leaders who identify and plan for these people issues early and strategically will be building a foundation for delivering full value.

In addition to defining people issues in a mostly tactical sense — relegated to paychecks and benefits, mainly — the topic of people is often dismissed as too conceptual to address strategically. That does not have to be the case. Ten elements ultimately shape the people dynamic at any organization, but note that the criticality of each element must be determined on a deal-specific basis: Vision, Mission and Values leads the list, followed by Leadership, Organization Design, Governance and Decision-making Rights, Communication Style, Work Processes, Work Environment, Rewards & Recognition, Talent Management, and the Employee Value Proposition.

Taken as a whole, these elements represent an organization's operating environment. They message and reinforce

intentionally and unintentionally on a minute-by-minute basis how leadership wants business conducted. This will be true for a potential transaction partner. These elements are, or should be, part of any deal thesis development and analysis. Questions that need answers include: What are the most critical elements in achieving strategic objectives and financial, modeled values? How will the transaction affect the current operating environment? How aligned or misaligned are these elements between the organizations involved? What actions will align or keep aligned the most critical elements?

As with other areas of the deal, the evaluation of people issues is not a one-time event. It should involve the constant testing and refining of an initial thesis. This strategic consideration is at the core of successfully anticipating and navigating issues that will negatively influence your ability to deliver value.

Deal Types Frame the People Risks

An urgent need in some organizations to create business sustainability and in others an opportunity to transform is expected to fuel increased deals activity over the next six to 12 months. In recent polling, approximately 40% of respondents indicated the current market conditions would not change their deal strategy over the next 12 months. There are patterns to the inherent people risks in different types of transactions. While each deal brings its own unique set of circumstances, it is possible to anticipate these risks in your initial deal thesis creation and prioritize them in early due diligence. Following are the anticipated near-term deal trends and associated prioritized people issues.

Joint Ventures and Partnerships: These deals provide a path for pursuing new business models (e.g., supply chain reconfiguration or digital transformation) while dampening some of the risk and capital requirements present in other deal structures. Business leaders often underestimate the associated people risks that work to destroy value creation. Key people issues that need to align with performance objectives are organization design, governance, leadership selection, incentives and talent retention.

Divestitures: Many organizations will leverage divestures as a way to stabilize their balance sheet and pursue new strategic imperatives. Key people issues include understanding the impact that the spin-off will have on workforce costs at both the remaining company as well as the carve-out, selecting talent to stay versus go, determining retention strategies for key talent, and executing the required stand-up expectations (e.g., Transition Services Agreement delivery or full Day One functioning).

Acquisition of Distressed and Devalued Assets: For financially well-positioned organizations, this is an opportunity to acquire assets that were previously unattainable. This type of opportunistic acquisition involves people risks including selecting the right leaders to capture the intended value, retaining key employees to drive the value and creating aligned incentive programs.

Current events are causing business leaders to rethink everything about their business model and related processes. Just as importantly, leaders need to rethink how they and their organization consider the people elements in future transactions. Let this be a wakeup call around how to approach deals moving forward. Early and strategic consideration of these elements will set the foundation for successfully mitigating risk and delivering value — in a post-COVID-19 business climate that focuses on the human factor as much as the financial one.

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Jeff Black is a partner and Global M&A Advisory Services Leader at Mercer. With 25 years of experience as a trusted advisor to business leaders, Jeff advises strategic and financial buyers and sellers on global people risks through the full lifecycle of a transaction. A recognized expert in deals, he is a frequent keynote speaker and been widely published and quoted in numerous industry journals and media outlets.

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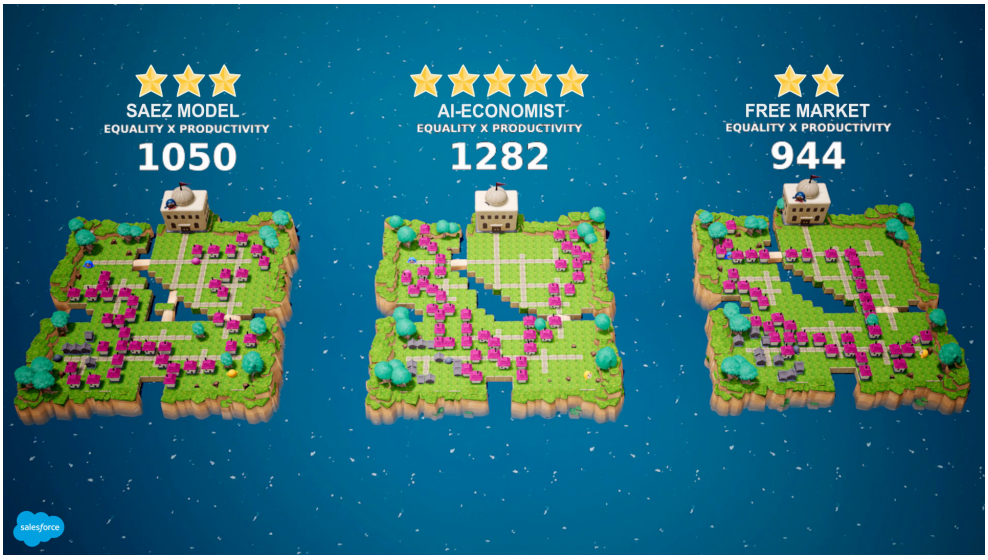
Kristin Murphy is the Global M&A Strategy & Operations Leader for Mercer's Global M&A Advisory Services. She has more than 10 years of experience in human capital consulting and currently advises clients on capturing value and achieving synergies through addressing people risks. Kristin has expertise in business strategy and driving enterprise-wide transformation, workforce strategy, operating model and organization design, change management, and process improvement.

Can AI Build a Tax System That Supports Equality?

Stephan Zheng
Lead Research Scientist at Salesforce Research



The social and economic impact of the COVID-19 pandemic has been wide and far-reaching. In particular, it has had a disproportionate effect on poorer households. Some of the hardest-hit industries, such as retail and food service, historically employ lower-wage workers that now find themselves without jobs or emergency funds to weather the storm. There's even research data that suggests inequality contributes to higher death rates among COVID-19 patients with lower economic status.

Economic inequality is a complex and global issue, and it is growing — even in the developed world — as a report released by the United Nations in January found. Furthermore, the results of a recent survey by the University of Chicago suggest we're likely to see the gap between poor and affluent grow even larger as a result of COVID-19.

The global economy is evolving rapidly and we need better methods to design and evaluate economic policy. Economists need to be able to identify faster and more comprehensive alternatives to find tomorrow's solutions. This is where we believe that AI technology can be used for good.

Introducing the AI Economist

The Salesforce Research team recently released a tool called the AI Economist as a first-of-its-kind machine learning model that aims to improve equality and productivity through the creation of AI-driven tax policy recommendations. The AI Economist uses a two-level reinforcement learning (RL) framework and is highly flexible, designed to optimize for any social objective (e.g., equality, productivity or sustainability), that can be set by the user.

We compared the AI Economist with three other baseline tax methods:

- The free market with no taxation or redistribution
- A progressive tax mirroring the 2018 United States federal tax schedule (i.e., marginal tax rates increase with income)
- An analytical tax model proposed by economist Emmanuel Saez, which in our setting leads to a regressive tax schedule

In our simulations, the AI Economist achieved a 16% gain in the trade-off between equality and productivity compared to the next best framework, the Saez model. Compared to the free market, the AI Economist also improves equality by 47 percent, with only an 11% decrease in productivity.

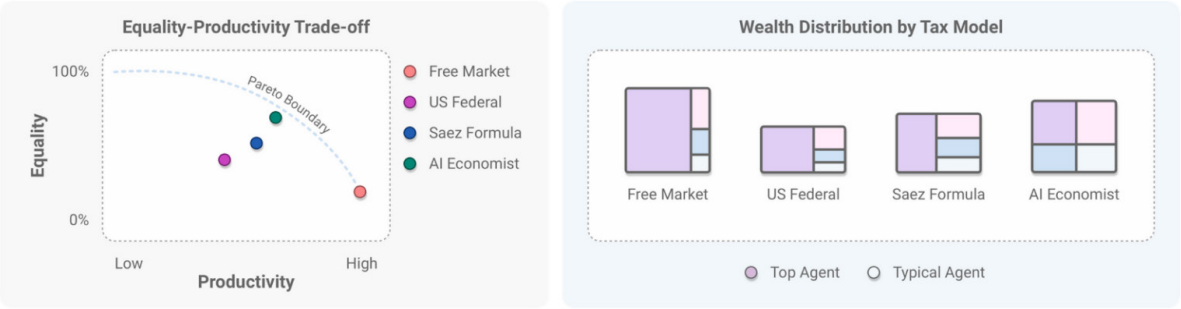
We believe these initial results demonstrate the potential of applying a data and simulation-driven approach to

quickly create equitable and effective economic policies.

Applying Reinforcement Learning to Optimize Economic Policy

Reinforcement learning algorithms use smart trial-and-error strategies in an environment to optimize policy models for a specified goal. During this process, the learning algorithm continuously uses feedback it receives to improve the policy models.

You have likely read about some of the higher-profile applications of RL. It's been the go-to method that enabled AI to compete and even win against humanity's best in popular games such as Go, Dota 2 and Starcraft.



An illustrative view of how taxes can impact social outcomes. Left: Taxes can improve equality by transferring income. However, taxes can also decrease productivity, because they can discourage work. The AI Economist seeks a tax policy that optimizes this trade-off. The Pareto boundary is the set of maximal trade-offs. Right: Taxes impact productivity (total income, represented by the area of the big squares), and equality (the relative difference in sizes of the smaller squares). In this illustration, the AI Economist achieves the best trade-off.

What is different about the AI Economist is that the goal is not adversarial. The objective is not to beat the other team. In this case, "victory" is achieved when the AI creates a socially optimal balance between equality and productivity. The AI Economist uses RL at two levels. At the first level, it uses a collection of AI agents to simulate how people might react to different taxes. The AI agents earn money by collecting and trading resources in order to build houses. These agents maximize their utility and happiness by adjusting their behavior using RL algorithms. At the second level, a social planner uses RL to adjust and evaluate the impact of tax policies on the world.

Why Taxes?

Taxes are a common tool for national and local governments to redistribute wealth, and it is a near-universal part of society. We have seen it in action recently as subsidies funded by taxes help those impacted by the pandemic, particularly in the U.S.

But no one has truly determined how tax policy can be feasibly optimized in complex dynamic economies. Creating effective economic policy is complicated due to the near-infinite number of possible contingencies to consider. This is why our team of AI engineers and scientists attempted to crack the code, and why we enlisted the help of experts such as Professor David Parkes, who heads the Economics and Computer Science group at Harvard University.

Together, we built a framework that can simulate millions of years of economies and evaluate tax policies in a fraction of the time it would take to run a real-world economy. Careful real-world experimentation with taxes is almost impossible, so viable economic simulation environments can help find effective solutions faster.

Our simulations saw AI agents react strategically to tax policy changes. In some cases, agents changed their behavior to game the system and lower their effective taxes. The AI tax model adapted well in response to those behavioral changes and was still able to improve equality among agents.

To help us ensure we're on the right path, we even took the first steps to evaluate our economic policies with real people. When we tested a version of the AI tax model with actual people earning money in the economic simulation, it achieved similar or better social welfare improvements compared to baselines.

Going Forward

Ultimately, our vision for the AI Economist is for it to be a step forward for AI-powered economic models that support real-world policymaking to improve social welfare. Our results indicate that there is real potential for this to be a valuable tool for policymakers.

So as a next step, the economic simulation is now available via – to anyone interested in helping the framework expand. With the help of a broader community with more academics, economists, policymakers and AI engineers, we look forward to seeing the AI Economist play a real role in creating more impactful economic policies that benefit everyone.

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Stephan Zheng leads the AI Economist team at Salesforce Research. His current research focuses on the use of deep reinforcement learning and simulation-based learning to design economic policy. He holds a Ph.D. in Physics from Caltech.

New Technologies Present New Risks for the Financial Services Sector

Lisa Quest
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Technology is fundamentally reshaping how business is conducted and the way financial services operate — from the way we work, shop, socialize, spend and save. This increased digitalization of our world has in turn unleashed a raft of new risks for regulators and firms to stay on top of.

For example, customers are vulnerable to sophisticated online fraud, businesses are facing down cyberattacks, and criminal money-laundering has become fiendishly complex.

In the financial services sector, further adaption of the regulatory approach is required to address these risks and encompass the vast range of new products and services being introduced — many of which come from companies which are not traditional banks. A greater level of protection will safeguard the stability of the whole system.

Regulators must act now to ensure banks, technology firms and, most importantly, customers can all safely benefit from the changes underway in financial services.

The New Regulatory Challenges

Competition and innovation from outside financial services has clearly benefited banking customers. For example, once one firm was able to approve loans or onboard new customers in a matter of minutes, retail banks had to find ways to dramatically reduce their own processing times.

However, it is a delicate balancing act to ensure that regulation and supervision preserve the benefits of innovation and competition, while also protecting consumers, ensuring financial stability and safeguarding the integrity of the system from economic criminals.

This is only going to become more difficult. As businesses have innovated, they have created products and delivery mechanisms which resemble traditional financial activities but are not currently covered by existing financial services regulations.

Take these new and innovative services: peer-to-peer lending and e-wallets. Is peer-to-peer lending only intermediating payment transactions? Are the money balances in e-wallets equivalent to cash or deposits for consumers? The answers have not yet been universally agreed, and therefore there is also no agreement on which licences and requirements must be applied.

Separately, firms may draw on data and dominant positions from outside the financial sector. While governed by cross-sectoral regulations (such as data or competition) these regulations may still be in development or in the process of adapting to new market circumstances. Financial regulators have established powers, rules and supervisory practices on many of these areas, but they cannot be legally enforced outside a specific financial licence.

Additional complexity comes from the way regulatory accountability is becoming diffused and, sometimes, confused as companies pick apart value chains. For example, payments companies from outside financial services are most interested in providing the clearing function, and in current accounts, new players often only choose to compete in the customer-facing section of the value chain. It is unclear where the overall responsibility lies for protecting the customer.

Some new entrants to the financial services arena cross multiple industries — for example, the big tech companies. As such, they can have huge volumes of data collected from all their business activities, including financial services, and use it to develop new products and services. But while financial services data is protected by regulation during its use in financial services activities, these regulations currently cannot be enforced outside this remit.

The Way Forward

In our report 'Big Banks, Bigger Techs?' we provide the first global policy analysis that explores approaches to regulating the next evolution of the market. We identified three areas for action:

Existing financial regulation: The scope of our current regulations needs to be extended to encompass all new types of activities. To do this, a common taxonomy must be defined so that there can be no confusion about what type of financial activity a company is engaging in. Similarly, it is necessary to expand the criteria that determine the activities included in financial services regulations. This should include unbundling value chains into their component parts and defining the regulatory responsibilities for each segment.

In addition, we must find the right balance between guidance, principles and rules-based oversight and how to enhance consumer awareness of the different levels of protection they get from different products and providers.

Cross-industry collaboration: On topics like data exchange, cybersecurity and anti-money laundering, we need to work with regulators in other sectors to strengthen policy. For example, his approach could require more cross-sector sharing of the anonymized data collected, subject to data privacy regulations, from other activities to ensure all firms have the same access to customer data for innovation and customization.

Extending regulation into other industries: As companies from other sectors, such as technology, move in to financial services, it makes sense to rethink the boundaries for and interactions between national regulators to eliminate confusing overlaps and underlaps. This will correct inconsistencies in regulation and enforcement. For example, resiliency requirements are needed for any non-banks that perform banking activities, such as deposit taking, or any activity deemed systemically important.

Fast-Forwarding to the Future

Technology-driven change and new competition will continue to improve customer outcomes, financial inclusion, innovation and efficiency. But these benefits will only be realized if we establish a regulatory framework that promotes the safe modernization and digitization of the financial sector.

Policy-makers in the banking sector have, quite rightly, prioritized creating a COVID-19 response and forbearance. However, there is a clear need to now support and shape the financial sector for post-COVID economic regeneration. The disruption from the pandemic may prove to be the catalyst required to make the fundamental changes we need to embed a more effective and efficient regulatory framework.

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