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## Addressing Challenges in Post-Pandemic Market Environment and Beyond

ASIAN BANKERS ASSOCIATION

ABA BANKING & FINANCE JOURNAL

## AIMS & SCOPE OF THE JOURNAL

The Journal attempts to link conceptualists and practitioners in banking and 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 purposes of the Asian Bankers Association (ABA) and of this Journal.

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## IN THIS ISSUE (Vol. XXXII, No. 2, 2021)

This issue features articles that appeared in BRINK, the news service of Marsh & McLennan Insights, a research institute dedicated to analyzing increasingly complex risks that are reshaping industries, governments, and societies. The editors and staff of the ABA Journal of Banking and Finance would like to take this opportunity to thank the authors – for sharing their materials with the ABA and its members.

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## Addressing Challenges in Post-Pandemic Market Environment and Beyond

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# Why Central Banks Are Now Taking Digital Currency Seriously

***Sergio Focardi***
***Professor and Researcher at the Finance Group, ESILV EMLV,***
***Pole Universitaire De Vinci, Paris***


*A person uses their phone as they walk past ATM machines for digital currency Bitcoin in Hong Kong. Today there are 150 alternative currencies. Photo: Anthony Wallace/AFP via Getty Images*

*The soaring price of Bitcoin has raised the question of whether countries should set up their own digital currencies. A digital currency would be issued by central banks, like banknotes, while cryptocurrencies rely on distributed ledgers like blockchain.*

*China has already begun piloting a digital yuan currency in several major cities, and the Federal Reserve chairman has said that he will hold a public dialogue about the idea of creating a central bank digital currency. Sergio Focardi is professor of finance at the Pôle Universitaire Léonard de Vinci in Paris.*

*FOCARDI:* At the moment, we have a two-tier banking system in most economies. There are commercial banks and a central bank. Commercial banks have accounts with clients, while central banks only have accounts with commercial banks.

A central bank does a number of supervising activities, but it also creates the base money, formed by bank notes. Bank accounts are debts that each bank has with its clients, payable in banknotes. But nowadays, the amount of money in bank accounts far exceeds any possible amount of bank notes, so the idea that a company might go to a bank and say, "Hey, I want my money back in bank notes," does not make sense.

Moreover, the public is increasingly moving away from using banknotes. If you travel to countries like Iceland or Norway, the use of bank notes is now really limited, for many different reasons.

**Performing the Same Role As Bank Notes**

*BRINK: So would a central bank's digital currency perform the same role as a bank note?*

*FOCARDI:* There are currently many projects for central banks digital money. Most major central banks are thinking about issuing some version of digital money. If you look at the E-Krona project of the bank of Sweden, they have a means of payment

that has some of the same characteristics of bank notes, except that it's electronic. So it's peer to peer, it's anonymous, but it's electronic.

At this moment, People's Bank of China (PBOC) seems to be the first central bank ready to deploy digital money. They have already concluded the test phase and are ready to launch the digital yuan. The digital yuan is not based on blockchain technology. The PBOC is careful not to endorse too strongly any specific technology.

From the user perspective, the digital yuan is like any other electronic wallet. The objective, however, is to replace cash, not bank money, and so commercial banks will play a role in distributing it.

The European Union is still in the research phase. A 2020 report outlines the future plan of the European Union. However, no pilot project has started yet. The first objective is to make the European banking system more modern and more efficient, and technologies are still to be decided.

**Digital Currency Could Be Used for Welfare Payments**

The Federal Reserve is discussing plans to issue a digital dollar but no test project has been identified. One element that might distinguish the digital dollar from other central bank digital currency (CBDC) is its use as a welfare tool. With a digital dollar, the FED would be able to make welfare payments, including lump sums paid to citizens.

It is fair to say that there are many projects and many possible solutions. Cryptocurrencies have created central banks' interest in digital money, but the end result might be completely different from any current cryptocurrency.

*BRINK: If this kind of central bank digital currency was introduced, would it cut out the commercial banks?*

*FOCARDI:* That's a big question mark. The creation of digital money is not in itself a major source of risk. The real point is what governments want to do with the money.

There are radical scenarios where the central bank issues digital currency and has accounts with the public — with you and me. But then, central banks would be in competition with the commercial banks, and central banks are not equipped to deal with millions of clients.

A less radical scenario is where they essentially replace bank notes with digital money, and the commercial banks continue to operate as before. That is where the thinking is today: Most central banks are trying to replace the use of bank notes with a system that is electronic and easier to deal with, still anonymous, but not replacing commercial banks.

**Central Banks Are Keeping an Eye on Bitcoin**

*BRINK: What would a central bank digital currency do to Bitcoin? Do you think that these cryptocurrencies will continue to exist?*

*FOCARDI*: Today there are 150 alternative currencies, but the only one that really keeps ongoing is Bitcoin — the others are marginal. I don't really believe that governments will just let Bitcoin grow.

No government will want a powerhouse that can control financial transactions without being controlled. I don't believe that cryptocurrencies will become major actors, at least in the foreseeable future, because it's against governments' interest.

***Brink***

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**Sergio Focardi**
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# More Than 110 Investors Discuss How They Plan for the Unexpected

***Ashley Knight, Project Fellow of Future of Investing at World Economic Forum;***
***Fiona Dunsire, Wealth Leader of Growth Markets at Mercer;***
***Maha Eltobgy, Head of Shaping the Future of Investing at World Economic Forum***

Our economy, society and planet are facing many long-term systemic risks. Institutional investors must respond to challenges such as climate change and technological evolution and plan for the unexpected.

Rather than wait for these trends to become emergencies, investors who begin to tackle them now can start to mitigate the risks they pose to their portfolios and explore ways to capture opportunities that deliver long-term returns.

*Fossil fuels from a building in Poland. An emerging trend regarding climate change among advanced investors is engagement over negative screening and divestment.*

As a bonus — for both their beneficiaries and portfolios — adopting these investment practices should help build a more resilient economy that considers the future needs of the environment and society in tandem.

While it sounds straightforward, there is a significant obstacle: Many asset owners are not aware of how they compare to peers with respect to integrating the trends. This is where investors who wish to progress from "developing" to "advanced" require a benchmarking framework to identify gaps and areas for improvement.

For many asset owners, the willingness to change and advance is there — but the best practices of advanced investors are not obvious, and measurement tools are limited.

**Investors Know There Are Issues to Tackle — But How?**

Over the past two years, the World Economic Forum's research, in collaboration with Mercer, identified six critical risks that sovereign wealth funds, pension plans, endowments, foundations and insurers are most concerned about over the long-term.

In our 2020 survey of more than 30 asset owners, — representing over $3.4 trillion in total assets — the top three trends for investors were climate change, low and negative interest rates and technological evolution.

Amid the pandemic, many governments and businesses across the globe have made commitments to rebuild the economy in a sustainable way by addressing and adapting to climate-change risks.

Meanwhile, the pandemic has propelled central banks and governments to act together to promote economic stability resulting in expectations of continued low, or

even negative, real long-term interest rates.

Our research shows that investors are also concerned about water security, geopolitics and demographic shifts, specifically ageing population growth in Africa and South Asia.. If not well managed, these trends will compound the resulting instability globally, as we see more inequality, populism, protectionism, threats to free trade and natural catastrophes. Investors know there are issues to tackle — the challenge is how to do it?

**No Single Measurement for Investors**

To mitigate the major risks that investors face from these systemic trends, institutional investors need to scrutinize, adapt and protect their portfolios, as well as capture opportunities to pursue attractive risk-adjusted returns. Yet, our research shows that many institutional investors have made only some or limited progress on most of these systemic trends.

Many investors also lack self-awareness of where they are in their vision, governance and implementation journeys, believing they are a lot more advanced than they really are — especially compared to peers.

For example, many believed they were making great progress on tackling climate change risks because they had a responsible investment policy. Yet often the policy was not specific enough from an investment or metrics-tracking perspective to enable implementation, and remuneration was not aligned with the policy's goals.

As a result, many investment teams were not motivated to evolve their sourcing process or feel accountable to update the policy to make it more actionable.

Advanced asset owners, however, have put in the effort required to integrate the global systemic trends into their strategic decision-making processes, adapting their vision, governance and implementation practices to account for goals, beliefs and stakeholders' feedback.

From a top-down perspective, senior leadership at advanced asset owners have generally evolved their investment and governance policies to successfully integrate the trends. Bottom-up, advanced asset owners have investment teams that understand the systemic trends and possess the appropriate guidance, incentives and resources to identify and invest into relevant opportunities.

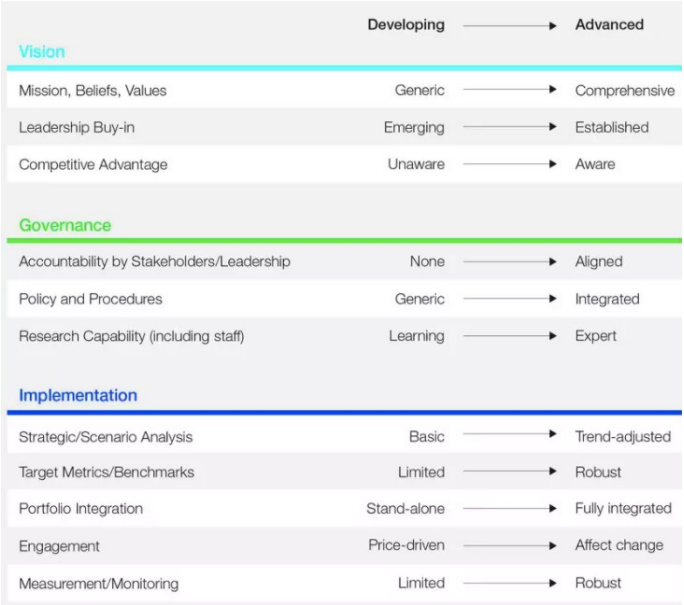
After conducting more than 180 interviews with members of the investment community over the past ten months, it became clear there was no single way to systematically and comparatively measure how investors are progressing on ESG and other metrics. So we created solutions.

**Three Ways to Become an Advanced Investor**

1. Measure progress

This framework enables investors to measure progress on the key thematic trends identified in our research and see how they are progressing relative to peers.

Investors can use the framework and case studies to ask themselves: "Are we in development mode in addressing these systemic trends? What can we do to be more




like the investors that are leading the way?"

Self-assessment will enable investors to be more proactive in addressing these trends, and, importantly, have visibility into areas in which they can amend their approaches to align with best practices and be in a better position to plan for the unexpected.

Any type of asset owner can use this framework. Even for smaller investors, the practical steps outlined are still relevant.

2. Learn from advanced peers

We identified six traits among advanced asset owners:

- Diversity of thought: Cognitive diversity that draws on varied experiences and specialized expertise to access insightful perspectives
- Accurate self-assessment: An ability and willingness to draw from internal and external stakeholders to understand and address organizational shortcomings
- Commitment to strategic vision: A shared belief that action today on factors that affect the portfolio over the long term will result in enhanced risk-adjusted returns
- Commitment to transparency: Clear communication to stakeholders from the board and senior leadership regarding beliefs, vision and objectives so that stakeholders align and contribute towards goal fulfilment
- Culture of innovation: Development of new expertise, questioning of existing norms and exploration of emerging investment themes and processes
- Willingness to collaborate: Commitment to share best practices with peers and

stakeholders so that the industry evolves more quickly, positively affecting regulations and policies

3. In the context of climate change, engage

For climate change, an emerging trend among advanced investors is engagement over negative screening and divestment. This means not completely divesting from certain sectors, such as fossil fuels, but instead pulling out of certain companies that are not taking serious actions to address the energy transition.

But one investor's actions alone will not change an entire sector. As a CIO of a large pension fund told us, "What good is a net zero portfolio when the world burns around you?" By taking a selective approach to divestment, the investment community can effectively reward the companies that are doing the right thing. Exposures to such companies should also benefit long-term investors.

Beyond engagement, asset owners are addressing the trends through public and private investments. For instance, sustainable agriculture and renewable energy infrastructure to address climate change or robotics ETFs and cybersecurity funds to gain exposure to technological evolution. The asset owner survey identifies which products investors are considering, such as blue bonds and investments into women- and minority-owned organizations.


**Define the Destination**

For investors to successfully respond to the long-term, global systemic risks facing the economy, society and planet, our framework can be a helpful resource to

assess, plan and empower.

Having systematic plans in place to address these complex trends will enable investors to position themselves to capture opportunities as well as mitigate major risks. Accurate self-assessment and peer collaboration are crucial components of the journey. We believe that all asset owners with a culture of innovation, diversity of thought and a commitment to a strategic vision and transparency have the ability to become advanced in addressing the trends.

This piece was originally published in the World Economic Forum.

***Brink***

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# Decentralized Finance: The Next Big Threat for the Finance Sector

***Kevin Werbach,***
***Chair of the Department of Legal Studies and Business Ethics at***
***The Wharton Business School, University of Pennsylvania***


*People use bank ATMs next to a Bitcoin ATM at a shopping mall in Istanbul, Turkey on April 16, 2021. There are now more crossovers where decentralized finance architectures are being built within the traditional financial services world. Photo: Chris McGrath/Getty Images*

*Decentralized finance, or DeFi, is a fast-growing segment of the financial markets. Based on a blockchain platform, DeFi provides software services that can cut out intermediaries in financial transactions, thereby allowing for financial services, such as mortgages and investment, to be delivered at lower costs. The question is: Will it take off, or will the financial sector push back?*

*Kevin Werbach is the chair of the Department of Legal Studies and Business Ethics at the Wharton Business School, University of Pennsylvania.*

*WERBACH*: At a broad level, DeFi is about reconstructing the entire financial system on decentralized blockchain-based foundations.

At the moment, we have a significant and growing market around cryptocurrency trading, as well as payments in things like Bitcoin. However, most of that activity still goes through centralized actors. If you buy Bitcoin on an exchange like Coinbase, for example, Coinbase is taking custody of your assets, and it's providing a similar kind of intermediation function to a traditional financial services provider.

**No One Takes Custody of Your Assets**

DeFi is about taking the actual financial service provision and transforming it into software that is operating as what are called "smart contracts" on a blockchain.

Most of this kind of activity today is on the Ethereum blockchain, but there's a number of other blockchains that are growing in their level of DeFi activity.

There are three key attributes of DeFi.

The first is that settlement is done on a trust-minimized blockchain platform. The base layer is that these are digital assets — cryptocurrencies where the ultimate ledger of transactions is a blockchain — as opposed to some centralized database in a financial entity.

The second piece is that the services are non-custodial — no one takes ownership or full control custody over investors' assets. The investor still has control of their assets — even though they are transacted — whether it's a trade or a lending

relationship through the financial services platform.

The third piece of DeFi is that services are open, programmable and composable. What that means is that all of these are just software components that are running on a blockchain network. So it's easy to add in additional functionality or to combine functions from different services because everything is running on a standardized software environment.

**Which of the Intermediaries Will Be Most Threatened?**

*BRINK: Which intermediaries are likely to be most disrupted by this?*

*WERBACH*: We first need to question whether DeFi actually disrupts traditional finance, operates alongside traditional finance or integrates with traditional finance.

It probably will be some of all three, but the growing success of DeFi does not necessarily require undermining traditional financial institutions. The question that DeFi poses to traditional finance is whether intermediation is valuable.

If the things that a bank or an asset manager does turn out to be things that can be provided more cheaply and efficiently in an automated way through software, then that will ultimately lead to capital flowing away from those traditional intermediaries.

In terms of the infrastructure, staffing, processes and relationships that are wrapped around that basic intermediation function in traditional finance, what will happen to all of those if we move to a world where at the core is software and decentralized blockchains as opposed to existing finance structures?

*BRINK: Can you describe any new services or new areas of financial activity that might open up as a result of this innovation?*

*WERBACH:* Right now, there is a tremendous amount of experimentation in DeFi because these base functions in finance can be combined in different ways. So one area of experimentation we see are aggregators — where if, for example, you have multiple opportunities to earn yields for providing capital as liquidity, then that can be automated and optimized in very efficient ways.

So there's a new layer of DeFi providers that have already sprung up on top of the first level of DeFi applications to do that automated management. We have things somewhat like that in traditional finance, but generally speaking, they're only accessible to the largest investors, the hedge funds and the very sophisticated players. They also have a lot of manual activity and costs associated with them. So that's one area of experimentation.

**Getting Your Mortgage via DeFi**

Another area of experimentation is potentially opening up financial products that have not been accessible to retail level investors, or to the billion or so people in the world who don't have bank accounts and access to the traditional financial system.

Now that has to be said with some caution because there's risk involved, and DeFi today is very immature. Making complex financial services accessible to someone who doesn't have the background or the knowledge or the legal protections

that traditional banking customers enjoy is not a desirable outcome.

Right now with DeFi, we're seeing people trying all sorts of creative things because they can — but that doesn't necessarily mean that all those things are going to succeed or that they should.

*BRINK: For example, one could potentially see mortgage services provided this way?*

*WERBACH*: Sure, any kind of lending relationship can be done in DeFi. The idea is that the collateral pool can be drawn from multiple holders of these digital assets in very flexible ways. Lending can be done in an automated way that is fully-collateralized or even over-collateralized. This addresses some of the risk concerns with these assets.

That being said, markets, like mortgage markets, are extremely large, sophisticated and regulated based on experience of where things can go wrong. I think we will see DeFi integrating in and providing alternatives to some of those markets. But again, there's a long way to go to the point where people would feel comfortable doing that at scale.

*BRINK: What are the major risks that regulators should have an early lead on?*

*WERBACH*: First of all, there are a host of technical risks and concerns about attacks and hacks that have been very significant in DeFi. There have been hundreds of millions of dollars lost because these systems are not sufficiently mature, robust and resilient.

**Manipulating the Oracle**

For example, DeFi systems depend on what are called oracles. A blockchain doesn't know the price of an asset — it only knows what's on the blockchain. There needs to be some decentralized mechanism to allow the price signal to be recorded in the blockchain. It turns out that those can be manipulated. If you can manipulate the price oracle, you can use that in some cases to drain funds from the DeFi application that depend on that price oracle.

Now there's a lot of sophisticated technical work going on to harden these systems, but we still have a long way to go.

All of these applications are based on smart contracts, and they generally have fail-safes involved and mechanisms to address significant price volatility. But as we've seen time and time again in finance writ large, it's impossible to fully predict how systems will respond to every possible scenario. We don't entirely know what will happen if there are rapid price swings in these assets.

**Legal Risks**

There are legal risks as well, where regulators appropriately have concerns about things like money laundering and fraud that are going on in the larger blockchain

and cryptocurrency world and as well as in DeFi specifically.

The value of these DeFi services is that they are decentralized, so there's not one actor that is responsible for all of the transactional activity. However, that can't simply open the door to eliminating any protections against various kinds of financial crime and fraud. That's certainly an area that the regulators are looking at because there have been plenty of examples in the cryptocurrency world where this has happened.

*BRINK: Ten years out, what percentage of the financial landscape do you think will be running through DeFi systems?*

*WERBACH*: It's a hard question to answer: probably still a relatively small amount because finance is so gargantuan around the world and is tied into so many different kinds of systems. The value of transactional volumes in trade finance, for example, is astronomical.

**Finance is a Software Application**

I think the basic concept that finance is increasingly becoming a software application is unstoppable, and that's happening independently of DeFi. FinTech broadly is moving in this direction as well.

I think we will see more and more crossovers where DeFi-type architectures are being built within the traditional financial services world once we can get greater confidence about addressing risks and the regulatory questions.

And there'll be more and more gateways where the activity may not flow predominantly through these new DeFi providers, but the line between DeFi and traditional finances is going to blur. So 10 years out, I think, some version of what we're now calling DeFi is going to be fairly well-established as an element of the financial landscape.

***Brink***

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# Going Beyond Investments — The Role of Commercial Underwriting in the Climate Transition

***Amy Barnes, Head of Climate and Sustainability Strategy at Marsh;***
***Anthony Bice, Partner, Co-Head of the Global Insurance Practice at Oliver Wyman;***
***Alex Wittenberg, Partner, Financial Services at Oliver Wyman***

*This article was originally published by the Chartered Insurance Institute in A Commonwealth Insured on 23 June 2021.*

The financial services industry is an accelerator in the transition to net-zero targets, for example with the focus on the investment portfolios of institutional investors and bank lending. Progress includes the 95% European bank lending having a net-zero ambition aligned with the Paris Agreement. Some 70% of European traded equity is managed by asset managers with a net-zero ambition.

*A worker pulls on a rope to secure equipment at a wind turbine under construction in Germany. While governments and the public are enthusiastic for offshore wind and solar energy, increasing claims are creating a more conservative underwriting environment, impacting project economics and potentially growth. Photo: Sean Gallup/Getty Images*

Only recently has the focus begun to shift to the underwriting portfolios of general insurers and the impact of commercial underwriting (liabilities). This can also play a crucial role in the transition to net zero.

First, insurers can impact carbon-intensive economic activity through the pricing and availability of financial capacity for insurance products. Through limiting coverage for certain assets or sectors of the economy, insurers have the ability to shift entire value chains. This applies across a spectrum of carbon intensity — to both green and brown industries.

Second, the underwriting portfolio can react much faster to a changing agenda than the investment portfolio, due to the annual duration of most insurance contracts, which differs significantly from the average tenure of a corporate bond (10 years at origination).

Multi-year contractual agreements in investment and lending mean that underwriting can be a far more immediate tool for portfolio steering.

**The Brown and Green Protection Gap**

The insurance profession is confronted with two priority opportunities to facilitate and de-risk climate transition.

*Avoiding a green protection gap: supporting a less carbon-intensive future*

An insurance protection gap for green industries could jeopardize the Paris goals. On the other hand, offering insurance cover for novel technologies and green sectors that are core to the net-zero transition is essential if they are to attract capital and expertise.

Pricing of insurance products is typically backward-looking and updated on an annual basis to reflect the volume and quantum of claims. Should claims increase to the extent that the insureds are unable to afford to pay premiums or the insurers are no longer willing to provide sufficient financial capacity, a so-called protection gap arises, potentially impacting the economic viability of businesses or sectors. This can be exacerbated by the lack of historic data with which to calibrate pricing and underwriting models, leading insurers to fall back on first-principles expertise and heuristics. This can result in excessive caution, and hence limited capacity, while insurers attempt to assess risks.

We are observing early signs of a green protection gap for sectors vital for the climate transition, in particular for renewable energy. While governments and the public are enthusiastic for offshore wind and solar energy, increasing claims are creating a more conservative underwriting environment, impacting project economics and potentially growth. Other factors, beyond the simple claims experience, include the scale of individual projects, which has grown dramatically, increasing the amount and concentration of insurance required; the value of the technology being deployed; and the exposure to natural catastrophe-driven perils of many optimal locations (the best place for wind farms is, unsurprisingly, where the wind blows). The outcome is that projects have a higher value, are more technically complex and are exposed to an uncertain operating environment.

To avoid the risk of a green protection gap, we believe insurers need to strengthen collaboration with industry and explore how best to parse the risk and diversify approaches to its transfer. Emerging solutions include the use of alternative risk carriers such as mutual insurance providers; reinsurance products such as parametric insurance; additional pooling and risk-sharing methods; or placing some part of the risk in public markets in the form of green bonds similar to catastrophe bonds. The insurance industry could also explore the appetite of regional and federal governments to carrying some of the risk on the public balance sheet.

*Avoiding chaos: facilitating an orderly transition from brown to green*

Insurers have the ability to influence greenhouse gas emission across many industries through the pricing, limit and coverage levers inherent in their underwriting activity.

Insurers are currently developing a variety of approaches to steer their underwriting portfolios toward Paris alignment. Many have announced they will cease underwriting new thermal coal businesses, and in some cases this extends to oil sands and arctic drilling, pursuant to recommendations in the Lloyd's of London ESG

Report. Others have gone further and set objectives based on the insured's activities or assets. Assuming that a significant number of firms choose their own path in reducing carbon intensity, there is a risk that the aggregation of insurer activity causes a chaotic transition out of brown industries, with profound implications on economic activity, particularly for those countries less able to rapidly reduce their reliance on carbon-intensive baseload power generation. Industry groups such as the Net Zero Insurance Alliance will play a critical coordination role.

Conceptually, the steering of the underwriting portfolio is simple but, in practice, there are complexities to address. The implementation of any portfolio steering approach requires clear guidelines to be effective. These include an exact choice of metrics, conversion of metrics to targets against a desired climate pathway, embedding the metrics into the actual underwriting process, and training staff in their application. Additionally, we foresee conflict between the need to align to the net-zero targets and the growing profitability gap between brown and green business as capacity swings away from traditional, well-understood, carbon-intensive businesses toward newer, less-understood, green businesses (with the inevitable tightening of returns). Insurers must resolve this dichotomy if they are to deliver their commercial goals while managing the net-zero narrative.

Fossil fuels will play a crucial role in providing stable, baseload electricity — particularly in emerging markets — during the coming decades. Insurers must be responsible in migrating out of carbon-intensive business over time and by supporting those insureds that are formally committed to transitioning their carbon footprint.

**Does the Vision Match the Execution?**

Insurance is often depicted as the oil in the economic engine. By offering cover to a range of industries, the insurance industry will play a crucial role in accelerating and de-risking the transition to a low-carbon economy and enabling an economically pragmatic pathway.

Translating big-picture net-zero aligned narratives into daily decision-making, while maintaining underwriting profit, will be a challenge, but one to which we are all capable of rising.

***Brink***

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# When the Investor Pool Shifts, 'Follow the Money'

***Ram Charan,***
***Global Advisor to CEOs***
***William McNabb***
***Former Chairman and CEO of Vanguard***

*View of a destroyed building from Hurrican Dorian in the Bahamas. These extreme weather events are changing the nature of risk and are causing misery and significant amounts of insured and uninsured loss. Photo: Jose Jimenez/Getty Images*

*While stock exchanges continue to be driven by short-term influences such as daily stock movements, quarterly reporting cycles, the average holding period for a security in an index fund is about 28 years. This is because of the under-acknowledged role of long-term institutional investors.*

*In their new book Talent, Strategy, Risk: How Investors and Boards Are Redefining Total Shareholder Return, Bill McNabb and Ram Charan say that companies must shift the focus of their attention from total shareholder return to talent, strategy and risk.*

*MCNABB/CHARAN*: The data clearly indicates that there's been not just a subtle, but a massive shift to the longer-term holders, the big index players, the passive players, if you like.

Almost simultaneously with that shift to long-term holders is a continuing rise and aggressiveness among what we would have to consider to be investors who are more short-term focused. So you've got the long-termers on one side, looking at long-term value creation, and then you have others, typically small holders, maybe even 2% or 3% of the company, that have shorter-term objectives.

**Awakening Sleeping Giants**

The short-termers have ironically awakened the sleeping giants. So more than ever, you're seeing the long-term holders begin to weigh in, sometimes in concert, on issues that just make fundamental good sense for the management of an enterprise, the composition of the board, for the strategic alignment of the activities of a company, and obviously the whole question of risk which has forced some companies to go, unfortunately, out of business.

*BRINK: Hasn't talent, strategy and risk always been at the forefront of most businesses? What's new about this?*

*MCNABB/CHARAN*: Well, we would argue that all three of these things are being redefined. Most boards, even 10 years ago, talked about strategy ad nauseam, and very little attention was given to talent other than, from time to time, weighing in on CEO selection.

The diversity issue has risen its head clearly in the boardroom around this issue of do you have the right set of questions being asked by the board? Is the right information coming in via a diverse perspective of views and experiences in the boardroom? So it's not that TSR historically was totally ignored. It's that now, it is foundational and centerpiece to what boards must do to create long-term shareholder value.

**The Importance of a Diversity Mindset**

The key point of diversity is not just the gender or race. It is also the mindset, the way people think, their risk profiles. That brings different viewpoints. And the reason for this is that the complexity of business is increasing every day. We must pay attention to stakeholders, we must address China-America tension, we should address the new industrial policy that the White House is advocating, etc. So diversity is a very helpful thing.

And in the race for diversity, we're often looking for raw talent. What is the raw talent in a human being — not what their pedigree is, not what their title is.

And if your customers are diverse, which, if you look around in any society that I've been in in the U.S., they are diverse, it's hard to imagine being able to connect with a customer if you haven't lived in their shoes. So having that sensitivity — that openness, to the way in which different segments of the population react to and think about products — is essential, or you will be lost in the boardroom.

*BRINK: You said that the key is raw talent, but if someone is lacking formal qualifications, how do you select that person based on raw talent?*

*MCNABB/CHARAN:* I learned this from these people who didn't have any degrees who are often very good at spotting talent. The way they do that is that they observe what someone does well and what we call, their God's gift. If they're not working with someone but interviewing them, then you invest time to get them to describe what they have done, how well they did, and out of the three or four incidents, you can identify their natural strengths.

This begins to show what I call observable and verifiable parts, because we're looking more for what they do well; we're not looking so much for what they do wrong. And then we verify that by the references. In the references we ask the people, "Don't tell us the negative. Tell us what they really do. What's their raw talent?"

**The Investor Pool Is Shifting to a Younger Generation**

*BRINK: What about ESG and the double bottom line? There's obviously been*

*a lot of conversations around this on BRINK. where would you place that in terms of the importance for a company?*

*MCNABB/CHARAN:* We define ESG with two Es: employee, first; environment; society and governance, and it is wrapped up in all of those things. With the right talent, with the right strategic comparatives and the right risk profile, you can address many of the concerns that investors rightfully have about the impact of a corporate activity on the environment, on the social good and, of course, governance.

The most important part we now know is that you can earn a good return on ESG investment. The technologies are now here. So it's important to do benchmarking of the companies that are doing it.

In some cases, you cannot do ESG alone — look at New Orleans, look at Houston, there are large complexes of chemical companies. The whole area is heat and carbon. You have to form a coalition, a consortium, including local authorities, and take the leadership to deal with it. This way, you're going to make a difference because, if you delay it, the cost will be much higher in the future and then the capital markets will punish you.

The investor pool is shifting to a younger set, to people in society who want to be investing in things that support, rather than destroy, the environment. They want to invest in things that are good for society. So, by necessity, follow the money; if you really want investors in your stock, you need to be sensitive and mindful to the realities of the shift in investor sentiment and investor behavior.

***Brink***

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# If Banks Don't Drive Europe's Recovery, They Risk Losing Relevance

***Ibon Garcia***
***Head of Retail and Business Banking Europe at Oliver Wyman***
***Will Illingworth***
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*Dark clouds loom over the city skyline, including the European Central Bank in Frankfurt, Germany. If banks can rise to the challenge, it will reinforce customers' trust and banks' central position in the European economy. Photo: Thomas Lohnes/Getty Images*

A year on, consumers have faced fundamental changes to their daily lives. Whole sectors of the economy have been shut down for months at a time, with those remaining open having to adapt to entirely new ways of working. Banks have had to react at breakneck speed to various public-sector-led initiatives and faced real disruption.

Now, banks are starting to look to the future, knowing the pandemic has permanently changed the landscape. Without taking action, they risk being gradually sidelined, pushed into a diminished role by a combination of public policy measures and new ways of delivering payments and credit. Now is the time for banks to take the lead on economic issues to move the region beyond recovery and solidify themselves as a necessary part of Europe's economic future.

**How European Banks Withstood the Pandemic**

The banking system has proven resilient during one of the steepest drops in gross domestic product ever experienced. Capital levels built-up after the financial crisis have proven sufficient, while unprecedented levels of government support for corporates have blunted or deferred many of the pandemic's economic impacts. One in three banks already has released credit provisions. Bank revenues and asset bases have, of course, been hit; in countries with the most stringent lockdowns and heavily exposed economies, revenues dropped up to 11% and risk-weighted assets fell by almost 5% in the most severe cases. Half of the industry's capital sits in banks with a return on equity of less than 4%.

The pandemic has shown that banks can be nimble. The banking system has acted as the transmission mechanism for emergency governmental policy. Banks have made operating model changes that few would have been willing to try in normal times — branches closed, all staff working from home, processes redesigned overnight.

From a macroeconomic perspective at least, the toughest tests are still to come.

Asset bubbles are inflating, caused by excessive market liquidity, low interest rates and a speculative frenzy in digital assets. Meanwhile, the specter of inflation has returned, something Europe's banks have not had to deal with for a generation. And although interest rate rises may bring much needed top-line growth, swathes of corporates are still suffering from weak profitability and would be exposed, along with households.

**Helping to Build a Better Economy**

Against that backdrop, Europe's banks have a once-in-a-generation opportunity. By supporting the recovery from the pandemic and helping to tackle some of the big issues facing Europe's economy, the sector can gain a strong sense of purpose, increase profits and ensure its ongoing relevance.

To seize this opportunity, banks need to address five challenges as Europe moves into recovery.

First, it will fall to banks to help unwind emergency lending programs while minimizing insolvencies and the number of "zombie" companies. Standardized approaches should be delivered across the industry, with government buy-in. Banks and other private-sector financial providers may need to invest in equity-like instruments for viable but overly leveraged companies. A successful glide-path out of emergency support could ensure losses do not reach the peaks predicted in 2020, saving 40 billion euros ($47 billion).

Second, the corporate credit market is changing, and banks will need to define their role. The European Union's Next Generation fund is being rolled out, and the Capital Markets Union (CMU) is slowly emerging, with a long-forecast shift to market-based financing. The 750-billion-euro Next Generation fund amounts to 16% of outstanding loans to non-financial corporations in the European Union. The CMU has the potential to drive market-based financing of corporates from 25% to 50%. Banks will need to be trusted advisers, channel different forms of capital and help clients navigate the broader range of financing solutions.

Third is the carbon transition and the sustainability crisis. An estimated 1.5 trillion euros to 2 trillion euros needs to be invested in the green economy in Europe, more than twice the size of the Next Generation fund. Banks have pledged to reach net-zero carbon emissions across their lending portfolios by 2050, yet their commitments are running far ahead of the transition in the real economy. To hit their targets they will need to be proactive in initiating transition projects. Conflicts between climate goals and financial returns may need to be managed, but if banks don't take the initiative, a combination of boutique advisers and specialists, data companies, and private equity funds will bridge the gap.

Fourth, the way banking products are delivered in the digital economy is moving closer to customers' point of need. Over the next 10 years, it is possible that new ways of accessing banking products could make up 10% of the non-mortgage credit, deposits, foreign exchange and payments markets. Banks will need to be aggressive to compete with fast-moving fintech and big tech players and develop customer-first services and

ecosystems, or settle on one of a number of different partnership approaches providing embedded finance.

Finally, radical changes in Europe's underlying financial infrastructure are on the horizon. Central bank digital currencies (CBDCs) are being initiated as a result of geopolitical and monetary policy control concerns. These currencies could be truly disruptive, with 10 billion euros to 25 billion euros of revenue at risk if CBDCs attract 20% of total deposits. More broadly, the banking system needs to take a collaborative approach, engaging with policymakers and regulators, and with each other, to identify and deliver system-wide improvements. The banking system needs to take a collaborative approach and deliver system-wide improvements in payments, financial crime, cost and data efficiency and digital identity.

Amid all this, the work of footprint rationalization, consolidation, digitization and cost reduction must go on. A further cost-income ratio reduction of 5 percentage points should be targeted, saving at least 30 billion euros.

Across these new opportunities and shifts in existing businesses, the equivalent of 25% of current bank revenue is on the table. If banks can rise to the challenge, it will reinforce customers' trust and banks' central position in the European economy. Embracing change and leading the recovery is the best way for banks to thrive and avoid being sidelined.

***Brink***

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# Multilateral Banks and the Role They Play in Climate Change Reduction

***Mark Plant***
***Director of the Sustainable Development Finance Program at The Center for Global Development***

*There is growing pressure on multilateral development banks (MDB), such as the World Bank and the Asian and African Development Banks, to make greener investments in the developing world and align with the targets set by the Paris Agreement on climate change.*

*Mark Plant is the director of the Sustainable Development Finance Program at the Center for Global Development (CGD) and the chief operating officer of CGD Europe based in London. He says that they are starting to make this a priority.*

*The World Bank headquarters in Washington, D.C.,. MDBs are focused on developing countries, but the major carbon-emitters are large developed countries — the United States and Europe. Photo: Daniel Slim/AFP via Getty Images*

*PLANT*: These multilateral banks have set targets for how much of their portfolios should have a positive climate impact. Most of them are looking at about 50% by 2030, and they're around 35% to 40% now. That doesn't mean the other half isn't climate friendly, but the question is how much is squarely aimed at confronting the climate challenge that the world faces.

*BRINK: Is that fast enough, given the rapid change that's now underway in the climate space?*

*PLANT*: No, they were inline with pre-COVID thinking, but there's been a sea-change in everyone's thoughts since then. There's now much greater awareness of global economic interconnectedness and the need to act in concert. One of the things that will help the banks accelerate their progress is the change in the U.S. administration. Most of the MDBs have a representative of the United States government sitting on their boards. During the Trump administration there was some hesitancy to move aggressively on decarbonization for fear of alienating one of their major shareholders.

*BRINK: There have been years of climate protests outside World Bank and IMF meetings. Are you surprised that it's taken them so long to catch up on this?*

*PLANT*: No. The MDBs are focused on developing countries, but the major carbon emitters are large developed countries — the United States and Europe. And while China, India and Brazil are also big carbon emitters, the MDBs impact in these large developing countries is at the margin. So decarbonization has not been central to

the MDBs' purpose until recently.

**Creating the Right Economic Growth Is Not Easy**

In the last four or five years, people have been coming around to the idea that we need to have sustainable growth not only in the developed countries, but also in the developing countries — where we have the chance to set the pattern for the economic growth for years to come.

The potential for global growth in the next 20 years is in middle- to lower middle-income countries. They're going to be the engines of growth. That makes the decarbonization mandate much more central to the mission of the MDBs.

*BRINK: So do the multilateral banks see green growth as an opportunity in these low to middle income countries rather than a problem?*

*PLANT*: Yes. It's an opportunity to grow right, if you will. Some of these countries may be smaller relative to the size of the world economy, but they will grow. China is in many ways a harbinger of what might happen in other developing countries. Thirty years ago, China was not considered an economic powerhouse.

I think people now look back on the Chinese experience, and perhaps think what if China had grown in a carbon-friendly way? We'd have a different carbon load in the industry. So we need to think about growth more broadly than just producing more — the question is how do you produce more while making it sustainable?

*BRINK: Is there much difference between the multiple MDBs? Does the African Development Bank or the Asian Development Bank take a different position on this?*

*PLANT*: No, I think they're all pretty much at the same place. They're going to differ a bit in how they arrange their carbon portfolios. The Asian Development Bank is going to be lending to the economic tigers of Asia, where the economic structure is more advanced.

If you're looking at some of the countries in Africa that are very poor, it's going to be a very different equation because these countries are really not big carbon emitters.

In fact, their contribution to the global carbon load is minimal, and you need to focus on how to get them to grow. So you might not worry as much about the initial carbon load of energy generation because it's so small, but what you want to do is figure out how they grow it into the future.

**Adaptation Vs. Mitigation Is a Big Challenge**

The other challenge is adaptation versus mitigation — a real problem for some of the MDBs. They know how to do mitigation: You move from fossil fuel-based energy production to a sustainable energy production, and it is becoming more and more possible to do that on a wholesale level, if you will.

But it's adaptation that really makes a difference in people's lives in a lot of the very poor countries — climate change is going to happen so the question is how do

you adapt lives and livelihoods to the new climate reality? That's a much more retail change which has to be brought about country-by-country, and even village-by-village.

Suppose you're the minister of finance of a small African country. You have a limited budget: You can either change your gas-producing plant to solar or you can build badly needed schools and hospitals. What do you do?

Those are the kinds of choices that each country's government is now having to make.

To the extent that the MDBs can alleviate the budget constraints by providing more financing, so much the better. But to date, the resources the world is devoting to developing countries are insufficient, so the choices will remain.

The trick is to find synergistic solutions — ones that are going to be both good for economic and social development and climate improving. Some progress has been made on this, but a lot more work needs to be done.

*BRINK: John Kerry, the U.S. Special Presidential Envoy for Climate, has been demanding an increase in climate financing. Are we going to see a bigger proportion of climate financing coming out of the MDBs?*

*PLANT:* That's the hope, and certainly it's grown over time. In 2019, the climate financing from MDBs for developing countries was about $45 billion, which is about an 8% increase over the previous year.

The MDBs see their role more and more as motivating the private sector and private development to do the right thing and to go in the right direction — and they see pro-climate financing as being part of that process.

Paris alignment is a bit of a fuzzy term as to exactly what it means because it can be widely interpreted. The real question will be when it gets down to individual projects — how do they decide what is climate enhancing and how much of each project counts towards their climate finance goals?

If they can do that in a consistent and transparent and consistent way, that will be real progress. It's a complicated system to coordinate, but with the Biden administration in place, world leaders are pushing in the same direction. This gives a clearer steer to the MDBs about greening their portfolios.

***Brink***

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# How We Digitize Finance Will Reveal Society's Values

***Douglas Elliott***
***Partner at Oliver Wyman***

*A client uses contactless pay with her smartphone in The Hague, Netherlands. More than 80% of small and micro businesses around the world updated their ability to accept digital payments last year. Photo: Pierre Crom/Getty Images*

The coronavirus pandemic has accelerated the take up of digital technology across the economy, and few areas are changing as quickly as money itself. U.S. e-commerce sales jumped by 44% in the second quarter of 2020, according to the Atlanta Fed, while a Visa survey found that more than 80% of small and micro businesses around the world updated their ability to accept digital payments last year. Nearly 90% of central banks surveyed by the Bank for International Settlements are actively researching the potential for digital currencies.

These innovations can offer convenience, speed and security, says Alex "Sandy" Pentland, a professor at the MIT Sloan School of Management. But they also require some tough decisions about privacy and anonymity and what controls the authorities should retain to monitor activity and combat fraud.

Whether we conduct commerce in dollars or bitcoin or digital renminbi, he says, we need to realize that people are susceptible to manias that can whipsaw markets and skew the distribution of wealth.

Pentland discusses the outlook and implications for digital finance in the second part of an interview with Douglas J. Elliott of the Oliver Wyman Forum's Future of Data initiative.

*ELLIOTT: You've written about digital assets, digital currencies and distributed finance. Can you share your views on those areas?*

*PENTLAND*: We helped several U.S. financial institutions set up Akoya, which uses distributed principles to allow you to move money around without sharing personal data. The previous system was horrible — screen-scraping your information, getting your password.

And we just helped institutions in Switzerland set up the Swiss Trust Chain, which is a blockchain platform for doing what Akoya does, as well as handling medical data and everything else — which is really transformative. Singapore has a similar blockchain, and China has one. These systems allow you to get uniform control over finance, trade and other information on the same encrypted platform. That lets you

detect fraud more easily, it lets you manage things much more efficiently — all by looking at patterns in the metadata, because it turns out that you don't need to look at the underlying data. This is the future that I see.

**Convenience Versus Privacy**

*ELLIOTT: Where do central bank digital currencies fit in the picture?*

*PENTLAND*: Central bank digital currencies would run on the same or similar platforms. Current best practice is to have a multi-level system: The central bank has relationships with the commercial banks, and commercial banks have relationships with you. All of these entities have a copy of the ledger for transactions, and they have permissions to see only certain parts of it. This allows you to get consistency among all parties so that if somebody gets compromised, everybody else says, "That's not right, my copy doesn't say that." That self-healing property means you're much more robust to attack.

The Chinese version of this very explicitly allows the central bank to see all the way down to whether you bought chewing gum. Other proposals have much more nuance. The central bank sees what the commercial banks are doing but not the details of how they manage the next levels of the ledger, unless there's a criminal case and a court order.

*ELIOTT: Can authorities get the convenience benefits of digital cash without the potential downsides?*

*PENTLAND*: Digital cash is not new, but you can have different types of anonymity. You can make it perfectly anonymous, sort of like Bitcoin, and nobody can tell where the money is going. Countries and tax authorities don't like that, so I don't think that's viable in the long term.

There's another version where you get a token that you can spend anywhere, but eventually that token has to be deposited in a bank. The authorities don't know exactly what happened in between, but they know that there was a flow. And there are different versions where the authorities will see some parts of the transactions — the cost, for example — but not other parts, like what you bought. We're helping people think through these choices to be able to have the ability to avoid fraud and solve crime while not having big changes in privacy and anonymity.

**Smart Money**

*ELLIOTT: Are you looking into programmable money?*

*PENTLAND*: Call it "smart" money. The idea is that financial rails carry a digital token that can have programming about what it will and won't do. It could pay tax, for instance, but not move outside the country.

This is different than the crazy stuff you see with cryptocurrencies, such as

the defi (decentralized finance) stuff like derivatives. The problems with these systems have to do with governance. Libra, the digital currency that Facebook proposed, was extremely good, except for governance.

Libra was virtually identical to a digital currency design we did called Tradecoin. It's intended to help sovereign wealth funds and retirement funds manage their resources and have secure exchange of value. What's nice about these funds is they have a 30-year time horizon, and they represent citizens. So, one hopes that when you begin to get digital currencies, the governance has that long-term perspective.

**How Regulation Reveals Society's Values**

These platforms and digital currencies will reveal the values of each society: How much anonymity is there, what do you have to do to be able to unmask information, who gets to do that and under what conditions? And who should get the long-term value of the digital currency — banks? Citizens? The nation as a whole?

*ELLIOTT: How do you handle all of these issues when digital currencies cross borders, where people might have quite different values or priorities?*

*PENTLAND*: Different countries are going to want to have their own control mechanism. Those will be different, and that's OK. I think that there will be a Darwinian competition: The ones that do well will survive, the other ones will have to learn from their errors.

Consider, for instance, the internet. Every country has their own networks and slightly different ways of regulating them, but they all need interoperability. It is the internet after all.

What you need with digital currencies is a way to transfer value from one ledger to the other. You're going to get the "inter-ledger," and it will have gateway mechanisms for moving from one territory to another. When I move from one digital currency to the other, I can build in programmable hedging. Suddenly, you can get world-class hedging that is stable across the entire ecosystem at essentially no additional cost.

**Misguided Policy Models**

*ELLIOTT: Across the range of things you focus on, what is the biggest misconception you have to keep dealing with?*

*PENTLAND*: Two things. One is this notion of the rational individual. The models we have for governance assume everybody's an individual making their own decisions, and they're all independent and somewhat rational. That's not true. Most of our decisions are made through social constraint and by learning from others. When people influence each other, you can get cascades of behavior, a type of distribution that has very long tails — like in 2008.

The other thing is this notion of ergodicity. People say, "Here's a good bet, everybody should do this," and they give examples such as home ownership. But in fact, such investments are only good on average. Lots of people will have a string of bad

luck, and they'll come out badly. That's at the root of a lot of inequality.

All of our policy is based on the average — that's an equilibrium model. It's based on individuals as opposed to networks. Those are some of the most salient and deepest problems.

*In the first part of this interview, Sandy Pentland discussed how data cooperatives can help society unlock the benefits of data while avoiding privacy violations and other abuse.*

*A version of this piece was originally published on the Oliver Wyman Forum.*

***Brink***

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# How Can Financial Institutions Prepare for AI Risks?

***Kartik Hosanagar,***
***Professor of Operation, Information and Decisions at the Wharton School;***
***Yogesh Mudgal,***
***Director and Head of the Emerging Technology Risk & Risk Analytics at Citi***

*People walk around in the city of London. Financial institutions are increasingly adopting AI as technological barriers have fallen and its benefits and potential risks have become clearer. Photo: Unsplash*

Artificial intelligence (AI) technologies hold big promise for the financial services industry, but they also bring risks that must be addressed with the right governance approaches, according to a white paper by a group of academics and executives from the financial services and technology industries, published by Wharton AI for Business.

The white paper details the opportunities and challenges of implementing AI strategies by financial firms and how they could identify, categorize and mitigate potential risks by designing appropriate governance frameworks.

"Professionals from across the industry and academia are bullish on the potential benefits of AI when its governance and risks are managed responsibly," said Yogesh Mudgal, AIRS founder and lead author of the white paper. The standardization of AI risk categories proposed in the paper and an AI governance framework "would go a long way to enable responsible adoption of AI in the industry," he added.

**Potential Gains from AI**

Financial institutions are increasingly adopting AI "as technological barriers have fallen and its benefits and potential risks have become clearer." The paper cited a report by the Financial Stability Board, an international body that monitors and makes recommendations about the global financial system, which highlighted four areas where AI could impact banking.

The first covers customer-facing uses that could expand access to credit and other financial services by using machine learning algorithms to assess credit quality, or to price insurance policies, and to advance financial inclusion. Tools such as AI chatbots "provide help and even financial advice to consumers, saving them time they might otherwise waste while waiting to speak with a live operator," the paper noted.

The second area for using AI is in strengthening back-office operations, including developing advanced models for capital optimization, model risk management, stress testing and market impact analysis.

The third area relates to trading and investment strategies. The fourth covers AI advancements in compliance and risk mitigation by banks. AI solutions are already being used for fraud detection, capital optimization and portfolio management.

**Identifying and Containing Risks**

For AI to improve "business and societal outcomes," its risks must be "managed responsibly," the authors write in their paper. AIRS research is focused on self-governance of AI risks for the financial services industry, and not AI regulation as such, said Kartik Hosanagar, Wharton professor of operations, information and decisions and a co-author of the paper.

In exploring the potential risks of AI, the paper provided "a standardized practical categorization" of risks related to data, AI and machine learning attacks, testing, trust and compliance. Robust governance frameworks must focus on definitions, policies and standards, inventory and controls. Those governance approaches must also address the potential for AI to present privacy issues and potentially discriminatory or unfair outcomes "if not implemented with appropriate care."

In designing their AI governance mechanisms, financial institutions must begin by identifying the settings where AI cannot replace humans. "Unlike humans, AI systems lack the judgment and context for many of the environments in which they are deployed," the paper stated. "In most cases, it is not possible to train the AI system on all possible scenarios and data." Hurdles such as the "lack of context, judgment, and overall learning limitations" would inform approaches to risk mitigation.

Poor data quality and the potential for machine learning/AI attacks are other risks financial institutions must factor in. In data privacy attacks, an attacker could infer sensitive information from the data set for training AI systems. The paper identified two major types of attacks on data privacy: "membership inference" and "model inversion" attacks. In a membership inference attack, an attacker could potentially determine if a particular record or a set of records exist in a training data set and determine if that is part of the data set used to train the AI system. In a model inversion attack, an attacker could potentially extract the training data used to train the model directly. Other attacks include "data poisoning," which could be used to increase the error rate in AI/machine learning systems and distort learning processes and outcomes.

**Making Sense of AI Systems**

Interpretability — or presenting the AI system's results in formats that humans can understand — and discrimination — which could result in unfairly biased outcomes — are also major risks in using AI/machine learning systems. Those risks could prove costly: "The use of an AI system which may cause potentially unfair biased outcomes may lead to regulatory non-compliance issues, potential lawsuits and reputational risk."

Algorithms could potentially produce discriminatory outcomes with their complexity and opacity. "Some machine learning algorithms create variable interactions and non-linear relationships that are too complex for humans to identify and review," the paper noted.

Other areas of AI risks include how accurately humans can interpret and explain AI processes and outcomes. Testing mechanisms, too, have shortcomings as some AI/machine learning systems are "inherently dynamic and apt to change over time." Furthermore, testing for "all scenarios, permutations and combinations" of data may not be possible, leading to gaps in coverage.

Unfamiliarity with AI technology could also give rise to trust issues with AI systems. "There is a perception, for example, that AI systems are a 'black box' and therefore cannot be explained," the authors wrote. "It is difficult to thoroughly assess systems that cannot easily be understood." In a survey AIRS conducted among its members, 40% of respondents had "an agreed definition of AI/ML" while only a tenth of the respondents had a separate AI/ML policy in place in their organizations.

The potential for discrimination is a particularly difficult risk to control. Interestingly, some recent algorithms helped "minimize class-control disparities while maintaining the system's predictive quality," the authors noted. "Mitigation algorithms find the 'optimal' system for a given level of quality and discrimination measure in order to minimize these disparities."

**A Human-centric Approach**

To be sure, AI cannot replace humans in all settings, especially when it comes to ensuring a fair approach. "Fair AI may require a human-centric approach," the paper noted. "It is unlikely that an automated process could fully replace the generalized knowledge and experience of a well-trained and diverse group reviewing AI systems for potential discrimination bias. Thus, the first line of defense against discriminatory AI typically could include some degree of manual review."

"It starts with education of users," said Hosanagar. "We should all be aware of when algorithms are making decisions for us and about us. We should understand how this might affect the decisions being made. Beyond that, companies should incorporate some key principles when designing and deploying people-facing AI."

Hosanagar has listed those principles in a "bill of rights":

- A right to a description of the data used to train users and details as to how that data was collected,
- A right to an explanation regarding the procedures used by the algorithms expressed in terms simple enough for the average person to easily understand and interpret, and
- Some level of control over the way algorithms work that should always include a feedback loop between the user and the algorithm.

Those principles would make it much easier for individuals to flag problematic algorithmic decisions and ways for government to act, Hosanagar said. "We need a national algorithmic safety board that would operate much like the Federal Reserve, staffed by experts and charged with monitoring and controlling the use of algorithms by corporations and other large organizations, including the government itself."

Building accurate AI models, creating centers of AI excellence oversight and monitoring with audits are critical pieces in ensuring against negative outcomes. Drawing from the survey's findings, the AIRS paper concluded that the financial services industry is in the early stages of adopting AI and that it would benefit from a common set of definitions and more collaboration in developing risk categorization and taxonomies.

*This piece was originally published on Knowledge@Wharton.*

***Brink***

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*Kartik Hosanagar is a professor of operations, information and decisions at The Wharton School of The University of Pennsylvania. He is the author of A Human's Guide to Machine Intelligence.*

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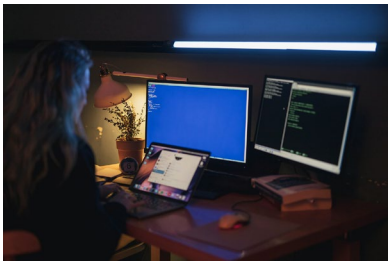
*Yogesh Mudgal is the director and head of the emerging technology risk & risk analytics at Citi. The goal of the program is to enable responsible innovation. He is responsible for leading the program globally, which includes identification of risks, evangelizing risks with emerging technologies, influence building of guardrails and frameworks and risk assessments of emerging technologies.*

# Insurance Prices Are Rising, With Cyber Claiming Big Increases

***Lucy Clarke***
***President of Marsh JLT Specialty and Global Placement***

Global commercial insurance prices increased 18%, on average, in the first quarter of 2021, although there are signs that increases may be plateauing in some regions. The first quarter increase was lower than the 22% seen in the prior quarter.

It was the fourteenth consecutive quarter of increases in the Marsh Global Insurance Market Index and the largest increase observed since the index's inception in 2012 (see Figure 1).



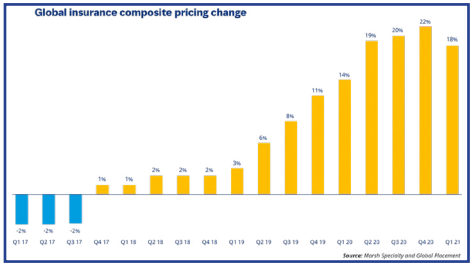
*Pricing for cyber insurance increased 35%, on average, in the U.S. — the largest increase since 2015. The increase was driven largely by the escalating frequency and severity of ransomware events. Photo: Pexels*

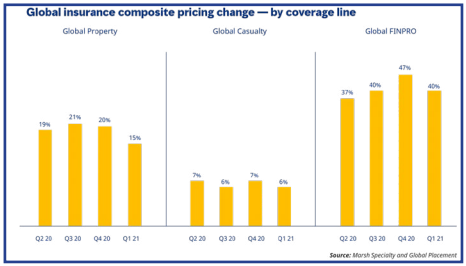
Pricing for cyber insurance diverged from the trend, with prices generally increasing — notably by 35% in the U.S. and 29% in the U.K. — driven by the frequency and severity of losses.

The U.K. and Pacific regions again led the increases, with average composite insurance pricing up by 35% and 29%, respectively. Average pricing in the U.S. rose by 14%, down slightly from the 17% year-over-year increase experienced in the prior quarter.

Average pricing increases in Continental Europe (13%), Asia (8%), and Latin America and Caribbean (5%) were all lower than in the prior quarter.

All three major product lines showed average pricing increases globally, though less in the prior quarter, with financial and professional lines up by 40%, property by 15%, and casualty by 6%.



**US Insurance Pricing Plateau Expected**

The average rate of increase for overall U.S. insurance pricing appears to have plateaued, barring unforeseen changes in conditions, as the level of increase slowed for the second consecutive quarter. Led by increases in property and financial and professional lines, U.S. insurance pricing in the first quarter increased an average of 14%.

Property insurance pricing increases in the U.S. slowed each month of the first quarter, with greater reductions on catastrophe (CAT) risks. About 80% of renewing clients experienced an increase, with 26% of clients reducing limits purchased.

Financial and professional lines pricing in the U.S. increased an average of 25% in the quarter. D&O pricing was up 27%, less than the 44% year-over-year increase seen in the previous quarter. For the second and third quarters of 2021, average pricing is likely to increase in the 10% to 20% range.

Pricing for cyber insurance increased 35%, on average, the largest increase since 2015. The increase was driven largely by the escalating frequency and severity of ransomware events. Payment demands now frequently exceed 1 million. The attacks have affected all industries, especially health care, manufacturing, educational institutions, and public entities.

Casualty insurance pricing in the U.S. increased 7%; excluding workers' compensation, the increase was 12%.

**UK Pricing Increases**

Overall, insurance pricing in the first quarter of 2021 in the U.K. increased 35%, the highest of any region and the fourteenth consecutive quarter of increase.

Financial and professional lines increased 71%, largely due to pricing for D&O as some insurers said that increases in the first quarter of 2020 were inadequate; however, the rate of increase was lower in the first quarter of 2021.

As elsewhere, cyber insurance rate increases quickened, primarily due to ransomware events. Insurers throughout 2021 are likely to continue closely scrutinizing cybersecurity hygiene and data practices, especially as cyber exposures increase due to ransomware, the implementation of multifactor authentication and poor remote desktop protocols.

In other major areas, property insurance pricing increased 18%, on average, and casualty was up by an average of 7%. It was the seventh consecutive quarter of increase for casualty pricing.

**Pricing in Asia Increases**

Insurance pricing in the first quarter of 2021 in Asia increased 8%, year-over-year, a lower rate than the 11% average in the fourth quarter 2020.

Property insurance pricing rose 10% in the region, on average, while casualty pricing remained generally flat in the quarter.

Financial and professional lines pricing in the region rose 23%, on average, the largest increase observed in several years and the eighth consecutive quarter of increase.

Insurers were selective on U.S.-listed D&O, with rate increases ranging from 75% to 100% in some cases.

**Insurance Pricing by Region**

Other regional highlights in the first quarter included the following:

Continental Europe experienced a 13% average increase in overall composite insurance pricing. Financial and professional lines pricing increased 23%, property 16%, and casualty 6%, on average.

Composite pricing rose 5% in Latin America. Casualty pricing declined 5% on average, the only decrease seen in a major product line globally.

Insurance pricing increased 29% in the Pacific region. Property pricing rose 20%, on average, a moderation from the prior four quarters. Casualty insurance pricing rose 17%, on average, the largest year-over-year increase since 2012.

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## About Author

**Lucy Clarke**
**President of Marsh Specialty and Global Placement**

*Lucy is president of Marsh Specialty, president of Marsh Global Placement, and is a member of the Marsh executive committee. Lucy joined Marsh in April 2019 as part of the acquisition of JLT Group, where she worked for 17 years in key leadership roles, including CEO of JLT Specialty, the insurance and risk arm of the JLT Group. Lucy graduated from Vanderbilt University and has worked in London since 1990.*

# How AI Plays Into the Future of Risk Management

***Kannan Janardhanan***
***Director of Business Development for TMT at intive***

*Risk analysts have been able to make sense of complex yet structured data. Although nothing in these methodologies is broken per se, the way we use data is transforming irreversibly. Photo: Unsplash*

Risk analysts have always relied on data to guide decisions toward strong growth potential and away from high-risk strategies. This used to be a fairly linear process, but now that up to 90% of our data is unstructured, information is not only difficult to organize into digestible formats but also produced in volumes that go beyond the capabilities of human analysts aided by conventional data systems.

Artificial intelligence and predictive analytics hold the promise of tackling the data burden and keeping risk predictions agile to external trends — but they need to be applied strategically to present real value and minimize business risk.

**The Risk of Siloed Approaches**

Historically, risk analysts have been able to make sense of complex yet structured data. Although nothing in these methodologies are broken per se, the way we use data is transforming irreversibly.

For a business discipline that should offer exactly the opposite, it's clear that the standard practice needs to be adjusted to keep predictive analytics accurate. With the majority of all business services and consumer activity now taking place digitally, data is produced in vast, unprecedented volumes that are virtually impossible to neatly organize into structured, linear data sets for interrogation.

This is especially true for real-time data, such as payment transactions that take place minute-to-minute, or conversational data taking place across social or customer service platforms. This creates a difficult conundrum as — without both real-time and historical data insights in the hands of analysts — a vital piece of the puzzle is missing.

But it's not just the nature of unstructured data itself that demands this change; the shockwave effects of the COVID-19 pandemic put the need for resilient risk management into sharp perspective.

**The Snowball Effect**

While consumer trends and economic uncertainty may have taken years to develop in the past, microtrends with the power to snowball into disruptive forces can now take place in a matter of months.

With cognitive analytics, unstructured data can not only be processed but

analyzed in real-time using sub-specialisms like Natural Language Processing (NPL).

With powerful predictive analytics to hand, boardrooms stand a better chance of staying abreast of these hurdles and adjusting business models accordingly. Are consumers starting to boycott a certain manufacturer? Is a trading route no longer reliable due to political instability? Are clients indicating their desire to see cryptocurrency payment options with their service providers?

The answers to these types of questions can help companies minimize risk, take rapid action on the future of the business and bank on decisions that build towards stability.

**Setting the Right Parameters**

AI and predictive analytics are powerful tools to have in the arsenal of any risk management strategy — but the ability to garner meaningful insights hinges on setting the right parameters.

You can train an algorithm to recognize phrases in conversation or one that learns how to predict consumers' health care decisions based on their behavior patterns; the results can be predicted accurately when inherent bias has been considered upfront and accounted for in the algorithm.

The same gains are possible with risk management, but data scientists need to have an extremely clear understanding of business goals to put the right training parameters in place.

Here, business intelligence (BI) units must work alongside data scientists to guide progress. What datasets should be analyzed? Which competitors are the biggest threats? What questions or phrases should be tracked online? What constitutes a positive or negative sentiment about the brand in question?

Things get even more interesting when cognitive AI is applied on unstructured data and given the freedom to self-train, but systems should be constantly tweaked and refined to yield better results. After all, the power of this tool will only be as strong as the domain knowledge the experts from their industries can offer.

**AI Risk Management in Action**

The finance sector has already made strides with AI's risk management capabilities. It's being used to develop more accurate consumer credit scores that go deeper than just spending habits, automate the analysis of detailed legal contracts to spot anomalies and get better at spotting fraudulent behavior.

Although, risk management strategies don't have to relate to just fraud or crime. For instance, in the data-intensive insurance sector, AI-based risk analysis helps actuaries understand the financial uncertainty and price the product for profitability while minimizing the losses.

Another example could be applied in the exploding media industry where large scale M&A are taking place, the risk of losing streaming subscribers and the need for subscriber churn prediction can affect the valuation of such acquisitions.

AI and predictive analytics can help to mitigate the risks businesses in every

sector will face. By responding to this intelligence early, leaders can make active efforts to stay ahead.

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## About Author

**Kannan Janardhanan**
**Director of Business Development for TMT at intive**

*Kannan Janardhanan is the director of business development for TMT (Technology, Media and Telecommunications) at intive. Janardhanan is responsible for strengthening the long-standing partnerships with existing TMT clients as well as driving customer acquisition in the U.S.*

# 3 Major Political and Credit Risks Amid Pandemic Recovery

***Stephen Kay***
***Global Head, Political Risk at Marsh***

As governments continue to implement fiscal and monetary policies in response to COVID-19, country-level economic risks are growing across all regions, according to Marsh Specialty's Political Risk Map 2021. And the story in many parts of the world is similar: Nationalism, sovereign credit risks and inequality are all on the rise. Still, senior leaders and risk professionals can access a variety of tools — from both public and private sources — to help limit their effects.

*Ships anchored off Singapore at Malacca Strait in local waters. Eighty percent of China's hydrocarbon imports arrive via the Malacca Strait, one of the busiest shipping channels in the world. Photo: Roslan Rahman/AFP via Getty Images*

**Resource Nationalism to the Fore**

A global rebound in commodity prices should give respite to resource-based economies in 2021. But competition for strategic resources that companies perceive as being vital to economic recovery and political strength continues to grow. Food security, water access and energy costs remain acute pressures that may lead to flashpoints domestically — and conflicts internationally.

Take China and India. The rivalry between the two largest populations on the planet is already a focal point of geopolitical tensions and will likely intensify in the years ahead.

As India's population potentially surpasses China's, the two nations will likely seek to secure supply chains and critical resources. Sea routes are expected to be especially crucial: 70% of India's trade value is linked to maritime exports, and 80% of China's hydrocarbon imports arrive via the Malacca Strait, one of the busiest shipping channels in the world.

India has also raised concerns about water security as China builds new dams on the Brahmaputra River, one of the largest by discharge in Asia and the world. No official agreement exists about the use of shared river systems between China and downstream countries, including India and Bangladesh. But altered water from China's projects is expected to disrupt the lives of 1.3 billion people in those countries, while also causing damage to agriculture and ecology.

At the same time, China is continuing its quest to shore up access to strategic resources via commodity partnerships in Africa and Latin America. China views these resources as critical to maintaining its position as a dominant manufacturing center globally. Resource access is also important to China's ambitious Belt and Road

infrastructure development vision, a foreign policy priority for the country.

Intensifying nationalism could have significant implications for foreign businesses, their suppliers, and investors. Despite the overall commercial insurance market becoming increasingly challenging for buyers, political risk and credit insurance solutions remain widely available. These solutions can enable organizations to offer improved payment terms to suppliers, improve liquidity, secure infrastructure and other direct investments in emerging markets, and access additional capital.

**Economic Divides Widening**

Among the myriad effects of the pandemic is a widening gap between the rich and poor. In some countries, efforts to reduce poverty have been set back decades. The World Bank estimates that an additional 88 million to 115 million people around the world fell into extreme poverty in 2020. This number could rise to 150 million in 2021.

Marsh Specialty analysis projects a growing disparity between emerging economies and industrialized nations. In emerging markets, strains on public financing are expected to result from increases in sovereign indebtedness and may create unfavorable conditions for domestic and foreign-owned businesses.

The divide between rich and poor is also growing within countries, especially in middle- and lower-income countries. In the decades to come, government policies to address societal inequality are expected to more prominently factor in electoral platforms on both the left and the right.

Although governments appear more attentive to inequality, the issue is often a driver of civil unrest. For example, massive protests in Chile began in 2019 because of an increase in transportation costs, with demands to address social inequities helping to sustain the unrest and leading to Chile's constitution being redrafted. Large-scale protests are also underway in Colombia, sparked by the government's introduction of poorly thought out tax reforms, including raising rates on water and other utilities.

Presently, food security issues — specifically, purchasing power rather than food production — are contributing to heightened political risk in Latin America. This could be a flashpoint in 2021 and beyond for strikes, riots and other types of civil disturbances.

Political and credit risk solutions could also help here, especially if civil disturbances and unrest arise from growing inequality. Among other benefits, insurance coverage can help multinational businesses protect against nonpayment risks, improve supply chain resilience and protect assets.

**Sovereign Credit Risks Intensifying**

Amid the pandemic, country-level economic risk grew for every nation in 2020. In 2021, COVID-19's lingering economic fallout is expected to continue to amplify that exposure.

Across all regions, Marsh Specialty's analysis shows larger increases than ever before in country economic risks. This is driven by increases in deficit spending, which is adding to sovereign and commercial credit risks. And whereas the overall servicing of

interest on debt has fallen globally, it has increased for emerging economies.

In Latin America, sovereign debt appears less likely to be repaid, as populist pressures may cause governments to prioritize economic relief over the repayment of foreign debts. For example, the government of Brazilian President Jair Bolsonaro — who is currently seeking reelection — is actively seeking to pass legislation that would provide another round of cash transfers to impoverished Brazilians, which threatens to push its sovereign credit risk even higher.

Colombia, currently facing a credit downgrade, recently saw tax reforms being unveiled by an unpopular government, which will soon be seeking reelection. Borrowing costs, meanwhile, are increasing for many other countries in the region, including Mexico, Peru, and even Chile, which historically has been perceived as being immune to such pressures.

Sovereign credit risk is also growing in Turkey, where the lira has lost approximately 30% of its value amid the pandemic; a series of interest rate cuts are also expected in 2021. And in sub-Saharan Africa, 36% of all countries saw sovereign credit downgrades in 2020, according to S&P. Among these countries is South Africa, where sovereign ratings have entered junk territory amid falling revenue as the country struggles to contain COVID-19.

Credit risk insurance solutions could help to ease the effects of these trends on multinational businesses. Among other benefits, credit risk insurance can facilitate bank lending — even for projects in countries where sovereign credit has been downgraded — and replace cash or letters of credit that would otherwise be used as collateral.

As political and credit risks intensify, multinational businesses must be vigilant. Although they may not be able to prevent certain events, multinationals can be prepared. Proper planning and risk mitigation tools, including insurance, can help organizations weather political and economic crises amid the pandemic and beyond.

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## About Author

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**Global Head, Political Risk at Marsh**

*Stephen Kay is Global Head of Political Risk at Marsh, based in New York. His expertise is in political risk and structured credit products for banks, commodity traders, capital market investors and corporates, including Basel II-compliant credit products.*

# Are Virtual Meetings for Shareholders and Board Members the New Normal?

***Varun Eknath,***
***Operations Analyst at The World Bank Group;***
***Tiziana Londero,***
***Analyst for the Doing Business Unit at The World Bank Group;***
***Syuzanna Simonyan,***
***Consultant for Doing Business Unit at The World Bank Group***

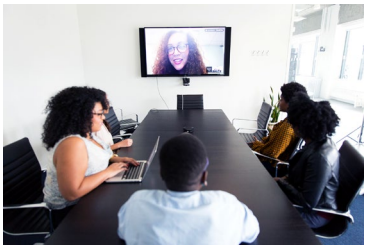


*Photo: Unsplash*

The global economic crisis induced by the COVID-19 pandemic has had a devastating effect on businesses worldwide. Yet, not being able to operate stores, factories or provide in-person services to clients would have been worse if companies hadn't been able to continue holding their corporate functions.

Most key decisions — such as replacing a director or chief executive, approving finances, extending benefits to all employees during closures or filing for bankruptcy — require a formal meeting of either board members or shareholders. These meetings can produce valid decisions that bind the company only if they follow strict procedural rules mandated by law. In recent years some economies, such as Costa Rica, Vietnam and Pakistan, had started to create the legal framework for virtual meetings and voting, but it wasn't seen as a high-priority policy. The COVID-19 pandemic changed this perception. After the pandemic subsides, virtual meetings are likely to continue and may become the new norm.

The pandemic has exposed the shortcomings of legal frameworks that do not provide for virtual board and shareholder meetings. Virtual meetings are an opportunity to enhance corporate governance and transparency by fostering more shareholder participation in a manner that proxies cannot, and by increasing communication among shareholders, management and directors. Benefits of online participation in shareholder meetings also include lowered operating costs and a reduced carbon footprint of companies.

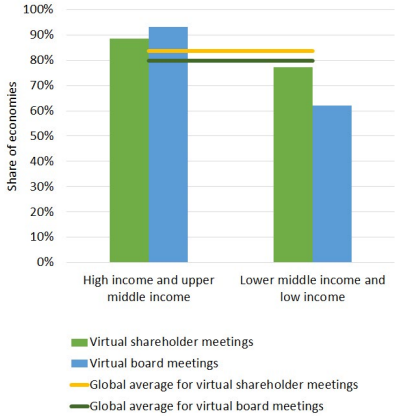
Legal Frameworks of All Economies in East Asia and the Pacific Allow for Virtual Meetings

| Region | Virtual shareholder meetings | Virtual board meetings |
|---|---|---|
| East Asia & Pacific | 100.0% | 100.0% |
| OECD high income | 90.0% | 96.7% |
| Europe & Central Asia | 83.3% | 88.9% |
| Middle East & North Africa | 76.5% | 88.2% |
| Latin America & Caribbean | 70.0% | 85.0% |
| South Asia | 62.5% | 75.0% |
| Sub-Saharan Africa | 86.4% | 52.3% |

*Doing Business database. Note: Sample includes 153 economies.; A cross-regional analysis highlights that there is universal adoption of virtual meetings in the legal frameworks of economies in East Asia and the Pacific region.*

Eighty-four percent of the economies now allow virtual shareholder meetings, while 80% allow virtual board meetings, according to World Bank data collected across 153 economies in 2020. Some of these economies had existing legal frameworks well before the pandemic, while many adopted legal frameworks that allow virtual meetings as emergency measures. Most OECD high-income economies and economies in Europe and Central Asia allow for virtual meetings. The level of adoption of virtual meetings in legal frameworks in Latin America and the Caribbean, Sub-Saharan Africa and South Asia is much lower. In low-income economies, the adoption in legal frameworks is as low as 64% for shareholder meetings and 40% for board meetings.

Low-Income Economies Have Lower Virtual Meeting Adoption in Their Legal Frameworks



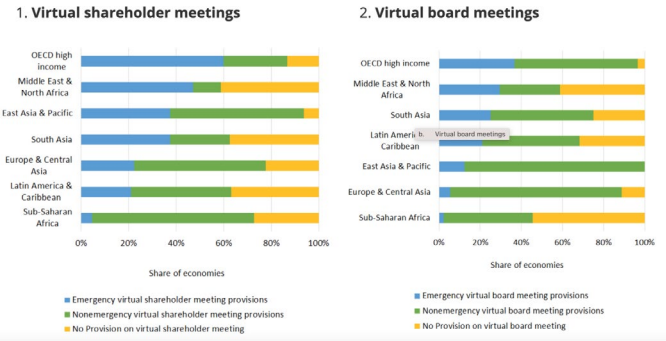

*Doing Business database. Note: Sample includes 153 economies.*

Many more high-income and upper-middle-income economies allow for virtual meetings compared to lower-middle-income and low-income economies. However, since the onset of the pandemic, 45 economies introduced provisions through emergency legislations to expand the possibility of using electronic means and legal tools to allow companies to hold virtual shareholder meetings. Over twenty introduced such provision for board meetings. Most of these emergency measures were instituted by OECD high-income economies.

Among these, some adopted provisions on virtual meetings solely as a temporary measure in response to the COVID-19 pandemic. For example, virtual meetings of shareholders were temporarily allowed in Australia and the United Kingdom until March 31, 2021 and are allowed in Austria, Germany and Switzerland until the

end of 2021. Whether these temporary measures will be translated into mandatory regulations to encourage virtual meetings as a matter of best practice going forward remains to be seen.

OECD High-Income Economies Imposed the Most Emergency Measures




*Doing Business database. Note: Sample includes 152 economies.*

While many economies scrambled to adopt legal frameworks allowing virtual meetings to mitigate the consequences of the COVID-19 pandemic, 69 and 84 economies respectively had already incorporated the practice for shareholder meetings and for director meetings well before the pandemic. In Colombia, for example, Law No. 222 of 1995 allows corporate body meetings to be held virtually. Similarly, virtual shareholder meetings have been permitted in other economies, such as in South Africa since 2011, in Turkey since 2012, in Costa Rica since 2018, and in Pakistan through the Companies Act of 2017, which allows members to participate in a meeting through a video link. In Taiwan, China, attendance via tele- or videoconference is deemed as attendance in person for board and shareholder meetings. In Vietnam, a shareholder is considered to have attended and voted, when the shareholder attends and casts votes through an online meeting, electronic voting or by using another electronic medium.

In many economies, the possibility of holding virtual meetings is left to the discretion of each company. Even when permitted by law, companies must specifically include this option in their constitutional documents. However, with the recent restrictions on travel and large gatherings, companies that had not already explicitly allowed virtual meetings in their constitutional documents, could not hold a meeting and vote to amend their constitutional documents. The pandemic exposed the shortsightedness and ill-preparedness of such legislative frameworks and their inadequacy in ensuring business continuity during difficult times. To address this inadequacy, emergency legislation in Armenia, Denmark, Italy and other countries allowed companies to hold virtual meetings even without an explicit provision in their constitutional documents, making virtual meetings temporarily possible during the pandemic.

While a strong case can be made to adopt regulations that allow virtual

meetings, it must be done with caution. It is essential for shareholder democracy that the challenges associated with virtually-held meetings — including proxy mechanics, voting procedures and processes for engaging with shareholders — be resolved to fully utilize the potential of virtual meetings. Companies must devise electronic solutions that replicate the face-to-face accountability of management and ensure that shareholders are not disenfranchised. For example, the Johannesburg Stock Exchange partnered with the Meeting Specialist, a service provider, to enable clients to engage with shareholders through virtual meetings. A similar platform, the e-GMS system, exists in Indonesia. A transition towards virtual meetings must make sure that the needs of all constituents are met in a fair and well-balanced manner.

This piece was originally published in World Bank Blogs.

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*Syuzanna Simonyan joined the Doing Business team in February 2019 and currently works on the Protecting Minority Investors indicator at the World Bank Group.*

# Is the Future of Work Agenda Shifting?

***Kate Bravery,***
***Global Advisory Solutions & Insights Leader at Mercer***

*The New Shape of Work interview series addresses the challenges and uncertainty brought on by the coronavirus with a focus on how to transition to a more agile workforce for the future.*

*The biggest people risk we're seeing is that the pace of change, as part of the new skills required to thrive in this new world of work, is overwhelming to many people. Photo: Unsplash*

The events of 2020 reset the future of work agenda. The workplace and the workforce has changed at an accelerated pace. It's clear that we're still figuring out how best to respond to this new landscape. We're diving into how the future work agenda has been reset, and what individuals, companies and societies can do to not only stay ahead, but to positively thrive in this new world order.

In this conversation, Kate Bravery of Mercer and Till Leopold from the World Economic Forum discuss the double disruption brought on by the pandemic and how it is affecting economies and society. The discussion is underscored by insights from the World Economic Forum's new "Future of Jobs" research.

## Key Insights

**On re-skilling the workforce:**

The biggest people risk we're seeing is that the pace of change, as part of the new skills required to thrive in this new world of work, is overwhelming to many people. According to our "Future of Jobs" research there's something like 50% of employees will need some re-skilling by 2025."

**On the evolution of roles:**

"Around 40% of current workers core skills that they use daily on their jobs are likely to change over the same period."

**On the role of human resources:**

"If anyone still had any doubts about the crucial and strategic role that HR should play in an organization, the COVID moment has surely put this to rest. Going forward, I expect to see even more of a focus on employee listening and engagement."

**On the emphasis of digital:**

"In our global talent trends report, we've seen executives wanting to push the

accelerator on digitization. They also want to push the accelerator on gig working and tapping into a wider talent ecosystem."

**On the advent of social impact initiatives:**

"One other really positive observation that we've been seeing since the pandemic, many companies wanting to anchor to their purpose or their values as they seek to reinvent. … We're seeing much more verbal and visible pledges around DEI and ESG."

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## About Author

**Kate Bravery**
**Global Advisory Solutions & Insights Leader at Mercer**

*Kate Bravery is a Global Advisory Solutions & Insights Leader for Mercer. She has more than 20 years of experience in human capital consulting and helping organizations achieve a talent advantage through people. Bravery has expertise in people strategy, talent management, assessment/leadership development and HR process design.*

# How to Engage Your Virtual Workforce

***Lewis Garrad,***
***Partner and Career Business Leader at Mercer Singapore;***
***Lily Phan,***
***Research Manager at Marsh McLennan Advantage***

Engaged employees tend to perform better, remain with their employers longer and enable organizations to innovate and maintain competitiveness. Most existing engagement programs rely on face-to-face interactions and perks in the office to get people fired up, so how does engaging employees look in the post-COVID-19 era?

One of the key questions for leaders is how they can effectively communicate with employees to energize the employee experience. The way leaders communicate with their workforce can give employee engagement a much-needed boost, particularly when part or all of the workforce is working remotely.

**First Step: Understand the Workforce**

Leaders need to develop a deep understanding of their workforce — who they are, what motivates them, what challenges they face and what they value. Effective employee listening strategies are a critical first step.

Most organizations recognize that their workforce will become increasingly diverse. The trend toward new hybrid workforce models — including gig workers, independent contractors and remote and on-site permanent employees — was already observable pre-COVID-19. The age spread of the workforce has also been increasing significantly: Many companies now have up to four generations (baby boomer, Gen X, Gen Y, and Gen Z) working side by side. Each group differs in their expectations, motivations and how they prefer to be communicated with.

The pandemic has also accelerated the importance of empathy as a leadership strategy. As COVID-19 pushed people into working from home, employers were forced to see people more holistically and acknowledge that their employees are also parents, partners and caregivers to their loved ones. Zoom calls had managers peering into the real-life situations of employees all over the world. Organizations have started to look for ways to support important aspects of employees' lives by offering flexibility and addressing caregivers' needs. There is a strong imperative for change: At present, most leaders do not know the number of caregivers in their organizations.

Leaders are also starting to pay more attention to purposeful employment. Younger members of the workforce are voicing their growing concern over economic, sociopolitical, and environmental injustices: The newer generations expect that employers share these concerns and play an active role in addressing them. For example, a recent paper on ESG trends shows how contributing toward social good can make a company more attractive to talent. In response, leading companies are looking to improve outcomes for multiple stakeholders, not just shareholders.

**Openness Goes a Long Way**

Openness is an important strategy for building organizational trust — employees want to be able to trust their leaders and, in turn, feel trusted. This sense of mutual trust has become even more necessary in a remote work setting.

More importantly, obscure and conflicting messages from leadership carry severe reputational risks. Employees expect transparent and truthful communication from the company leadership, especially during difficult times, such as during times of political or economic crises or organizational restructuring. Failure to meet this expectation risks exposures and backlashes — particularly with the advent of social media — which can leave crippling effects that may take companies years to recover from, if at all. One executive in our study noted: "Employees are making judgments about their employers based on what companies did or didn't do during the crisis. Brands will be especially impacted. Some will come through this with a worse reputation."

**Place Care for Employees At the Center of Communications**

Employers need to foster an organizational culture of care: There is no business without a healthy workforce. Unfortunately, two out of three employees already felt at risk of burnout even before COVID-19, and the pandemic has only worsened the situation.

Leading organizations are taking steps to support the mental and physical health and well-being of their workforce. For example, many companies are accelerating the use of Employee Assistance Programs, developing employee health-monitoring apps, upgrading employee benefits, offering child care allowance or vaccination programs.

The message of care must be consistently at the center of employee communication — and even more so during times of crisis. The absence of care and empathy for employees from leadership will likely lead to productivity declines, behavior lapses and lower retention rates.

**Be Mindful of Cultural Difference**

An engagement strategy may work well in one culture but may be ineffective in another. Accounting for cultural differences can help multi-national corporations avoid costly mistakes resulting from misunderstandings that stem from ineffective organizational communication and underestimating local social norms.

For example, one executive described difficulties in applying the employee engagement strategy developed in their Asian headquarters to major offices in Europe. In another instance, even when both the parent and the acquired company were based in Europe, significant differences in cultural practices and mindsets between the two led to unintended friction.

Therefore, leaders need to strike a balance between aligning communication and engagement initiatives across different office locations while taking care to respect local values.

**Leverage Technology the Right Way to Enhance Communication**

Digital tools and applications can speed up two-way engagement processes, cultivate workforce understanding, and encourage organizational communication. For example, many companies are conducting virtual "Ask Me Anything" sessions hosted by senior leaders, virtual town halls and virtual focus-group discussions that allow employees to ask questions anonymously if they choose.

However, companies should watch out for over-emphasizing "tech" and not enough "touch." Information collected via digital communication channels needs to be analyzed with a human mindset to shed light on employee voices and needs: A superficial scan of single data points or top-line results can lead to erroneous conclusions. Second, in rolling out digital communication strategies, companies should address the risks of data security and anonymity. Failing to abide by appropriate protocols may result in irreversible damage to organizational trust.

COVID-19 has unquestionably made seismic changes to the workplace, but there is a silver lining. As one C-level executive in our study noted: "People tend to 'club' together more closely under stressful situations. … We'll exit the tunnel with a higher level of engagement than before COVID-19 started."

The pandemic brings an opportunity for companies to expedite their flexible work models, experiment with digital tools and realize engagement prospects that they didn't think possible before. Organizations that take advantage of the headwind to renew and refresh how they engage with employees will reap dividends from a recharged and committed workforce.

***Brink***

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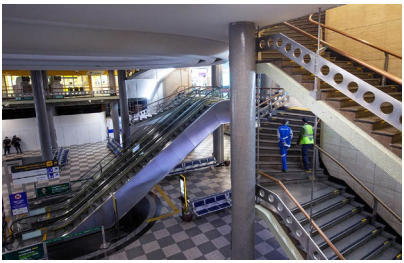
# Why Business Interruption Risk Affects Us All

***Dirk Wegener,***
***President of The Federation of European Risk Management Associations***

*Catastrophic risk is the hardest risk of all for business to protect itself against. In the third of our occasional series on how to bridge the protection gap for business interruption resulting from major crises like the pandemic, BRINK spoke to Dirk Wegener, president of the Federation of European Risk Management Associations (FERMA). FERMA is the umbrella body for 21 European risk management associations, representing nearly 5,000 senior professional risk managers.*

*The first two articles in the series can be found here and here.*



*A general view of a vacant airport during COVID-19 on May 15, 2020, in Sao Paulo, Brazil. The pandemic has clearly shown that systemic risks exceed the capacity of private insurance on its own. Photo: Alexandre Schneider/Getty Images*

*BRINK: What lessons have your members learned from the pandemic crisis about managing business interruption risk?*

*WEGENER*: During the pandemic, it became clear that there is a real gap in protection for non-damage business interruption (NDBI), mainly because of a lack of supply in the insurance market.

**Insurance Doesn't Cover the Gap**

In the COVID-19 survey that FERMA conducted among its members at the end of 2020, only 5% of the respondents said that insurance provided their organization with coverage for the business interruption losses resulting from the pandemic. Some legal cases have favored the insureds, but if anything, this is likely to result in stronger exclusions in NDBI coverage.

However, most risk and insurance managers who responded to the FERMA survey felt their organizations had been largely or fairly well prepared to manage the pandemic. A majority, although not all, said their organizations had suffered negative operational and financial impacts from the pandemic.

We have certainly seen the value of flexible risk management tools, such as business continuity planning, as contributing to business resilience and to recovery post-pandemic.

*BRINK: Do you think companies are now in a better position to handle catastrophic risks of this nature?*

*WEGENER*: Yes, for at least three reasons. The first is that they now have a greater awareness of systemic risks. Secondly, they have an enhanced appreciation of the value of enterprise risk management and risk management tools in creating resilience. And the third is technology — the fact that organizations have been able to shift, remarkably smoothly, to remote working has made an enormous difference.

However, I would add that we are now taking into account a number of newly heightened risks that come with these new working methods — in particular, exposure to cyber risks.

**The Need for Public-Private Partnering**

*BRINK: What sort of public/private partnerships do you think are needed to handle future systemic risks, such as climate change?*

*WEGENER*: The pandemic has clearly shown that systemic risks exceed the capacity of private insurance on its own to provide meaningful capacity for organizations to manage their business interruption.

A number of European countries, such France, Spain and the Netherlands, already have public-private mechanisms, like pools for extensive or peak losses. But they are limited by national boundaries and by perils, most frequently flood and terrorism.

We believe that there should be a layered approach to a public-private partnership to create substantial capacity for non-damage business interruption losses across Europe. It would start with good risk management in corporations at its foundation, followed by participation from the insurance/reinsurance industry.

FERMA members regard the insurance industry as an essential element of such a public-private scheme.

Re/insurers, brokers and loss adjusters have extensive risk knowledge, and the insurance mechanism can motivate risk mitigation, as well as provide risk transfer. Thus, they can incentivize sound risk management practices on corporate level. This then contributes to the overall resilience of our societies from catastrophic events.

**The Role of Capital Markets**

Above this re/insurance layer, there may be interest from capital markets in providing extra capacity through alternative instruments, such as catastrophe bonds. And we envisage some form of public funding as the "reinsurer of last resort."

We understand that the private insurance sector can't make up for the financially devastating impacts of this pandemic. Only a public-private partnership, built on corporate risk management acknowledged by the insurance sector, can build an effective resilience framework for the benefit of societies and a fairer allocation of tax payers' money to affected companies.

*BRINK: Should any such solutions be at a pan-EU level or individual country*

*government level?*

*WEGENER*: Individual country schemes can be useful, but they are too limited to fully support international or global businesses. Moreover, not all EU member states have such national schemes nor plan to have one. As we have seen with the pandemic, systemic events spread across continents, even the globe. International businesses have extensive cross-border exposures.

In addition to pandemics, cyberattacks on elements of common operating systems have the potential to affect multiple countries. The SolarWinds attack in late 2020 illustrates this risk. Its repercussions are still emerging.

**Captives Have a Role**

*BRINK: What is your view of captives, i.e., corporations self-insuring?*

*WEGENER*: FERMA has always regarded captives as a valuable element of corporate risk management, especially for large organizations. Captives allow organizations to buffer insurance market conditions, thanks to risk financing techniques based on the technical premium for low- to medium-impact risks. They can also allow a large corporation direct access to the reinsurance market especially for exceptional risks.

In the 2020 FERMA Risk Manager Survey, 27% of respondents said they would use an existing captive for hard-to-place risks (this marks a significant increase from 1% in 2018), and 16% planned to create a new (re)insurance captive by 2022 (14% in 2018). These figures could be even higher if we repeated the survey now.

That said, a company will not automatically say: The market has hardened; we will set up a captive tomorrow. Captives do have costs in terms of capital, and resources and take some time to establish.

In terms of regulatory approaches, FERMA has advocated strongly that the principle of proportionality should apply to captives under the European Solvency II prudential regime. By this we mean that insurance supervisory authorities in the EU member states should take account of the nature of captive insurance companies and the very low risks they pose to consumers.

We have proposed a method that national regulators can use so that captives are treated proportionally evenly across EU member states according to this proportionality principle. We expect that the review of Solvency II, currently underway, will enhance the attractiveness of European existing and prospective captive domiciles.

**The Rise of Cyber Risks During the Pandemic**

*BRINK: You mention cyber risks — why have these risen since the pandemic?*

*WEGENER*: The risks of hacking and data theft are pervasive. Criminals are now "digital natives," as the European Union Serious and Organized Crime Threat Assessment said earlier this year.

The pandemic has increased the exposure as employees have moved to remote working, and organizations have accelerated their use of digital technology, including artificial intelligence. Even before this, the FERMA 2020 Risk Manager Survey made the issue of digital risks clear. Respondents across all business sectors put cyber threats, including data theft, among their top five risks now and in the medium term.

Many types of cyberattack are foreseeable, and organizations have incorporated them into their enterprise risk management processes. Insurance is — or should be — available to mitigate the risk.

At the other extreme, state-sponsored cyber terrorism is a concern, especially in critical industries. This goes beyond the capabilities of individual corporates to address on their own. It needs coordination across industry and governmental cyber defense agencies, including the European Union authorities.

**The Gap in Cyber Insurance**

Organizations are looking for more and better cover, but we believe there is a real gap between the insurance offering and the increased exposure. We are currently hearing from risk managers from our member associations that cyber insurance renewals this year have been difficult, leading to less coverage and higher premiums.

FERMA is supporting its members to help this market develop in line with their needs. We have a project with one of our members to quantify the cyber insurance market. We are currently working with the (re)insurance industry including brokers and policyholders on coverage definitions for cyber insurance.

***Brink***

## About Author
## Dirk Wegener

### President of The Federation of European Risk Management Associations

*Dirk Wegener is the President of the Federation of European Risk Management Associations (FERMA). He is also Global Head of Corporate Insurance for Deutsche Bank Group, and a member of the German risk management association GVNW. Starting his career in the German insurance industry, Wegener moved into risk management first with Daimler Group and then in 2012 with Deutsche Bank.*

# How Can We Ensure Humans Flourish in an Age of Robots?

***Kevin Roose,***
***Technology Columnist for The New York Times***


*Items are being transferred at an automated logistics centre in Shandong. Business leaders should be focused on automation that provides better conditions for workers. Photo: STR/AFP via Getty Images*

*The pandemic has accelerated the update of automation in many areas of work. Robotic process automation, or RPA, is rapidly replacing a lot of white collar activities, while AI is starting to be used in supervisory positions.*

*In his new book, FutureProof, 9 Rules for Humans in the Age of Automation, the New York Times's technology correspondent Kevin Roose argues that there is a risk of the workplace becoming dehumanized by automation and that we need to think carefully about what we automate.*

*ROOSE*: The pandemic has really had a significant effect on accelerating the deployment of AI and automation inside companies. RPA refers to software-based products that automate common business tasks, so a company might use RPA in the billing department to automate certain parts of creating invoices; it might use RPA in the legal department to review certain kinds of contracts or in the IT department to interface between two types of databases.

These can range from very simple rule-based algorithms to more complicated RPA bots that take advantage of AI techniques like machine learning and computer vision.

**Automating Harry in the Back Office**

As one consultant put it to me, they are trying to automate Harry in the back office. Companies are taking these sort of basic tasks and, instead of upgrading their entire computer system, which could cost billions of dollars and take many years, they are automating the people who use the old computer system.

But RPA is just one of the several kinds of AI and automation that is taking place inside companies now, and the aggregate effect of all this is likely to be much larger. Forty-five million workers in the U.S. could be displaced by automation by the end of the decade — up from the 37 million predicted before the pandemic.

**So-So Automation**

*BRINK: You write about something called so-so automation, which is an interesting phrase. What do you mean by that?*

*ROOSE*: This is a phrase that comes from two economists, Daron Acemoglu

and Pascual Restrepo, who study automation and its effects on the labor market. It refers to the kinds of automation that are just barely good enough to replace human workers, but don't generate substantial productivity gains or create dynamic new industries full of new jobs for people.

The examples they use are things like the automated call center, which — I'm sure anyone who's called an automated call center understands — are pretty mediocre forms of automation. Most of the time, you want to talk to a human instead. These forms of automation, these automated call centers, these self-checkout machines at grocery stores and things like that get implemented because they're cheaper than human workers, and they're maybe marginally more efficient.

The danger that so-so automation poses is it gives us the downsides of automation, which are human displacement and job loss, without the upsides, which are substantial gains in productivity, the creation of new industries that have all the jobs that can catch people who are displaced out of the old industries.

And that might be one reason why we're not seeing giant productivity gains, even as companies become more and more automated.

*BRINK: So how do we find a way through this? Are there ways that the human workforce can come out of this to the betterment of themselves and their lives?*

*ROOSE*: Yeah, absolutely. I should say I am not anti-automation. I don't think we should stop automating just to preserve jobs that are outdated or obsolete, but I do think we need to be careful in how we automate.

**Not All Automation Is Created Equal**

It matters how the gains of automation are distributed.

From history, we know that automation and technology generally have a concentrating effect on wealth — fewer people are needed to run giant institutions and corporations, so wealth tends to get concentrated upward in fewer and fewer hands. And it takes years and often quite bloody labor struggles to disperse the gains of automation more equitably among workers.

So what business leaders should be focused on is providing automation that provides better conditions for workers, that frees them from mundane work and toil, and allows them to be more creative and human. In other words, automation that makes their lives and their livelihoods better, not worse.

One thing that concerns me right now is that a lot of companies are using AI to track workers, to surveil them to increase productivity expectations, and that dehumanizes the workplace in a way. Automation and AI should be doing the opposite: It should be freeing us from these kinds of overbearing working conditions, it should be making us all more creative and human. But I worry that in some cases we're moving in the wrong direction.

*BRINK: Is this a problem that businesses have to solve, or is this an issue that needs to be taken up by governments, policy and regulation?*

**We've Seen This Movie Before**

*ROOSE: I*n an ideal world, regulators would be all over this, but I think it will be a while before regulators catch up to where the technology is.

In the meantime, I would urge business leaders to be very thoughtful about this, because we've seen this movie before.

We know how the wave of factory automation in the 20th century ended: It produced vast inequality and labor unrest. There were strikes, there were interventions, they were work stoppages. Workers reacted very harshly to automation because they weren't seeing the gains of automation in their paychecks or in their workplace environments.

So we need to be very careful because otherwise we could be in for a lot of tumult and upheaval in the years ahead. I'm not as worried about a mass unemployment event as I am about jobs changing as a result of these technologies. There are ways in which AI and automation have actually made work more precarious.

**AI As the Supervisor**

A lot of AI now is serving in a supervisory function.

As a result, the experience of being a worker has gotten in some cases harder and more precarious. So if we have full employment, but the jobs are worse than they used to be, and we're working in less-forgiving conditions and on more mundane tasks, is that a win for automation? I don't think it is.

*BRINK: And what about for individuals themselves? Do you have some tips on how to survive this?*

*ROOSE*: Yes. The book has nine what I call rules, but they're really pieces of advice for people who are trying to navigate this wave of change in their work life, in their home life, in their community.

They all boil down to this idea that we need to be much more human than we currently are. For many years, we've been essentially training people to compete with machines by becoming machines. We told people to go and major in engineering, make yourself as productive as possible. Work as hard as you possibly can, optimize your life, squeeze all the inefficiency and waste out of it — essentially teaching people to behave like robots.

**Choosing Not to Automate to Keep the Human Connection**

But many of the experts I talk to say that we need to be moving in the other direction. We need to be teaching people how to do the uniquely human things that are going to differentiate us from AI. These are things that generally involve human traits like compassion and empathy and collaboration and courage and the things that are

harder to automate.

I think it behooves all of us to think about what the most human parts of our jobs are and how we can spend more of our time doing those very human parts, because the rest is liable to be automated.

I think that there is no such thing as a robot-proof job, but there are certain jobs that we can choose not to automate because we want the human connection.

We want to have a social experience when we're interacting with someone. And I think those kinds of jobs are likely to stay in human hands not because we can't automate them, but because we won't accept automated substitutes that will seem cheap and mass produced and sort of soulless, when what we really want is one-to-one genuine human interaction.

***Brink***

## About Author

**Kevin Roose**
**Technology Columnist for The New York Times**

*Kevin Roose is a technology columnist for The New York Times, based in the Bay Area. His column, "The Shift," examines the intersection of technology, business, and culture. Roose is the host of the podcast "Rabbit Hole," and writes regularly about online extremism, social media disinformation, A.I. and algorithms, and emerging technologies. Roose is the bestselling author of three books.*

# How Employers Can Reduce the Social Anxiety of Returning to Work

***Jennifer Wild,***
***Psychological Scientist of The University of Oxford***

*Many people are suffering social anxiety at the thought of having to go back to the office — after COVID-19 forced millions into a work-from-home lifestyle. We asked Dr. Jennifer Wild, a psychological scientist at the University of Oxford with expertise in risk and resilience, for guidance for employers as to how to handle this as employees start to return to offices.*

*Commuters wearing facemasks exit a metro station in Bangkok on March 4, 2020. One concern people have is about whether or not they will be able to maintain a work-life balance once they start commuting again. Photo: Mladen Antonov/AFP via Getty Images*

*WILD*: It's important for employers to recognize that some people may feel anxious about returning to the office because they have worries about social interactions after being in lockdown for such a long time.

Employers can normalize this feeling and encourage informal catch-ups, such as creating spaces where people can get together and start to socially mix as they did beforehand.

It may also help to include an informal catch up in meetings, such as taking a few minutes at the outset to ask team members what's new and good with them.

**Encouraging a Catchup Before Meetings**

When people feel socially anxious, they have anxiety and fears about how they will come across to others. If it's really severe, social anxiety can end up causing people to under-perform at school and work and can affect life decisions.

When people are socially anxious, their attention shifts to their feelings and fears of how they think they'll come across to others. They may look down or avoid eye contact, all of which makes it difficult to accurately process how people are really responding to them.

One of the things that can help is to use the awareness of feeling self-conscious as a cue to look up and around. It becomes easier to discover that people are responding in a kind and friendly way. That's something that an individual can do to help with their social anxiety.

*BRINK: If someone feels too anxious to be in a meeting in person, should they join by Zoom instead?*

*WILD*: My advice is that if somebody is feeling anxious about a meeting and

is feeling a pull to join by Zoom, then they actually should join in-person, because it's only through joining in-person that they will discover that people aren't judging them negatively and their fears don't happen.

If you join on Zoom and you're feeling quite self-conscious, there's a risk your focus will shift to monitoring how you are coming across and you won't actually process what's on your screen, meaning you won't get good information about how people are really responding to you.

More often than not, people are kind and friendly, but we don't discover this when we are monitoring ourselves and how we're coming across.

**Try to Join in Person**

*BRINK: So your advice is to try to re-engage if at all possible, because that will help the process of getting back.*

*WILD*: Yes. It's important to be really clear about what you're worried will happen when you see colleagues again. If you go into work and you have a meeting with colleagues, be really specific. What do you think will happen?

Then look up and around, drop any sort of efforts to come across well and get really lost in the conversations. Afterward, ask yourself, did your fears come true? Did people reject you? Behave in such a way to suggest they were judging you negatively? Focus on what ways they were friendly and inclusive. This idea of putting our fears to the test is really one of the best ways we can overcome social anxiety.

*BRINK: Are you finding that people have lost some level of social skills after a year in lockdown?*

*WILD*: That's really hard to answer because many of us still have a high degree of social interactions, they've just taken place online.

I don't think social skills have become worse because of lockdown. I just think that it's been easier to avoid socializing during lockdown. So if you have a propensity to social anxiety and we're in lockdown, it's much easier to avoid interacting with people because you can turn your camera off on Zoom and do many things that require interacting with others, such as shopping, by using the internet.

**Fear of Returning to Public Speaking**

*BRINK: You have been advising the university and other organizations on the return to work. What concerns have you been encountering?*

*WILD*: There have been three concerns. One has been anxiety about catching COVID, which obviously will be addressed with the vaccine. The other concern that's come up is a fear of public speaking. So having to do talks with people in the same room. And the third concern is about whether or not people will be able to maintain a work-life balance once they start commuting again.

When people have been doing talks by Zoom, perhaps they've been able to have more notes around them to help jog their memory of the kinds of things that they want to convey in the talk. But when they return to doing public speaking, a presentation in a meeting or in a lecture theater, they won't necessarily have those prompts stuck all over their computer or on their desk, which may increase anxiety about forgetting what they want to say.

**Focus on Facts, Not Feelings**

I've run through several tools with employers and employees that are covered in my book Be Extraordinary that can help. The first is to "Focus on Facts, Not Feelings." When we have a worry or we're anxious about something, try to focus on facts rather than how anxious we're feeling.

The next tool is called "Then Versus Now." That's really about breaking the link between the present and the past. People who have unwanted memories of past difficult social interactions perhaps experienced lockdown, for example, really focusing on what's going on in their office environment today and how this is different to their memory. This practice can help to unhook the present from the past.

The next tool is called the "Three Minute Carrot," which helps us to overcome avoidance. It's about people starting a task that they have been avoiding and giving themselves permission to try the task or activity for three minutes and then reevaluating whether or not to carry on or stop. Three minutes of doing a task is usually enough to get started. And once you've started, this gives a breath of success — and release of dopamine, the feel-good factor — which can motivate you to keep going.

**Plan Something Pleasurable**

The next tool is "Planning Ahead," which involves planning your next day in half hour chunks, assigning tasks to each half hour and including an enjoyable activity at some point during the day. The research shows that this tool dramatically reduces psychological distress.

And it frees up mental energy for challenging tasks the following day. Also by planning an enjoyable activity the following day and scheduling it, it means you're more likely to do it, which can boost your well-being.

Employers could encourage staff to take one or two brief breaks during the day to catch up with each other, which could help to refamiliarize staff with informal interactions and help people feel less rusty with their social skills. If they know that the space is there, and they're being encouraged to take a break and socialize with colleagues, this may make social interactions feel less daunting.

There's one more thing that is worth saying and that is to be compassionate, to tap into self-compassion. We will have fluctuations and anxiety around returning to work, and being kind to ourselves increases our optimism and makes us better problem-solvers. Cultivating a compassionate mindset about our return to work will help us return happier and more confident.

***Brink***

## About Author

**Jennifer Wild**
**Psychological Scientist of The University of Oxford**

*Dr. Jennifer Wild is a psychological scientist at the University of Oxford with expertise in risk and resilience. Dr. Wild developed SHAPE, an evidence-based program to support frontline healthcare workers during the COVID-19 pandemic. She regularly appears in the media giving expert advice on how to build resilience to severe stress.*

# Six Ways to Better Serve Your Mobile Workforce

***Olivier Meier,***
***Principal in Mercer's Mobility Practice;***
***Michael Nash,***
***Global Mobility Technology Solutions Leader for Europe at Mercer***

*Employees want to feel like they aren't just numbers in a process. Organizations will need to embrace approaches that humanize an individual's specific scenario and make adjustments that home in on a sustainable, employee-first business approach. Photo: Pexels*

Digital tools for managing a mobile workforce have become a lifeline for businesses and employees in less than a year. COVID-19 has forced organizations to have a reliable pulse on where their people are and to review programs that used to work disparately, exposing where digitization is necessary. Technology is no longer a nice-to-have for international HR teams trying to collaborate, exchange data, ensure a positive employee experience, deliver on ROI and assess compliance issues on a global scale.

As consumers, we now adopt new tools quicker than ever in our daily lives to work, interact with each other, shop and get things done with more speed, ease and visibility. This has created new employee expectations for customized experiences at their fingertips.

In 2020, we saw a strong focus on HR transformation, and the global health crisis played a vital role in accelerating this trend. It became apparent that a lack of integrated tools and platforms is not only a source of inefficiency — it prevents international HR teams from working effectively in an emergency.

A new generation of technology solutions, specifically designed to meet the needs of decentralized and international HR teams, has boosted the adoption of automation. Building a solid business case is an essential first step in enlisting top management support when implementing new technology for international HR management and talent mobility. Here's how digitization helps you better serve your mobile workforce.

### 1. Keep Pace With the Rapid Evolution of International Teams

Years ago, the division between mobile expatriates and local employees dominated talent mobility management. Many tools and approaches supported this dichotomy. Today, global workforce concerns have become more complex. Long-term assignments have to be considered — as do short-term moves, permanent relocations, locally hired foreigners, commuters, extended business trips, employee-initiated moves, and remote or flexible workers.

These evolutions are transforming international HR teams, forcing them to consider alternative approaches to compensation, career-pathing and HR business

processes. Technology needs to reflect these changes and keep pace with evolving priorities, including delivering more flexible work options and enabling remote or virtual assignments.

2. **Connect the Disconnected**

An international workforce creates challenges in aligning talent management processes with strategic business priorities. Successful organizations apply an integrated approach to the HR function, including a cohesive model that brings together global operating structure, technology, policies and processes. Importantly, this model also seamlessly integrates external vendor ecosystems.

From a practical perspective, one benefit of an integrated platform is linking talent mobility administration to talent management, resulting in a greater focus on recruitment and retention strategies and identifying skill gaps. Talent management issues make up some of the most significant barriers to mobility: 22% of companies report difficulties identifying the right candidates, and 18% report career management problems.

Integration with external systems allows for creating a central technology ecosystem for handling all vendor relationships in one place. The result is a streamlined and seamless process for everyone — from expatriate employees to leadership — that helps fulfill the expectation of a consumer-grade experience in the workplace, clearly visible in our recent research.

3. **Put Employee Experience and Well-Being At the Forefront**

Employees want to feel like they aren't just numbers in a process but people with names whose employers consider their unique situations. Mercer's 2021 Global Talent Trends study reveals a growing appetite for greater personalization and the development of employee value propositions that address the needs of different mobile employee groups.

This doesn't mean an organization needs to create a new policy for each group or even discard existing segmented policies. But it requires that organizations embrace approaches that humanize an individual's specific scenario and make adjustments that home in on a sustainable, employee-first business approach.

New technologies allow employers to provide assignees with relevant information tailored to their specific needs. Companies can customize an employee message and automate the output, allowing for a balance between administrative efficiency and bespoke experience.

4. **Use Data and Metrics to Empower HR**

Although it's essential to turn assignments into valuable experiences for mobile employees, what is talent mobility's added value for businesses? Making sure metrics and cost-tracking basics are in place is a first step in empowering your HR team to deliver real value.

Using new technology to develop meaningful analytics while turning the results into actionable suggestions to improve people management will be a true differentiator for HR professionals. According to Mercer's 2020 survey on international assignment policies, although 69% of companies make detailed cost projections when relocating an employee abroad, only 45% track actual versus budgeted costs. The rapid development of artificial intelligence (AI), combined with a growing appetite for detailed mobility metrics and analytics, offers new tracking possibilities. Better tracking will be needed to help ensure that assignments are backed by solid evidence of benefit for the company and employees.

Today, automation and AI have become key areas of focus across industries and business functions, particularly HR. On average, 90% of companies are already using AI and automation in HR today or have plans to invest in these areas.

**5. Master Risk and Compliance**

With an automated and integrated system for mobility management, the modern mobility team is poised to become the essential contact and facilitator for any potential issues.

According to a Mercer survey, compliance is one of the top barriers to novel forms of remote working for mobile talent and a pivotal element to review for 29% of companies. In multinational organizations, compliance and risk management are often split between departments and geographies, with no high-level oversight. A centralized platform allows the mobility team to act as an advisor to the business, anticipating potential issues, such as tax, social security or immigration rule breaches.

**6. Manage Costs Wisely**

How you balance costs and benefits has a direct effect on your mobile population. Many employers — 35% of participants in Mercer's survey — think current conditions are too costly. But it's important to note that traditional cost-cutting approaches, which focus on reducing assignees' allowances and premiums or drastically limiting the number of expatriates, often fail to meet employers' objectives and can lead to lower assignee retention.

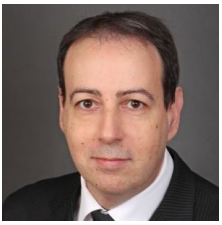
Furthermore, organizations need to reframe cost management to incorporate the cost of assignees' packages, the overall cost of the mobility function, and the cost of attrition, failed assignments and missed opportunities. Understanding all these elements requires an integrated mobility management ecosystem capable of consolidating data from various HR databases, payroll and career management systems, and external vendors.

Beyond the costs and benefits of the assignments themselves, the value of global mobility functions will likely come under scrutiny in the wake of the COVID-19 crisis. The capacity to identify and apply new tools to increase task efficiency and demonstrate value will determine mobility's long-term success. Digitalization will empower international HR professionals to create sustainable futures for the mobile

workforce, while it also remains vital for them to understand where the human touch adds value to processes and activities.

***Brink***

## About Authors



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# How Do You Embed a Sense of Purpose Into a Company?

***Hubert Joly,***
***Former CEO of Best Buy***

*Hubert Joly was ranked by Barron's as one of the top 30 CEOs in the world for his successful turnaround of Best Buy as chairman and CEO.*

*In a book called The Heart of Business: Leadership Principles for the Next Era of Capitalism, he explains how a sense of purpose was at the core of Best Buy's success and why it is now essential for every major company.*

*Customers shop for electronics and other items at a Best Buy in Illinois. A key part of the company's successful turnaround is a focus on purpose as a cornerstone of their strategy. Photo: Joshua Lott/Getty Images*

*JOLY*: Purpose stems first of all from the idea that we have to abandon Milton Friedman's idea of shareholder primacy, which has been a big source of our current problems.

Today, the purpose of a company — and I've said it to our shareholders — is not to make money; it is to contribute to the common good. I regard purpose as being at the intersection of what the world needs, what you're good at, what you're passionate about, and how you can make money.

**Enriching Lives Through Technology**

At Best Buy, it took the first three years just to save the company. A lot of people had told us, "Cut, cut, cut. You're going to have to close stores and reduce headcount" and so forth, whereas our approach was very human-centric. At that stage, purpose was not that explicit, but the underlying philosophy was there, and once the turnaround was over in 2016 or 17, we had to decide, "How do we accelerate our growth?"

We had done a good amount of work on market research, segmentation, targeting, i.e., on the where and the what, but there was a moment where we said, "We also need to talk about the why."

That's how we came up with this idea of enriching lives through technology. This concept vastly expanded our addressable market. So the company's performance from 2017 to now has been very much rooted in this idea of purpose.

Of course, many companies talk about these things, which is great, but then you have to follow through, right? You have to make purpose the cornerstone of your strategy, and you have to have everyone at the company feel that their own purpose in life connects with the mission of the company. And it takes a lot of work to get to that point.

**The Role of the Company Needs a Fundamental Rethink**

*BRINK: I guess one of the reasons that Milton Friedman's idea has stayed around is because it does align with why a lot of people go into business, which is to make money. So does purpose push against that?*

*JOLY:* I think we need to rethink all of this, because what's the definition of madness? Doing the same thing and hoping for a different outcome. We are obviously facing a multifaceted crisis: health, economic, societal, racial, environmental, geopolitical. And if we keep doing the same thing, we're not going to fix any of these things, so we have to fundamentally rethink what we ought to be doing.

Of course, making money is an imperative. You need to make money. By the way, part of what gives credibility to the book is the fact that our share price at Best Buy went from a low of $11, in 2012, to about $120 now. Ten times in eight years is not bad. It indicates that there's no need to choose between being a force for good in the world and creating shareholder value. It is not about trade-offs; rather, leadership in this new era needs to call on our better instincts.

**The Question Is Not Whether That's the Right Direction, but How?**

You cannot have lived through 2020 and say, "No, everything is fine. We should be fine. Let's do nothing and we'll be fine."

*BRINK: Rebecca Henderson of Harvard said something in her interview with BRINK, which I thought was interesting, that society has privileged free markets for too long. Do you agree with that? Do you agree that business is going to have to be regulated in order for it to change?*

*JOLY:* I learned a long time ago that 98% of the questions that are asked as "either/or" are better answered as "ands." I think business can be an enormous force for good. I think we're seeing this — you've seen the Edelman Report that shows companies are the most trusted organizations — so we can have a big impact, and you're increasingly seeing people step up to the plate.

But more actions are needed. For example, I find it interesting that all of these companies have embraced the idea of purpose and stakeholder capitalism, but executive compensation is still very much tied exclusively to shareholder value creation.

Some regulations are needed. There's this madness where the P&L and balance sheet of a company are following GAAP rules (generally accepted accounting principles), but nobody said that this was supposed to represent economic reality. This is just a set of norms. There's a ton of things that are not included in these numbers, including the quality of your workforce, as an example, but also, of course, your externalities. And business leaders today who are solely focused on profits don't take into account these externalities.

That's changing, but I think that the government can play a role in nudging

companies, for example, by putting a tax on carbon, so you can have a market and regulation. And then there are entire industries, like food or apparel, that have begun to work together on addressing sustainability issues of common interest, which I think can provide added momentum. So it's all of the above.

**It's Better If the Change Is Intrinsic**

*JOLY:* The way human beings are, it's always better if the motivation is intrinsic, because nobody likes to be told what to do.

I only passed the baton at Best Buy in June of 2020, and I'm still very involved in the business world: I'm on two boards and coaching and mentoring a number of CEOs and senior executives. And what I'm seeing across multiple companies is significant movement.

This last year has been a huge accelerator. The momentum was there before, but now it's vastly expanded, and it's wonderful because if it's intrinsically motivated, it's going to go faster.

And of course, employees and customers are putting on pressure as well. You cannot lead an organization if you ignore the desires and aspirations of your employees, and employees are very vocal these days. You're not going to be able to attract them and retain them if you're not doing good in the world.

**How to Engage with Societal Issues**

*BRINK: Where do you think the right balance is in terms of businesses becoming involved in societal issues? We've seen companies protesting restrictions on voting in the U.S. What's the appropriate role for business in these sorts of areas?*

*JOLY:* I've given a lot of thought to this because there has been a sea change, and the role of CEO has changed fundamentally in many ways. But we have to be thoughtful because we're not elected officials, and we're not competent in everything. So CEOs should be involved more, but they need to use a number of criteria to determine when to get involved.

One is the issue of relevance to the business. So if you're headquartered in Georgia, like Delta or the Coca-Cola Company, the Georgia voting law is relevant to you. If you don't have any operations in Georgia, maybe it's not so clear. Or if you're a Walmart, guns are a real issue. If you're, let's say Best Buy, guns are less of an issue. Not as relevant.

Then you have to be legitimate. Just being a CEO does not give you a God-provided right to speak on any matter. So a question would be, as with these bills, have you read the bill? And do you know something about voting rights and voting laws? I'm not saying it's particularly complex, but if you've not read the bill, how can you comment?

**Authenticity Is Important**

When Nike did their Colin Kaepernick commercial around him taking the

knee, it was a good issue for them because they have a lot of black athletes, but it backfired a little bit because somebody said, “Show us your own internal actions on diversity and inclusion.” And at the time, like many companies, they had room for improvement.

And then you look at efficacy. Is your action going to make a difference? For me, on the voting rights, and I’m a new citizen, so I’m very passionate about voting, but just making a statement that democracy is important, what does it really do? It’s action in Congress that needs to happen.

The point is that business can be very impactful — sometimes. At Best Buy, we weighed in on a bunch of issues when I was there, and Corie Barry, my successor, is continuing to do so. What worked well for us was that it was not just me making the decision. I had a process where various functions weighed in, because these issues are usually multifaceted. We had our criteria and our process, and that led us to make better decisions. It’s important to be thoughtful about it.

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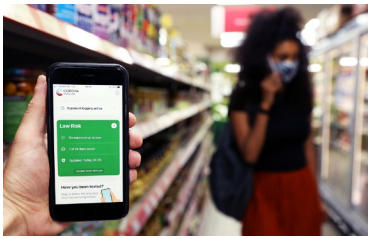
**Hubert Joly**
**Former CEO of Best Buy**

*Hubert Joly is the former chairman and chief executive officer of Best Buy Co. He is now a senior lecturer at the Harvard Business School.*

# 7 Ways to Invest in Better Digital Technology to Fight Pandemics

***Stefan Feuerriegel,***
***Chair of Management Information Systems at ETH Zurich;***
***Joel Persson,***
***Chair of Management Information Systems at ETH Zurich***

The COVID-19 pandemic has challenged how public decision-makers manage a health crisis. To take informed action, decision-makers need accurate and timely information. Relevant information may be: How many COVID-19 cases are confirmed per day and region? What is the utilization of critical care beds? How do people respond to policy measures aimed at social distancing?




*A phone shows a COVID-19 contact tracing app in Berlin, Germany. By investing in better digital technology, public decision-makers can ensure that accurate, real-time information becomes available. Photo: Adam Berry/Getty Images*

Numerous examples from the current pandemic demonstrate that governments have invested too few resources into digital tools for managing health crises. Many developed countries, such as Germany, Switzerland and the U.S., still rely upon "pen and paper" for data reporting. This includes a hybrid of fax, post and email. As a result, about 10% of the reported cases were lost at the peak of the epidemic. In several instances, hand-writing could not be deciphered, or counting was done by weighing the stack of printed faxes. Furthermore, the manual processing resulted in a reporting delay, especially after holidays and weekends where case numbers became available only with a delay of several days.

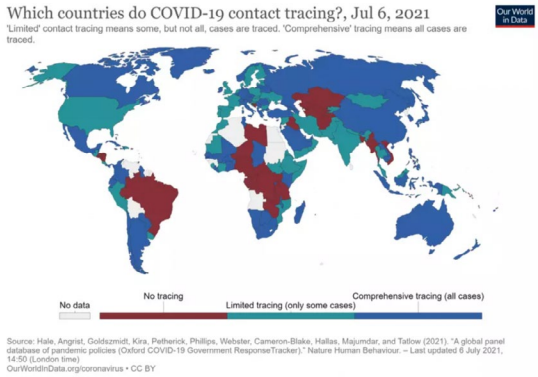
Other countries have learned from past epidemics and set up centers for disease monitoring using state-of-the-art digital technology. Take Singapore as an example: The country has rolled out mobile apps to alert individuals when an infected person was present in their immediate vicinity. On top of that, the data from these apps is directly integrated into monitoring tools and thus immediately available to public decision-makers.

**Public Decision-Makers Need to Invest in Better Digital Technology**

By investing in better digital technology, public decision-makers can ensure that accurate, real-time information becomes available. Eventually, this will support a more effective management of the current, as well as future, epidemics and pandemics.

Seven steps should be at the top of their agenda:

1. Make digital technology a top priority. The current pandemic has demonstrated




the value of digital technology. For better management of future pandemics and epidemics, governments should build sufficient expertise and resources for developing, expanding and deploying digital technology.

2. Capture the complete data journey. A holistic approach to data collection and evaluation is needed, supported by integrated digital solutions. Examples are web-based interfaces for data collection and APIs (Application Programming Interfaces), which pull data from hospitals and testing sites in real-time. This can overcome severe time lags caused by manual reporting. Eventually, this should capture all relevant data, including information on conducted and confirmed tests, genomic sequencing, new hospitalizations and critical care resources. For evaluating data, publicly available dashboards have become best practice. Such data should be made further available to research through standardized data formats for impact assessments and forecasting.
3. Take a lean approach. During epidemics, public leaders face two competing, ambidextrous challenges: managing the crisis while simultaneously scaling digital technologies. Importantly, addressing either should not be at the expense of the other since they are complementary. It is crucial to address both simultaneously. Digital technology, for instance, reduces the workload associated with "pen and paper" data collection. In order to develop end-to-end solutions when time and resources are scarce, governments should adopt a lean approach. Thereby, public decision-makers start with a minimal working product and then incrementally add new features to quickly improve current practice. Here, open source software is particularly valuable as it can expedite development time.
4. Embrace privacy. The use of digital tools for disease monitoring may violate privacy and is often perceived as a risk. However, we argue the opposite: The current practice, where sensitive personal data is manually exchanged via phone or fax, is, by default, unencrypted. Any effort towards digital solutions provides opportunities for incorporating security mechanisms (such as

encryption or differential privacy) and strengthens the privacy of individuals.

5. Integrate new data sources. The use of digital technology for data collection opens the possibility of integrating new data sources. Recent research has demonstrated the benefits of telecommunication data in assessing the effectiveness of social distancing policies and forecasting the future spread of COVID-19. While adhering to legal frameworks, governments should strive to make full use of the potential of digital technology by considering all sources of data available for informed decision-making.


6. Evaluate effectiveness. Digital technology greatly improves the ability to evaluate the effectiveness of policies targeted at social distancing. This allows for impact assessments and fosters evidence-based action. As an example, it's estimated that digital contract tracing apps have averted around half a million COVID-19 cases in the United Kingdom. By assessing policies and communicating their effectiveness, governments gain trust among the public.
7. Act now. While case numbers are flattening in many countries, this should not be treated as a sign to postpone investments in digital technologies. On the contrary, many countries face new mutations of COVID-19 and need to extend monitoring. Likewise, dashboards help public decision-makers assess how vaccines are distributed and inform where more resources for vaccination programs are needed. Finally, better digital technology is needed in preparation for future epidemics and pandemics.

The COVID-19 pandemic has unravelled the importance of digital technology for managing health crises in an unprecedented manner. Governments should now revisit past lessons and take strategic action. In particular, governments need to invest in better digital technology to prepare for future health crises.

This piece was originally published on The World Economic Forum.

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# System Migrations Need to Start With People

***Konstantinos Varsos,***
***Partner and Head of the Manufacturing, Process Operations and MRO at Oliver Wyman;***
***Neil McConachie,***
***Partner at Oliver Wyman***

*One of the most common reasons for team burnout is underestimating the amount of time a migration project will take. Photo: Unsplash*

One of the most common traps that organizations fall into is treating system migrations solely as a technology question and overlooking common human pitfalls. As a result, most large-scale system migrations are fraught with unexpected issues, taking longer and costing more than anticipated. Technology itself causes many major headaches, as re-engineering business processes and moving data can bring unexpected consequences, trigger transparency and accessibility issues, and exacerbate compliance or regulatory risks.

There is a better approach. System migrations that start with three people-elements proceed much more smoothly and efficiently. These elements involve focusing early on the end customer, avoiding team fatigue and proactively upskilling teams.

**People First, Tech Second**

In migrations, the business is generally the final customer or end-user. Hence, there should be a clear vision, communication and collaboration between business and technology teams from the outset. This sounds simple, but system migrations focus largely on the technical and logistical problems of shifting platforms and transferring data, when the task should be approached through a broader lens.

Instead, managers should take a more active role in planning and execution, determining up front which functions are necessary, which data should be migrated, and who will be impacted by replacing or upgrading the systems. This avoids setting the project on a doomed trajectory. For example, one airline spent months trying to extract, transform and load historical flight information, only to scrap the code after the business deemed it unnecessary for the future system. Such moments are easily avoided with the right communication.

Business-driven, rather than technology-driven workshops are one way to prepare sufficiently by gathering the right people to ask the right questions: Which functions are necessary or nice to have? What data is priority? What data is required for business-as-usual activities? What about regulatory requirements? These types of questions require meaningful engagement and will allow leaders to commit the right resources or organize external support, such as industry or legal expertise. Likewise, they establish greater ownership and accountability.

One Fortune 500 company recently attributed the success of its migration to the business being the driving force behind all project planning, clearly defining what it needed before the migration started. This led to better adoption and higher degree of satisfaction with the final system functionality and increased engagement with frontline employees and leadership.

**Data-Driven Decision-Making**

Alternatively, managers can use a bottom-up data-driven approach to understand the impact. Who uses the data now? Who has been accessing the data historically? Mapping these interaction points can determine which data to shift into the new systems, prioritizing essential and leaving behind "nice-to-have" data. This also reduces the chances of getting into trouble later when data is missing or unavailable.

**Vacation Days As a Performance Indicator**

System migrations are, in most cases, exhausting. From the initial sprint to post-deployment, meeting milestones can be highly stressful — particularly when the team is working toward a set deployment target and competing for shared resources. Long hours are common, meaning staff have little downtime or respite and often compromise their personal time. This leads to frustration and tension. Leaders should anticipate that after the first six months of the project, teams will exhibit fatigue, lower morale and decreased responsiveness. These can all have adverse effects on the project's progress.

One of the most common reasons for team burnout is underestimating the amount of time a migration project will take. Start from a position with reasonable expectations about timing rather than relying on rough estimates. Failing to invest enough time into developing a proper strategy and plan sets the team up for failure. Projects can also be structured to deliver milestones of success and periods of rest, to re-energize teams on a cadence matching the fatigue cycle.

In long system migration projects, one common pitfall is that teams avoid taking vacation throughout the year, only to find most people need to use accrued leave at the same time, which risks derailing timelines. One company avoided this by including vacation days as a key performance indicator, ensuring that teams spaced their time off evenly. In such cases, it's important for leaders to support this policy through regular communication, as well as leading by example. Work sentiment surveys can also ensure that the teams feel supported and can operate in an environment of psychological safety when they do feel like they are not getting sufficient down time.

While exhaustion is unavoidable, companies can mitigate these situations, such as taking stress reduction measures, monitoring the mood of the team using weekly pulse check and encouraging teams to join wellness programs.

**Cross-Training Can Protect Organizational Knowledge**

Large system migration projects can take months to years to accomplish — enough time for key people to move onto new roles or leave the organization entirely. Churn is natural, as the work can be monotonous, and people need to balance tasks with

their day jobs. To avoid an unexpected skills gap during or after a system deployment, companies should take a long-term approach to upskilling the team. Likewise, it's important to have the right incentives in place to keep the team motivated and to clearly communicate that these resources have a role after the migration is completed.

Business leaders should have a contingency plan in mind for every key role, but training and developing your project's people for multiple roles will ensure more continuity. Take the time to teach a broader cross-section of migration-literacy skills within the business, and ensure the solution vendor proactively shares system knowledge to build the team's self-reliance post-deployment. By cross-training project resources, firms can accelerate the professional development of their people and mitigate the formation of talent "silos" within project teams.

One business experienced issues when a team of key people left just after their migration was finished, resulting in a loss of knowledge of the set up and inner workings of their new system. This forced them to rebuild and retrain a new team to extract the maximum value from their technology investment. In contrast, we've seen companies preempt this issue by identifying a key cluster of employees to become system experts before the launch, with the vendor being involved in knowledge transfer. This enabled the organization to be more self-sufficient and allowed their people to further improve the new platform without external help.

**A People-Led Future**

COVID-19 has taken a toll on the time, budgets and resources of many organizations. This leads to short-term thinking around system migration projects and can cause problems later. The scenario is all too familiar: Technology teams take charge without engaging in meaningful dialogue early on with business managers, who are too busy multitasking to scrutinize what is best for users and customers. Significant time is lost on activities of low business value or wasted due to misunderstood requirements. As things don't work out as planned, teams get demoralized and exhausted, which leads to greater turnover.

Yet, all this waste is easily avoided by taking a people-led approach at the beginning of the project to improve team structures and plan for the inevitable bumps in the road. We have seen some of the largest failures, greatest successes and best turnarounds for such projects, and we're confident these are the highest leverage points for your project's success.

*Connie Cheung and Ethan Murray also contributed to this piece.*

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# Now Is the Time to Rethink AI, Automation and Employee Rights

***Mona Sloane,***
***Sociologist at New York University***

The COVID-19 pandemic prompts us to rethink what is considered high- or low-skill work. Whose skills, whose labor and whose hours, exactly, are of value to society? What and who do we value and deem essential, and how do we compensate these workers (e.g., care work or teaching)?

These questions are particularly pertinent in the context of artificial intelligence and automation.

*We are seeing AI technologies increasingly deployed across many parts of society. Around the globe, governments are rushing to mobilize vast amounts of capital to invest into AI innovation. Photo: Shutterstock*

**The Rush for AI**

We are seeing AI technologies increasingly deployed across many parts of society. They are embedded into loan decisions, insurance policy decisions, government services like benefit distribution, spam-folder and auto-correct software, education, search engines and web recommendations, autonomous driving, navigation, precision medicine, policing, security and surveillance, immigration enforcement, military, supply chain management, industry and production and much more.

Around the globe, governments are rushing to mobilize vast amounts of capital to invest into AI innovation. This is often tied to the narrative of AI being central for the Fourth Industrial Revolution. A bulging landscape of national AI strategies has emerged over the past three years that sees vast funding pots being made available for AI research, innovation and national security projects. The federal government of Germany alone has committed 3 billion euros ($3.25 billion) for this purpose, with state governments pitching in additional funds for regional research institutions and public-private partnerships.

**Wrong to See Terminator Vs. Humans**

When we look at this global AI landscape, there is something important to note: We see a narrative of AI built on vast (and frankly overstated) expectations of its capabilities. The idea that artificial neural network architecture (and with it, “deep learning”) is the breakthrough technology for creating conscious, or even sentient, machines fuels the looming fear of robots taking our jobs. It prompts us to picture the Terminator, rather than a server farm, in our head.

The Terminator narrative of AI and automation very often depicts “low-skill”

or "blue collar" workers as the most likely victims of automation. This framing is not only incorrect, but it is also a strategic distraction from the policy decisions that frame what we see as "skillful" work and what kind of labor we value.

**COVID-19 Shows the Importance of the Human Element**

This is thrown into sharp relief in the current global health crisis: If we truly had robots for all our essential "low-skill" services, then these services wouldn't be on the edge of breaking down to the extent they are now, which shows us how important these job roles really are.

For example, Amazon warehouses are automated to a significant degree, but they are not fully automated. Humans and machines work together and many crucial tasks, such as delivery, are still completed entirely by humans. The key part is that these humans are undervalued and at a much higher risk.

Their precarity is not only unevenly distributed along the fault lines of well-known inequalities, but it puts us at risk as a society at large. Not having health insurance or not being provided with protective gear fuels the spread of the virus among those workers who form the backbone of what is left of our economy.

**The Wider Context**

There is a bigger context to this that we have to consider, and that often gets pushed to the sidelines by the AI hype. First, there is a systemic issue around wage stagnation and automation that extends into important questions around AI. Productivity growth (the proportional change in output growth per unit change in labor output) over the last three decades in the United States has indeed increased due to the introduction of labor-saving technologies, not just AI. Productivity used to grow in tandem with labor compensation; however, that has changed dramatically since the 1970s. Productivity has continued to grow, but wages stagnated.

This means that that laborers lost their stock in productivity and in infrastructure, but they did not necessarily lose their jobs. This shift has coincided with the dismantling of unions, leading to a decline in collective bargaining power and the rise of the gig economy.

**Changes Are Driven by Policy, Not Technology**

In the meantime, employers have increased their own stock in crucial infrastructure — just think about Amazon's cloud empire — but these developments are hardly entirely due to technological innovation and automation. They are the results of policy decisions.

In the U.S., automation is incentivized via tax breaks while human labor remains expensive. So we end up with a situation in which "low-skill" does not equal likeliness of automation — "ease of automation" does.

"Tax-incentivized ease of automation" is a very different framing than "low-skill." Contrary to many stories that we hear, tasks that we traditionally value as high-skill are just as much at risk of automation. For example, automating large-scale text

analysis through natural language processing technologies is an attractive business proposition for law firms. Writing code, a skill currently valued highly and compensated accordingly, could also be automated.

This is how automation and the rise of inequality are linked: not through technological change, per se, but political and economic decisions made upstream. Not seeing this relationship clearly pits certain humans — not all humans — against machines in ways that have us focus too much on the machinery and make the wrong decisions around workers' rights and well-being.

**COVID-19 Has Changed the World As We Knew It**

This change provides a window of opportunity for reconfiguring how we think about society, technology and the economy. Now is a good moment to draw out strategies for change. We need to stop talking about large-scale work replacements caused by robots, and remind ourselves that technological innovation and change follows policy and investment decisions. The state, not just the private sector, plays a central role here, as economist Mariana Mazzucato has reminded us.

We need public buy-in (quite literally) for the idea that successful, equitable automation means a sociotechnical system in which workers play a central role, whether through directly or indirectly working with machines, and are compensated accordingly.

**Building Greater Resilience**

This is not just a matter of doing the right thing. It is also a matter of getting society and the economy to a point of resilience, which is needed not least to secure the democratic process.

At the most basic level, wages need to be required to rise in tandem with productivity — especially when it comes to "low-skill" work that keeps the most crucial parts of our economy afloat. This means deploying tools that are widely known and yet underused, such as minimum wage and universal health care, as well as worker unions (reestablishment is well underway in the tech worker movement), considerations of universal basic income and public investment in infrastructure.

Now is the time to make these changes.

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**Sociologist at New York University**

*Mona Sloane is a sociologist based at New York University (NYU). She works on inequality in AI design and policy. At NYU, she is a fellow with the Institute for Public Knowledge, The GovLab and the NYU Alliance for Public Interest Technology, as well as adjunct professor at the NYU Tandon School for Engineering.*

# AI Could Be As Harmful As It Is Helpful — Depending on How You Use It

***Ben Hoster,***
***Director of Transformative Technologies at Marsh McLennan Advantage;***
***Richard Smith-Bingham,***
***Executive Director of Insights, Marsh McLennan Advantage***

*An employee transports parcels from a conveyor belt to an automatic robot at a warehouse in Wuhan, Hubei province. Despite the substantial benefits that the technology promises, AI deployment without safeguards poses risks at all levels of business. Photo: Wang He/ Getty Images*

Artificial intelligence has embedded itself into the business landscape. No longer the purview of Big Tech companies alone, firms across various industries are actively integrating AI into their processes, acquiring tech startups and scouting opportunities to deploy the technology in the near future. COVID-19 has only accelerated this trend as businesses have had to contend with plummeting revenue and workforce restrictions.

But as companies increasingly look toward AI to solve business challenges and increase their profitability, what risks will they face? How might they mitigate such risks? What else should business leaders take into consideration?

**Balancing Public Health and Individual Liberty**

Despite the substantial benefits that the technology promises, AI deployment without safeguards poses risks at all levels of business, especially for traditional, non-tech companies. To limit severe financial and reputational harm, it is crucial that companies weigh the many benefits of AI use against the risks intrinsic to its use, as well as associated concerns from the broader community. Consider, as one particularly pertinent example, the myriad ways wherein AI has been deployed in response to the global pandemic: from contact tracing to enhanced infection risk profiling, those who develop and use such cutting-edge techniques must carefully balance the dual imperatives of public health and individual liberties.

**Defending the Decisions of Algorithms**

Given the self-learning and automated nature of AI, a well-known concern associated with the technology is that of "explainability," especially with public-facing "black box" AI models that make decisions on sensitive or consequential issues such as job recruitment, credit risk assessments and medical diagnoses. A lack of transparency and traceability, particularly when using externally procured applications, exposes businesses to significant reputational harm.

For instance, numerous controversies in recent years have shown us that AI

systems can inadvertently generate biased and potentially discriminatory outputs that exacerbate or even perpetuate inequalities. Organizations, especially when such adverse outcomes to customers and staff are possible, must be able to explain and defend algorithm-based decision processes and their output to a range of stakeholders, including subject-matter experts and even the legal community in cases of alleged malpractice. Big-name tech firms with dedicated AI specialists on hand have long struggled with this issue; non-tech companies are also at risk of intense public scrutiny and brand damage.

**Cybercriminals Exploiting AI**

Cyber risk is also a significant threat to companies using AI, especially with the rush toward digitization during the COVID-19 lockdowns. In fact, participants in a survey of more than 12,000 business executives rated cyber risk as the top risk for doing business in the U.S., the U.K., and Canada — among other developed economies — over the next decade. The growing use of AI in critical business operations will only increase vulnerability to cybercrime as hackers can gain control of entire systems simply by manipulating their underlying algorithms. AI can moreover directly enhance the arsenal of cybercriminals who can now cause disproportionate levels of harm by leveraging the speed of decision-making enabled by automated programs. Smarter cyber threats, coupled with industry's growing reliance on digital capabilities, only escalate the risks to operations and revenue streams.

Beyond such technical hazards, businesses that adopt AI solutions, also risk reputational harm and revenue erosion if consumer data is used inappropriately or otherwise exposed. Some major tech companies have drawn sharp criticism over the last few years for allegedly misusing sensitive voice data recorded by their AI-powered digital assistants. Given Big Tech's enduring ability to generate insights from big data and exploit personal profiles in ways that consumers have not anticipated or accepted, such scrutiny will surely persist. This public outcry for data privacy will no doubt extend to non-tech firms in the future.

**Lack of Holistic Governance Standards**

Finally, due to the emergent nature of this technology, companies may find themselves deploying AI in rapidly evolving regulatory environments, complicating compliance efforts. The global fragmentation of data standards creates additional regulatory discontinuities across jurisdictions. Non-tech firms that are less familiar with international differences in AI-specific legislation may struggle to align their use of AI with shifting regional mandates, thereby necessitating decentralized, and often difficult and costly, policy rollouts.

These are just some of the threats to which businesses expose themselves should they attempt to realize the benefits of AI without implementing effective and holistic governance measures. Given the complexity of the technology and the pervasiveness of its potential perils in all aspects of operations, a multifaceted and dynamic approach to governance is required to manage AI risks. It is important that businesses evaluate their use of AI technology across five areas:

- Intent: Using data in a principled manner and verifying that AI design and implementation processes are ethically aligned and appropriate.
- Fairness: Ensuring that the processes and outputs of AI systems do not unwittingly discriminate against any group or individual.
- Transparency: Verifying that AI processes are explainable and repeatable.
- Safety/Security: Establishing robust capabilities in data governance, threat protection, and user privacy so as to better defend against malicious incursions.
- Accountability: Undertaking rigorous audit and compliance assurance processes to assuage the concerns of various stakeholders — lawmakers, auditors, customers, business partners and shareholders, among others.

To activate effective governance aligned with these principles, organizations must additionally implement supporting infrastructure and processes, including an oversight committee, a risk register and testing and analytics. Training should also be provided for staff involved in development and management of AI such that they can proficiently handle the dynamic risks that this technology presents.

By framing the management of their AI solutions around the five dimensions outlined above and instituting proper governance mechanisms, businesses can ensure that they do not expose themselves to undue risk, or worse, inadvertently cause harm to broader society. In doing so, they will be able to rest easier when procuring, developing and implementing new AI solutions.

A version of this article originally appeared on NACD BoardTalk blog.

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# When Skills, Not Jobs, Become the Currency of Work

***Kate Bravery,***
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Once upon a time, a person's job skills often became their last name. An English cask maker might have been called John Cooper. A German with the last name "Bauer" was likely a farmer and a Spanish soldier may have gone by "Guerrero." Such were the strong relationships between what an individual did and who they were.

*Transforming from a job-centric framework to one that reshapes itself around "future work" will keep organizations competitive and employees energized. Photo: Unsplash*

Today, in our large global, nearly post-pandemic village, we're seeing a return to an emphasis on people's skills as a key defining principle. In fact, the COVID-19 pandemic showed just how much skill-based approaches can create agility at pace. Leading organizations are now using that experience to create resilient and more sustainable businesses. Those that can deliver skills at scale will outpace competitors and be in a better position to adapt their business and their people in periods of uncertainty. And with skill-based approaches impacting workforce ROI by better matching skills to demand, it's no surprise that this Is on the C-suite agenda — helping them prepare for further volatility, while being a responsible employer for their people.

**Long-Term Employability**

The paradox of our time is that the race to reskill is on, but without a clear route to the finish line. The big challenge has always been how to stay up-to-date on which skills the organization currently has in place, the skills likely needed in the future and the price of different skills clusters as they trend up and down as market demand and supply change. Without this intelligence, any strategic workforce planning exercise will be subpar. At the same time, companies are faced with exhausted employees who are tired of filling out surveys and updating profiles and fatigued HR personnel, who are done with creating competency models that expire the day they launch.

The pandemic, thankfully, has opened doors to new ways of addressing these challenges. The World Economic Forum has facilitated industry-based groups to define the most critical skills and share insights on both cross-company standards and vetted vendors to support the skills ecosystem. This is driving collaboration. In Sweden, a consortium of companies from the airline, hospitality and fast food industries came together with academics to design training programs for laid-off staff so they could find

employment in the expanding health care and nursing home sectors. More of this type of thinking and innovating is needed to ensure abundant mobility for all as work, jobs and paths to prosperity continue to shift.

**Long-Term Sustainability**

Transforming from a job-centric framework to one that reshapes itself around "future work" will keep organizations competitive and employees energized. And competitiveness and energy are tightly linked. Energized employees are two times as likely as de-energized employees to be excited about the prospect of reskilling and three times more likely to be satisfied with the company, with no plans to leave, according to Mercer's Global Talent Trends study.

Achieving this level of engagement, however, requires a willingness to be transparent and communicative about job prospects, trending skills and a desire to move to a culture of learning and mobility. And this level of guidance is needed, as one in five Generation X and Y employees say they don't know what skills they should learn to remain employed as the world of work changes. Meanwhile, employees whose companies are transparent about which jobs will change are most likely to say they are thriving today (72% versus 56%).

Thus, good career management for employees demands an empathetic approach and greater democratization of opportunities than seen in organizations today, despite the increased appetite to build talent marketplaces. Add AI into the mix, and the real power for change emerges as the organization can now learn from itself.

AI can help answer: What skills clusters are critical for various jobs? What skills can lend themselves to vertical or lateral moves? What skills are in demand or could catapult people into new and emerging roles? What skills are employees searching for? With talent insights driving skills taxonomies and market insights driving valuation of skill sets, organizations and individuals can now use nudges and incentives to move, reskill, build or explore new opportunities that set them onto a sustainable path to prosperity. The challenge is making this a reality — especially in organizations with traditional models of HR and talent practices built in the 90s.

**Sustainable Futures for All**

When skills (not jobs) become the central currency of work, this not only helps organizations adapt to the new shape of work, but helps secure futures — for workers and societies. It's clear that responsible employers are thinking about reskilling and redeploying talent beyond business units and the organization as a whole. And a few are looking at cross-industry and cross-border partnerships. Many are implementing internal talent marketplaces to help find the right people with the right skills at speed.

This puts organizations in a better position to deal with the unknown, but represents a substantive shift in how talent is managed locally and raises tricky questions around costs and benefits as talent flows more freely toward work opportunities.

The above paints a bright picture of what could be, but the chasm between the skilled and unskilled is widening, as is the gap between organizations that are on the

front foot of this trend and those on the back foot. When done well, a company's skills strategy becomes an essential part of their employee value proposition. When done poorly, it adds to the many distractions we hear about today and further depletes worker energy.

With the potential for skills-based models to drive business growth and sustainability, building a culture of learning that will support this transition is critical — especially given that learning is the one talent trend set to stay and with the greatest potential to close the skills/unskilled chasm — for people and for organizations.

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# Should Companies Provide Lifelong Learning for Employees?

***Jason Tan,***
***Associate Professor in Policy, Curriculum and Leadership at The National Institute of Education***

*Companies are increasingly looking at ways of providing continuous learning or upskilling for employees to help them adapt to the arrival of AI and other new technologies. One country that has pioneered lifelong learning for its entire population is Singapore, with its SkillsFuture platform that is available to every citizen.*

*BRINK spoke to Jason Tan, associate professor of Policy, Curriculum and Leadership at the National Institute of Education, Singapore, about how well the experiment is going.*

*Office buildings light up the financial skyline in Singapore. A prong in the Singapore government's push for lifelong learning is that of providing second chances and trying to soften the rigidity of the current system. Photo: Nicky Loh/Getty Images*

*TAN:* A major motivation for the Singapore government is the increasing challenge posed by technological disruption to workplaces, not only in Singapore, but around the world. AI is no longer threatening just lower-skilled jobs, but also white collar jobs — we're talking about artificial intelligence now being able to interpret radiograms, even to write up press releases.

These trends are very worrying, not only for the individuals who may be facing job obsolescence, but also for governments who will have to address the possible disruptive effects brought about by the emergence of technological disruption.

**Course for Personal Fulfillment**

On its SkillsFuture platform, the Singapore government has broadened the idea of lifelong learning to encompass not only employability concerns, but also lifelong learning for personal fulfillment.

It has had to respond to some public criticism that it's not really wise to be using public funds to subsidize individuals who take up courses that aren't directly related — at least on the surface — to the workplace and job hunts.

The government's reply is that its conception of lifelong learning is much broader than just narrow employability concerns. In other words, lifelong learning is for everyone out there, no matter what kind of job you're in. So long as you're 25 years or above, you are entitled to receive periodic cash credits into what is called your Personal SkillsFuture Credit Account.

You can use this money, for example, to enroll in courses that are run by

universities, polytechnics and the Institute of Technical Education. At the same time, you can also enroll in courses that are conducted directly by companies. So, there are two major categories of course providers in Singapore, as far as the SkillsFuture Initiative is concerned.

*BRINK: What is the motivation for companies — why are they feeling they need to provide this for their employees?*

*TAN*: That is a tough part of the equation — why should companies invest in this? And it's not an easy question for companies to answer. I think the government knows that it has to provide some sort of incentive system for companies.

**Too Much Emphasis on Qualifications Rather Than Skills**

A major long-standing problem in Singapore is that there's been too much emphasis in the schools and in many workplaces on paper qualifications for job hiring and, of course, for promotions, for career advancement.

Over the last decade or so, the government has tried to bring about a massive culture shift, both in the schools and in workplaces — by putting more emphasis on what they call "skills mastery" instead of paper qualifications — when it comes to the hiring of employees, promotions and career advancement.

This is going to be a tough undertaking because there's a very entrenched culture in Singapore of doing well in examinations when you're in school and advancing in the education system on the basis of your superior performance in national exams. And then of course, if you do well in university, that stands you in better stead than someone who has not gone to university, and so on.

*BRINK: So do you see any shift in the corporate culture toward a continuous learning model for employees?*

*TAN*: I would say it's probably early days yet. That would be my frank assessment. The latest figures that I managed to unearth about SkillsFuture credit use rates for the year 2020 indicate that 49% of people who are eligible to use SkillsFuture credits, have done so. That figure isn't exactly a resounding endorsement of the widespread use of SkillsFuture credits.

I think many employers are still using paper qualifications rather than this idea of skills mastery to determine who gets hired, who gets promoted and so on. And that's been one of the factors that haven't yet been addressed, which is: What weight exactly will be given to these short-term courses that you take, that are run by companies and not by universities, say? Will these courses that are not run by established institutions of higher learning be accorded the same weight by employers?

It appears that InfoComm technology courses are the most popular courses, data analytics, artificial intelligence, that sort of thing.

**Rethinking the Way We Work**

*BRINK: So do you see that companies will eventually come around to this model?*

*TAN*: I think the COVID pandemic has shaken up the entire society because it has brought about so much disruption in workplaces. Quite a number of people have lost their jobs, and it has provided that much-needed opportunity to rethink the way workplaces are currently organized.

But massive cultural change won't be immediate, and it never is. The Singapore government is now trying to change the way teaching and learning is organized in schools. So for example, by reducing the emphasis on examination grades in favor of what they term the joy of learning.

What I see so far is that there hasn't yet been substantial change as far as parents and students and teachers are concerned, I guess because people are so used to the idea of students focusing heavily on exams, doing well in exams in order to advance year-by-year. And supposedly, the better you do in school, the better your job prospects will eventually be.

Another prong in the Singapore government's push for lifelong learning is that of providing second chances and trying to soften the rigidity of the current system. Giving you the chance to revisit job options, take up new jobs and acquire qualifications later in life, not necessarily when you're in your teens and early 20s. So, we're talking about letting working adults go back to school on a much wider scale than has been the case in Singapore.

That's very admirable, but then again, I come back to that question that I posed earlier, which is: How will the professional world of jobs adapt?

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# Harnessing Technology Convergence

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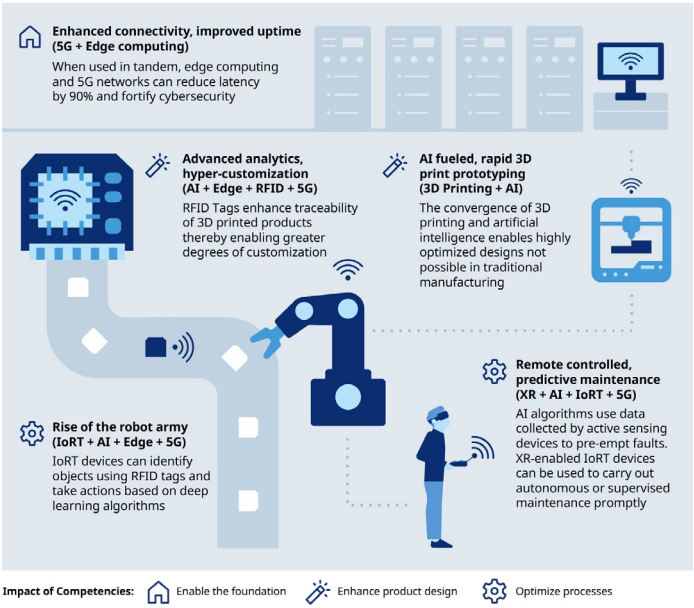
As innovative disruption and pandemic-induced constraints present challenges to existing business models, the convergence of complementary technologies is creating a range of capabilities in smart factories that are improving productivity, flexibility, and business continuity.

Novel combinations of artificial intelligence, Internet of Things (IoT)/Internet of Robotic Things (IoRT), and extended reality connected by 5G networks are helping smart manufacturers improve the efficiency of every step of the production process – from R&D to product assembly (see Exhibit below).

The tech ecosystem of a smart factory shop floor




A suite of complementary technologies akin to those utilized in smart factories can equip firms in other sectors with a host of capabilities that align with business priorities — product/service leadership, customer intimacy, and operational excellence. To successfully identify capabilities and supporting technology portfolios that reduce prototyping costs, enhance service delivery, and create other competencies, firms will need to anticipate challenges associated with selecting, integrating, and maintaining

complex technologies.

To help business leaders navigate the evolving technological landscape, Harnessing Technology Convergence explores use cases enabled by complementary technologies in smart factories, provides actionable insights on how businesses can emulate the success of smart manufacturers, and lists strategies for defusing cyber threats and assuaging employee concerns associated with tech adoption.

You may download the full text here.

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# The Digital Economy Cannot Be Managed With 18th-Century Regulation

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Governments have been grappling with the challenge of how to regulate new and rapidly expanding industries while safeguarding against potential risks ever since technological change first accompanied the Industrial Revolution. In the 18th and 19th centuries, governments had to support the development of entirely new industries while addressing problems in areas such as child labor, sanitation and air quality.

*A person wears a mask while using a phone in Wuhan, China. Digital regulatory approaches need to be built around a more sophisticated understanding of what people are actually doing with new digital products and services. Photo: Getty Images*

These challenges needed to be addressed as a result of the dramatic economic and social effects of these industries. There were very clear benefits to the government in supporting their development, but also huge potential harms in allowing the market to dictate terms.

Today, governments face a similar tightrope act in regulating the global digital economy being forged by the Fourth Industrial Revolution. The public sector must enable firms to develop innovative new digital products and services, while building in regulatory safety measures against possible harms and clear guidelines within which firms can operate safely.

**The Rise of Patchwork Regulation**

The difference is that, this time, public-sector institutions rooted in the 20th century and organized around regulating single industries need to be modernized to keep up with large firms increasingly spanning multiple sectors as part of the new digital economy. Take financial services: Activities like shopping and paying for goods on social media have both retail and financial services components and are subject to regulation by multiple organizations. As a result, new regulations continue to be rolled out, overseen by different agencies, to cover additional areas, which is creating a patchwork of regulators both domestically and internationally.

Even new cross-sector regulations often still need to be broadened in order to equitably address the full scope of rapidly expanding digital activities. For example,

GDPR in Europe, a policy designed to safeguard consumers by protecting individual data, can make it difficult for startups and scale-ups to access the vast amounts of consumer data held by large firms. Yet often, larger firms can still share data across their own platforms. This creates new competition challenges, which are regulated by a different set of institutions.

So what can be done? To be effective, governments have to redesign the way they regulate the world's rapidly growing digital economy, taking into account four new, parallel, emerging digital challenges.

**Scope: Single Companies Now Span Multiple Sectors**

Over the past century, regulators have identified challenges within markets that have lent themselves to developing agencies or regulatory bodies that dealt with that specific market — such as energy or telecommunications. Or they focused on a specific challenge, such as how to deal with monopolistic power.

But in the digital economy, the biggest companies stretch across everything from consumer goods and retail, to telecoms and energy. Regulatory bodies need to be refocused on similarly broader definitions of issues and markets.

For example, in the United Kingdom, the Competition and Markets Authority (CMA) and the Information Commissioner's Office are cross-sectoral competition and data protection agencies that set standards across the entire economy. In a recent review of digital markets, the CMA has recently started to redefine markets and market power.

In the United States, the Federal Trade Commission treats data protection as part of its broader mandate to protect consumers and has experience looking at automated decision-making. It may adopt an even more holistic view of data protection and competition under its new chair, who is a well-known figure in antitrust circles.

**Scale: When Company Budgets Surpass Countries' GDPs**

Regulators also need to find a way to keep up with unprecedented financial firepower that gives large technology firms the ability to outflank them on many fronts. Some of the largest companies have annual budgets larger than the GDP of most countries. With digital services that are integral to everything from how we shop to how we get around to how our financial services are processed, the operations of large digital players are critically important to the functioning of national digital economies. As a result, some policy-makers are considering regulatory frameworks requiring operational resilience requirements.

In addition, many digital services are now spread across geographical boundaries. As a result, regulation in one domain might not provide a full solution in the absence of agreements among a wider range of nations and states. This is where supranational bodies play an important role in setting standards for national regulation and providing guidance on global issues like cross-border data-sharing.

There are precedents for international regulation in the financial services market, like the Financial Stability Board, which monitors financial markets, coordinates financial authorities and sets international standards. The massive, international,

cross-sectoral scale of digital markets will create new issues and make international coordination difficult. Nonetheless, this is no reason to shy away from it, recognizing it may need to take the form of regional, rather than global, coordination of like-minded nations in the short term.

**Digital Products: Assumptions of Protection Lead to Exploitation**

Regulating digital data versus other commodities similarly needs to be reimagined. There is an implicit assumption that physical products sold on a digital platform are covered by current regulatory regimes.

However, the current lack of an explicit cross-sectoral consumer protection body in any country leaves consumers exposed to the digital exploitation of rules where products and services fall between sectors. An example is that consumers might erroneously assume that food sold by online retailers complies with national safety standards. Another is that an unregulated credit "Buy now, pay later" offer can feel like a loan to a borrower, in much the same way that a charge card or bank overdraft might. But while it may feel the same to a customer, the protections offered differ.

Even where firms are subject to the same regulation, the reality of day-to-day supervision is that digital activities are often not yet scrutinized in the same way and therefore not subject to the same supervisory intensity.

**Unexpected Consumer Behavior**

Finally, regulations need to be designed to address new forms of digital behavior. One of the biggest lessons from past regulatory reforms has been that individuals don't always respond in the way that regulators expect. When the U.K. government, for example, began to significantly open up the electricity and gas markets, there was an assumption that free markets would lead to consumers shopping around and switching suppliers for a better deal.

These assumptions were based on standard economic assumptions about how consumers seek to maximize their own self-interest. But it turned out that the vast majority of people stuck with the incumbent supplier.

Digital regulatory approaches need to be built around a more sophisticated understanding of what people are actually doing with new digital products and services, rather than how we might expect them to behave — even if consumers themselves are not always aware of how their data is being used and its value extracted.

**A Sustainable Digital Economy**

Technological innovations are becoming ever more embedded in our day-to-day lives, generating valuable new opportunities but also digital risks that are increasing exponentially. Truly protecting consumers, while encouraging more technological advances, will require a more modern, holistic, regulatory architecture from governments.

As a starting point, policymakers can begin to reconcile digital tug of wars between regulatory agencies by creating regulatory colleges and cooperation forums

that help to provide solutions to some of the cross-sectoral challenges the new digital economy is throwing up. This is starting to happen, for example through the Digital Regulation Cooperation Forum in the U.K., which seeks to understand where coordination points are required and address them head-on.

But what is really needed is a new oversight architecture that is fit for purpose in the age of the digital economy. Such a digital economy regulatory architecture should bring together and holistically address newly emerging cross-sectoral risks in terms of scope, scale, products and behavior.

A version of this piece was initially published on the World Economic Forum Agenda Blog.

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