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Governance at a turning point. Christine Lagarde discusses the priorities for policymakers

Wilbert Jan Derksen considers the election of Milei in Argentina and the possible outcomes

Ashleigh Brocchieri looks at ICC leading dispute resolution worldwide

THE GLOBAL TRADE AND FINANCE PLATFORM

FOREWORD

Is democracy broken?

There seems to be a feeling of frustration and anger in the electorates of many Western democracies that has been brewing for some time. After decades of broken pledges, policies introduced without consultation and public opinion flagrantly disregarded, there is the impression that we are living in a one-party world that is now a democracy in name only.

The developed West has polarised into two camps; the liberal left (since when has socialism been liberal?) and the right, who seem cowed by the left into being a 'liberal-lite' version. In other words, their policies are indivisible from each other.

Once elected, both sides of the aisle forge on with activist policies and agenda that are often at complete odds with those of the people they supposedly represent and to whom they forget that they owe their very positions. Institutions that should stand as a balance against activist ideologies have been steadily captured by the same intellectual conformity that ensures the tyranny of the faceless 'blob'.

It is becoming clear that truth is no longer the core value around which many of our political class and once independent institutions adhere to. A dogmatic secular religion has grown up, with a new priesthood of politicians and technocrats who enact their policies under the conviction that they, and they alone, are best placed to decide how the electorate should live.

Political cracks are appearing in this alliance. For example, the move to net zero has been put back. As the electorates realise the cost of the policies forced on them then the more they are pushing back. This may explain the election success of Geert Wilders and Javier Milei, and the move to the right in many other countries. And the US may vote for Trump, and France for le Pen!

There is a push from the incumbents to stop misinformation and disinformation as they look to control the agenda. *"War is Peace. Freedom is Slavery. Ignorance is Strength."*

Now is the time for bold and visionary leaders to propose a much-needed change to a not-fit-for-purpose system. To maintain the benefits and privileges of liberal democracies there is a need to reform the system to counterbalance major decisions where our elected representatives have deviated from the views and priorities of the public.

With no recourse to a safety-valve of voting for politicians who represent their views it is not surprising that we are seeing a disempowered electorate prepared to take matters into their own hands via civil disobedience and potential acts of violence. This never ends well and before discontent turns to action, we should start to propose solutions to the limitations of our representative democratic model. ■

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Explaining the rise of Javier Milei in Argentina

The Argentine electorate shocks the world. Wilbert Jan Derksen considers the election of Milei and how he could be a catalyst for more libertarian leaders in Latin America

The economy of Argentina has puzzled economists for years. On paper, this resource-rich country should be one of the most developed countries in the world, but the past century was marked by repeated economic collapse. Economists even refer to this oddity as the 'Argentine paradox'. But on November 19th it became clear that Argentines are more than fed up with this never-ending cycle of economic failure. They opted for a path of radical change, by voting the first libertarian president in the world in office: Mr Javier Milei. He wants to transform the country and build a new Argentina. But how did things get to this point? And more importantly, what exactly is the vision that Milei has for Argentina?

A century of economic misery

It might be difficult to imagine now, but not that long ago Argentina was considered to be a prosperous country with a bright future ahead. By 1913 it was among the top 10 richest nations in the world, with a GDP even bigger than that of countries like France and Italy.

Like the United States in the north, Argentina was considered to be the 'land of opportunity' of the south. The country attracted large waves of migration, especially from European nations like Italy and Spain. One of the architects of this success was the political thinker Juan Bautista Alberdi.

Inspired by classical-liberal principles like free enterprise and limited government, he wrote the blueprint of what would become the Argentine Constitution of 1853. From the 1880's, when Argentina entered a period of political stability, the country's economy started to develop rapidly.

That ended in the 1930's, when, just like so many other nations across the world, Argentina suffered the consequences of the Great Depression. That created a period of political turmoil in the country. In 1943 there was a military coup, which ultimately resulted in the election of army colonel Juan Domingo Perón as president in 1946.

He developed his populist ideology of 'Peronism', based on three main principles: social justice, economic independence and political sovereignty. To accomplish these goals, Peron envisioned a strong role for the state. Economic problems and dissatisfaction with his oppressive style of rule resulted in a military coup against him in 1955 though and he was forced to go into exile.

It is clear that Milei has a very ambitious plan for Argentina. He believes he can put the country back on the path of development like it was before this 'lost century'

In 1973 Perón made a long-awaited return, but he died one year later. His wife Isabel took over the presidency, but as the country faced skyrocketing inflation the military once again intervened and removed her from power.

What followed were some of the darkest pages in the country's history, as a violent military dictatorship ruled the country between 1976 and 1983. Thousands of 'suspected' left-winged activists were tortured and murdered by this regime in what was later called the 'Dirty War'.

Next to committing grave human rights violations, the dictatorship also failed to fix the economy. After losing to the United Kingdom in the Falklands War, the dictatorship stepped down and democracy returned to Argentina. The newly elected president Raúl Alfonsín however, was also not able to provide the economic recovery that the Argentines had hoped for.

In 1989 this led to the return of the Peronists to power, with Carlos Menem as the new president. Surprisingly though, in economic terms he made a 180-degree turn, deviating from traditional left-wing policies in favour of large-scale liberalisation of the economy. This worked quite well it turned out, as the economy started to grow.

Finally, things were looking up again for the country with annual GDP growth rates of around 7 percent. However, public spending remained too high and the country faced serious corruption problems. Inevitably, this led to a massive economic crisis in 2001, leading to violent protests all across Argentina.

Peronists switched strategies again and returned to left-wing economic policies when they gained the presidency in 2003. Under the Kirchners – first president Néstor Kirchner, followed by his wife Christina Kirchner in 2007 – Argentina climbed out of the crisis years, but its economy still suffered the consequences of trade restrictions and growing government debt.

In 2015 hopes were set on centre-right president Mauricio Macri to clean up the mess and to implement serious economic reforms. Four years later, however, the disappointing conclusion was that he had failed to do so. Even though he promised reforms, his intention to do it gradually meant that public spending remained more or less the same and that markets were barely liberalized.

In 2019, once again the Peronists assumed power and Alberto Fernandez was elected as president. The bad state of the economy only worsened when the COVID-19 pandemic hit the country. Fernandez was unable to prevent the death spiral in which the economy found itself.

Moreover, his popularity plummeted once it was discovered that Fernandez had been ignoring the lockdown measures on several occasions during the pandemic. Next to that, he also had to face several internal disputes in his government, adding to his ultimate decision not to run for a second term as president.

By 2023 the country's annual inflation rate surpassed 100 percent and more than 40 percent of the population had fallen below the poverty line. Both Macri and Fernandez failed to restore the economy. Voters lost faith in the traditional parties on both sides of the spectrum. This paved the way for an outsider to take a shot at the presidency.

Who is 'El Loco'?

Javier Milei was born in Buenos Aires in 1970. He grew up under difficult circumstances, as he suffered serious abuse from both his parents. Milei took an interest in economics when he experienced hyperinflation at the end of the 1980's under President Alfonsín.

This motivated him to study economics. Later he worked as an economist for several organizations and also started to write books. In addition, he became a frequent guest on television programs, often stirring up debates with provocative statements.

Once a believer in Keynesian economics, Milei had a radical change of heart after he read an article by the libertarian philosopher Murray Rothbard. Milei then became a libertarian himself and an avid critic of Keynesian thought, eventually even qualifying Keynes as a Marxist.

He took an interest in the Austrian school of economics and became a big fan of philosophers like Friedrich Hayek, Milton Friedman and of course the earlier-mentioned Argentine thinker Juan Bautista Alberdi.

Milei entered politics in 2020 as part of the Avanza Libertad (Freedom Forward) coalition. A year later he was elected as a member of Argentina's Chamber of Deputies. To demonstrate his libertarian convictions, he decided to raffle his monthly paycheck among Argentines, stating he would never accept money that was illegitimately taken from people through taxes. His popularity started to grow, especially among young voters, and in early 2023 Milei decided to participate in the presidential race.

Just his appearance reveals that Milei is no standard, boring politician. Once the lead singer of a rock band, he often dresses in a leather jacket. He lets his hair run wild, which to him symbolizes the untameable forces of the market.

In addition, he has five dogs (all named after economists), which are all clones of his deceased mastiff Conan. It is said that Milei still communicates with Conan through a spiritual medium, allegedly even receiving political advice from his dead pet. Milei also claims to have seen the ghost of the famed liberal philosopher Ayn Rand appear before him in a bookstore.

As a musician, Milei knows how to play a crowd and create political theatre. During his campaign he often appeared frantically swaying a chainsaw above his head, illustrating his ambitions to radically cut the size of government. Also in debates, Milei does not hold back, often bursting out into high-energy rants against his political opponents, earning himself the nickname 'El Loco' (the crazy one).

The libertarian alternative

So, what exactly are the ideas that Milei has for Argentina? First of all, Milei presents himself as a libertarian who wants to drastically overturn not only the economy, but the entire political structure of the country.

According to him, Argentina suffered for decades under the mismanagement and corruption of a 'political caste', comprised not only of politicians, but also unionists and bribed journalists. He sees them as part of a criminal gang, who only care about enriching themselves, at the expense of the rest of the country.

In terms of the economy, he wants to radically cut down government spending, for example by privatizing state-owned businesses and by bringing down the number of ministries from 18 to 8. He wants to lower tax rates and eliminate import tariffs.

In addition, Milei wants to roll back government control over things like salaries and exchange rates. In fact, he wants to completely abolish the Central Bank of Argentina and ultimately 'dollarize' the economy.

According to him this will stabilize the economy, as it takes away the government's power to intervene in the economy through monetary policy. Milei is also in favour of what economists call 'shock therapy', meaning that he wants to quickly and radically liberalize the economy, rather than a more cautious and gradual implementation of such measures.

On social issues, Milei also has strong libertarian views, as he sees individual autonomy as the most important guiding principle. One extreme example of this is the fact that he wants to legalize organ trade. According to him, organ transplantations would be much more effective under a free market system.

Moreover, from a moral perspective, Milei argues that individuals should be able to decide over their own bodies, which includes selling parts of that body for whatever reason. Despite this plea for body ownership though, Milei is against abortion and he wants to repeal the recently approved Argentine law on that matter.

According to him, life starts at the moment of fertilization, so abortion goes against the right to life. Hence, Milei wants to call for a referendum on whether the law should be overturned or not.

Nevertheless, on issues like same-sex marriage, gender identification, drugs and prostitution he believes that an individual should be able to make his or her own choices, as long as the rest of society is not forced to 'pay the bill' (by having to pay taxes for it).

Winning the presidency

With many Argentines cheering for Milei's promise of radical change, hopes were set sky-high during the first round of the presidential elections. Surprisingly though, with 30 percent of the votes he only came in second after the Peronist candidate Sergio Massa, who gained 36 percent of the votes.

This despite the disastrous economic situation the country found itself in under the Peronist government, in which Massa acted as the Minister of Economy. One of the ways Massa had succeeded in winning votes, was by promising more government handouts. Moreover, he tried to warn people of the consequences that Milei's radical policies could have for the country.

His strategy worked in the first round, but it was not enough to win the second round. Focusing on the negative implications of a Milei presidency, he failed to present his own solutions for the country's problems.

More importantly though, after the first round Milei gained the endorsement of two other politicians; former president Mauricio Macri and the number three of the first round of the presidential elections Patricia Bullrich. This was enough to quite convincingly hand Milei the presidency, gaining 11 percent more votes than his Peronist opponent in the second round.

Milei's victory gained press coverage worldwide, with headlines stating that Argentines had voted for the 'Trump of the Pampas'. Whether this comparison is fair, is up for debate. Although Milei has expressed admiration for the former US president, it would be far too simplistic to state that they are one and the same.

As explained before, Milei first and foremost identifies as a libertarian. Although they share viewpoints on issues like abortion and climate change, on other issues like gay marriage, drug legalization and the war in Ukraine Milei has very different ideas than Trump.

Moreover, while Trump argues for economic protectionism, Milei believes in an open economy. Branding Milei as just another version of Trump would therefore not be very accurate.

Challenges ahead

It is clear that Milei has a very ambitious plan for Argentina. He believes he can put the country back on the path of development like it was before this 'lost century'. According to Milei, with his policies, Argentina can become a country like France or Italy within 15 years and after 35 years even become a global superpower like the US. Nevertheless, he will have to face some serious challenges ahead.

First of all, he is going to need to have the support of Congress. The problem is, however, that in Argentina Congress is renewed only partially every election. For now, his coalition just has 7 out of 72 in the Senate and 38 out of 257 seats in the Chamber of Deputies.

This means that Milei needs to form bonds with other parties within Congress. We know that El Loco is good at burning political opponents to the ground, but it remains to be seen if he is also able to adopt a more conciliatory tone in order to form political alliances.

To gain their support he will probably also need to make concessions, for which he might have to moderate his attitude on some topics. For voters who are now expecting radical change, that could result in disappointment.

To circumvent Congress, Milei stated that he could resort to referendums. Still, for such a referendum to be binding, a majority in Congress is needed. Non-binding referendums could still be used to apply pressure but are not as strong a weapon as Milei would like to have.

Even if Milei is successful in convincing others of his radical political agenda, the Argentines will need to brace themselves. His preference for economic 'shock therapy' entails drastic cuts in public spending, including the social programs on which a lot of Argentines depend right now. The idea is that this short-term sacrifice will create a more healthy and stable economy in the long term.

Argentines, especially lower- and middle-class families, are going to feel the hit though. It remains to be seen how much they can take before they start taking to the streets. In that case, Milei would have to find a way to calm the mood and not let things get out of control.

Then again, well aware of this possible outcome, many poor Argentines still voted for Milei. They are so fed up with how things are going now, that they prefer any alternative over the present situation and seem to be willing to let Milei sail the country into the storm.

To conclude, it is going to be some interesting years for Argentina. If Milei fails, libertarianism can be added to the country's already packed ideological graveyard. If he succeeds, however, it might prove to be a catalyst for more libertarian leaders to rise up in Latin America.

Not only in Argentina, but also in other countries like Uruguay, Ecuador and Venezuela, the libertarian movement is growing right now. Milei could create a domino effect across the region, where in many countries voters are also fed up with the traditional political system.

The election of Milei might be a prelude to a radical ideological shift in Latin America. Reasons enough to keep a close eye on Argentina in the upcoming years. ■

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Look to the mainstream to explain the rise of the far-right

Aurelien Mondon discusses the popularity of conservative parties and argues the reason is deeply entrenched oppression that is core to Western societies

Javier Milei in Argentina. Geert Wilders in the Netherlands. These are the two latest 'populist shocks' – the tip of the 'populist wave' that comes crashing against the weakened defences of liberal democracies. At the same time, former UKIP leader Nigel Farage benefits from the same 'funwashing' on *I'm a Celebrity Get me out of Here!* As Pauline Hanson, leader of the most successful extreme right party in Australia in recent years, did when she was invited on *Dancing with the Stars* just a moment after her political career plummeted.

The contradiction in addressing the rise of far-right politics in public discourse could not be starker. And yet, it goes far deeper. It should be obvious to anyone concerned about these politics and the threat they pose to democracy and certain communities, that humanising their leaders through fun reality TV shows or coverage of their hobbies rather than politics only serves to normalise them.

What is less obvious and yet just as damaging is the hyped coverage of the threat. Milei and Wilders are not 'shocks'. The resurgence of reactionary politics is entirely predictable and has been traced for a long time. Yet every victory or rise is analysed as new and unexpected rather than part of a longer, wider process in which we are all implicated.

The same goes for 'populism'. All serious research on the matter points to the populist nature of these parties being secondary at best, compared to their far-right qualities. Yet, whether in the media or academia, populism is generally used carelessly as a key defining feature.

Using 'populist' instead of more accurate but also stigmatising terms such as 'far-right' or 'racist' acts as a key legitimiser of far-right politics. It lends these parties and politicians a veneer of democratic support through the etymological link to the people and erases their deeply elitist nature – what my co-author Aaron Winter and I have termed *"reactionary democracy."*

What this points to is that the processes of mainstreaming and normalisation of far-right politics have much to do with the mainstream itself, if not more than with the far right. Indeed, there can be no mainstreaming without the mainstream accepting such ideas in its fold.

In this case, the mainstreaming process has involved platforming, hyping and legitimising far-right ideas while seemingly opposing them and denying responsibility in the process.

Sitting on the fence is not an option for anyone who plays a role in shaping public discourse. This means self-reflection and self-criticism must be central to our ethos

While it would be naive to believe that the mainstream media tell us what to think, it is equally naive to ignore that it plays a key role regarding what we think about. As I argued in a recent article on the issue of *"immigration as a major concern"*, this concern only exists when respondents think of their country as a whole. It disappears when they think about their own day-to-day lives.

This points to the mediated nature of our understanding of wider society which is essential if we are to think of the world beyond our immediate surrounding. Yet while essential, it relies on the need for trusted sources of information who decide what is worth priming and how to frame it.

It is this very responsibility that much of our media has currently given up on or pretend they do not hold, as if their editorial choices were random occurrences.

This could not have been clearer than when the *Guardian* launched a lengthy series on 'the new populism' in 2018, headlining its opening editorial with: *"Why is populism suddenly all the rage? In 1998, about 300 Guardian articles mentioned populism. In 2016, 2,000 did. What happened?"* At no point did any of the articles in the series reflect upon the simple fact that the decisions of *Guardian* editors may have played a role in the increased use of the term.

A top-down process

Meanwhile, blame is diverted onto conveniently 'silent majorities' of 'left-behind' or a fantasised 'white working class'. We too often view the far-right as an outsider – something separate from ourselves and distinct from our norms and mainstream.

This ignores deeply entrenched structural inequalities and forms of oppression core to our societies. This is something I noted in a recent article, that the absence of race and whiteness in academic discussion of such politics is striking.

My analysis of the titles and abstracts of over 2,500 academic articles in the field over the past five years showed that academics choose to frame their research away from such issues. Instead, we witness either a euphemisation or exceptionalisation of far-right politics, through a focus on topics such as elections and immigration rather than the wider structures at play.

This therefore leaves us with the need to reckon with the crucial role the mainstream plays in mainstreaming. Elite actors with privileged access to shaping public discourse through the media, politics and academia are not sitting within the ramparts of a mainstream fortress of good and justice besieged by growing waves of populism.

They are participating in an arena where power is deeply unevenly distributed, where the structural inequalities the far right wants to strengthen are also often core to our systems and where the rights of minoritised communities are precarious and unfulfilled.

They have therefore a particular responsibility towards democracy and cannot blame the situation we all find ourselves in on others – whether it be the far right, fantasised silent majorities or minoritised communities.

Sitting on the fence is not an option for anyone who plays a role in shaping public discourse. This means self-reflection and self-criticism must be central to our ethos.

We cannot pretend to stand against the far right while referring to its politics as 'legitimate concerns'. We must stand unequivocally by and be in service of every one of the communities at the sharp end of oppression. ■

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Leading dispute resolution worldwide

Ashleigh Brocchieri discusses how the ICC International Court of Arbitration has developed dispute resolution and prevention techniques for business for 100 years

1923. The Hollywood sign is erected in Los Angeles, the first ball is thrown in Yankee Stadium in New York, and on 19 January 1923 in Paris, France the International Court of Arbitration® of the International Chamber of Commerce was founded. As the Hollywood sign is to film and the Yankee Stadium is to baseball, the ICC Court is as relevant to the business community today as it was 100 years ago.

World peace through world trade

The International Chamber of Commerce was created in 1919, in the aftermath of the devastation of the first world war. It was the brainchild of a group of entrepreneurs, known as the Merchants of Peace, including the then French Minister of Commerce Etienne Clémentel.

Armed with the belief that nations with strong economic ties do not go to war, the Merchants set out to foster world peace. They believed that to achieve peace, it is the private sector, rather than governments, who are best placed to set global standards and guidelines for commerce.

Just four years later, in 1923, the ICC Court was founded. The aim of the ICC Court then was, and today remains, to provide access to justice and the rule of law to everyone, every day, everywhere.

Who is the ICC Court?

The ICC Court is not the traditional court you would imagine watching courtroom dramas. The ICC Court does not itself settle disputes, but it exercises supervisory authority to monitor the proceedings of disputes in application of the ICC Rules of Arbitration, independent of any national court or other political involvement.

The ICC Court monitors the entire procedure, from the filing of the request for arbitration, through the constitution of the arbitral tribunal, the financial aspect of the arbitration, to the scrutiny of the award and beyond to assist parties in complying with formalities for the enforcement of the award.

The ICC Court is led by a President, who serves on a once renewable three-year term. The President, along with 17 Vice Presidents and 195 members from 121 countries around the world, make up the ICC Court. The ICC Court is supported by the Secretariat of the ICC Court, led by its Secretary General, to ensure the efficient administration of ICC arbitration.

The Secretariat comprises 12 case management teams, each dealing with a different geographical region or jurisdiction, and a 13th floating case management team to support the 12 aforementioned teams. The ICC Court and

With Court members from 121 countries, the ICC Court can leverage its experience in almost all jurisdictions around the globe to give its users an unparalleled service

Secretariat of the ICC Court are made up of qualified lawyers with expertise in international arbitration and dispute resolution and professional support personnel.

The Court takes all administrative decisions necessary during the arbitration, whilst the Secretariat is the parties' day-to-day point of contact for any assistance required during the arbitration or for any explanation as to the functioning of the ICC Rules.

The first cases

The first arbitrators were not the legal professionals we see today. They were experts in the subject matter of the dispute, engineers, businesspeople or members of local chambers of commerce originating from many jurisdictions already. The disputes very often concerned the quality of goods sold, including rubber, oil and other commodities, with the arbitrator being required to examine the goods in person.

The awards rendered were also very short, being just a few pages in length. The cases changed very rapidly in terms of legal and factual complexity. In the 1930s cases involving agency and licencing, for example, began to appear.

Today, arbitrations vary greatly from case to case but in general are much more complex than 100 years ago. Transactions involving multiple parties, multiple contractual documents, multiple external stakeholders from the private or public sectors including States, across multiple jurisdictions and with differing business models lead to more complex disputes. The ICC Court has filed over 28,000 cases.

Today, approximately one-third of ICC arbitrations involve multiple parties or contracts. In 2022, only 20% of ICC arbitrations concerned the sale and purchase of goods. 24% of cases involved the construction and engineering sector and 21% concerned the energy sector.

Evolution of the ICC Rules

The ICC Rules provide a framework within which parties can resolve their disputes. As the way the world conducts business has evolved, as have the ICC Rules to ensure they are primed to deal with new and challenging issues. There have been 14 versions of the ICC Rules, with the most recent being published in 2021.

As noted in the foreword to the 1998 version of the ICC Rules, which sentiment remains relevant today, *"The changes made are designed to reduce delays and ambiguities and to fill certain gaps, taking into account the evolution of arbitration practice. The basic features of the ICC Arbitration system have not been altered, however, notably its universality and flexibility, as well as the central role played by the International Court of Arbitration in the administration of arbitral cases."*

The first version of the Rules, published in 1922, comprised three sections. The first section contained Conciliation Rules. The second and third sections contained the Arbitration Rules. This showed the importance of amicable dispute procedures from the outset. As Emmanuel Jolivet, ICC and ICC Court General Counsel observed *"by providing flexible and comprehensive rules covering the whole range of dispute resolution mechanisms ICC has been a pioneer in the dispute resolution field for a century."*

Conciliation remained at the forefront of the ICC Rules until 1988, when the arbitration rules became their own document. That is not to say the emphasis on amicable dispute resolution waivered. Quite the opposite, in 1972 ICC established the ICC International Centre for ADR, a dedicated department focussing on amicable dispute resolution.

In addition to dealing with the administration of mediation and appointment of mediators, the Centre now also offers services in Expertise, Dispute Boards and Docdex, a bespoke dispute resolution tool for documentary instruments such as letters of credit.

The first version of the Rules, published in 1922, did not contain what is now the hallmark of ICC Arbitration: scrutiny of awards. However, it did not take the founders long to appreciate the benefit users would gain from this and as early as 1923 commentary noted that draft awards should be submitted to the ICC Court for examination.

In these early days, the examination was limited to the form of the award. It was 10 years later, in 1933, that the scrutiny of awards extended to drawing an arbitrator's attention to points of substance of awards – while never fettering the arbitrator's liberty of decision making.

Through the scrutiny process, the ICC Court ensures that the draft award has clear reasoning and that it addresses parties' claims and defences, as well as considering any requirements of laws of the place of arbitration, when practicable. All with the ultimate goal of ensuring the enforceability of the award.

In response to parties' desire for an efficient procedure to allow emergency measures outside of national courts, in 2012 the ICC Rules introduced Emergency Arbitration. The procedure offers the possibility of obtaining emergency relief, in the form of an order, for parties unable to await the constitution of the arbitral tribunal.

The ICC Rules have not only evolved to cater for complex disputes, in 2017, ICC introduced the Expedited Procedure Provisions ("EPP"). Intended for disputes where the amount in contention is under US$ 2,000,000, increased to US$ 3,000,000 in the 2021 Rules, EPP offers a simplified procedure at a reduced cost where the final award may be rendered within six months from the case management conference.

In these cases, the arbitral tribunal, after consultation with the parties, may decide the dispute on documents only or limit the parties' written submissions and witness evidence.

The 2017 Rules introduced the possibility for the Court to communicate reasons for certain decisions. With the aim of fostering transparency, another wish from users, any party may request that the ICC Court communicate its decisions on its prima facie jurisdiction, consolidation, arbitrator challenges or replacement of arbitrators.

Servicing our users over 100 years

ICC's role as service provider has underpinned its user offerings over the past 100 years. As the ICC Court's global reach has expanded, as has its range of services.

Inaugurated and headquartered in Paris, the ICC Court now operates from offices in five regions. ICC opened its first overseas office in Hong Kong in 2008. This was followed by an office in New York in 2014, Sao Paulo and Singapore in 2018 and Abu Dhabi in 2021. Being present in all time zones affords ICC the unique position of having a truly global reach, with a regional presence.

The ICC Court continuously strives to keep up to the demands of parties. At the time of publishing the 1988 Rules of Arbitration, the Court would meet in principle once a month. Now the Court meets at a minimum once a week, in English and French, with additional sessions in Spanish, Portuguese and German. 299 Court sessions were held in 2022.

With Court members from 121 countries, the ICC Court can leverage its experience in almost all jurisdictions around the globe to give its users an unparalleled service.

The world since 1923 has changed drastically and no more so than the way global business can leverage technology. In October 2022, ICC launched ICC Court Connect, a pioneering digital case management platform to connect parties, arbitral tribunals and the ICC Secretariat.

ICC Case Connect enables parties, via their business and/or legal representatives, to streamline communication and file-sharing and provides a convenient platform to view their current or closed ICC Case Connect arbitrations.

In June 2023, ICC announced its intention to develop the next version of its digital case management platform. As articulated by Francesca Hill, Head of Operations for ICC Dispute Resolution Services, this *"will enable ICC to continuously improve our range and delivery of digitally-enabled dispute resolution services for the future."*

ICC as a global leader

According to the Queen Mary University of London Survey on International Arbitration, ICC is the world's most preferred and/or used arbitral institution by global stakeholders. ICC's Dispute Resolution Services offering to the international business community is not limited to the administration of their arbitration proceedings.

Created in 1920, the ICC Constitution and Commission on Arbitration, now known as the Commission of Arbitration and ADR, is the ICC 'legislative' body. It drives thought leadership by studying international dispute resolution and producing reports and guidelines on legal and procedural aspects of dispute resolution.

The commission's membership consists of delegates appointed by national committees, ICC local representative bodies, as well as ICC court members and counts over 1,300 members from more than 100 countries comprising lawyers, in-house counsel, arbitrators, mediators, law professors and experts in various dispute resolution fields.

The ICC Commission furthers the belief of the Merchants that it is the private sector who are best placed to set global standards and guidelines for commerce. In this way, ICC and business can work together to shape the future of dispute avoidance and resolution.

ICC's work in the dispute resolution field is supplemented by the Institute of World Business Law, a think-tank engaged in academic studies and training. By way of example, Eduardo Silva Romero, Chair of the Institute explained *"having noticed the decline of investment treaty arbitration, the Institute formed a working group with UNIDROIT in order to create a model investment contract which could – to the extent possible – replace the network of investment treaty protections. More generally, the Institute has always been at the avant-garde of the legal ideas and tools in international business law."*

ICC remains a voice on behalf of business in the international sphere. In 1927, ICC helped broker the Geneva Convention on the Execution of Foreign Awards. In 1953, ICC drafted a Preliminary Draft Convention on the Enforcement of International Arbitral Awards. This document ultimately inspired the 1958 New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards, one of the key instruments in international arbitration.

Outside of dispute resolution, in 2016, ICC was granted Permanent Observer status at the United Nations General Assembly. ICC remains the only business organisation to have been granted such status, which gives business a direct voice in the UN.

To further the goal of enabling access to justice to all; in 2021 ICC made ICC arbitral awards available, free of charge, to the global legal community via Jus Mundi. The ICC Dispute Resolution Library is also accessible via Jus Mundi platform, allowing members of the legal community to utilise over 7,500 documents including ICC Dispute Resolution Bulletin, ICC Commission on Arbitration and ADR Reports.

ICC has also been at the forefront of supporting diversity in arbitration. In 2022, ICC was awarded the Equal Representation in Arbitration Pledge Award for its pioneering work for building LGBTQIA network within the global legal community and for the ICC Task Force on Disability Inclusion and International Arbitration.

The future of ICC Dispute Resolution and Prevention

On 19 January 2023, 100 years since its inauguration, the ICC Court published its ICC Centenary Declaration on Dispute Prevention and Resolution. This is ICC's pledge to the business world to continue to enable access to justice and the rule of law by providing innovative and trusted dispute prevention and resolution services to everyone, every day, everywhere.

Among the pledges, ICC commits to accessible, affordable, predictable and efficient dispute prevention and resolution services, improving transparency and leading the transformation of dispute prevention and resolution.

It is impossible to foresee what dispute resolution will resemble in 100 years' time, as the Merchants would have been unable to imagine it as it is today. However, ICC remains committed to working with business in whatever challenges the world may face tomorrow.

As Claudia Salomon, the ICC Court's President expressed: *"As business relationships and disputes evolve in an ever-changing world, ICC's track record of innovation places us in the perfect position to lead the world of dispute resolution and prevention into the future."* ■

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Is it time for a prosperity update?

The digital transformation will continue. Joachim Nagel discusses productivity, competition and stable money in the digital age

1 Introduction

You may have wondered before leaving home whether it would rain today. Perhaps you needed a ticket to travel here by public transport. Maybe you cycled or walked and didn't know the way here. If so, I would be surprised if you hadn't used your smartphone in some way.

When Ludwig Erhard published his book *Prosperity for All*, things weren't that simple: to buy a train ticket, you generally had to go to the station and queue up at the counter. To find your way around town, you needed a map of the city, which you would unfold in order to look for a route. You started by asking: where am I and where do I need to go? And if you wanted to know what weather to expect, you checked the newspaper or listened out for the weather report on the radio.

Nowadays, all it takes is a finger swipe or a voice command to obtain such information. That's thanks to digitalisation. It's made our daily lives easier in many ways. Or when was the last time you pored over a street map, studied a timetable or flipped through a phonebook? And it has opened up new ways for us to communicate, to network and to share in the world's knowledge.

Technological progress is also bringing the economy further into the digital age. Networked machines and cloud-based services have long since become part of day-to-day business operations. Many firms are currently testing the potential uses of artificial intelligence. And in the medium term, quantum computing could cross the threshold to broad applicability.

We all feel the effects of the wave of new technologies: they affect how we work, shop and pay; and they are transforming products, production processes, business models and markets. Fundamental changes of this kind always entail both opportunities and risks. Most experts believe that digital transformation harbours considerable further potential for providing impetus to growth and prosperity. That's the first thing I want to talk about.

But whether this potential is actually tapped remains to be seen. If we want to turn digital progress into prosperity for all, we need an economic model whose framework creates the basis for this.

The digital transformation offers us a wealth of new opportunities for productivity, growth and prosperity

Ludwig Erhard's fundamental principles for the social market economy include strong innovation, competitive markets and stable money. They were important then and still are today. However, they have to be implemented in a way that is consistent with the prevailing circumstances so that the drivers of our prosperity can take full effect even in a changed environment.

That's why it is important to reassess conditions from time to time – and make updates where necessary. I'd like to discuss next.

2 Productivity and growth stimuli from digitalisation

2.1 Surging technological progress and ebbing productivity

Can you remember which mobile apps were most popular at the time of the 2006 FIFA World Cup in Germany? No? It's no wonder, seeing as today's widely successful smartphones did not even exist yet, and the major providers didn't even launch their app stores until 2008.

Smartphones and apps have long since become ubiquitous. With PCs, it took several decades after they had been launched on the market for them to become a fixture in the majority of households. The time it takes for digital innovations to gain a foothold in the market is becoming shorter and shorter. It took ChatGPT all of two months to crack the threshold of 100 million users.

A high pace of innovation actually also promises to boost productivity and thus increase prosperity. In the past, innovations such as the steam engine and electrification brought about radical changes in production. This was followed by major advances in labour productivity – and higher standards of living.

The hoped-for productivity boost from digitalisation is not borne out by the statistics, at least at first glance. On the contrary, productivity growth has been declining in the advanced economies for some time now. In the 2010s, it averaged only around 1% per year. And that was despite the proliferation of digital platforms and clouds which had enabled new production processes.

How do the wave of technological advancements and the slump in productivity fit together? Does digitalisation lead to a more productive economy? Or does it simply make our lives more convenient, while barely making the economy as a whole more efficient?

These questions are crucial factors for our future prosperity. The productivity trend also provides important indications of an economy's growth potential. Paul Krugman encapsulated this notion with the words: Productivity isn't everything, but in the long run it is almost everything[1].

This is especially true in the context of demographic change. The ageing of the population will mean that fewer people are available to the labour market. At the same time, more older people will be drawing a pension. On the one hand, the ageing population will therefore dampen economic activity and thus the basis for government revenue. On the other hand, it will cause government spending to rise more rapidly.

This is making it all the more important to become more efficient and make the best possible use of scarce resources. So let's take a closer look at whether digitalisation can deliver on its promise when it comes to productivity gains.

2.2 Digital transformation crucial for higher productivity

Our Bundesbank experts examined productivity growth between 1997 and 2018[2]. What they found is that the sectors of the economy that are the main producers of digital goods recorded far larger productivity gains than the rest of the economy.

At the aggregate level, however, the positive developments in these sectors were overshadowed by the weak performance of the other sectors. In other words, producers of digital goods were a key driver of aggregate productivity growth. Without their efficiency gains, productivity growth would have been significantly lower, even stagnating in some cases.

To be sure, digital goods are produced by a relatively small subsegment of the economy. However, they transform products and processes in other sectors as well: microprocessors enable us to control almost all electronic products, from cars to washing machines, whilst online reservation and appointment scheduling software eases the administrative burden on doctors' offices, restaurants and hair salons. Digital inputs play a major role in increasing aggregate productivity through digitalisation. This, too, has been shown by our analyses.

But the impetus provided by digitalisation diminished over the period under review up to 2018[3]. While the pandemic did subsequently boost the use of digital technologies, it is not yet possible to say precisely whether this will lead to marked and sustained efficiency gains. Surveys of firms on this topic find that they are optimistic, though.

2.3 General-purpose technologies take time

New digital applications can quickly capture the market, as was the case recently with ChatGPT. But it takes more time for new technologies to fundamentally change the economy. This is true even of ground-breaking inventions, as history shows. Let me give two examples:

James Watt had his steam engine patented in 1769. Despite this, it was not until the 1830s that steam overtook water as the dominant power source in industry. And it took another two decades for the steam engine and steamboat to prevail over sailboats and horse-drawn carriages. Steam's contribution to productivity growth did not peak until after 1850[4].

Or think of the sweeping progress made in IT in the 1970s and 1980s: the first email, the internet protocol, the first programmable pocket calculator, the first PCs that I previously mentioned. At that time, productivity growth was on the decline in many advanced economies. It was not until the mid-1990s that the effects were reflected in productivity statistics.

In other words, we should not be too quick to write off digitalisation as a driver of productivity and growth.

This is very much the case when it comes to the potential of artificial intelligence (AI). For example, Gina Gopinath, First Deputy Managing Director of the International Monetary Fund, said in a speech that AI could be as disruptive as the Industrial Revolution was in Adam Smith's time[5].

I am amazed by the wide variety of AI use cases that we now see in almost all sectors. We will wait with bated breath to see what impact they have and what ideas will be thought up in the future.

The initial findings of a study on the use of AI assistants in customer service were promising: employee productivity rose by almost 14%. Novice and low-skilled workers benefited, in particular, raising their productivity by 35%[6].

The Bundesbank also uses AI. It already has more than 30 applications – performing functions such as predicting financial stress, automating message evaluation and data cleansing. And we see even more potential, for example with regard to language models and generative AI. Our aim is to further enhance our analytical capabilities with the help of AI.

General-purpose technologies such as AI require additional innovation and investment to ensure their practical application by enterprises and public authorities[7]. It is not enough to buy software. Legal issues have to be cleared up, business processes have to be restructured, employees have to be trained. Productivity gains cannot be harvested until later, once these investments have borne fruit. Digitalisation could therefore still provide a considerable boost to growth and prosperity in the future.

3 Framework for competition and innovation

These are opportunities that are there for the taking. Digital transformation must become an engine of prosperity!

This can be achieved if digital transformation is approached with openness to new ideas and room for innovative solutions. For this to happen, two things need to come together: first, innovative entrepreneurs; and second, a state that provides them with the right framework.

For the Nobel Prize-winning economist Edmund Phelps, an innovative mindset is also a matter of values and motivations. In his view, people should seize upon problems with renewed vigour and flourish with their ideas. That, he says, is how people and their economies grow[8].

There are a number of parameters that could be adjusted to make the environment more attractive.

They include well-developed digital infrastructure and innovation-friendly regulation. Clear rules on the use of data and AI systems are important, as is improved access to data for research purposes. I welcome efforts to make the European Union a leader in trustworthy AI.

However, we need to think of ourselves not just as a community of regulators, but also one of innovators. And on this front, too, we should be aspiring to lead the way. I would now like to take a closer look at three further parameters.

3.1 Ensuring competition despite new challenges

Let's start with the core of the social market economy: dynamic competition. On the one hand, it spurs enterprises on to be more innovative and more productive. As consumers, we all benefit from this: we enjoy greater choice and lower prices. On the other hand, competition is also intended to ensure that welfare gains do not accumulate in the hands of the few.

Ludwig Erhard put it succinctly: *"Prosperity for all' and 'prosperity through competition' are inseparable; the first postulate indicates the objective, the second the way to this objective."*[9]

However, the economy does not pursue this path on its own. Governments need to set the right parameters. For competition to work properly, an appropriate regulatory framework needs to be in place. This framework needs to limit economic power and prevent the abuse of market power so that better or cheaper offers can prevail.

Intelligent competition law and strong anti-trust authorities have played a key role in making the social market economy a success story. And they are no less important today.

However, the digital economy is presenting new challenges. On the one hand, there are countless small start-ups and fierce competition, and on the other hand, there are the large platforms of bigtech firms. These differ in some respects from other markets: For example, the benefits of a particular car model hardly depend on whether ten vehicles of this model are sold or 10 million. For platforms, this is different: The more users they have, the more attractive they become.

This network effect strengthens the 'top dogs' – and makes it difficult for newcomers to gain a foothold. This is because customers generally see little benefit in switching from a large platform to a small platform. As a result, this can mean that only a few or even just one single platform operator dominates its respective market.

This strong position can be exploited: for example, by interlinking the main offering of the platform with new additional services and thus expanding the network to other markets. In this way, platforms can grow into self-contained ecosystems that users leave less and less often.

Today, no company is immune from being overtaken by technological progress and its pioneers – not even the market leaders. History provides many such examples of this happening. Kodak and BlackBerry are two that spring to mind.

Could AI perhaps be the stone in David's slingshot that today's tech Goliaths will come to fear? This is conceivable, but there are strong counterarguments[10].

AI opens up fresh possibilities for processing data and linking these data in novel ways. The incumbents have the necessary computing power, which is considerable and expensive. And they are sitting on large volumes of data. This enables them to train AI models and tailor them to their customer groups. And that gives them a head start over new providers who do not have proprietary data to draw on. AI could therefore even increase the market power of the big players.

Politicians and competition watchdogs need to be particularly vigilant here. And lawmakers have already responded: The Federal Cartel Office recently gained greater powers, partly with the aim of promoting competition in digital markets[11].

With this objective in mind, the following aspects are particularly important: As data have a major bearing on competition, data protection and competition law should be closely coordinated. When assessing mergers and acquisitions, it is important to focus to a greater degree on whether they would further enhance individual firms' data advantage[12].

Time also plays an important role: Authorities need to act faster and more proactively than before in order to effectively safeguard competition. At the same time, incentives for innovation need to be maintained. The main thing is to keep barriers to entry low, for example by enabling users to take their data from large platforms to different providers with little or no hassle.

3.2 Promote people's digital skills

New digital technologies are also changing the world of work. In the past, it was mainly physical activities such as agriculture, the manufacture of textiles or automotive production that became fully or partially automated as a result of technological progress. More recently, automation has also been used for simpler cognitive tasks that are routine, such as accounting.

AI could initiate a paradigm shift here[13], as it can also be used to carry out more complex tasks that are not routine, such as programming software or summarising and checking texts.

A study by the International Labour Organization suggests that the latest wave of Generative AI is not a job killer. However, it is likely to change many job descriptions[14], as individual tasks can now be automated in many lines of work.

Job profiles are therefore changing, and with them the requirements of employees. At the same time, AI can be a tool that eases the burden on employees and supports them in their work.

This support could also reduce barriers to entering certain lines of work, such as the need for in-depth knowledge of foreign or programming languages. This would be of great benefit, especially in times of increasing shortages of skilled workers. And employees could take on higher-grade tasks than before.

What is clear is that digitalisation is redrawing the division of labour between man and machine. This is breaking up existing structures and, in some cases, also triggering uncertainty.

Education and openness to new things are key factors in ensuring that this transition is seen primarily as an opportunity and not as a threat. Both factors will allow people to keep pace with the rapid advancements being made.

It is therefore important to be open to the new possibilities offered by technology, but also to be able to assess technology's limits and risks. These skills can be used to make better use of the opportunities arising from the transition.

It is all the more worrying that education and training opportunities in Germany are used less frequently by people aged between 25 and 64 than on average in the EU. In addition, participation rates in training measures in Germany fall significantly with advancing age[15].

Education should not be misconstrued as a phenomenon that is confined to the first third of our lives and is then over and done with. If this has ever been the case, these times are over. People never stop learning – after school, their training, or their studies. Learning needs to be a firm fixture throughout our professional lives.

This is where the state comes into play. The education system should provide people with key qualifications to ensure that they can also survive in the working world of tomorrow. These include skills for dealing with new technologies, for example. Furthermore, the government can help to mitigate particular hardships stemming from structural change through its social safety net.

3.3 Making public administration more efficient

The government sector should also use digitalisation to become more efficient and effective itself. Rigorous digitalisation of administrative processes could pay off twice.

Simpler communication and better networks connecting public authorities could reduce the burden on both administrations and enterprises. This would make it easier to submit applications. And it would cut down on the need to send information twice or in different formats. As a result, it could also help to speed up planning and approval procedures.

In addition, standardised digital interfaces to administrative bodies throughout Germany could make digitalisation easier for enterprises. The OECD pointed to these positive spillover effects in its most recent economic survey for Germany[16].

As a central bank, we are playing our part in this regard and are committed to making use of the opportunities offered by digitalisation in the field of payments. For instance, we enable real-time payments. Payment service providers can use SEPA instant payments as a basis for developing innovative and practical solutions with a pan-European reach.

Another example would be conditional payments, which are settled automatically once the conditions of an agreement are met. Not only is this more efficient, it also reduces the risk of the other counterparty failing to uphold its end of the agreement.

If machines can initiate payments to each other directly and completely automatically, other applications might also be possible. For example, conditional payments could pave the way for innovative business processes.

4 Stable currency in the digital age

4.1 Digital euro belongs to an increasingly digital world

Digitalisation is also changing how people pay. Digital payments are becoming more and more popular – be it via card, smartphone or smartwatch.

Today, around two-thirds of payments made in Germany are already cashless. Amongst younger people, this share is as high as around three-quarters. By way of comparison, six years ago, just under half of payments were made using banknotes and coins[17].

Given these circumstances, I consider the digital euro to be an important and logical step. It would be the (digital) counterpart to the (analogue) euro banknotes, which will also continue to exist in the digital age.

The digital euro would give people the ability to pay electronically as well using central bank-issued money – securely, cost effectively and with guaranteed privacy. And this would be in real time, throughout the euro area and in any everyday payment scenario, be it at the point of sale, between friends or when shopping online.

The digital euro could also result in greater competition in crossborder payments. Today, crossborder payments can often only be made using one of a handful of large, international card schemes.

First, the digital euro could provide an additional option here in and of itself. Second, it could help private European payment solutions to gain acceptance throughout the whole of Europe.

The Governing Council of the ECB has now decided to start preparatory work for a digital euro. This is something I welcome very much.

It is not a decision on whether a digital euro will actually be introduced. That is something the Governing Council will decide at a later date. A stable legal framework must be established first. The European Commission published a legislative proposal on this at the end of June. Even if everything goes smoothly, it will be another four to five years before the digital euro arrives in our wallets.

4.2 Price stability remains key

By then, the wave of inflation that we have been experiencing since the middle of 2021 will hopefully be history. For as much as we should encourage dynamic innovation in the economy, it is just as important to ensure it is firmly underpinned by stable prices.

Fortunately, the euro area inflation rate is now significantly lower than its peak a year ago. But it is still too high. In October, according to preliminary estimates, the headline rate was 2.9% and the core rate was 4.2%.

For consumers, inflation means a loss of purchasing power. This tends to hit people on lower incomes harder, putting it at odds with Ludwig Erhard's pursuit of *"prosperity for all"*. Or, as he put it himself: *"the social market economy is unthinkable without a consistent policy of price stability."*[18]

This also shows that price stability makes an important contribution to economic inclusion and thus to our social cohesion.

The Governing Council of the ECB is determined to bring euro area inflation back to its medium-term target of 2%. And we have taken action, reducing key interest rates ten times in a row by a total of 450 basis points. This has brought the benchmark rate for monetary policy to 4.0%.

In October, we left interest rates unchanged for the first time since July 2022. Given the current inflation outlook and the degree of monetary policy tightening that has already been achieved, I believe this is right.

Our tight monetary policy is yielding results, but we must not ease up too soon. On the contrary: key interest rates need to remain at a sufficiently high level for a sufficiently long duration.

It is not yet possible to say whether interest rates have already reached their peak. This will remain strictly dependent on the data.

There are various upside risks to inflation. Geopolitical tensions in the Middle East, for example, have the potential to push up energy prices and make the medium-term outlook more uncertain.

Our monetary policy stance must ensure that inflation returns to 2%. Inflation has proven persistent and has not yet been tamed.

The people of the euro area rightly expect us to do our job and maintain price stability. That is my top priority.

5 Conclusion

15 years ago, smartphones began to take over. Will we still have smartphones in 15 years' time? Perhaps smart glasses will have captured the market by then – or something completely different that we haven't even heard of yet.

What we do know, however, is that the digital transformation will continue. It offers us a wealth of new opportunities for productivity, growth and prosperity. We can take advantage of these opportunities – in the spirit of entrepreneurship, with a desire for innovation and with the courage to forge ahead.

It is up to policymakers to create the appropriate framework for this. They must implement Ludwig Erhard's fundamental principles for the social market economy in a way that is appropriate to the times.

As the President of the Deutsche Bundesbank, my focus is clear: I will do my utmost to ensure that this period of high inflation is soon behind us. Ensuring monetary stability is the best contribution monetary policy can make to prosperity for all. ■

Dr Joachim Nagel is President of the Deutsche Bundesbank

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Governance at a turning point

International governance has brough indisputable benefits, but mistrust has grown. Christine Lagarde calls for policymakers to focus on citizens' priorities whilst being courageous and accountable

Good governance is a crucial issue in these uncertain and challenging times. Two aspects of good governance are the protection of liberties and the need for integration. In my view, these aspects also apply to governance in a broader sense, particularly regarding individuals and governments. And they are especially important for supranational governance, as there is often a tension between the need for closer integration – which is likely to advance prosperity – and the wish for greater protection of liberties.

In fact, it's this tension that leads to rules-based systems and institutions emerging as countries work together voluntarily to forge supranational governance structures. And as international cooperation becomes stronger and more complex, supranational governance must also be strengthened to support it.

But in recent decades we have also seen an imbalance emerge between the authority delegated to supranational governance and its legitimacy in the eyes of citizens. That is partly because supranational governance, by promoting the expansion of economic integration, has also contributed to weakening its own legitimacy.

Today this lack of legitimacy brings us to a turning point where we must either deepen supranational governance or accept its decline. However, I am confident that we can find a way forward by meeting three essential conditions.

First, by aligning governance with, and focusing it on, people's priorities. This is what I will call the function.

Next, by using the right forms of governance to effectively respond to people's concerns. I will refer to this as the form.

And finally, by striving to fulfil that function and serve the public, with what I will describe as courageous and accountable leadership.

The development of global governance

When countries have objectives that they cannot achieve on their own, or face challenges that go beyond their individual capabilities, they are motivated to cooperate internationally. This leads them to voluntarily accept some limits to their autonomy.

Mistrust has materialised as protectionism, withdrawal, retreat and populist tendencies, eroding the foundations of supranational governance, leading to political movements seeking to regain control, and to our world fragmenting into competing blocs

It could, for example, involve reciprocal market access to promote international trade or a concerted ban on certain products or practices in order to protect the global commons.

But the more countries cooperate internationally, the greater the associated risks. Countries are exposed to unfair competition from trading partners, to spillover effects from other countries' financial markets and to non-compliance with agreements on protecting the global commons, such as treaties on the environment.

That is why supranational governance is needed to mitigate these risks and achieve fair outcomes for all involved. In this sense, governance resides in setting the 'rules of the game' in advance and then ensuring that they are fairly adhered to.

This type of governance can take different forms, ranging from creating international institutions to setting global rules and establishing standardisation bodies, or even more informal standards. But crucially, governments agree to this governance, submitting to certain constraints in return for a better response to a need they are unable to meet on their own.

However, there is an inherent correlation between the complexity of interactions among governments - particularly in terms of economic integration – and the authority that needs to be delegated to supranational governance to ensure that outcomes remain fair.

When international cooperation efforts remain fairly straightforward, the authority granted to global governance is often limited. After the Second World War, for example, the Bretton Woods agreements were signed globally, while the common market was set up in Europe.

However, these governance arrangements focused mainly on promoting a stable environment for trade in intermediate goods. This reflected the limited scope of economic integration at that time, characterised by capital controls, fixed exchange rates, and high tariff and non-tariff barriers for services.

As interactions become more complex, however, there is a need for that governance to deepen. Look at the EU, for example. To promote economic growth, the countries decided in the late 1980s to transform the common market into a single market, covering capital and services. But a single market is inherently riskier.

It exposes people to greater risks from harmful products or to unfair sales practices in jurisdictions that are less well-regulated, as well as to anti-competitive behaviours such as subsidies. And the risks of financial spillovers increase, too.

So the powers of competition authorities and financial regulators had to be strengthened. That's why in Europe we delegated authority for competition and external trade to the European Commission. Much later, and at the cost of suffering the consequences of not having it in place at the time of the financial crisis, we did the same thing for banking supervision. And we of course also launched a common currency to prevent the Single Market from being undermined by competitive devaluations.

Research has shown that the capacity of supranational governance to issue guidelines and interpret standards increased by around 50% over this period[1]. This triggered a self-fulfilling process, whereby greater economic integration led to deeper governance, which then led to greater economic integration – that is what we know as globalisation.

There have been multiple benefits: across a sample of 147 countries, a one-point increase in globalisation measures was associated with a 0.3% increase in the growth rate in those countries over five years, with lower- and middle-income countries benefiting even more[2].

Hundreds of millions of people in emerging markets have been lifted out of poverty. Europe has benefited from globalisation too. Between 2000 and 2017, jobs related to exports to the rest of the world increased by two-thirds to 36 million[3].

Tensions inherent to global governance

But at the time we were not fully aware of the tension inherent in this process. Michael Zürn, an expert on international relations understood it clearly, however, and he developed a conceptual framework in which the growing powers of global governance lead to a lack of legitimacy, followed by a descent into conflict[4].

All forms of governance need legitimacy. In other words, people need to feel that authority is being exercised wisely. But supranational governance cannot draw its legitimacy from the same sources as national authorities, such as elections or referendums. In practice, it must obtain its legitimacy through expertise and impartiality.

Expertise can confer legitimacy provided that supranational bodies are seen not only as competent, but also as uniquely able to build a framework for sustainable prosperity by virtue of having a supranational perspective that national governments lack.

Similarly, impartiality can confer legitimacy if supranational governance is seen as a way of ensuring that all parties respect the rules of the game and of adjudicating decisions fairly among all members, strong or weak – something that national governments cannot do either.

In this way, there may be long periods in which supranational governance is perceived as legitimate. After the Second World War, for example, public support for supranational governance was very strong, fuelled by the painful memories of the costs of non-cooperation.

A survey conducted in 1952 asked: *"In general, are you for or against efforts to unify Western Europe?"* The results revealed that 82% of West Germans embraced the idea, as did 78% of British respondents and 63% in France[5].

But compared with sources of democratic legitimacy, expertise and impartiality are rather fragile, as they can be weakened by major crises or shifts in power dynamics. By enabling deeper economic integration, supranational governance increases the likelihood of that weakness – as we have seen over the past 15 years.

First, we witnessed the great financial crisis, followed by the euro crisis, both of which led to volatile crossborder capital flows. These episodes undermined faith in the idea that free markets regulated by supranational bodies were essential for sustained prosperity. This mistrust was famously summed up in the declaration by UK government minister Michael Gove that people *"have had enough of experts."*

These crises caused the credit bubble that had fuelled growth in the early 2000s to burst, revealing the growing inequalities created by globalisation. Over the past 50 years the income gap between OECD countries has risen to unprecedented levels[6], exposing the limitations of resorting to debt to mask such disparities. This realisation was a further blow to the notion of legitimacy founded on expertise.

Global governance has also been a victim of its own success: the impressive increase in wealth and the growth in the international influence of emerging countries. These new powers, especially China, have legitimately demanded fair representation, becoming less inclined to submit to the governance of others.

This has led to the impartial nature of global governance being questioned on two fronts. On the one hand, emerging powers considered that global bodies overly favoured the interests of their main stakeholders and were too resistant to change.

On the other hand, the former powers considered that the newer powers had no intention of playing fair. They therefore considered the rules, institutions and standards of global governance to be inadequate.

And as the global economy expanded, climate change was accelerating behind the scenes, with various international agreements barely making a dent in global carbon emissions. This suggests that even in areas of clear common interest, supranational governance was falling short.

So supranational governance is under threat from all sides, as various groups seek to bend it to their own interests. This is a sign of our times: fragmentation of the global order, gridlock in many international fora, the emergence of populist parties and groups of states coming together to forge new agreements better suited to their interests.

Is there a way of countering this trend?

It is vital that we strive to do so, because global governance is a necessary condition for maintaining international cooperation. We will not be able to preserve its many benefits if we let all that we have achieved go into retreat.

But global governance has to address its legitimacy deficit. And since it cannot draw on democratic legitimacy, the only way of restoring it is to tackle the challenges – such as economic insecurity, climate insecurity and geopolitical tensions – to which it has partly contributed, and that have undermined its claims to expertise and impartiality.

To do this, let me describe three possible ways of responding: function, form and leadership.

Three conditions for strengthening global governance

Function

Let's start with the function of global governance. In order to thrive, global governance must offer solutions in the areas in which people feel most at risk today. If it doesn't, the logical response would be to erect new barriers and reverse international cooperation.

In Europe, we have already seen this process unfold. For example, when the global financial crisis and the euro crisis exposed vulnerabilities in the banking sector, some wanted to dial back on integration. But we instead collectively responded by making the EU responsible for banking supervision and by addressing the issues that had come to light.

Similarly, when Europe found itself facing another external shock in the form of a pandemic, we reacted by putting in place the European recovery plan and recovery fund (NextGenerationEU). These helped to avert the threat that the virus would have a deeply unequal impact on European economies – especially those most dependent on tourism – which could have caused a new rift in our Union.

In both cases, rather than reversing economic and financial integration, we strengthened our governance to make integration more secure. We made sure that the competences of the EU matched what Europeans expect of it. In doing so, we clearly bolstered the legitimacy of the EU. Today, support for the euro and for the EU stands at 79% and 65% respectively[7].

Can this be done with today's challenges? The good news is that many of the issues citizens feel most insecure about are precisely the ones where they want stronger European governance.

Around two-thirds of Europeans are convinced that the European Union represents a bastion of stability in a world in crisis. Almost nine in ten Europeans agree that tackling climate change can help improve their health and well-being, and the same proportion expresses support for the environmental objectives of the European Green Deal[8].

Citizens realise that, although some of these problems result partly from a more globalised world, the answer does not lie in turning in on ourselves, but in taking action at a level that best allows us to deal with the issues effectively. And this means deepening integration.

In the future, it will be crucial to harness this spirit of collaboration to confront new challenges in areas of common interest such as security, defence, climate or mass migration.

Form

After function comes form. The form should mould itself to the function, creating the conditions for supranational governance to deliver on the issues prioritised by citizens. This means great care should be taken when choosing an appropriate governance method.

We can build multilateral governance using either decentralised rules or centralised institutions. Although the first approach might appear to be the more attractive option owing to easy acceptance and because it keeps power at national level, it actually makes it more difficult to achieve governance objectives.

This is because rules are subject to a trade-off between credibility and flexibility. They are either rigid in order to be credible or vary according to circumstances in order to be flexible. But it is almost impossible to create a rule that successfully reconciles the two. All too often, attempts to find middle ground end up achieving neither.

Take the exchange rate mechanism as an example. It was created in the 1970s to stabilise exchange rates between European countries, initially operating according to strict rules that allowed a maximum fluctuation of 2.25% from the central rates. This system was severely tested in the 1980s, however, by increased capital flows and speculation. And it had to be made more flexible as a result.

But the system had to be relaxed to such an extent that it lost all credibility as a reference point for exchange rates, with fluctuation margins reaching 15% in 1993. This failure clearly showed the benefits of taking an institutional approach to European monetary integration, which then led to the adoption of the euro.

These benefits stemmed from the fact that institutions are not faced with that trade-off. When they have a clearly defined mandate and deliver on it, they become more credible. And when they have operational independence, they can be flexible and adapt to changing circumstances as they arise.

Let me illustrate this with the example of the ECB. Since it was created, the ECB has faced unforeseen challenges as it has carried out its mandate. But the Treaty combines our price stability mandate with discretion over the tools we can use to fulfil that mandate.

This enabled us to use unconventional policy tools during the financial crisis, the recession and the pandemic to ensure that inflation remained in line with our target. Managing these complex situations would have been difficult if we had strictly adhered to fixed rules or had been limited to using conventional tools.

However, I am not naive as to the difficulties in moving from a rules-based to an institutional approach. I recognise that creating or changing institutions requires considerable political capital. This poses a challenge in specific political circumstances or situations where progress has stalled.

But that cannot be used to justify inaction, because political courage can sometimes prevail over resignation and because there are other forms of governance, such as informal institutions, that can help us address the global challenges we are facing.

Llet me take climate finance as an example. Numerous initiatives have emerged in this area under the aegis of the G20, providing a powerful channel for collective action in the wake of the crisis. Initiatives such as the Task Force on Climate-related Financial Disclosures have been set up, creating a framework encouraging companies to disclose information on the climate change-related financial risks in their economic and financial activities.

Similarly, the Glasgow Financial Alliance for Net Zero, a global coalition of leading financial institutions, has committed to accelerating the decarbonisation of the economy. And the Network for Greening the Financial System, a coalition of central banks keen to align their actions with the pressing need to tackle climate change, circulates scenarios and analyses among all its members.

Although these are voluntary actions, their widespread adoption by thousands of organisations can create powerful incentives to address the challenges we face, bringing benefits such as speed, efficiency and adaptability.

It is crucial that such initiatives are led by players with a genuine concern for the common good, because if they are not, other entities motivated by profit gains or market share could quickly fill the void, sometimes with less clear motives.

Leadership

The third and final condition that I would like to mention is leadership. Even if we give governance the right function and implement it in the right form, this does not mean that the outcome will be the right one. Institutions need courageous and accountable leadership in order to take the right decisions.

Faced with complex and uncertain global challenges, the *"courage to act"*[9], as Ben Bernanke said, is essential. Leaders must show an unwavering determination to use all of the tools available to them, in line with their mandate, to achieve their goals.

This is a truth I have experienced throughout my entire career: as Finance Minister in France, as IMF Managing Director, and now at the helm of the ECB. Crises are insidious and unpredictable in nature, and every crisis is different. There is no textbook setting out the perfect approach to take. But time is always in short supply and risks inevitably have to be taken, while the outcome is inherently uncertain.

More recently, we faced an unprecedented crisis with the pandemic. These were extraordinary times, and the creation of the €1.85 trillion pandemic emergency purchase programme (PEPP) to shield the economy from the impact of the pandemic was an extraordinary response. But it was necessary to combat the deflation we could have seen if we had not acted.

Effective leaders must therefore give their institutions the resources they need to act, all the while being accountable for their actions. When taking decisions that break with precedent, leaders must always keep in mind that they will have to account for those decisions. This keeps them within the limits of their mandate and focused on the public interest, and it prevents them from being tempted to go too far.

We saw this again in the case of the PEPP, as we meticulously prepared for the implementation of the programme with this in mind. We strictly complied with the requirements and safeguards considered necessary by the Court of Justice of the European Union in its judgments on our past actions, thereby ensuring that our measures were fully compatible with the Treaty.

So, in striving for effective leadership, courage and accountability must go hand in hand.

Conclusion

International cooperation is a powerful force that has shaped our recent history. It has brought indisputable benefits, propelling the world towards unprecedented development, creating wealth, providing access to scientific and technical progress in an increasing number of countries and building multilateral institutions that have defined the post-war era.

But it would be a mistake to disregard the challenges that have arisen on this path. Inequalities, unresolved global crises and the loss of institutions' legitimacy have sown doubt in the minds of our fellow citizens.

This mistrust has materialised as protectionism, withdrawal, retreat and populist tendencies, eroding the foundations of supranational governance, leading to political movements seeking to regain control, and to our world fragmenting into competing blocs.

Today, the supranational governance that underpins international cooperation is at a critical turning point: either it is strengthened or it goes into decline. The choice is between a world that seeks to reconcile differences and create prosperity for all, or retreat into a world without cooperation, perhaps even one of confrontation.

I do, however, see a way forward. If supranational governance can be aligned with and focused on citizens' priorities, take the most effective form to achieve those priorities, and be led with courage while being held accountable, then it will be able to rise to the challenge it is facing.

But we should also remember that all supranational governance structures have emerged from an era shaped by the devastating consequences of a failure to cooperate and open conflicts between countries, while deep-rooted fears were taking hold.

In these decisive moments, I am inspired by the legacy of an eminent member of the Académie française and a pioneer in the fight for women's rights, Simone Veil. She chose to have her ceremonial sword engraved with the number 78651, representing her deportation to Auschwitz, alongside Europe's motto: *"United in diversity."*

Let us not forget our past. Let's work together for a fairer, more sustainable and more prosperous world. The choice before us must be guided by a shared vision of unity, cooperation and mutual respect, which our future generations deserve. ■

Christine Lagarde is President of the European Central Bank

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Challenges for monetary policy that make us think

Monetary policy is too important to rely on trial and error. Klaas Knot argues that central banks need data and research to fulfil their mandate, so that they can do the best possible job

Every year scientists, researchers, authors and economists all over the world eagerly await the awarding of the Nobel prizes. But did you know there is a satiric version of these prizes, called the Ig Nobels? Since 1991, the Ig Nobels have been awarded to honour achievements in scientific research that first make people laugh, and then make them think.

The Ig Nobels are organised by the satirical scholarly journal Annals of improbable research, the annual ceremony is held at Harvard University, there are ten prizes every year for a variety of scientific fields, presented by genuine Nobel laureates, and the prize is 10 trillion Zimbabwean dollars from a time of hyperinflation. And the honour, of course.

Yes, some of the winning research seems very trivial and totally irrelevant. For instance the project that concluded that black holes fulfil all the technical requirements for being the location of Hell… Or the discovery that fleas living on a dog can jump higher than fleas living on a cat. Or the winner of the 2005 Ig Nobel prize in Economics who invented Clocky: an alarm clock that runs away and hides, repeatedly, to ensure that people get out of bed and have a more productive day.

But there is a noble side to the Ig Nobels: history shows that seemingly trivial research sometimes leads to important breakthroughs. A good example is the experiment that won André Geim and Michael Berry an Ig Nobel in 2000: how to levitate a frog with magnets. It seemed weird and trivial, but the experiment showed that the magnetism of water is strong enough to counter gravity.

That insight became part of the inspiration for China's lunar gravity research. And of course, Geim won a real Nobel prize – for Physics – in 2010. We all know that every invention, every discovery, every research project has to start somewhere. Just like every change has to start somewhere. Mostly with events.

And recent years have been truly eventful. The euro area economy was rocked by several large shocks, – the Global Financial Crisis (GFC), the European sovereign debt crisis and a pandemic that kept the economy in lockdown. And more recently, Russia's unjustifiable war in Ukraine that caused energy prices to spike and inflation to soar.

Shocks that have challenged central banks all over the world in their quest for price stability. Shocks that have challenged us to find new instruments, to expand our toolkit to counter the deflationary dynamics and enable governments to engage in fiscal stimulus. A challenge that we met by deploying several unconventional monetary instruments, including forward guidance, asset purchases and longer-term refinancing operations.

We need data and research to fulfil our mandate, so that we can do the best possible job at what we must do best

Did they work? Yes, they certainly left their mark. Forward guidance and asset purchases lowered medium to long-term interest rates, making credit more affordable and boosting the economy. TLTROs significantly reduced banks' funding cost, and stimulated banks to pass on these favourable funding costs to businesses and households.

These measures are now an integral part of the central bank's toolbox; they add policy space when rates are at the lower bound, even though they are not unbounded themselves.

Yet, as we have found out, they also come with a challenge: the combination of instruments and the sequencing we ourselves imposed have created a very high degree of persistence in our monetary policy. In other words: it reduced our ability to 'turn the ship' when inflation flared up. Why was that?

The moment policy makers could effectively raise rates was delayed because we communicated that we would first stop with net asset purchases before raising rates. And stopping asset purchases takes time. They were a novel, untested instrument. And as Brainard argued: uncertainty regarding an instrument calls for smaller steps.

So, to 'turn the ship', we started by gradually reducing the net asset purchases to zero under the PEPP and APP. After that, in July 2022, we were 'free' to raise rates for the first time. What followed was a rise of policy rates at an unprecedented pace: between July 2022 to September 2023, policy rates increased by a total of 450 basis points from minus 0.5 percent to 4 percent today.

Restrictive policies will likely remain needed for some time to come to get inflation back down to target. Personally, and conditional on incoming data confirming the latest projections from September, I see the current level of our policy rates as a good 'cruising altitude' where they can remain for some time.

And that brings me to another challenge: the right calibration of our monetary policy to strike a balance between doing too much and doing too little. Why is that a challenge?

First, you are all aware of the long and variable 'transmission lag' of monetary policy between one and two years. In other words: the effects of the policy tightening on the real economy – think about investment, GDP, unemployment – will only be felt in about one year's time.

Hence, we should be a little patient and not raise rates too much to prevent choking off the economy. Second, even though inflation numbers have started to decrease, the risk still remains that high inflation may become entrenched if second round effects persist or inflation expectations de-anchor.

Therefore, we need the incoming data to continue to confirm our projections – which have not been the best in an environment of major shocks – if we are to have confidence in them.

There is one other challenge I want to mention: the size of the central bank balance sheets. More than a decade of implementing 'unconventional monetary policy' tools has increased central banks' footprint in financial markets in an unprecedented fashion. As we have stopped reinvesting the principal payments from maturing securities under the APP, the Eurosystem's balance sheet is now shrinking at a measurable pace.

Under both the APP and PEPP, we bought billions in sovereign bonds with an average maturity of about 7 years. Some of these bonds are now maturing: that means the 'principal' of our investments is flowing back to us. Through this process, excess liquidity is drained form the system. However, we currently still reinvest the principal payments for the PEPP, leaving the overall bond portfolio unchanged.

To date, this 'quantitative tightening' has been smooth and well-absorbed by financial markets. This is similar to what we see from our international peers, who – in fact – are reducing their balance sheet at a relatively faster pace.

That brings me to the challenge. While, clearly, the current balance sheet has to shrink, our future balance sheet size may need to be larger than it was before the Global Financial crisis. The reason is that structural changes in financial markets, including a higher demand for liquidity, will call for a larger central bank reserves in the future. In my view, refinancing operations represent the most efficient tool to provide such a level of reserves down the road.

Monetary policy is too important, too crucial for our economy and our general wellbeing, to rely on trial and error. The ECB, the central banks, would prefer to avoid the honour of receiving an Ig Nobel prize.

Yes, in the history of the Ig Nobel prizes some were also awarded as criticism wrapped up in a blanket of satire. For instance, in 2009, the Ig Nobel for Economics was awarded to the directors, executives, and auditors of four Icelandic banks for demonstrating that tiny banks can rapidly mushroom into huge banks, and vice versa, and for demonstrating that similar things can happen to an entire national economy.

So, to avoid that 'honour', we need data and research to fulfil our mandate, so that we can do the best possible job at what we must do best. Because in monetary policy, we cannot live by the slogan of the Ig Nobel prizes, also the closing remark of the annual ceremony: *"If you didn't win a prize – and especially if you did – better luck next year!"*

So, make us think! ■

Klaas Knot is the President of the Netherlands Bank

This article is based on a speech delivered at the 26th Annual DNB Research Conference 'Challenges for monetary policy that make us think', Amsterdam, 2 November 2023.

Finding solutions to global challenges

The shifting regulatory, political, and economic landscape has brought challenges to companies and regulators. Elise Donovan considers the role of IFCs in an uncertain world

As 2023 comes to a close, it is clear that the 'permacrisis' hailed by political and economic commentators earlier this year is still very much at play. An evolution of the 'polycrisis' – a term widely used last year to describe the simultaneous occurrence of several significant crisis' in recent times – the 'permacrisis' is the acknowledgement that this period of global instability is proving to be more enduring than we had hoped.

Indeed, with increased geopolitical tensions, regional conflicts and economic fragmentation, the global economy in 2023 has been sailing in choppy waters, with high interest rates and sluggish growth being felt all the way from trading floors down to consumers.

We have also seen powerful pan-global trends shift our landscape. In the technology space, the stratospheric rise of AI sparked new possibilities for businesses and new concerns for regulators, while the crypto and digital assets sector struggled to overcome controversies. Elsewhere, record-breaking temperatures supercharged the efforts to fund the fight against climate change.

This shifting regulatory, political, and economic landscape brought challenges to companies and regulators. Looking forward, the role of International Finance Centres (IFCs) must be to find crossborder solutions that enable companies to overcome these challenges.

The British Virgin Islands (BVI) is well-versed in navigating complex global issues. For over 40 years, the international business and finance centre has remained a neutral centre point for crossborder transactions, investment and trade, bringing together world-leading practitioners and regulators to find solutions to challenges and identify new opportunities.

From climate initiatives to digital finance, the BVI is responding to these global changes in a forward-looking and innovative manner, navigating the fast-shifting landscape to remain steadfast in its commitment to facilitating global growth.

Responding to fragmentation

Last month, European Central Bank President Christine Lagarde warned the audience at the European Banking Conference that there was increasing signs that the global economy is *"fragmenting into competing blocs."*

IFCs make a significant contribution to the global economy and will be vital in facilitating crossborder business and investment in this period of challenged economic integration

This issue of economic fragmentation has been a much-discussed topic this year, as geopolitical tensions, sanctions, and weakened supply chains have resulted in trends such as 'friend-shoring', as nations increasingly diversify their supply chains and reduce dependency on certain nations.

How geopolitical shifts are changing the shape of globalisation was a topic explored earlier this year in a report commissioned by BVI Finance: *Beyond Globalisation: The British Virgin Islands' Contribution to Global Prosperity in an Uncertain World*. Authored by Pragmatic Advisory, the report laid out the value of the BVI to the world's economy and the role it plays in bringing clarity during a period of caution.

Central to the report was the recognition that the increasing economic integration we became accustomed to in recent decades has stalled, and explores three potential scenarios that will play out: weaker internationalism where globalisation continues but at a much slower pace and with more political obstacles to navigate; bloc economy, which will see economic and regulatory integration between countries based on diverging geopolitical alliances; and economic nationalism where countries reverse globalisation and become more protectionist, which in turn creates political obstacles.

We can see examples of all three occurring within our global community. A notable example of the formation of a bloc economy was seen at the BRICs Summit in August, which saw the five-nation BRICs group of emerging economies expand their membership and, for the first time, present themselves as a viable alternative to the G7 which can represent the real priorities of the developing world.

However, there has also been positive signs that this bloc economy will not be as divided as some commentators presumed, with positive meetings between United States President Joseph Biden and Chinese Premier Xi Jinping just last month, confirming the nations shared understanding of the benefits of continued globalisation.

Irrespective of the scenario, what is certain is that there will remain a need for IFCs, such as the BVI, to support crossborder trade and investment.

Analysis in the *Beyond Globalisation* report found that BVI business companies hold US$1.4 trillion of assets, equivalent to 1.5 per cent of global GDP. These holdings facilitate crossborder investment through physical, corporate, and financial assets, enabling real investment in essential infrastructure projects and industries.

This impact is felt across the world; investment mediated by the BVI supports around 2.3 million jobs worldwide, with China (including Hong Kong) accounting for one million and around 400,000 in Europe and North America. Analysis also revealed that the economic activity and incomes generated by these 2.3 million jobs contributed to over US$13.8 billion annually to government treasuries worldwide.

The global impact of BVI's financial centre is a result of a wide breadth of services offered. From incorporation, through to mergers and acquisitions, public listings, privatisation, digitalisation, restructuring, litigation, insolvency, and liquidation, the centre can cater to the needs of companies through every step of their business and investment journey.

The global reach and appeal of the BVI can also be attributed to its track record on financial regulation. As geopolitical events alter the regulatory environment, the BVI remains committed to achieving, the highest standards in tax information exchange, transparency, and anti-money laundering (AML) measures, working closely with international governments and bodies in a co-ordinated response to challenges. Through this, the BVI is ensuring that companies have access to the global economy, even in times of economic fragmentation and financial shifts.

Financing the fight against climate change

The threat of climate change is undoubtedly amongst the biggest challenges facing our global economies and societies. So much so, that the search for climate solutions is inspiring global collaboration even in times of geopolitical fragmentation.

This is evident in the recent COP28 Conference in Dubai whereby representatives from almost 200 countries came together to discuss how international action can be harnessed to tackle climate change and environmental degradation.

As an island-nation, this is an issue that hits close to home for the BVI. Our Caribbean region is of particular risk from tidal patterns, heavy rainfall, and extreme weather. Furthermore, extreme weather events threaten the local tourism industry, and the jobs which rely on it. The region has a unique vulnerability to climate change that inspires a commitment from the IFCs in the region to lead on mitigating these risks and driving real global change.

One of the ways this is being progressed is through the Bridgetown Initiative. Led by Barbados Prime Minister Mia Mottley, the initiative calls for the reform of existing institutions to finance climate resilience and the Sustainable Development Goals (SDGs).

Focusing on debt restructuring and climate financing, the initiative is steeped in the principle that a more equitable and fit-for-purpose global finance system must be created to allow developing nations to invest in their future and protect their nations from the effects of climate change, of which they are particularly vulnerable to.

It is also a recognition that the richer, developed nations who are responsible for the majority of carbon emissions and environmental degradation must also be responsible for financing the solutions.

The popularity of 'green finance' and 'blue finance' – a new financing structure to support projects focused on the sustainable use of ocean resources – is growing, and IFCs are at the forefront of this shift. For example, the BVI has established one of the first Climate Change Trust Funds in the Caribbean, allowing it to receive funding for climate-related projects and to explore how it can maximise the impact of funding.

The Caribbean region is emerging as a leader in the fight against climate change and, by harnessing its decades of knowledge and expertise in finance and investment, the BVI is in a unique position to act collaboratively with its neighbours and drive effective and innovative change on a global level.

Digital finance in a post-FTX world

Another shift seen in the financial sector over the last 12 months is how to respond to, and move forward from, events in the digital assets and crypto sector.

The collapse of FTX in November 2022, the subsequent trial and conviction of former Chief Executive Sam Bankman-Fried for fraud and conspiracy, and last month's guilty plea to criminal charges of cryptocurrency exchange Binance founder Changpeng Zhao were some of the most discussed business stories of the last 12 months. For many, the events served as a cautionary tale for under-regulated financial activity.

Digital assets and cryptocurrencies may have had a challenging year, but they are still considered a hugely promising step for the financial services industry. In fact, the total addressable market of digital assets is expected to be worth between US$8 trillion and US$13 trillion by 2030, and with major financial institutions such as BlackRock filing new applications with the US Securities and Exchange Commission for a crypto exchange-traded fund (ETF) in the last month, there are signals that the confidence in the sector is rebuilding. The FTX collapse, rather than being a death knell for the industry, is proving to be a stimulus for much-needed deeper regulation.

As we look to 2024, the BVI is exploring just that. Already a global leader in digital assets, with a world-leading regulatory environment and innovative ecosystem, the jurisdiction is committed to progressing the sector and embedding regulation into financial processes.

For example, since the Virtual Assets Services Providers (VASP) legislation went into effect in February this year, the BVI Financial Services Commission, the regulator, has received more than 60 applications from entities and businesses in the digital assets space eager to be established and regulated in the jurisdiction.

Creating a new legal framework for the registration and supervision of individuals engaged in virtual asset services, the new legislation has further enhanced the reputation of the BVI as a trustworthy home for digital assets.

Also, according to a report from PwC, the BVI overtook the United States as the second most popular location for crypto hedge funds to domicile last year. With the steady increase in applications in 2023, we expect its share of the global market to continue to rise.

Conclusions

In this uncertain climate, it can be useful to heed the sentiment of Heraclitus and remember that there is nothing permanent except change. It is how we respond to this global change that will determine future success and growth. In 2024, the BVI will continue to remain resilient and agile, responding rapidly to challenges and embracing the new opportunities that innovation and technology provide.

IFCs, such as the BVI, make a significant contribution to the global economy and, as outlined in our report: *Beyond Globalisation: The British Virgin Islands' Contribution to Global Prosperity in an Uncertain World*, will be vital in facilitating crossborder business and investment in this period of challenged economic integration.

This will be critical as the global community seeks to push forward on key issues such as regulation and climate change and the BVI will remain at the forefront of driving collaboration in these key areas. ■

Elise Donovan is the CEO of BVI Finance

Improving the contestability of e-commerce in two jurisdictions

Improving competition in digital markets is a priority for the governments in both the United States and Europe. Fiona Scott Morton considers how Amazon's alleged conduct controls prices on rival marketplaces

Executive summary

Antitrust cases against Amazon in the United States reveal that the e-commerce giant has developed algorithms that mimic price protection contracts called MFNs (from most-favoured nations, a term borrowed from international trade), despite the company saying publicly that it ended the contracts themselves some years ago.

MFNs are well known in antitrust enforcement for their anticompetitive effects: higher prices and less entry. The complaints describe how Amazon demotes merchants from its coveted Buy Box if Amazon finds a lower price on a rival e-commerce site, creating an incentive for merchants to set higher prices on rival sites.

The European Union, the Digital Markets Act bans such contracts. This would be a good remedy for the US as well as it would restore competition with minimal harmful side effects. The US complaints describe a different scheme that penalises brands if Amazon must reduce its retail prices to match a rival retailer. The EU may have to pursue this conduct under Article 102 of the Treaty on the Functioning of the European Union that prohibits abuse of dominance.

Both the US Federal Trade Commission (FTC) and the European Commission have found that Amazon's policy of tying its own logistics service to Amazon Prime status raises entry barriers to rivals. The European Union remedy redesigns the Buy Box and allows rival logistics services access to consumers.

This remedy provides a useful benchmark to consider in designing remedies for the FTC and for California, which is also pursuing an antitrust case against Amazon. In general, both the US and the EU gain from the enforcement actions of the other.

1 Introduction

Improving competition in digital markets is a priority for the governments in both the United States and Europe. In the European Union, this can be seen in the Digital Services Act, the Data Act, and most importantly, the Digital Markets Act. In the US, the desire for more competition can be seen in the Biden Administration's appointments of leaders of the antitrust agencies who have brought several antitrust cases against digital platforms.

Amazon is one of the big-tech companies that receives regular criticism from politicians and the media. In the US, several antitrust cases against Amazon are currently in litigation, including those brought by the state of California (filed September 2022; Superior Court of the State of California, 2022) and the Federal Trade Commission and 17 states (filed September 2023; FTC, 2023).

These cases may have a bearing on enforcement against Amazon in Europe, where regulators have also been busy: an antitrust case brought against Amazon by the European Commission was resolved with commitments in December 2022 and commitments were also accepted in 2023 by the United Kingdom Competition and Markets Authority[1].

In addition, the European Commission has designated Amazon's e-commerce business as a core platform service[2], meaning it will have to comply with the EU Digital Markets Act (Regulation (EU) 2022/1925) beginning in March 2024.

The conduct described in the US complaints against Amazon harms competition between online stores and among the merchants who sell via them. The first harm is the suppression of price competition between e-commerce platforms.

The second harm occurs when Amazon's market power reduces competition in the logistics that merchants use to support their e-commerce sales. If they are available, independent logistics firms lower the cost of entry of rival e-commerce platforms and thereby increase competition. The evidence in this context unearthed in the US investigations is highly relevant to successful enforcement in the EU.

Meanwhile, Amazon's commitments to the European Commission, and DMA provisions that apply to Amazon's core platform services, should increase contestability and fairness in e-commerce markets. As this Policy Brief details, the combination of these policies can be effective in giving merchants more choices and lowering barriers to entry to Amazon's competitors.

The US lags behind Europe in competition enforcement of e-commerce and US authorities can learn from European solutions

The US lags behind Europe in competition enforcement of e-commerce, and so US authorities can learn from such European solutions. Likewise EU regulators can learn from US antitrust enforcement. Regulators on both sides of the Atlantic can build on the enforcement activities of each other. More robust solutions will create more contestability and fairness for consumers and businesses.

2 Stifling price competition

2.1 How Amazon's alleged conduct controls prices on rival marketplaces

The California and FTC complaints both accuse Amazon of operating what are effectively 'platform MFNs' (most-favoured nation commitments, a term borrowed from international trade) for third-party marketplace sellers and the brand representatives.

Platform MFNs are requirements that third-party sellers on a platform, in this case a marketplace, set prices for the same good on competing marketplaces that are at least as high as those found on the platform requiring the MFN.

The MFN thus controls prices on the seller's own website and on competing marketplaces. These contracts end price competition between marketplaces because all prices for the good are the same. Furthermore, a merchant selling on a marketplace with lower fees cannot pass those lower fees through to consumers in the form of lower prices, without – under the terms of the MFN – also lowering the price of the good on the primary platform, in this case Amazon, which has higher fees.

Therefore, a lower-priced entrant platform has no way to attract customers with lower prices if it wants to sell the products of merchants covered by the Amazon platform MFN. For this reason, platform MFNs also limit competition between marketplaces (Baker and Scott Morton, 2018).

A large economics literature[3] confirms these intuitions: sellers will choose to set high prices on all competing sites to match those on a large platform with an MFN. This harms competition in goods. Second, the competing marketplace now has no reason to lower its fees, since it cannot gain more business that way. This harms competition between the marketplaces themselves and deters entry of more efficient marketplaces.

This economic logic is well-known among enforcers. MFN contracts have therefore been a frequent target of enforcement efforts in many industries. In 2013 Germany and the UK opened investigations into Amazon's MFN contracts, which caused the company to abandon them in Europe (Bundeskartellamt, 2013).

In 2019, at the instigation of Senator Richard Blumenthal (not the FTC), Amazon voluntarily ended its MFN contracts in the United States. Observers might well think, therefore, that the anticompetitive effects of these contracts are gone.

2.2 *De-jure* versus *de-facto* MFNs

However, the US lawsuits set out the steps Amazon took to purposefully recreate the effects of the MFN contracts after it ended them formally. Both the California and FTC complaints describe the replacement tactics Amazon has used to control off-platform prices through the Amazon Standards for Brands policy (ASB), the Marketplace Fair Pricing Policy, the Seller Code of Conduct and Select Competitor – Featured Offer Disqualification (SC-FOD) (Superior Court of the State of California, 2022 (hereafter 'Cal Comp') paragraph 125; FTC, 2023 (hereafter FTC), paragraphs 276, 297).

If a seller's prices are lower on a rival site (FTC ¶ 277), Amazon downgrades the listing of the good, and removes it from eligibility for the 'Buy Box' or 'featured offer' (FTC ¶ 84) (the Buy Box is the familiar box on the top right of the Amazon product page; it shows one seller that Amazon has chosen and, by virtue of the design of the box, is made more prominent than any other seller).

Given Amazon's huge consumer base, and the fact that 98 percent of purchases occur through users choosing the seller in the Buy Box (FTC ¶ 85), an excluded merchant is likely to lose significant sales with this downgrade.

Furthermore, the California and FTC complaints are detailed in their evidence that Amazon's managers were aware of the purpose of the programmes. For example, SC-FOD was designed to enforce the contractual MFN's *"expectations and policies,"* which *"had not changed"* (FTC ¶ 276). The FTC complaint states:

"At one time, Amazon designated only the very largest online stores as 'Select Competitors' for purposes of SC-FOD. After dropping the price parity clause from its Business Solutions Agreement, Amazon exponentially expanded its classification of 'Select Competitors.'[…] According to a senior Amazon executive, Amazon expanded the designation of Select Competitors] to make "the punitive aspect" of SC-FOD "more effective"" (FTC ¶ 280).

Both complaints explain that Amazon's Standards for Brands, or ASB programme, contractually requires certain third-party sellers to *"ensure that their products' prices on other online stores are as high or higher than their prices on Amazon at least 95% of the time"* and imposes additional restrictions on sellers' inventory and Amazon Prime membership[4] so they effectively cannot sell anywhere but on Amazon (FTC ¶¶ 291-2; Cal Comp ¶¶ 145-8).

As with the SC-FOD programme, Amazon was clear about why it penalised ASB sellers who did not meet the programme's requirements: *"Amazon told those punished ASB sellers that they were being sanctioned because 'customers considering your products could have easily found your products cheaper at another major retailer, and may have chosen to shop elsewhere'"* (FTC ¶ 297).

These statements should raise concerns in all jurisdictions that Amazon's contractual MFNs were only a small part of the competition problem.

2.3 How Amazon's alleged conduct controls prices on rival retail sites

The California complaint describes behaviour that also creates an effective MFN in Amazon's retail operation. Amazon's retail business differs from the marketplace business because Amazon itself buys goods at wholesale prices, owns those goods, and then sells them via its own website at prices it chooses. A marketplace, by contrast, hosts independent merchants that control what they sell and how it is delivered, and set their own prices.

As described in the complaint, brands that sell wholesale to Amazon fare even worse than re-sellers because of another MFN-like scheme. Amazon requires brands to agree to a contract called a Minimum Margin Agreement (Cal Comp ¶¶175-204). Amazon uses an algorithm to reduce its retail prices if it finds a lower price for the same product on a rival website, such as Walmart.com.

But the brand Amazon buys from wholesale remains responsible for maintaining Amazon's profit margin. The brand must therefore make up the difference between the price initially set by Amazon, and the lower price that Amazon has matched. This is true even though the brand itself does not choose the retail price in either setting; the online stores have that responsibility.

The result of this scheme is that whenever Walmart.com, for example, has a sale on a certain product or brand, Amazon matches the sale price, and its profit margin may fall below its target level. If so, Amazon requires the brand to compensate it for the new low price.

Naturally, this penalty causes the brand to want to sell to Walmart.com at a high enough wholesale price so that Amazon's retail price will always be lower than Walmart's. In general, a brand does not want to offer discounts to Walmart because that might encourage a sale that would cause the brand to suffer if Walmart.com decides to lower prices for any reason, eg. to attract consumers to its store.

The brand might even withdraw from Walmart.com altogether if such sales cause it to owe large sums to Amazon. Internal Amazon documents acknowledge the *"punitive aspect"* of this scheme (FTC ¶ 282). The anticompetitive impact of this programme is the same as an MFN in its ability to raise prices at rival stores.

2.4 What remedies would restore vigorous price competition?

Assuming that the allegations about MFNs described in the preceding subsections are proved, agencies or courts will need to impose remedies to restore the lost competition. The simplest remedy is to ban MFNs entirely: wide MFNs (which cover prices in rival e-commerce stores), narrow MFNs (which cover prices on the website of the brand itself) and any conduct that creates the same incentives as an MFN. The EU has already banned MFNs in Article 5(3) of the Digital Markets Act.

To explain the impact of an MFN ban on the strategies of all parties, it is useful to consider two questions. First, for the MFN to be triggered, a rival must offer a lower price.

Why is a rival e-commerce store setting a retail price lower than Amazon's price?

1. The rival store has lower costs of operation than Amazon;

2. The rival platform bought the good from its manufacturer for a lower price; or

3. The rival platform has a different strategy or weaker market position than Amazon and lower prices are the best way to attract consumers.

These answers are standard manifestations of competition that benefits consumers. If prices are lower on a rival e-commerce site for any of these reasons, consumers gain, and the law should not permit Amazon to implement contracts or policies that suppress that competition.

If Amazon wishes to retain customers after this MFN is banned, it can bring down its fees or raise its value. Likewise, Amazon can bargain for a lower price from the manufacturer, or possibly cut its costs by making its own-label version of the product.

The second question when assessing the potential impact of an MFN ban has to do with re-sellers:

Why is a third-party reseller setting a price on Amazon that is higher than on other platforms?

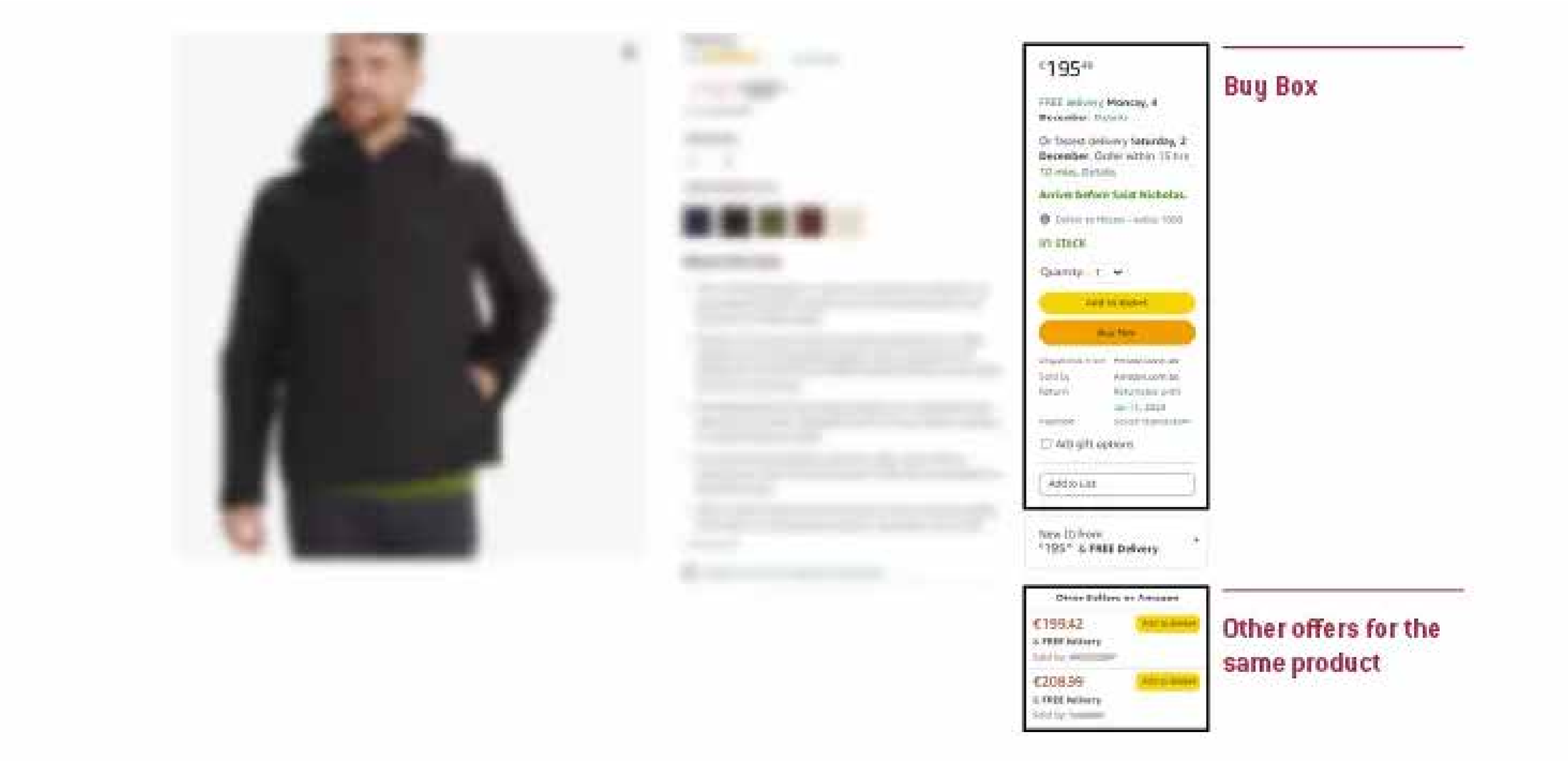
4. It thinks Amazon shoppers are inattentive and not price-responsive and is exploiting them with a high price; or

5. Its costs are lower on rival platforms because those platforms' fees are lower.

A reseller is not violating competition laws if it chooses to set different prices in different distribution channels for reasons such as differences in cost or demand. But, of course, this conduct hurts Amazon shoppers and Amazon's brand. A remedy that restores the lost competition in fees (5) should ideally allow Amazon to protect its own consumers from any possible exploitation in (4).

Handily, Amazon has already built the tool needed to combat the possible exploitation in (4): the Buy Box. When third-party sellers list on Amazon, the firm's algorithm evaluates their offers and puts the one that meets its criteria into the Buy Box (see the annex for an illustration). Consumers with ranking bias and default bias tend to purchase

Annex: The Buy Box



the option in the Buy Box, meaning that the winning seller typically obtains 98 percent of sales (according to the FTC complaint).

If Amazon's algorithm weights high prices negatively, a third-party seller engaging in the exploitation in (4) would be expected to sell very little because it is not in the Buy Box and, if any diligent consumers search the listing, they will find an exploitative price – which will limit sales.

The design of the Buy Box means it can be used legitimately by Amazon to defend consumers on Amazon Marketplace from exploitation by high-priced sellers. Thus, it duplicates the pro-competitive impact of the MFN without the anticompetitive element and can be used to replace it when the MFN is banned. Because the Buy Box is only for prices on the Amazon platform, it does not duplicate the restraint on horizontal competition that characterises an MFN.

Now consider the case of a product sold by only one reseller on Amazon, and which that re-seller is pricing in an exploitative manner. The Buy Box cannot fix this problem. However, Amazon has the incentive and ability to recruit another reseller to its platform. Entry will be attractive for the new seller because undercutting the incumbent's exploitative price still allows for a healthy margin.

Thus, both Amazon and rival third-party sellers have an incentive to defeat the conduct described in (4), while Amazon has the information to identify the opportunity and the ability to facilitate entry of lower-priced rivals.

If there is only one original seller of the product, such as the brand itself, there is also nothing for the Buy Box to leverage. But Amazon has procompetitive tools to combat this strategy. For example, the brand's listing on the search-results page could truthfully explain to the customer what the brand's regular list price is and could recommend substitute products on Amazon that are not overpriced – all without removing the ability to buy the brand in the normal way.

An Amazon premium here could occur because the cost of selling is higher on Amazon. If the brand finds the costs of selling on Amazon to be higher than on other platforms, either because of advertising that is effectively required, or high fees charged by the platform, it may build those costs into the price it charges.

This is a normal feature of competition. Customers will evaluate the benefits of the Amazon platform (OneClick purchasing, fast delivery, saved addresses) and compare them to the price difference. If the latter outweighs the former, the customer will leave Amazon to buy the brand for a lower price elsewhere.

A reasonable concern is that a ban on MFNs will lead to inefficient free-riding (showrooming). This occurs when sellers use the dominant platform to display their product and attract buyers, but then encourage those buyers to purchase off the platform, thereby avoiding the platform's fees. This can reduce below the optimal level the incentive to build and invest in a platform.

However, a consumer who sees a product on Amazon and searches for the seller's page to buy it at a lower price is giving up all the services of Amazon: saved payment, saved addresses and quick delivery times. Amazon itself touts the superiority of its services and the stickiness it creates with time- and attention-strapped consumers.

The government complaints contain quotations from managers at the company that acknowledge high switching costs for consumers (FTC ¶ 182). For these reasons, free-riding may be minimal.

3 Stifling entry of competitors

3.1 The link between shopping and fulfilment

Additional allegedly illegal conduct described by the FTC relates to the tying of fulfilment by Amazon (FBA) membership to participation in Prime (and therefore sales, as noted above). Formerly, merchants could use their own fulfilment and delivery services within the Prime programme (called SFP, or seller-fulfilled Prime) (FTC ¶ 400).

The merchants that participated in SFP could have their listings qualify for Prime, and therefore the Buy Box, but also could send out those items using a logistics provider of their choice, rather than using Amazon.

This is important because such a merchant can then also fulfil sales from rival e-commerce platforms with the same logistics infrastructure they use for Amazon sales. This promotes the entry of rival e-commerce marketplaces because, by virtue of hosting the same sellers on their platforms, their delivery quality and cost is similar to Amazon's.

When Amazon banned SFP or made it difficult[5], most Amazon merchants turned to FBA, which does not have this beneficial effect on rival marketplaces.

The FTC's complaint emphasises this impact on competition, namely that the decline in availability of independent fulfilment and logistics services at scale reduced entry and growth of rival e-commerce stores. When SFP reduced multihoming across e-commerce marketplaces, that reduced competition between marketplaces (FTC ¶ 405).

Amazon executives appreciated the value of the lessened competition, according to the FTC complaint. An Amazon executive stated that the mere prospect of increased competition for fulfilment services *"keeps me up at night"* (FTC ¶ 391).

Another executive *"explained to his colleagues that he had an 'oh crap' moment when he realized that this was 'fundamentally weakening [Amazon's] competitive advantage in the US as sellers are now incented [sic] to run their own warehouses and enable other marketplaces with inventory that in FBA would only be available to our customers"* (FTC ¶ 31).

3.2 Fairness concerns

The FTC complaint tracks the concerns expressed by the European Commission about the way in which the design of the Buy Box effectively required sellers to participate in Prime and therefore to use FBA. However, that similarity masks an interesting element to the European case. The Italian competition authority started its investigation[6] because local rival logistics operators wanted to be included by Amazon on an equal basis to Amazon's logistics.

The conflict with Amazon arose because of the possibility that rival logistics providers have slower delivery times. The open question is whether Amazon treats rival logistics providers as consumer prefer (by performance) or in a way that favours Amazon's logistics services.

The European Commission case also demonstrates a view that the treatment of merchants was unfair in that Amazon's own products were ranked higher than equivalent rivals and the Buy Box incentives were extremely sharp.

In other words, if a merchant did not get into the Buy Box (which required buying FBA), their sales dropped almost to zero, while their Amazon ranking may only have been very slightly lower than the winner's rank.

Such a strong response becomes unfair to sellers if there is any bias or imprecision in the ranking. This concern for fairness is conceptually distinct from the competition, but is a feature of European antitrust enforcement.

However, the fairness element is not central to the argument of illegality in either case. Since a merchant will not use a logistics service that causes exclusion from the Buy Box, the Amazon policy linking FBA, Prime and the Buy Box has an exclusionary impact on rival logistics providers.

These policies prevent merchants from multihoming (offering their goods on multiple marketplaces), which in turn creates an unnecessary barrier to entry of rival marketplaces. The link to competition is fundamental.

And importantly, while the quality of current rivals may be poor, that does not invalidate this theory of harm. Under different rules logistics providers would have different incentives to invest. If a rival could serve merchants within the Amazon Prime programme, it would have the incentive to invest to improve its quality so that merchants would select it, and this would generate competition in logistics.

If the Amazon algorithm is, in fact, downgrading products that consumers prefer, this lowers the quality of the service and should cause consumers to switch to a rival store. If rival stores can more easily enter because rival logistics are available, then competition between merchants will improve.

If the Amazon algorithm only ranks products according to attributes valued by consumers – with no bias or distortion – competition among those merchants will intensify and consumers will benefit.

3.3 Remedies to protect competition in fulfilment

A simple remedy to apply in the United States would be the restoration of the Amazon SFP pro-gramme, which was shown to be technically feasible and popular with merchants (see section 4.1). Merchants would always be free to choose Amazon's fulfilment service. It is likely Amazon would want to establish quality standards for rival delivery services to qualify for Prime, in order to maintain the reputation of the Amazon brand for quality and reliability.

Information reported in both the EU and US has shown that Amazon previously tracked such performance. Maintaining quality standards to ensure consumers have a good user experience is a perfectly procompetitive policy, provided the standards are transparent and are applied fairly. If so, a delivery service with a proven quality can be used by merchants in SFP, and their listings will be treated equivalently to those delivered by Amazon.

The European Commission has taken two approaches to a remedy. The prohibition decision was resolved with commitments that Amazon implemented in 2022 (Amazon, 2022):

To address the Buy Box concern, Amazon proposed to commit to:

- *treat all sellers equally when ranking the offers for the purposes of the selection of the Buy Box winner;*

- *display a second competing offer to the Buy Box winner if there is a second offer from a different seller that is sufficiently differentiated from the first one on price and/or delivery. Both offers will display the same descriptive information and provide the same purchasing experience.*

To address the Prime concerns Amazon proposed to commit to:

- *set non-discriminatory conditions and criteria for the qualification of marketplace sellers and offers to Prime;*

- *allow Prime sellers to freely choose any carrier for their logistics and delivery services and negotiate terms directly with the carrier of their choice;*

- *not use any information obtained through Prime about the terms and performance of third-party carriers, for its own logistics services."*

Notice that the Buy Box rule in these commitments will be a less-effective replacement for an explicit MFN – as argued above – because it cannot steer users to less-expensive option as forcefully. The results of this combination of commitment and DMA ban will need to be studied to evaluate if the former weakens the latter.

4 The role of the DMA in promoting competition in ecommerce

4.1 DMA rules

One might think that Europe is ahead of the US in banning MFNs because Amazon gave up its MFN contracts in Europe in 2013 (Bundeskartellamt, 2013). But the US litigation evidence raises the possibility that the company effectively replicated the prohibition on sellers discounting off the Amazon platform by other means – and this could have been true in Europe as well.

It is therefore unclear whether the outcomes (prices and entry) Europe has experienced in the last ten years reflect competition effectively free of MFNs or not.

The European Digital Markets Act (Article 5(3)) again bans MFNs for the core platform services designated by the European Commission. Amazon's retail business is a CPS and therefore must comply with Article 5(3) by March 2024. If the processes and algorithms described above are being used in Amazon's European operations today, these will surely be viewed as violating the DMA and would have to be changed.

The DMA also explicitly permits disintermediation of the platform in Article 5(4). It says that gatekeepers, or the hard-to-avoid digital giants covered by the DMA:

"… shall allow business users, free of charge, to communicate and promote offers, including under different conditions, to end users acquired via its core platform service or through other channels, and to conclude contracts with those end users, regardless of whether, for that purpose, they use the core platform services of the gatekeeper."

Juxtaposing this wording with text from Amazon's Seller Code of Conduct in the US is informative[7]:

"Circumventing the Sales Process: You may not attempt to circumvent the Amazon sales process or divert Amazon customers to another website. This means that you may not provide links or messages that prompt users to visit any external website or complete a transaction elsewhere."

Article 6(5) of the DMA requires gatekeepers to not rank their own services and products more favourably than those of third parties. This rule backs up, or duplicates, one of the Buy Box commitments and might affect Amazon's house brands and retail products relative to the products of third-party sellers on Amazon Marketplace.

It also likely applies to Amazon's Prime fulfilment and delivery service (FBA). FBA should not automatically be ranked favourably relative to services of third-party sellers, but rather the ranking conditions should be *"transparent, fair and non-discriminatory."*

Amazon itself has the ability to measure how well SFP serves customers; it found that over 95 percent of the time, SFP met the delivery requirements set by Amazon (FTC ¶ 401). Under this rule, it would seem that a product delivered by a rival service that is as fast and reliable will cause the product to be ranked equivalently to one being delivered by Amazon Prime, all else being equal.

Importantly, in addition to Articles 5(3) and 5(4), the DMA also contains an anti-circumvention rule in Article 13. If Amazon devised methods to effectively replace the platform MFN contracts, they could be considered circumvention of 5(3) and 5(4).

Such an interpretation is sup-ported by statements in the FTC complaint against Amazon such as *"replacement of a contractual price parity term with an expansion of SC-FOD would appear to be] not only trivial but a trick and an attempt to garner goodwill with policymakers amid increasing competition concerns"* (FTC ¶ 15).

4.2 The effectiveness of the DMA

The Commission defined Amazon's core platform service to be its marketplace services, not its retail services. Therefore, the de-facto MFN that operates through the retail channel, the Minimum Margin Agreement, may not be governed by the DMA.

The EU competition authority may want to bring an antitrust case against Amazon's retail MFN under Article 102 of the Treaty on the Functioning of the EU (prohibiting abuse of dominance). In this way the antitrust law would complement the DMA and fill an enforcement gap. This package of enforcement outcomes such as price and quality in the EU e-commerce marketplace.

Rival e-commerce sites that do not require costly advertising and/or have lower participation fees will enable merchants to set lower prices there and attract consumers with those lower prices[8]. Because of the prohibition on MFNs, those merchants will not be penalised by Amazon for the price differential.

In a setting of unfettered competition we may see consumers leave Amazon in pursuit of lower prices, or we may see consumers choose to pay more for the quality they are accustomed to and stay with Amazon. Either outcome is a manifestation of competition. Business users will be free to set the prices they want on each distribution channel they use, and end users will therefore have more choice and lower prices.

DMA Article 13 prohibiting circumvention will play an important role in enforcement of the other Articles needed to create competition in e-commerce. Because it is clearly straightforward to create algorithms and policies that mimic the effect of a contractual MFN, enforcers will need to develop processes or tests to monitor compliance under DMA Article 5(3), or the ban on MFNs will achieve almost nothing.

Successful enforcement will advance the DMA's contestability and fairness goals. The ban on MFNs increases contestability both on the platform and between platforms. Safeguarding merchants' freedom to contract differently across distribution channels and the equitable ranking of offers enhances fairness between different business users, as well as between business users and the platform's offerings.

5 Conclusions and policy recommendations

Soon there will be evidence of the effectiveness of the newly-mandated choice architecture of the Buy Box and its algorithm. Enforcers, merchants and Amazon will be able to measure the performance of third-party fulfilment and delivery, which will be very helpful to policy development. The changes should cause products without Prime shipping and lower prices to appear higher in the organic ranking, which could reduce the influence of Prime.

However, advertised products may fill the search results page so that shoppers do not see these highly-ranked inexpensive products. Such a poor user experience might cause consumers to shop elsewhere, and if the MFN provision (DMA Article 5(3)) is enforced, competitors to which consumers can switch will enter.

Even better, switching consumers can use their rights under DMA Article 6(9) to choose to port their personal data, including addresses, recurring purchases and methods of payment, to their new accounts with rivals.

Enforcers in the US should pursue a simple ban on platform MFNs because it will likely pre-serve competition between platforms with minimal negative impact. An effective remedy would also be to ban conduct and contracts similar to MFNs in Amazon's retail business, such as the Minimum Margin contracts.

If all those contracts – and the establishment of any similar programme that achieves the same anticompetitive ends – are prohibited, price competition will be able to flourish online. Given the policies Amazon seems to have adopted to replace MFNs in practice, both elements of the remedy are crucial.

In Europe, the main enforcement challenge seems to be possibility of de-facto MFNs enforced through carefully designed algorithms. Amazon's March 2024 compliance report to the European Commission may need to include information describing whether Amazon tracks the prices of its sellers on other platforms, and if it does, what actions Amazon takes after it finds sellers charging less outside Amazon's marketplace.

The answers to these questions are critical to demonstrate the gatekeeper is in compliance with the DMA.
The Commission may find the information revealed in the US litigation to be helpful as it interprets Amazon's compliance reports, as well as in any Article 102 litigation.

The case of Amazon illustrates that different parts of the DMA can work together to create a whole that is greater than the list of those parts. Eliminating MFNs allows for lower prices on rival sites, while a consumer's ability to port her data allows for easy switching to those sites. Unbiased rankings allow the best choices to rise to the top of the search results page, including choices fulfilled by a rival logistics provider. That rival logistics provider in turn can support entry in e-commerce. And the entrant can attract customers with a differentiated strategy which cannot be blocked by incumbents using MFN-equivalent policies or practices. The addition of the Buy Box redesign adds to the force of this combination.

Making sure this cluster of policies is effective at increasing contestability and fairness will require measurement of outcomes as well as inputs. What choices appear in the Buy Box and how do consumers respond to different design choices in the shopping environment? Measurement of the performance of all parties providing fulfilment and logistics will likewise be critical to policy evaluation.

The more effective these European Commission enforcement changes are – the MFN enforcement, portability of data, the Buy Box design and the increased shipping options – the more likely it is that they will be exported to other jurisdictions facing similar problems, whether from Amazon or another local dominant e-commerce platform.

In the United States, third-party sellers and brands will want California and the FTC to demand the European solutions if they are shown to be successful. Litigation in the US moves so slowly that there will be plenty of time to evaluate the outcomes of the existing EU antitrust commitments and the DMA before any US remedy would need to be chosen.

Moreover, a judge would likely find it attractive to choose a remedy that reduces the possibility of negative unanticipated outcomes in the marketplace. A solution that has been tried in Europe and has succeeded there is much less risky to impose on US consumers.

Additionally, Amazon cannot argue that such a remedy is costly or difficult from an engineering point of view because the company will already have built and deployed it in Europe. But this cheerful picture depends on the effectiveness and success of the new European enforcement package. ■

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Endnotes

1. See European Commission press release of 22 December 2022, 'Antitrust: Commission accepts commitments by Amazon barring it from using marketplace seller data, and ensuring equal access to Buy Box and Prime'. The UK CMA has already agreed commitments (CMA, 2023). In addition, the Italian Competition Authority levied a substantial fine of more than €1 billion; see press release of 9 December 2021, 'A528 - Italian Competition Authority: Amazon fined over € 1,128 billion for abusing its dominant position'.

2. See European Commission press release of 6 September 2023, 'Digital Markets Act: Commission designates six gatekeepers'.

3. See for example Cooper (1986), Salop (1986), Scott Morton (1997), Moshary (2015) and Baker and Chevalier (2013).

4. Amazon Prime is a paid subscription service that gives certain premium benefits to customers, including faster delivery of goods and access to music and other services.

5. FTC ¶ 408. Amazon wanted to minimise any potential backlash from SFP sellers, so in 2019 Amazon let sellers already in SFP remain, while blocking new enrolment. Critically, Amazon communicated to those sellers who were already in SFP that it expected them to fulfil orders themselves, rather than using independent fulfilment providers. Amazon's internal analyses showed that sellers using independent fulfilment ser-vices met Amazon's stringent SFP standards more often than sellers fulfilling orders themselves. For example, in the last quarter before Amazon suspended enrolment, SFP sellers using independent fulfilment providers satisfied Amazon's delivery requirement 98.4 percent of the time (compared to 96 percent for all SFP sellers), and satisfied Amazon's shipping requirement 99.8 percent of the time (compared to 96.8 percent for all SFP sellers).

6. See footnote 1.

7. See https://m.media-amazon.com/images/G/65/rainier/help/Selling_Policies_and_Seller_Code_of_Conduct_SG_new_version_clean_PDF.pdf.

8. FTC ¶ 236. The FTC complaint quotes one Amazon executive as acknowledging that the advertising costs are "likely to be passed down to the customer and result in higher prices for customers"; Amazon founder Jeff Bezos is quoted as *instructing executives to "accept more 'defects'" (the term for junk advertisements) because the advertising revenue to Amazon is more than the sales it loses from the degradation in search quality and higher prices. See FTC ¶ 5.*

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Disclosure: Within the last three years the author has engaged in antitrust consulting for a range of healthcare companies, government plaintiffs and the digital platforms Amazon and Microsoft. The author's Amazon engagement ended more than two years ago and predates the US complaints discussed in this article.

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Some lessons for crisis management from recent bank failures

Agustín Carstens discusses the lessons from the bank failures that occurred in March 2023, and argues that robust and proactive supervision is essential

Motivation

Recent bank failures in the United States and Switzerland have prompted a debate about the adequacy of the current prudential framework for preserving financial stability.

In particular, these episodes have shed light on how bank resolution frameworks are functioning. As you know, resolution frameworks are one of the key innovations that followed the Great Financial Crisis (GFC). Authorities adopted several measures to make bank failure management frameworks less dependent on public support.

In particular, the Financial Stability Board issued new international standards to enable the orderly resolution of global systemically important banks and other banks that are systemic in failure. These sought to ensure that failing banks' critical functions could continue, while keeping the involvement of national treasuries to a minimum.

The 2023 bank failures were the first significant test of those reforms. I think it's fair to say that their performance was mixed. The interventions by the Swiss and US authorities did preserve systemic stability – a key objective of resolution frameworks. But both involved public support. And in Switzerland, the authorities opted to impose losses on some creditors without using the resolution framework.

Against that background, national authorities and standard setters should take this opportunity to review the framework and understand how we can ensure that authorities have credible options for resolving banks.

The recent bank failures

Let me first recall some of the key features of the bank failures and the strategies that were adopted in the United States and in Switzerland.

In early March 2023, the US regional banking sector experienced severe stress. Two banks failed: Signature Bank and Silicon Valley Bank. Both had a high proportion of uninsured deposits. And both experienced large and rapid deposit outflows amid concerns about the sustainability of their business models. Over a couple of days, the FDIC took both banks into receivership, created temporary bridge banks and eventually sold the banks in the market.

This resolution strategy was possible only because the US authorities invoked a 'systemic risk exception'. This allowed authorities to override the usual limits on the amount of funds the FDIC can use to finance a resolution. With it, the FDIC could cover all deposits, including the large amounts that were not insured. Shareholders and certain unsecured debtholders were not protected.

Recent bank failures, and the measures taken by authorities, highlight the significant progress since the GFC in making bank resolution effective

A week after the US bank failures, following an acute liquidity crisis at Credit Suisse, the Swiss authorities announced that UBS and Credit Suisse would merge and provided liquidity support for this process. This was described as a 'commercial transaction'.

Importantly, the merger was supported by decrees enacted using emergency powers, which allowed the Swiss National Bank to provide liquidity support to UBS and Credit Suisse. The transaction also involved the contractual writedown, in full, of all the outstanding Additional Tier 1 (AT1) capital instruments issued by Credit Suisse. However, Credit Suisse shareholders retained some residual equity.

How resolution worked in practice in 2023 – lessons

These cases demonstrated that Switzerland and the United States had effective crisis management frameworks that enabled the authorities to deal with a range of cases.

The authorities were well prepared. They had sufficient powers, tools and funds to manage the failing banks in an orderly manner. And the frameworks gave them enough flexibility to adapt their responses to the prevailing conditions.

The latter is important since new technologies combined with social media can lead to a fast-burning crisis of liquidity and confidence, leaving the authorities with only a short window in which to make decisions and implement them.

Both the Swiss and US authorities provided funding through a combination of internal and external sources. Internal resources came through the writedown of at least part of the equity and hybrid capital. External support came from the deposit insurance fund and through public guarantees.

In the Credit Suisse case, the write-off of AT1 instruments substantially reduced the costs to taxpayers. It also proved, contrary to the fears of some observers, that a writedown of G-SIB debt instruments is feasible without destabilising markets in any deep or persistent way.

Nevertheless, while the responses were effective, the authorities had to depart from the expected approach. Let me highlight the main differences.

In the United States, the use of the systemic risk exception was required to mitigate the risk of systemic stress in the banking sector. However, the failing banks had not been considered systemic in life and were consequently subject to less stringent prudential requirements, including for resolution planning.

In Switzerland, the authorities decided not to use statutory resolution powers to execute the resolution plan. Instead, they opted for a merger transaction that they judged to be less disruptive to financial stability. Although writing down AT1 instruments delivered significant loss absorption, the resolution plan would have bailed in a wider set of liabilities and therefore involved less public support.

This approach also overturned the expected hierarchy of creditor losses that would have applied if Credit Suisse had been put into resolution. Although that was anticipated in the AT1 contracts, it nevertheless had significant, albeit relatively short-lived, repercussions in the market for AT1 instruments.

In both the Swiss and US cases, special facilities provided liquidity. The Swiss government used emergency powers to enable the central bank to provide liquidity with government guarantees. That liquidity was not fully collateralised. In the United States, the Federal Reserve created a new funding programme offering loans of up to one year against collateral valued at par.

We therefore end up with a somewhat mixed picture. The overall story is positive: the authorities' actions avoided the disruption that these bank failures might have triggered. But, to do that, the authorities had to resort to emergency powers or exceptional actions.

Given this difficult balance, let me highlight areas for improvement in our crisis management frameworks or their implementation.

First, banks' loss-absorbing capacity and the credibility of bail-in as a resolution tool. Even if the writedown of AT1 instruments helped reduce the costs to the public purse, greater loss-absorbing capacity in the failing banks would have been preferable.

A fundamental lesson of the GFC was that banks' shareholders and creditors should bear a large share of the cost of their resolution. Significant work has been carried out internationally over the past few years to make bail-in operational. But that work is incomplete. Authorities need to be confident that they can execute a bail-in and markets must believe that a preferred bail-in strategy is not just words on paper.

Importantly, banks should have sufficient liabilities to absorb losses in resolution. Currently, international standards require only the largest banks to maintain minimum gone-concern loss-absorbing liabilities.

To make further progress in this area, it is important that other banks can do the same. This is already the case in the European Union, where the requirement applies to all large and medium-sized banks.

Other authorities are also bringing forward related initiatives. For instance, in the United States, a consultation[1] is under way on a proposed requirement that banks should hold a larger amount of long-term debt, which can be bailed in to manage their failure.

A second area for improvement is the writedown of hybrid capital instruments.

The sale strategy for Credit Suisse wiped out holders of AT1 instruments. Many market participants were insufficiently aware of the contractual terms of individual AT1 instruments and the differences between the applicable frameworks in different jurisdictions.

As a result, there seems to be merit in pursuing work aimed at improving the disclosure and understanding of the terms and operation of AT1 instruments. This would reduce the risk of adverse market reactions[2].

A third set of lessons concerns the crossborder application of resolution tools.

In the resolution of any large bank, there will always be a crossborder dimension. Resolution actions in one country will need to apply to the bank's operations elsewhere. This is both a legal issue – how do resolution powers apply across borders? – and a question of cooperation between authorities.

Good communication with foreign counterparts is essential to effective resolution. This includes financial authorities in jurisdictions where the failing bank is locally systemic, even if those local operations are not systemic from the perspective of the failing bank or its home authorities.

When preparing for a possible resolution, it can be hard for authorities to maintain secrecy about the expected intervention while keeping counterparts informed. However, it can aid communication to involve all relevant parties in resolution planning and establish the necessary communication channels in advance.

Finally, there is clearly a need to review liquidity frameworks to ensure that there are adequate funding sources.

Liquidity played a significant role in recent bank failures, both as drivers of the failures and as a crisis management tool. Both the Swiss and US authorities provided liquidity support on special conditions.

However, ad hoc facilities are generally less desirable than an established framework. This suggests that further work is required on three aspects relevant to liquidity.

First, as is starting to emerge from discussions in various global forums, there is room to improve the supervision of liquidity risk.

Second, a review of the operational aspects of Emergency Liquidity Assistance (ELA) could be useful. For example, pre-positioning and assessment of collateral may ease the provision of ELA to stressed banks.

Third, countries need to have in place frameworks for the provision of liquidity in resolution. An established facility with terms that reflect the expected requirements of banks in resolution helps to provide authorities and markets with the assurance that sufficient liquidity will be available to support the effective resolution of bank failures with a systemic dimension.

Conclusion

Recent bank failures, and the measures taken by authorities, highlight the significant progress since the GFC in making bank resolution effective. Authorities took prompt and credible action to contain the crisis. In doing so, they preserved financial stability and prevented crossborder contagion.

But these episodes also remind us that the work is incomplete, and some elements of the framework require attention. Issues such as banks' loss-absorption capacity, the practical execution of bail-in and the crossborder challenges it involves, and the provision of liquidity in resolution are not new, or a surprise to the authorities working over the last decade to build robust resolution frameworks. However, the recent failures give added impetus to the ongoing work at the international level on those matters.

Of course, authorities cannot anticipate all the issues that may arise in a bank failure. They may need to depart from script. However, sound planning can help them to respond quickly and flexibly, and to adapt their strategies to the circumstances of the failure.

Furthermore, we should not forget that resolution frameworks and resolution planning cannot replace supervision. Where the root cause of a bank's weakness is an unsustainable business model, robust and proactive supervision is the more appropriate response.

I hope this article has given you the opportunity to consider how we can make bank resolution frameworks more solid, and I trust this discussion will continue. ■

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Endnotes

1. See Office of the Comptroller of the Currency, Department of the Treasury, Board of Governors of the Federal Reserve System and Federal Deposit Insurance Corporation: "Long-Term Debt Requirements for Large Bank Holding Companies, Certain Intermediate Holding Companies of Foreign Banking Organizations, and Large Insured Depository Institutions", August 2023.

2. For further discussion, see the R Coelho, J Taneja and R Vrbaski, "Upside down: when AT1 instruments absorb losses before equity", FSI Briefs, no 21, September 2023.

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Money and payments: a ‘black ships’ moment?

Jon Cunliffe recalls Facebook’s announcement in 2019 that it was launching a digital currency, and discusses the three areas where this galvanised more urgent action by authorities

It is difficult to overstate the importance of the announcement by Facebook in June 2019 that it intended to launch a multicurrency stablecoin, a new digital currency called Libra for general crossborder payment use. Indeed, one commentator has likened the impact of the Libra announcement on central banks to the sudden arrival off Tokyo harbour in 1853 of the 'black ships of evil appearance' - a modern, irresistible US fleet – that led quickly to the collapse of a centuries-old ruling system and to the opening up of Japan[1].

For the previous decade, central banks and financial regulators had been watching, with a wary eye, the development of cryptoasset markets, using new technologies, outside the conventional financial system. Many, like the Bank of England, had dipped a toe into the experimental water, running small experiments with these new technologies with the aim of understanding them and their possible use cases better. Some financial firms had gone further, exploring and investing in limited use cases within wholesale financial services.

And regulators, increasingly fretful about the cocktail of risks in unregulated cryptoasset markets – risks ranging from illicit finance to consumer harms and, potentially, to financial stability – had been debating whether and how to bring 'crypto' activities within regulation.

But the Libra announcement and the potential appearance of a new form of money, using new technology and moving between countries on new rails outside the current system, galvanised central banks and regulators into much more urgent action on a number of fronts.

I want to talk about three of those fronts: the G20 roadmap to improve crossborder payments; the Bank of England's exploration of the Digital Pound, a central bank digital currency; and the regulation in the UK of systemic payment systems using 'digital settlement assets' like stablecoins.

I will talk about the first wearing my hat as Chair of the Bank for International Settlements' Committee on Payments and Market Infrastructures (CPMI) and co-chair of the Financial Stability Board's Cross-Border Payments Coordination Group (CPC), and about the second and third wearing my Bank of England hat. I will of course be giving up both hats next week when my Bank of England term finishes, so this is really my parting shot.

But to be able to make sure that forms of money, and the means of transferring it, can evolve, without putting that essential confidence at risk, central banks, as the Libra moment reminded us, need to look to the future and prepare for it

Crossborder payments

The Libra project raised significant regulatory and financial stability concerns, leading to swift statements from both the G7 and G20 that *"no global stablecoin project should begin operation until the legal, regulatory and oversight challenges and risks… are adequately addressed"*[2].

But the project, and the benefits it claimed it could deliver, also shone a light on the cost, speed, reliability and availability of crossborder payment systems – a long-neglected corner of the international financial system.

Central banks, finance ministries and regulatory authorities realised quickly that they could not simply focus on the risks that new players and new technologies might bring; they needed also to understand and, if possible, address the shortcomings in the existing, less risky systems that created such opportunities for new technologies and new players.

And shortcomings there certainly were. In contrast to the improvements in domestic payment systems that were increasingly being seen in many jurisdictions, crossborder payments were slow, expensive and unreliable. Removing frictions in wholesale, retail and remittance payments across borders could both yield substantive economic benefits and improve access for millions to the international financial system[3].

So in February 2020, G20 Finance Ministers and Central Bank Governors tasked the FSB, CPMI and others to develop a roadmap to enhance global crossborder payments[4].

Work by FSB and CPMI revealed that this was not a simple problem, amenable to one or two quick solutions, but rather a complex set of interlocking frictions, both in the public and private sector, exacerbated by weak competition.

Moreover, while there were common themes, there was also substantial variation by payment types and by region and jurisdiction. The CPMI produced a comprehensive list of the necessary action areas, the so-called 'building blocks', covering infrastructure, data, regulation and competition, and these formed the basis of the FSB's roadmap of actions adopted by G20 leaders in the autumn of 2020[5].

So, three years on, as I pass the CPMI baton on to Fabio Panetta, the incoming governor of the Bank of Italy, it is fair to ask: *"How are we doing, and what are the priorities for the future?"*

We have built a strong, detailed, analytical foundation for the work. From 2021 to 2023, the CPMI and FSB produced a number of reports, analysing the key frictions and the actions for the public and private sector, in partnership, that are necessary to alleviate them. We have set out best practice where it exists and practical guidance on how to make changes in key areas.

Equally important, the G20 Leaders adopted in 2021 quantitative targets for improvement by 2027[6]. These cover speed, cost, access and transparency for wholesale, retail and remittance payments.

As we all know, 'what gets measured, gets done'. So, equally importantly, we have established the mechanisms and the data collection that will enable us to measure progress towards the targets. The first annual monitoring report against the targets was delivered to G20 Finance Ministers and Central Bank Governors in Marrakesh two weeks ago[7].

While the data are not perfect and there are important gaps we need to address, we are now able not only to measure how far we have to go but also to identify more precisely the areas for action that are likely to yield the greatest improvement.

We have started to see some concrete improvements. Since 2020, some countries have expanded access to their payments infrastructure to a wider range of financial institutions, or expanded their operating hours. Payment systems in more than 100 jurisdictions are already actively using the ISO 20022 messaging standard, which can carry far more information and so reduce payment failures.

CPMI and the private sector have now developed harmonised data requirements for these crossborder payment messages, which will prevent fragmentation[8]. Finally, a number of projects in Asia are showing the real benefits that can be achieved by interlinking fast payment systems[9].

However, as the monitoring report shows, we are significantly short of the targets for 2027. In general, on the main targets, we are between half and two thirds of the way there. That is not surprising perhaps, given we are halfway through the roadmap period. But, though achievable, given the timescales for investment and other action, it is a challenging distance to travel in four years.

So, in short, we have built a strong foundation for the work, including quantitative targets for 2027 and the machinery to monitor progress. We are starting to see some real improvements. But there is a long way to go, and it will need continued investment by the public and private sectors in infrastructure and data and regulatory changes.

As I said at the outset, both the frictions and the actions necessary to achieve them vary considerably by payment type and by region. But there are some common priority areas on which we will need to focus on the next phase of the work.

First, we need to see further upgrades to central bank and private sector payment systems. More than a dozen countries are developing and upgrading their real-time gross settlement (RTGS) systems over the next five years, for instance by expanding access or extending operating hours.

As an individual crossborder payment will often involve systems operated by both public and private sector institutions, the CPMI has launched a joint public-private sector taskforce to coordinate plans for the necessary improvements and ensure they coalesce around best practices[10].

Second, we need to implement the data standards for crossborder ISO 20022 payment messages and develop harmonised standards for application programming interfaces (APIs).

Third, we should facilitate and promote interlinking of fast payment systems. There are a range of technological solutions available or in prospect[11]. But the governance and oversight of interlinking arrangements can be a greater challenge than the technology.

CPMI is working on a report to the G20 next year on these governance and oversight issues that could serve as a useful reference for payment system owners and overseers, and it published an interim report for comment last week[12].

Fourth, we should pursue more effective, coordinated regulatory frameworks for crossborder payments, and remove unnecessary regulatory frictions. A key priority on regulation in the near-term will be for the Financial Action Task Force (FATF), in the first half of next year, to update their recommendation (which was originally developed 20 years ago) on detecting and preventing misuse of wire transfers by terrorists and other criminals.

A more granular recommendation, which takes into account new data standards and technology, will enable more consistent implementation across jurisdictions and enhance both the efficiency and the effectiveness of AML/CFT checks.

In addition to FATF's work here, there are a range of other frictions arising from the regulation of banks and non-banks, and a second public-private taskforce is focused on identifying actions to address these[13].

Fifth, we should support authorities beyond the G20 in addressing crossborder payment frictions. This month's progress report shows that the biggest frictions, not surprisingly, are in lower income regions such as Sub-Saharan Africa, and addressing these could bring transformative economic benefits. The IMF and World Bank are developing their programmes of technical assistance to support authorities in these countries.

And finally, we need to enhance competition and innovation. Currently, in most jurisdictions, only banks have access to domestic payment systems and central banks' RTGS systems – leading to weak competition, especially as the number of active correspondent banks worldwide fell by approximately 30% between 2011 and 2022.

Even where non-bank payment service providers can have direct access to payment systems, existing legal or regulatory barriers, or the high costs of direct access, prevent them from doing so. The CPMI has set out a framework of best practices to enable countries to review the access arrangements of their key payment systems[14].

It is perhaps this lack of access to payment rails operated by incumbents, and the need to use settlement assets provided by incumbents, that has helped to stimulate the exploration by potential challengers, like the Libra project, of new rails and new settlement assets using new technologies.

The Libra project, of course, after much work and much modification, fell by the wayside last year. The stumbling blocks appear to have been regulatory rather than technical.

However, though perhaps more muted, interest in using new technologies to develop new forms of settlement asset and new payment rails for use in the real economy – outside the world of cryptoasset markets – has not gone away[15]. The recent launch of the PayPal/Paxos stablecoin arrangement is one example.

These new technologies purport to offer improvements in speed, cost and reliability, all of which would make them attractive for crossborder use, and exploring their potential has therefore been included in the G20's roadmap.

However, these technologies also purport to offer new 'functionality' for money and payments that may make them competitive for domestic use – even in advanced jurisdictions that have developed sophisticated payment systems.

Technological advances have throughout history led to changes in the forms of money we use because they have made money easier and more convenient to use. The shift from physical cash to electronic payments that we have seen over the past decade has not occurred because people have lost confidence in cash[16]. Rather, it has happened because it has become more convenient and because physical cash cannot be used for internet commerce.

And small reductions in frictions and small increases in functionality matter, as the shift towards using mobile phones rather than cards at point-of-sale demonstrates[17].

The technologies that are loosely grouped under the broad heading of 'tokenisation' – cryptography, distributed ledger, atomic settlement, blockchain, fractionalisation and programmability – enable new ways of representing money that allow for greater automation of the transfer of money and the deeper integration of that transfer – the payment – into other processes.

While these technologies have been pioneered in cryptoasset markets, they could significantly transform everyday payments in the real economy, as I will discuss later.

One cannot of course say with certainty that it will be possible to deploy such technologies at scale for general use in the economy or that users will value and adopt the new functionalities. But it would be very unwise in my view to bet, as some seem to do, that we have reached the end of developments in payments and money – especially given the increasing and rapid digitalisation and automation of the processes of everyday life.

And this brings me to the other two areas of action that were accelerated by the announcement of the Libra project four years ago – the exploration of central bank digital currencies and the regulation of private sector firms that propose to use those technologies to create new forms of money like stablecoins and new payment systems for general use in the economy.

The Digital Pound

First, I will say a little about where we are in the UK on the possibility of introducing a retail CBDC, the 'Digital Pound'.

In February this year, the Bank of England and HM Treasury issued a consultation paper on the design of a Digital Pound[18]. The consultation paper did not propose the introduction of the Digital Pound. No decision has been taken to do that in the UK.

Rather, the paper concluded that current trends and technological advances in payments – the trends I have been discussing – made it likely that a Digital Pound would be needed by the end of the decade. The paper set out and invited comments on the detailed model of the Digital Pound we proposed to explore and test in the next stage of our work, prior to a decision in two to three years' time on whether or not to implement it.

We envisage the Digital Pound as a partnership with the private sector – a so-called 'platform model'. The Bank would provide the Digital Pound and the central infrastructure, including the 'core ledger'. Private sector firms – which could be banks or approved non- bank firms – would provide the interface between the Bank's central infrastructure and users by offering wallets and payment services.

These private companies would be able to integrate and programme the Digital Pound, as the settlement asset, into the services they would offer to wallet holders.

The consultation paper offered two main motivations for the possible future introduction of the Digital Pound. The first is the most relevant to central banks. It concerns the role played by state money issued by the central bank to the general public in anchoring confidence in money and in supporting the singleness of money - the interchangeability of all monies, public and private, that circulate in the economy on demand and at par value.

The only form of state money available to the public at present – physical cash – is declining in use and usability. And as the Libra announcement highlighted, new, non-bank players could potentially exploit technological advance to offer new forms of money and new payment systems and services.

Against this backdrop, my view is that it is likely to be necessary to issue central bank money in digital form to support confidence in money, particularly in stress, and to ensure the singleness of money.

The second motivation concerns competition and innovation. While relevant to central banks, it is more a motivation for governments. Digital marketplaces, as we have learned, have a tendency to concentration as, of course, do payment systems[19].

This can be a barrier to competition and innovation, with the risk of new entrants wanting to offer new payment services being tied to particular private issuers of digital money and their payment systems. This may be a particular concern if 'big tech' firms enter more deeply into payments and money.

Competition and innovation may therefore be enhanced by providing a public alternative, a public digital money platform that allows private firms to offer services exploiting the new functionalities I have mentioned.

The Bank of England and HM Treasury consultation paper has stimulated a strong response, with over 50,000 completed responses. The responses fall into two broad categories. The majority express general, high-level concerns about three broad issues – privacy, programmability and the decline of cash.

The second, smaller category of responses comprises detailed comments on the proposed platform model and some other key design features, including the limits that have been proposed at least for the Digital Pound's introductory period.

We expect to publish a detailed response to the consultation in the coming months addressing both types of response. I do not want to anticipate that, but it is possible to make a few key observations on the consultation.

On the first category of response, the consultation document made clear that, under the proposed model, neither the government nor the Bank of England would see individuals' data. Rather, private sector payment firms would be the interface with the user, handling user information in the way banks do today.

Users would have at least the same, if not greater, protection of their privacy that they enjoy today when they make electronic payments. We also made a commitment that neither government nor the Bank would programme the

Digital Pound or constrain the uses to which it could be put. It would be for private sector firms to develop and offer, for user consent, payment services involving greater programmability.

As regards cash, the Government recently legislated to ensure the availability of physical cash to those who prefer to use it and the Bank has made clear that it will provide physical cash as long as there is any demand for it.

The responses to the consultation illustrate the importance of these key issues. It is clear that public confidence in our approach will be essential, if a future decision were taken to introduce the Digital Pound. During the design phase, we will develop the strongest possible protections in these areas, and the government has committed to introducing primary legislation before launching a Digital Pound[20].

On the second category of response, there is general support for the model of the Digital Pound we propose to explore and test further. There are, however, differing views on some key aspects, particularly the limits that we propose would apply, at least initially, to prevent rapid, destabilising changes to the banking system that could have financial stability implications.

Some question the need for limits, while banks in particular are concerned about the impact of CBDC on their deposit bases and on financial stability. And on use cases, while merchants, fintechs and payment services firms appear supportive of the possibilities, others, particularly banks, are more sceptical that attractive use cases will be developed for a retail Digital Pound.

We are still in the process of the detailed analysis of all of the responses and, as I say, we aim to respond comprehensively in the coming months. But I would observe, if only a little tongue in cheek, that criticisms of the Digital Pound have ranged from concerns that it would be adopted at a scale and pace that would disintermediate the banking system and threaten financial stability, to, at the same time, concerns that there would be no use for it and it would be a 'solution looking for a problem'.

Not surprisingly, as an institution charged with maintaining financial stability, we take the first point very seriously. Modelled estimates suggest that even with a very high level of take-up, the impact over time on the banking system should be manageable[21].

But these can only be estimates. We cannot know in advance the behavioural response of users to a Digital Pound, ie. the scale and speed of take-up by households and firms. That is why we have proposed that, initially at any rate, were we to introduce a Digital Pound, there would need to be limits on holdings.

During the next phase of development, and in advance of any decision on whether to introduce a Digital Pound, we would seek to refine, in the light of available evidence, our estimates of possible take-up and the consequent calibration of limits.

The second concern perhaps risks missing the point. I am reminded a little of Henry Ford, who is reported to have said that had he asked people what innovation they wanted, they would have asked for faster horses. Were we to decide to introduce the Digital Pound, the objective would not be to target some particular failing or identifiable use case not available in current payment systems.

Rather, it would be to create a public sector platform using public sector money that private payment services firms could use to exploit the greater functionality in money and payments that technology may now offer in an increasingly digitalised world.

Experimentation by a variety of private sector firms on a platform developed by the Bank of England and Bank for International Settlements' Innovation Hub provides some initial support for the view that with a relatively small range of technical features, a Digital Pound could support a very wide range of payments use cases[22].

While it might be possible to deliver some of the use cases through specific programming of existing payment systems using commercial bank money, there are clearly material advantages in a general-purpose platform and digital settlement asset that can be used and configured relatively simply, consistently and cheaply for a broad range of uses cases.

In the next phase of the work, we will work more intensively with the private sector to explore possible use cases for a Digital Pound and the technological design necessary to create the best platform for innovation. At the same time, we and HM Treasury will consult more widely to stimulate a national conversation on the Digital Pound.

Stablecoins

Similarly, it would be possible for the private sector to use these new technologies to create infrastructures and issue private money for general use in the economy. Indeed, that is precisely what the Libra project proposed – initially as a multi-currency basket stablecoin and subsequently as a dollar stablecoin[23].

This brings me to the third front on which the Libra project galvanised action – the development of international standards and domestic regulatory frameworks for stablecoins. To be clear, although stablecoins, whose value is linked to a fiat currency, have developed as the settlement asset and store of value in cryptoasset markets, the motivations behind these regulatory initiatives should not be seen primarily as an attempt to regulate the Wild West of highly speculative crypto markets.

I should say at this point that there is in my view a strong case for regulation of those markets, to protect investors, ensure market integrity and prevent their use for illicit finance. Indeed, in the UK, regulation has recently been extended to cover the marketing of cryptoassets, to ensure promotions are clear, fair and not misleading to retail investors[24].

And HM Treasury have consulted on the other key elements of a comprehensive cryptoasset regulatory regime, including regulation of the exchanges that provide the access to crypto markets – often, as we saw in the case of FTX, bundled with a range of other services and activities[25].

However, the regulatory initiatives that followed the Libra announcement have been directed primarily not at cryptoasset markets but rather stablecoins that could be used a means of payment in the real economy, both for crossborder and domestic use.

Thus in 2022, CPMI-IOSCO, the international standard setting body for payment systems and market infrastructure, issued guidance on the application to stablecoins of the international standards for systemic payment systems[26]. In much the same way, the FSB issued High-Level Recommendations on 'global stablecoins' in 2023[27].

Both effectively set standards for some of the unique features of payment systems using stablecoins, including not just the mechanism for the transfer of coins but also the need for the coinholder to have a clear claim on the issuer and the requirement for the issuer to be able to repay that claim, when requested, in fiat money at par value by the end of the day.

International standards of course are only effective if implemented by jurisdictions in legislation and regulation. Many jurisdictions, not least the United States, are currently wrestling with the question of how to extend their regulatory regimes to stablecoins and to cryptoassets more generally.

A number of jurisdictions, however, have legislated to bring stablecoins used for payments within the regulatory framework[28]. In the UK, the Financial Services and Markets Act passed by Parliament earlier this year gave the Bank of England power to regulate systemic payment systems using 'digital settlement assets' (including stablecoins).

The Act therefore extends the Bank of England's existing powers to regulate conventional systemic payment systems. The Financial Conduct Authority (FCA) will regulate the issuance and custody of stablecoins for conduct and market integrity purposes.

The Bank expects very soon to issue a Discussion Paper setting out its proposed regulatory regime for systemic retail payment systems using stablecoins[29]. I am not able to set out the proposed regime in detail today. But I would like to explain how we have approached the key issues and how we see this new regulatory regime fitting in alongside other regulatory regimes to avoid regulatory arbitrage.

First, and perhaps most obviously, is the question of why? Do we really need new forms of money issued by new players moving on new payment rails?

This is essentially the same question as I discussed earlier in the context of the Digital Pound. And much of the answer is the same. While it is not certain that these technologies will actually deliver the innovation and competition in payment services some have claimed, we do not want to prevent such innovation, provided – and this is a very, very important 'provided' – the risks can be managed to the same degree as equivalent risks are managed both for existing systemic payment systems and for the commercial bank money they use as a settlement asset.

There may well be some players who attempt to operate outside regulation. But setting out clearly the regulatory framework will enable those players who wish to innovate sustainably and responsibly to build the necessary management of risks into their business models and technology.

Second, I have said that our approach is to ensure that risks are managed to the same degree as equivalent risks are managed for existing payment systems and for the private, commercial bank money they transfer. This is an important elaboration of the fundamental principle of 'same risk, same regulation'.

It may not be possible, for technological or other reasons, to apply the current regulation for systemic payment systems and banks to systemic payment systems using stablecoins. It will, for example, be impossible to provide collective insurance akin to bank deposit protection, initially at any rate, as unlike for banks there is no broader industry among which to share the costs of a payout.

In order therefore to achieve the necessary level of protection of the coin holders' claim, and so protection against run risk, there will need to be more robust requirements in other areas, especially, but not only, in the requirements for the backing assets.

In that respect, the Financial Policy Committee of the Bank of England judged in 2022 that, to manage systemic risks, the backing assets should be high quality and liquid – either deposits at the Bank of England or very highly liquid securities[30]. The lack of deposit protection also has implications for the nature and enforceability of the coin holders' claim[31].

Third, we will require a legal entity that can be identified as the payment system operator and held responsible for the end-to-end management of risks. Stablecoin payment systems can be structured in many different ways, including arrangements where the issuance of the coin, the transfer of the coin and the storage of the coin (the wallets) are performed by separate entities.

It is not clear that use of public, permissionless transfer mechanisms, at least with current technology, would be consistent with this requirement. But our regime will be designed to be flexible and accommodate different structures insofar as that can achieved with the necessary management of risks.

Fourth, as with the Digital Pound, we cannot know in advance the speed and scale of adoption of such new forms of money and payments. We need therefore to be alive to possible financial stability risks from rapid transitions that could impact the stability of the banking system. For the Digital Pound, we have proposed limits, initially at any rate, to manage the risk, and it would make sense to take a similar approach to stablecoins.

Finally, we will aim to ensure clarity on regulatory boundaries and the business models that fit within them. The proposed regulatory regime is a payment system regime intended to enable innovation in payments. It is intended for business models focussed on generating revenues from payment services.

Business models that are focused on earning revenues from maturity and liquidity transformation – the return on the assets backing the liquid, money-like claims they issue – pose risks that are more appropriately regulated within the banking regime.

Likewise, business models that use stablecoins to represent claims on investment products, and which do not guarantee redemption at par, are not suitable for use in payment systems and need to be regulated under an investment regime.

Innovation using new technologies is not confined to new entrants. Banks, whose business model depends in part on issuing liquid liabilities (bank deposits) for payments use, may well want to use new technologies to tokenise and transfer bank deposits[32].

This would fall under the existing banking regime rather than the proposed regime for payment systems using stablecoins. There are a number of issues concerning the issuance and transfer of bank deposits in tokenised form that will need to be considered by bank regulators and banks themselves, including whether such tokens should be permitted to circulate freely like digital banknotes[33]. But the underlying nature of the claim, deposit protection and management of risks should be regulated in the banking regime.

Banks may also want to issue stablecoins under the proposed new regime. In that case however, our view is that they should be issued out of a separate, bankruptcy remote, legal entity with different branding, to avoid confusion among consumers and so avoid contagion in a stress between different forms of money.

Conclusion

I am often asked, *"what do central banks do?"* or, a more penetrating question – usually from schoolchildren: *"what is the Bank of England for?"* Rather than give them the long list of Bank of England functions – monetary policy, financial stability, bank regulation, payment system regulation, provision of cash etc – I give a much simpler answer.

Central banks are responsible for ensuring that that most foundational element of the economy and society, that is called money, 'works'. That people can use it every day with confidence – confidence in its value, confidence in its creditworthiness, its authenticity, its usability – and confidence that it will be accepted everywhere at the same value whatever form it takes.

And while we may not be the originators of technological innovation in money and payments, we do I think have a responsibility to ensure that beneficial innovation that will improve the usability and functionality of money can not only happen but can happen without putting confidence in money at risk.

One cannot know now whether the appearance of Libra off the shore of conventional money and payments was truly a 'black ships' moment. I certainly hope that the 'wake up' call for crossborder payments is not forgotten and that we deliver the long overdue improvements the G20 has set as the target.

Likewise, while I think that on current trends, the Digital Pound in the form we have proposed is likely to be needed by the end of the decade, the picture may look very different in two to three years' time when a decision is due to be taken.

And stablecoins and their associated technological innovations may never cross over at any scale from the highly speculative world of cryptoasset trading to the real economy.

But to be able to make sure that forms of money, and the means of transferring it, can evolve, without putting that essential confidence at risk, central banks, as the Libra moment reminded us, need to look to the future and prepare for it. Thank you for giving me the opportunity for this parting shot! ■

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Endnotes

1. I am indebted to Gillian Tett of the Financial Times for this striking historical parallel.

2. Investigating the impact of global stablecoins (bis.org), G7 Working Group on Stablecoins, October 2019: Communiqué: G20 Finance Ministers and Central Bank Governors, October 14, 2020 (utoronto.ca)

3. The global average cost for sending remittances was 6.79% in Q1 2020 – within Sub-Saharan Africa, the average cost was 8.9%. And for crossborder business-to-business payments, six out of ten of these required some kind of manual intervention, each one taking at least 15 to 20 minutes, according to a 2015 study by Traxpay. Moreover, given the scale of crossborder payment flows, improvements could provide significant benefits to the world economy - one estimate from Boston Consulting Group put the total value of crossborder payments globally at almost $150 trillion in 2017.

4. G20 Finance Ministers & Central Bank Governors Meeting (bundesfinanzministerium.de)

5. Enhancing Cross-border Payments - Stage 1 report to the G20 - Financial Stability Board (fsb.org), Enhancing cross-border payments: building blocks of a global roadmap (bis.org), Enhancing Cross-border Payments: Stage 3 roadmap - Financial Stability Board (fsb.org)

6. Targets for addressing the four challenges of crossborder payments: Final report - Financial Stability Board (fsb.org)

7. Annual Progress Report on Meeting the Targets for Cross-Border Payments: 2023 Report on Key Performance Indicators - Financial Stability Board (fsb.org)

8. Harmonised ISO 20022 data requirements for enhancing crossborder payments – final report (bis.org)

9. The link between Thailand and Singapore launched in 2021 has, according to the Bank of Thailand, reduced the costs of crossborder payments from $12-$30 to $5, and speed has increased from two days to two seconds.

10. Press release: Bank for International Settlements' Committee on Payments and Market Infrastructures invites market stakeholders to join crossborder payments interoperability and extension task force (bis.org)

11. Project Nexus between the BIS Innovation Hub Singapore Centre and ASEAN central banks is exploring interlinking fast payment systems on a multilateral basis, so that a payment system in one country could reach all the other countries in the network via a single connection.

12. Linking fast payment systems across borders: considerations for governance and oversight (bis.org)
13. FSB invites senior representatives from firms and industry associations to join crossborder payment taskforce - Financial Stability Board
14. Improving access to payment systems for crossborder payments: best practices for self-assessments (bis.org)
15. Card companies are also increasingly integrating stablecoins into their networks – eg. Visa announced in September 2023 that it will now also use the Solana blockchain, in addition to its use of Ethereum, to enable merchants to receive stablecoins such as Circle's USD Coin when they accept card payments.
16. Indeed, as part of our work on CBDC, the Bank commissioned focus group research on people's attitudes to money and payments. We found that, while understanding of the difference between publicly and privately issued forms of money was generally low, there was a strong consensus around the importance and safety of physical currency. See Annex 3, The digital pound: a new form of money for households and businesses? Consultation Paper (bankofengland.co.uk).
17. 30% of UK adults were registered for mobile payment apps like Apple Pay or Google Pay in 2022. Use of contactless card payments itself took off in 2013-14 after they started to be accepted on London buses and trains (offering a small but meaningful improvement in convenience over the existing 'Oyster' charge-cards), and they now account for 37% of all payments in the UK.
18. The digital pound: A new form of money for households and businesses? | Bank of England.
19. Unlocking digital competition: Report from the Digital Competition Expert Panel (publishing.service.gov.uk).
20. Deposited paper DEP2023-0393 - Deposited papers - UK Parliament.
21. New forms of digital money | Bank of England.
22. Project Rosalind, completed in June 2023, focused on the API which connects a central bank's CBDC ledger with the private sector providers of wallets and other services. With a set of simple and standardised API functionalities, public and private sector collaborators developed more than 30 use cases. For example: (i) enhancing online shopping by reserving a buyer's funds at time of purchase and automatically releasing this to the seller only once physical delivery of goods is

confirmed, potentially enabling greater competition in online retail as consumers might be more confident to shop online with a merchant or platform they haven't heard of; (ii) allowing commuters to purchase train tickets and be refunded immediately and automatically if the train arrives late, rather than separately completing a form and the train company separately instructing the refund; (iii) developing voice-authenticated payments using a smart speaker, and (iv) paying for car- parking by the minute through a stream of 'micro-payments' rather than paying for a block of time that the driver doesn't use all of. Project Rosalind: building API prototypes for retail CBDC ecosystem innovation (bis.org).

23. The Libra Association's first White Paper in June 2019 proposed a stablecoin backed by a multi-currency basket. In April 2020, a second White Paper made a number of changes to the initial proposal, including proposing a series of stablecoins each backed by a single fiat currency (though the concept of a multi-currency stablecoin was still present as a "digital composite of some of the single currency stablecoins available on the Libra network"). The Libra Association rebranded as the Diem Association in December 2020. In May 2021, it moved its primary operations from Switzerland to the US, focusing on the dollar stablecoin.

24. An FCA-led registration regime for anti-money laundering and counter-terrorist financing has also been in place since January 2020 for firms providing certain cryptoasset services in the UK.

25. Future financial services regulatory regime for cryptoassets - GOV.UK (www.gov.uk).

26. Application of the Principles for Financial Market Infrastructures to stablecoin arrangements (bis.org).

27. High-level Recommendations for the Regulation, Supervision and Oversight of Global Stablecoin Arrangements: Final report - Financial Stability Board (fsb.org).

28. The EU's Markets in Crypto-Asset Regulation (MiCA) came into force in June. And earlier this year, the Monetary Authority of Singapore announced the features of a new regulatory framework for stablecoins regulated in Singapore.

29. The Bank is considering the risks and benefits of innovations in wholesale settlement, including the use of stablecoins for wholesale purposes, and will set out its views in due course.

30. Financial Stability in Focus: Cryptoassets and decentralised finance | Bank of England.

31. For example, whether the coinholder has a claim on the issuer as with banks, or whether the backing assets are held in a bankruptcy-remote custody arrangement for the benefit of coinholders.
32. A form of privately issued electronic money, 'e-money', already circulates, and may continue to circulate, in the UK under regulation and larger-scale e-money issuers are occupying a growing share of the market in the UK, in direct competition with commercial banks. E-money issuers are presently regulated by the FCA for prudential and conduct purposes under a specific regulatory regime. The FPC has previously noted that this regime would not meet its expectations if e-money were to be used for payments at systemic scale. And HM Treasury has said the current e-money regime is likely to be revised to ensure requirements keep pace with the ongoing evolution of the sector.
33. For example, were banks to issue deposit tokens that could circulate freely (like digital banknotes issued by private banks), holders would have a transferable claim on the issuing bank where, in payment transactions that involve a transfer of the token between individuals, the recipient becomes a customer of the issuing bank. This would raise some difficult issues, such as around how a bank would maintain a single customer view of those who hold its liabilities in order to facilitate a rapid deposit insurance payout were the bank to fail, and around how banks would satisfy 'know your customer' requirements to prevent money laundering and terrorist financing.

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A theory of trade policy transitions

Renee Bowen, Lawrence Broz and Peter Rosendorff explore the major transitions in US trade policy since the Civil War, and demonstrate that shocks like the Civil War and the Great Depression pave the way for trade policy transitions

The history of US trade policy has featured two major political parties taking opposing stands on trade. Transitions between protectionism and reciprocal free trade are rare because they require fundamental realignments in party politics, global economic conditions, and the status quo. This column explores the major transitions in US trade policy since the Civil War. Shocks like the Civil War, the Great Depression, World War II, and now the rise of China disrupt party structures, the availability of transfers, and global conditions, and pave the way for trade policy transitions.

In 2018, the US unilaterally imposed tariffs of between 10% and 50% on imports from several countries and across a variety of goods (Fajgelbaum *et al* 2019). This marked a significant departure from the previous 75 years of trade policymaking, which had relied on a rules-based, multilateral system of reciprocity to obtain persistently low tariffs.

This return to protectionism is echoed in the current Biden administration, where the tariffs on China remain in place, the WTO remains hamstrung, and there is an explicit move to industrial policy in the US, with the surge of subsidies for favoured industries.

Both political parties appear to have converged on a policy shift towards protectionism, in contrast to most of the history of US trade policy (Irwin 2017), where the Democratic or Republican parties have stood in opposition to the tariff. In a recent paper, we explore this bipartisan retreat from reciprocal trade liberalisation, as well as other major transitions in US trade policy since the Civil War (Bowen *et al* 2023).

Unlike the standard view, which is elegantly captured in the 'Protection for Sale' model by Grossman and Helpman (1994), we incorporate domestic bargaining between political parties, transfers, and reciprocity. This model of political bargaining between two parties supplements a standard two-good, two-factor, two-country trade model, and offers a foundation for understanding 160 years of US trade policy.

It has as its primitives the status quo domestic tariff and transfer levels, the interests of the agenda-setting party, and economic conditions abroad (the foreign tariff and the size of the foreign export sector). Political conditions determine the identity and interests of the agenda setter, and any offer the agenda setter makes to the rival political party must be no worse (for either party) than that available under the status quo tariffs and transfers.

While this status quo bias leads to long periods of policy stability, significant political and economic shifts can be large enough to fundamentally change trade policy outcomes.

The rise of China means that import-competing firms, and workers in those firms, see their welfare decline. Greater and greater transfers are required to maintain the free trade consensus

The history of US trade policy has featured two major political parties taking opposite stands on trade, one party representing the globalists and the other, the protectionists. At times the Republican Party is protectionist; at other, globalist. The same is true of the Democratic Party.

Figure 1 plots an index of party control with red and blue bars (Lee 2016), and the evolution of average tariffs on dutiable imports in the US in green from 1859 to 2021. The index of party control is the average of the Democratic Party's share of the total national popular vote for president and House and Senate seats.

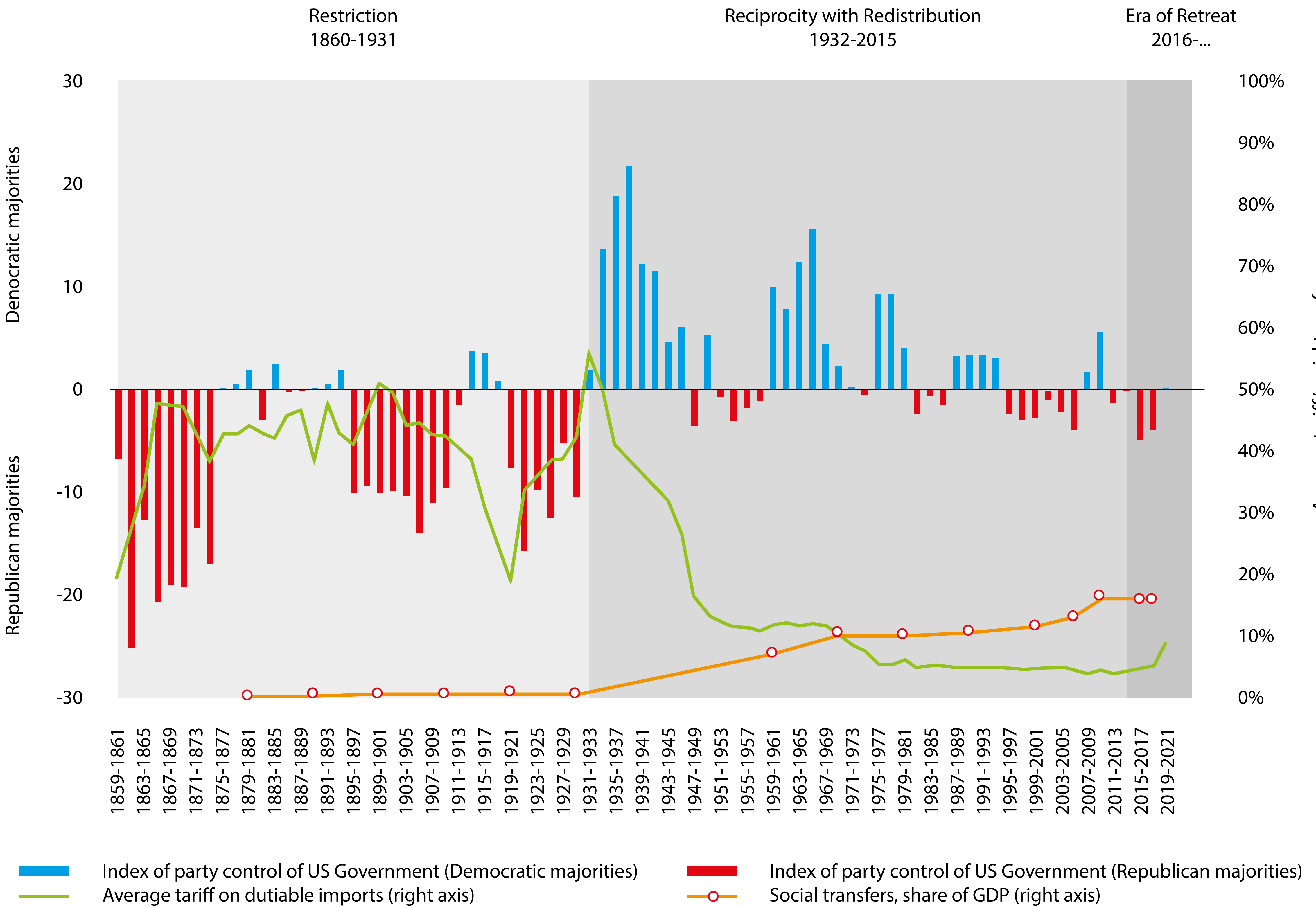
We subtract 50 from the average to differentiate Republican Party majorities (red bars below the zero line) from Democratic Party majorities (blue bars above the zero line).

Three distinct eras of trade policy are evident in Figure 1. From the end of the Civil War to the Great Crash of 1929, US trade policy was characterised by relatively high tariffs; like Irwin (2020), we describe this as the 'Era of Restriction'.

As the red bars in this first era indicate, the Republican Party, representing the import-competing North, held agenda-setting authority. Prior to the Civil War, the tariff was low, and was not a major source of revenue; postbellum, the protectionist northern Republicans proposed a higher tariff, which was agreed to by the southern and western Democrats motivated by sharing in the tariff revenues.

Consistent with our model, political bargaining across parties with divergent interests, given a status quo of low foreign tariffs and protectionism at home, resulted in unilateral protectionism. The usual terms-of-trade arguments led to a desire for high tariffs for both globalists and protectionists. Without the need to incentivise trading partners to lower tariffs (because they are already low), unilateral protection results.

Figure 1. US party majorities, average tariffs, and social transfers, 1859–2021



After the stock market crash of 1929 and the onset of the Great Depression, the Democratic Party swept the 1932 election and became the dominant party, as evidenced by the blue bars in Figure 1 through this period. The Democrats continue to represent export-oriented agriculture while the Republican Party still represents import-competing industries.

By this time, foreign tariffs had risen dramatically in response to the Smoot-Hawley Tariff Act of 1930. When foreign tariffs are high, both parties benefit from a shift to reciprocal free trade, as long as transfers to the losers from liberalisation are large enough. Figure 1 shows a dramatic drop in the average tariff during the period we label the 'Era of Reciprocity with Redistribution'.

Also evident in Figure 1 is the orange line with markers, showing the rise of social transfers from effectively zero to almost 20% of GDP in this period. A striking feature of the US political economy in the 20th century is the emergence of a transformative social safety net and government investment in public assistance.

Unemployment insurance, social security, a health insurance system, a public education system, and trade-related programmes such as Trade Adjustment Assistance all become part of the 'Reciprocity with Redistribution' era.

Reciprocal free trade emerges and persists when the adversely affected can be compensated; but there is no guarantee that sufficient transfers are available in a political equilibrium, especially in a globalised world. The social compact is contingent.

While Democratic Party dominance in government declines towards the end of the 20th century, and the Democrats become less committed to the liberalisation enterprise, conditions for a switch back to protectionism did not emerge. When the status quo is free trade with transfers, and as long as the transfers reach a minimum threshold, neither party would propose a shift back to protectionism.

Even though Democratic commitment to free trade wanes towards the end of this period (and Republican protectionism has yet to take full effect) there is no political bargain available to either party to reverse the reciprocal liberalisation of the era. Export interests prefer to fund social transfers to the degree that keeps the import-competitors relatively indifferent to a return to protectionism.

This all changes in the first two decades of this century. Since China's accession to the WTO in 2001, its economy has grown at an annualised rate of more than 6% per year. The US share of the world's capital stock has declined precipitously, from above 80% at the end of World War II to less than 15% currently, while China's share has risen to exceed that of the US.

As China became relatively capital abundant, its exports of manufactured goods caused major dislocations for US manufacturers. At this time the status quo policy is free trade with transfers, and, as predicted by the theory, this can only be sustained if the transfers are large enough.

The rise of China means that import-competing firms, and workers in those firms, see their welfare decline. Greater and greater transfers are required to maintain the free trade consensus.

Figure 1 shows that transfers stagnated in this period. The Republican Party, which takes over as agenda setter in 2016, proposes a unilateral tariff – which protects declining workers and industries and reduces the transfers the globalists must pay to sustain openness. In the post-2016 'Era of Retreat', stagnating transfers are associated with bipartisan agreement to raise tariffs, a consensus that continues to the current day.

Transitions between protectionism and reciprocal free trade are rare in US history because they require fundamental realignments in party politics, global economic conditions, and the status quo. Shocks like the Civil War, the Great Depression, WWII, and the rise of China disrupt party structures, the availability of transfers, and global conditions, thereby paving the way for trade-policy transitions.

An important question for future research is whether it will be possible to expand transfers to the extent necessary to restore the bargain of reciprocal free trade. ■

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The new economics of industrial policy

Industrial policy is at the heart of modern economic policy. Réka Juhász, Nathaniel Lane and Dani Rodrik assess the latest research and consider how to do industrial policy well

Industrial policy is at the heart of the current economic discourse, propelled by major legislative acts from the Biden administration. This column presents an analysis of the 'New Economics of Industrial Policy', synthesising emerging literature to understand these complex policies. It highlights the broader objectives of modern industrial policy, extending beyond traditional sectoral support. Key findings suggest a generally positive impact of these policies, with nuances in implementation and efficacy. For a full efficiency evaluation of industrial policy, future theoretical work, informed by careful empirical work on a case-by-case basis, is called for.

The rise of 'Bidenomics' and its signature economic legislations, such as the Infrastructure Investment and Jobs Act (IIJA), Creating Helpful Incentives to Produce Semiconductors Act (CHIPS), and Inflation Reduction Act (IRA), has thrust industrial policy to the fore of economic policy discussions.

With similar packages emerging across the OECD and beyond, there is renewed interest in understanding the workings of industrial policy. What exactly is an industrial policy? How do we measure it? And how do we evaluate it? An emerging literature in economics, which we call the New Economics of Industrial Policy, is making sense of this landscape with new tools and insights.

In a recent paper (Juhász *et al* 2023), we attempt to clarify the discussion around these complex policies and synthesise the emerging literature. New work has made important methodological headway in understanding the basics of policy practice and in evaluating the efficacy of policies. The emerging picture, generally, paints a more positive view of industrial policy – but also highlights important nuances.

What is industrial policy?

We define industrial policies as those government policies that explicitly target the transformation of the structure of economic activity in pursuit of some public goal. Importantly, these policies are selective; they target some activities, but not others.

Moreover, they are intentional in the sense that changing the structure of the economy is what they want to do. As such, industrial policy can be many things – our definition includes the targeted sectoral policies with which they are typically associated (eg. support for steel, automobiles, shipbuilding, or semiconductors), but it also includes support for other targeted forms of intervention, such as R&D or exporting.

Industrial policy is not that different from many other domains of public policy choice […] where the justifications for government intervention are well-established

Likewise, the goals of industrial policy may be broad. While historically, these policies were primarily aimed at facilitating structural transformation and industrialization in particular, today, goals include climate goals, the creation of 'good jobs', supply chain resiliency, national security, and more.

What is the rationale for intervention?

The economic rationale for industrial policy falls into three main categories:

1. market failures such as positive externalities which imply that the market will not provide enough of a positive activity (for example, modern manufacturing, green energy, good jobs);

2. coordination failures whereby a desirable activity may only be individually profitable if everyone else is also producing; and

3. the provision of activity-specific public inputs which are public goods (for example, the charging infrastructure needed for the uptake of electric vehicles).

The controversy surrounding industrial policy is often less about theoretical rationales – which are broad – and more about practicalities. Sceptics worry that the cure will be worse than the disease. There are two broad concerns:

1. information problems which prevent even a well-intentioned government from picking the correct activities to target; and

2. political capture, which implies that even if the government knows which activities to target, self-interested actors will divert the government away from those that create benefits to society at large.

Both reasons create doubt about whether governments can 'pick winners'.

We acknowledge these challenges, yet argue that the ultimate test of the effectiveness is not whether governments can 'pick winners' but whether they are able to 'let losers go'. Although cutting losers ex post may be difficult, it is far less demanding than governmental omniscience in selecting winners ex ante.

In this sense, we would argue that industrial policy is not that different from many other domains of public policy choice (education policies, stabilization policies, etc.) where the justifications for government intervention are well-established (human capital externalities, Keynesian 'rigidities') but what works is not obvious. Yet, unlike industrial policy, debates in these arenas typically focus on *how* to do policy well, not *whether* policy should be attempted.

While economists turned away from the study of industrial policy, the world kept using them. In fact, industrial policies are ubiquitous – and growing. Recent work measuring industrial policy using innovative methods (De Pippo et al. 2022, Juhász *et al* 2022, Criscuolo *et al* 2022) consistently finds that industrial policies in Western economies are widespread.

For all these reasons, rather than trying to persuade policymakers to avoid them, economists should study them in order to inform the question of how to do industrial policy better. The New Economics of Industrial Policy is doing just that.

Evaluating industrial policies

Indeed, the need for careful work is pressing and evaluating industrial policy requires confronting some fundamental empirical issues. For instance, consider two types of governments: a rent-seeking one beholden to special interests and a technocratic one intervening to correct market failures. Rodrik (2012) shows that with observational data alone, one cannot distinguish the two types of governments.

These issues, and those documented by Rodrik and Rodriguez (2001) and Lane (2020), highlight the myriad of ways observational data alone can be uninformative about policy efficacy.

In addition, the canonical empirical exercise whereby the researcher is able to extract the orthogonal, 'accidental' component of an industrial policy for evaluation may not fully resolve empirical problems either.

The sceptic of industrial policy may argue that an evaluation of the random allocation of industrial policy misses all the practical (informational and political capture) challenges associated with implementing industrial policy in the real world. Optimists see ways to still recover useful quantities from the endogenously placed policy.

New, well-identified work deals with the tension between the search for exogenous variation and real-world relevance by isolating different layers of treatment. One layer, which we call the 'economic mechanism' evaluates the question of whether the justification for industrial policy is valid, ie. is the market failure for the targeted activity large?

For example, Juhász (2018) evaluates the infant industry argument in 19th-century France using the disruption to trade resulting from a blockade against Britain. Although the paper does not address contemporary policy, the paper demonstrates that the infant industry can be a powerful economic mechanism in the real world.

A second layer involves evaluating a narrow version of the efficacy question: Did the firms/industries/sectors promoted by policymakers respond in the intended direction? Recent work has been informative on this margin as well.

The credibility revolution has finally arrived in research on industrial policy

We review the findings from papers that use reduced-form research designs to evaluate three types of industrial policy: infant industry, public R&D, and place-based industrial policy. First, three recent papers (Juhász 2018, Hanlon 2020, Lane 2022) evaluate episodes that mimic cases of textbook infant industry in technological follower countries. Each paper finds some support that infant industry promotion led to increased activity in the targeted sector, though to different degrees.

Lane's (2022) study of the heavy and chemicals industry drive in 20th-century South Korea produces the clearest example of a country drastically shifting its comparative advantage using industrial policy tools.

Second, two new papers provide a fairly positive take on the scope for large-scale public R&D efforts to have large local and, more speculatively, aggregate effects (Gross and Sampat 2023, Kantor and Whaley 2023). These papers study canonical episodes of 'moonshots' in the US and show, that during times of national crisis, the US government was able to choose technologies, places and firms that delivered the desired outcomes. Moreover, while this was not the main intention of the policies, the papers also find evidence of long-lasting positive (mostly local) effects.

Third, a great deal of new work finds that place-based industrial policies (PBIPs) often lead to outcomes consistent with the intentions of policymakers in both lagging and declining regions. Historical natural experiments point to the potential for local manufacturing activity to spur local structural transformation and income gains that last generations (Mitrunen 2021, Garin and Rothbaum 2022).

Work on European PBIPs for economically distressed regions (Criscuolo *et al* 2019, Cingano *et al* 2022) suggests that PBIPs can help with manufacturing job growth (in reality, dampening the decline). Similarly, policies targeted at lagging regions also find positive, and often long-lasting effects through the creation of self-sustaining agglomerations (La Point and Sakabe 2021, Incoronato and Lattanzio 2023, Cerrato 2023).

Learning from the East Asian miracle

New work on industrial policy also moves the debate forward on the controversy over the role of industrial strategy and the East Asian economic miracle. The Asian miracle constitutes not only one of the most important episodes of modern economic development, but it remains the focal point of debates surrounding the efficacy and desirability of industrial policy.

A string of new studies, starting with Lane (2022), turns to South Korea's Heavy-Chemical Industry Drive (HCI). These studies find that policy promoted the growth and export development of targeted industries, both in the short and long run (Lane 2022), with considerable long-run welfare gains (Choi and Levchenko 2022), though possibly at the cost of increasing misallocation in the economy (Kim *et al* 2022).

Quantitative work by Ernest Liu (2019) provides a useful guide for policymakers confronting the challenge of picking which industries to target, in an economy where market imperfections occur across linked sectors. Liu provides off-the-shelf sufficient statistics for optimal targeting, and his framework shows that, in certain settings, subsidizing upstream sectors minimizes policy mistakes.

Liu shows that actual policies used in China and South Korea's HCI correspond to his statistics, suggesting that the informational problems of policymakers may not be insurmountable.

New empirical work, led by Aghion *et al* (2015), has only begun to scratch the surface of China's more recent industrial policy. Bai *et al* (2022) explores the impact of Chinese quid-pro-quo style FDI and study spillovers from foreign joint ventures to domestic firms. Relative to unrestricted FDI, they estimate that the quid-pro-quo FDI improved the quality of affiliated domestic models and raised their sales.

Deep work on Chinese shipbuilding by Kalouptsidi (2018) and Barwick *et al* (2019) point to the importance of policy design. Barwick *et al* (2019) shows how not all policy levers were efficacious: while production subsidies and investment subsidies may have been useful, entry subsidies led to inefficiencies in the shipbuilding sector.

Conclusions

After years on the periphery in economics, industrial policy is now the subject of an emerging strand of research. Although nascent, the New Economics of Industrial Policy is providing a more productive assessment of industrial policy – one potentially up to the task of informing questions about how to do industrial policy well.

This work unpacks diverse industrial policy episodes uncovering how success hinges on critical design details and economic context. While much of this new work utilises state-of-the-art reduced-form methods, we conclude by noting that these methods fall short of providing a full efficiency evaluation of industrial policy, which requires a model. Future work should move to tackling these challenges, informed by careful empirical work on a case-by-case basis. ■

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Generative AI, productivity, the labour market, and choice behaviour

Lisa Cook discusses the benefits of generative AI, which can fuel economic growth, but also considers the potential disruptions

I am excited to discuss AI and its prospective effects on productivity and the labour market. Outside of those of us who have spent many years researching the economics of innovation, it seems that AI is having a moment. The surge in excitement and trepidation about AI is palpable. Google searches for 'AI' have tripled worldwide since 2022, fuelled by the buzz about ChatGPT. Of course, this group saw it coming as early as 2017, when the first NBER AI conference was held here in Toronto, and many of you saw it coming much earlier than that.

I will focus my remarks on generative AI, which creates new content largely in response to natural language prompts. As this audience knows, image and text classification—discriminative AI—has been in use for many years and is remarkably effective. I have used it to identify demographic characteristics of entrepreneurs in my own research[1].

In contrast, effective generative AI is a very recent development and seems to be a leap forward into something new. Applications of generative AI range from the prosaic, like reducing the monotony of writing routine memos, to the wonderous, like protein structure prediction and drug discovery.

Of course, experts emphasize that at their core, all forms of AI are an exercise in prediction, and technically that is true[2]. To the layperson, though, a chatbot that is nearly good enough to pass the Turing test is substantially different from the US Postal Service using AI to read your handwriting.

Some of the uses of generative AI may be unsettling. For example, concerns about the ability of generative AI to impersonate individuals to harm their reputation or violate their privacy exist and are growing.

Moreover, observers have noted that AI models sometimes harbour, if not amplify, the biases found in their training data, leading to malign effects on decisions about mortgage approvals, insurance rates, medical diagnoses, and even pretrial detention[3]. And discrimination is not just an equity issue—it also holds down economic growth, as I show in my own work[4].

The range of potential social effects of AI is wide, as will be explored in the next presentation[5]. In general, I am optimistic about broad benefits accruing to the economy and society from the use of generative AI—including

The potential for far-reaching changes to the economy from generative AI is clear, but the pace and extent of the changes will depend on the choices made by workers, managers, and policymakers more productive and less tedious work in offices, labs, factories, and warehouses—provided we address the very real concerns I just mentioned, and others like them.

As we consider how to foster the emerging benefits of AI and guard against unwelcome harms, it is important to keep in mind that the path from innovation to greater welfare passes through the choices of individuals in a social context—in the corner office, in government, and in the minds of workers and consumers—and progress could stall or accelerate in any of these places.

I will return to this point later after offering some thoughts on the potential for AI to affect productivity and the labour market.

Why do I focus on AI as a monetary policymaker? The Federal Reserve's dual mandate is to promote maximum employment and stable prices. When firms deploy technologies that make workers more productive, they create the conditions for greater wage growth consistent with stable prices. And the labour market adjustment that follows as the economy adapts to technical change can affect maximum employment.

AI and productivity

The impact of AI on the economy and monetary policy will depend on whether AI is just another app or something more profound. The most consequential innovations in the past have been general purpose technologies that have broadly transformed the economy over an extended period of time.

We are living through the ongoing transformation fuelled by electronic information technology, for example, and electrification had a similar effect in the early 20th century.

General purpose technologies have three key features: (1) they are widely used across the economy, (2) they improve steadily over a long period of time, and (3) they raise the productivity of research and development (R&D)[6]. Could generative AI have these features? I will consider each in turn.

First, is generative AI widely used? It is easy to see the potential, and we seem to be headed for widespread use. Generative AI makes communication more efficient, and nearly all human activities—and all industries—involve communication. It is true that if you let generative AI draft an email, write the minutes of a meeting, or research a topic, you will have to review, fact-check, and edit the result.

Nonetheless, thanks to AI's contribution, you may be much closer to your goal when you start than if you began with a blank page. Empirical evidence is still patchy, but there is work showing that generative AI improves productivity in a variety of settings, including computer coding, customer service, language translation, and robotics[7].

Second, will AI itself improve steadily over time? If we look backward, we can see that although the history of the computer language models at the core of generative AI goes back at least to the 1950s, there has been an explosion of technical progress in very recent years as LLMs, or large language models, using neural networks have emerged.

Whether that explosive progress can be sustained is an open question, although the concerted efforts here in Toronto and elsewhere bode well for continued innovation. To draw an analogy, the sustained progress in solid-state electronics correctly predicted by Gordon Moore in 1965 looks like a law from a distance.

But, in reality, each new generation of chip technology represents the coordinated effort of hundreds of scientists and engineers solving seemingly intractable problems[8]. Continuing advances in model architecture, data curation, and computation will be essential for the continual improvement of AI models and implementation.

Third, does generative AI make R&D more productive? Some potential for efficiency improvements in the scientific process when it comes to literature review and writing is obvious. Yet AI can go much deeper, discovering patterns in data and in previous research to generate hypotheses for testing that may not have occurred to researchers. Work by Ludwig and Mullainathan on exactly this topic will be presented shortly.

All told, generative AI seems promising as a general-purpose technology. Of course, you will get a much deeper dive into this question later this morning with the Eloundou, Manning, Mishkin, and Rock presentation.

In their work, they find that 80 percent of the US workforce will see at least some of their tasks transformed by generative AI. The authors of that paper do not take a stand on how fast this transformation will take place. Nor will I.

However, we do know that historically the journey from innovation to productivity has sometimes been a long and uneven one. An often-cited example is the electric dynamo, which was first used in the US in the 1890s but did not boost manufacturing productivity until the 1920s[9]. Things now are a bit more hopeful than that example suggests, though: The lag between invention and adoption has been substantially reduced since the 19th century[10].

Adoption of generative AI is certainly happening at a rapid clip. Even so, the full benefit of a technology only follows adoption when suitable complementary investments have been made[11]. These can include changes in corporate structure and management practices, worker training, and the adjustment of the mix of capital in use.

On the last point, we may have a head start, as AI will be deployed in a world with a massive stock of information technology already in place. New business formation will surely play a role as well, as historically much of productivity growth has followed from the entry of firms starting with a clean slate—and the exit of firms that were slow to adapt[12].

Labour market effects

As with all revolutionary technologies, when we turn our attention from productivity to the labour market, many express concern, focusing on jobs that may disappear, while others focus on which jobs will replace them. Economic history suggests cautious optimism here. When the world switched from horse-drawn transport to motor vehicles, jobs for stable hands disappeared, but jobs for auto mechanics took their place[13].

New technologies may displace some types of labour, but they can also raise the productivity and incomes of jobs they create or complement. The increase in consumption that follows may raise demand for labour overall. Nonetheless, the displacement effect might be concentrated and the productivity effect more diffuse.

Therefore, while many workers throughout the economy benefit, a smaller set bear the brunt of the negative effects. Just as the introduction of computerized machine tools replaced skilled machinists and personal computers made many routine clerical and administrative jobs obsolete, the widespread adoption of AI will be a difficult transition for some workers[14].

But the labour market effects of technological change are more subtle than just creating and eliminating positions. Labor economists encourage us to think of work in terms of tasks, not jobs[15].

As firms rethink their product lines and how they produce their goods and services in response to technical change, the composition of the tasks that need to be performed changes. Here, the portfolio of skills that workers have to offer is crucial. Can you shift to a new position that requires a different mix of your skills?

For workers with a diverse skill set, and for workers with broad skills, like critical thinking and project management, the answer may well be 'yes'. For others, like the stable hand who was highly skilled in grooming horses, the answer may be 'no'[16].

The ability of workers to move to where they are needed as the task composition of production changes will also be an important determinant of how successfully the economy adapts to the new jobs created in response to AI.

For example, how quickly will education and training react to the market signals of the skills that are needed? How will AI affect the range of skills required within firms and how will firms restructure in response? And how efficiently will the labour market match job seekers to suitable vacancies?

While the Federal Reserve does not have a role in setting policies to help workers directly, I do not want to suggest that this transition will be easy or painless. Any large change in the labour force will generate disruptions and challenges that will need to be addressed to help workers adapt and thrive.

The benefit of AI to society as a whole will depend on the adaptability of workers' skills, how well they are retrained or redeployed, and how policymakers choose to support the groups that are hardest hit by these changes.

Choice behaviour

The potential for far-reaching changes to the economy from generative AI is clear, but the pace and extent of the changes will depend on the choices made by workers, managers, and policymakers. AI makes predictions, but AI does not make choices. Ultimately, human beings are still in control.

For workers, preparing for the AI-enhanced economy is a tricky task. What should students focus on in school? What college and university courses should be developed and mandatory? What kinds of continuing education are needed?

It is safe to say that generative AI will make knowledge work more efficient—a worker can do more research, communication, design, and the like in a day. And, while some observers might warn that means fewer such workers, it is more likely we will need more of them.

After all, when knowledge workers can accomplish more in an hour, firms have an incentive to use more of them, not fewer. So the demand for STEM skills will be robust, as it has been throughout the information age, but AI technology may strengthen the rising demand for social skills as well[17].

Some of the job titles will be brand new. A search for 'generative AI' jobs on Indeed.com early this week found over 2,000 listings, including such titles as 'prompt engineer' and 'newsroom generative AI lead'.

Among firms, success deploying AI will depend on strategic decisions, such as investing in training, reorganization, and product development. Financing will need to be available to existing firms that appear to best leverage the potential of AI and to the innovative new firms that will surely appear with AI-based business models.

Policymakers, too, at all levels of government, will have to confront the changing world. Importantly, in the policy arena—as well as health care, consumer finance, insurance, and many others—decisionmakers have legal and ethical duties to be deliberate about the effects their choices have on affected groups. In this context, an AI black box with no insight into the decision-making process is of limited value.

As a policymaker, I look upon model-generated forecasts with a sceptical eye, if they are not coupled with a plausible explanation for the driving factors behind them.

More generally, when stakeholders have an opportunity to appeal a decision, they are entitled to understand how the decision was made—an issue I emphasized when I spoke at the 2018 meeting of this group[18]. So I am particularly interested in seeing progress on 'explainable AI', which may help bridge the divide between the technical sphere and the user[19].

In short, the impact of generative AI, as with all technical change, has to be understood in terms of human choice behaviour in specific social and institutional contexts. Generative AI will change the choice set available to consumers, firms, and policymakers. As it happens, because economists study choice behaviour, we are well positioned to contribute to the debate about AI and welfare and to anticipate the trajectory of this exciting trend.

Some questions you might consider include: Are there ways to limit the labour-force disruptions of AI while capturing its job-creating potential? What new training and skill development will be needed to capture AI's benefits? Can productivity measures be improved to better capture how quickly AI is affecting the economy?

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Endnotes

1. See Lisa D Cook, Matt Marx, and Emmanuel Yimfor (2022), "Funding Black High-Growth Startups," NBER Working Paper Series 30682 (Cambridge, Mass.: National Bureau of Economic Research, November).

2. On AI as prediction, see Ajay Agrawal, Joshua S Gans, and Avi Goldfarb (2019), "Artificial Intelligence: The Ambiguous Labor Market Impact of Automating Prediction," Journal of Economic Perspectives, vol. 33 (Spring), pp. 31–50.

3. On criminal justice, see Laurel Eckhouse, Kristian Lum, Cynthia Conti-Cook, and Julie Ciccolini (2019), "Layers of Bias: A Unified Approach for Understanding Problems with Risk Assessment," Criminal Justice and Behavior, vol. 46 (February), pp. 185–209. For a broader discussion of bias mitigation in AI, see Xavier Ferrer, Tom van Nuenen, Jose M Such, Mark Coté, and Natalia Criado (2021), "Bias and Discrimination in AI: A Cross-Disciplinary Perspective," IEEE Technology and Society Magazine, vol. 40 (June), pp. 72–80.

4. See Lisa D Cook, Janet Gerson, and Jennifer Kuan (2022), "Closing the Innovation Gap in Pink and Black," Entrepreneurship and Innovation Policy and the Economy, vol. 1, pp. 43–66.

5. See Charles I Jones (2023), "The A.I. Dilemma: Growth versus Existential Risk," working paper, September 12.

6. For the definition of general-purpose technology, see Boyan Jovanovic and Peter L. Rousseau (2005), "General Purpose Technologies," in Philippe Aghion and Steven N Durlauf, eds., Handbook of Economic Growth, vol. 1B (Amsterdam: Elsevier), pp. 1181–224.

7. Empirical papers providing evidence of the effectiveness of generative AI span a variety of tasks, including financial services, computer programming, call centres, and writing. For financial services, see Tracy Yang, Tian Lu, Beibei Li, and Lu Xianghua (2020), "Personalizing Debt Collections: Combining Reinforcement Learning and Field Experiment," ICIS 2020 Proceedings, December 14. For computer programming, see Sida Peng, Eirini Kalliamvakou, Peter Cihon, and Mert Demirer (2023), "The Impact of AI on Developer Productivity: Evidence from GitHub Copilot (PDF)," unpublished paper, Cornell University, arXiv, February. For call centres, see Erik Brynjolfsson, Danielle Li, and Lindsay R Raymond (2023), "Generative AI at Work," NBER Working Paper Series 31161 (Cambridge, Mass.: National Bureau of Economic Research, April). For writing, see Shakked Noy and Whitney Zhang (2023), "Experimental Evidence on the Productivity Effects of

Generative Artificial Intelligence," working paper, March 10; Emma van Inwegen, Zanele T Munyikwa, and John J Horton (2023), "Algorithmic Writing Assistance on Jobseekers' Resumes Increases Hires," NBER Working Paper Series 30886 (Cambridge, Mass.: National Bureau of Economic Research, January).

8. See Hassan N Khan, David A Hounshell, and Erica RH Fuchs (2018), "Science and Research Policy at the End of Moore's Law," Nature Electronics, vol. 1 (January), pp. 14–21. Moore's initial prediction was later revised to state that the number of components on a cost-effective integrated circuit would double every two years. See Gordon E Moore (1965), "Cramming More Components onto Integrated Circuits," Electronics, vol. 38(8), pp. 114–17; Gordon E Moore (1975), "Progress in Digital Integrated Electronics," Technical Digest 1975, International Electron Devices Meeting, IEEE, pp. 11–13.

9. See Paul A David (1990), "The Dynamo and the Computer: An Historical Perspective on the Modern Productivity Paradox," American Economic Review, vol. 80 (May), pp. 355–61.

10. See Diego Comin, Danial Lashkari, and Martí Mestieri (2021), "Structural Change with Long-Run Income and Price Effects," Econometrica, vol. 89 (January), pp. 311–74.

11. See Erik Brynjolfsson, Daniel Rock, and Chad Syverson (2021), "The Productivity J-Curve: How Intangibles Complement General Purpose Technologies," American Economic Journal: Macroeconomics, vol. 13 (January), pp. 333–72.

12. See Ryan Decker, John Haltiwanger, Ron Jarmin, and Javier Miranda (2014), "The Role of Entrepreneurship in US Job Creation and Economic Dynamism," Journal of Economic Perspectives, vol. 28 (Summer), pp. 3–24.

13. See Georgios Petropoulos (2018), "The Impact of Artificial Intelligence on Employment," in Max Neufeind, Jacqueline O'Reilly, and Florian Ranft, eds., Work in the Digital Age (London: Rowman & Littlefield International), pp. 119–32.

14. See Leah Platt Boustan, Jiwon Choi, and David Clingingsmith (2022), "Automation after the Assembly Line: Computerized Machine Tools, Employment and Productivity in the United States (PDF)," NBER Working Paper Series 30400 (Cambridge, Mass.: National Bureau of Economic Research, August; revised October); David H Autor and David Dorn (2013), "The Growth of Low-Skill Service Jobs and the Polarization of the US Labor Market," American Economic Review, vol. 103 (August), pp. 1553–97.

15. See David H Autor, Frank Levy, and Richard J Murnane (2003), "The Skill Content of Recent Technological Change: An Empirical Exploration," Quarterly Journal of Economics, vol. 118 (November), pp. 1279–333; Daron Acemoglu and Pascual Restrepo (2018), "The Race between Man and Machine: Implications of Technology for Growth, Factor Shares, and Employment," American Economic Review, vol. 108 (June), pp. 1488–542.

16. On the difficulty faced by workers with eliminated jobs, see David Hummels, Jakob R Munch, Lars Skipper, and Chong Xiang (2012), "Offshoring, Transition, and Training: Evidence from Danish Matched Worker-Firm Data," American Economic Review, vol. 102 (May), pp. 424–28.

17. See David J Deming (2017), "The Growing Importance of Social Skills in the Labor Market," Quarterly Journal of Economics, vol. 132 (November), pp. 1593–640.

18. See Lisa Cook (2018), "The Consequences of AI-Based Decisions or Outsourcing Tasks When Humans Fail," presented at the NBER Economics of Artificial Intelligence Conference 2018, Toronto, September 13–14.

19. See Pantelis Linardatos, Vasilis Papastefanopoulos, and Sotiris Kotsiantis (2021), "Explainable AI: A Review of Machine Learning Interpretability Methods," Entropy, 23, 18.

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Economic warfare: lessons from two World Wars

Present-day sanctions have their origins in economic warfare in the two World Wars. Mark Harrison reviews that experience and the lessons we can learn

What may sanctions be expected to achieve? This question is currently fraught for two reasons. One is the proliferation of sanctions since Russia launched a full-scale war against Ukraine in 2022. With 13,000 sanctions in place against Russia alone (Atlantic Council 2023), sanctions and countersanctions are now everywhere.

Another reason is that the war continues and shows no sign of coming to an end. There is uncertainty over whether sanctions might have avoided the war, whether they can now sufficiently punish Russia for its aggression, or if they can contribute to Russia's defeat.

While some have drawn attention to the costs to the West of imposing sanctions (Hinz and Crozet 2016, Schropp *et al* 2022, Mei *et al* 2022) and the scope for Russia to mitigate or even shrug off the consequences (Oegg and Elliott 2008, Nigmatulina 2022, Cecchetti and Berner 2022), others have argued that Western sanctions were becoming increasingly effective (Bergelijk 2012) and may now have severe consequences for Russia (Ongena 2022, Simola 2022).

Recent historical writing has noted that present-day sanctions have their origins in economic warfare in the two World Wars, reflected in the setup of the interwar League of Nations and postwar United Nations (Dehne 2019, Mulder 2022). In a recent paper (Harrison 2023), I review that experience, asking what economic warfare was expected to achieve and whether these expectations were matched by results.

To begin, two clarifications are useful. One is that the purposes of economic warfare then were narrower than those of sanctions now. According to Giumelli (2011), sanctions aim to constrain, coerce, or signal.

In the two World Wars, economic warfare had one purpose: to weaken the adversary's fighting power by constraining the supply of war (Vickers 1943). It was not expected to signal or incentivise any course of action except surrender. Thus economic warfare concerns 'constraining' sanctions, which are a relatively small subset of today's sanctions.

In peacetime, constraining sanctions cannot be relied on to act alone; they must be combined with deterrence. In wartime, economic warfare does not win battles, but it helps to decide who will win them when they are fought

The other thing is that the experience considered by the literature is much narrower than it should be. Most of it is the experience of Germany in two World Wars. For that reason, Stephen Broadberry and I are currently engaged in a parallel project to bring together research on economic warfare from a wider sample of periods and conflicts.

Lesson 1. Modern economies were tough targets

Both wars saw horrifying attrition on the battlefield. Leaders on each side looked for ways to win a quick victory and stop the slaughter. At the start of the 20th century, as the world became increasingly globalised and interdependent, influential observers (Angel 1912, Bloch 1899) argued that modern industrial economies were vulnerable to naval blockade.

They thought a blockade could stop essential imports of food and materials, causing unemployment, famine, and collapse. They imagined the threat of blockade as powerful enough to prevent war.

This view became popular (and has never gone away). However, two World Wars proved it to be wishful thinking. While global trade was thoroughly disrupted, and civilian welfare declined, both wars saw sustained economic mobilisation on both sides.

Contrary to Bloch's expectation, it was the less modernised, more agrarian economies that saw the worst food shortages. Countries that dropped out early did so because they were defeated on the battlefield, not because their economies collapsed.

Those who expected the supply of war to collapse in the face of a sudden trade shock had the wrong model of economic interdependence. They imagined it as a chain of fragile links: disruption at any point would cause the entire chain to fail.

In fact, the modern economy was a resilient network. Firms and households could adjust to sudden shortages by economising and substitution. As a result, no shock to supply had the catastrophic effect that seemed likely at first sight.

Lesson 2. Economic warfare took time

In the two World Wars, it was anticipated that economic action would be fast – implicitly, fast enough to deter or pre-empt military action. In the outcome, the pace of economic action was frustratingly slow.

The first reason was that action against the adversary's economy turned civilian property and lives into targets. This flew in the face of international norms that protected civilian interests and the rights of neutral countries to trade with both sides. To erode the leaders' scruples and fears took time.

This was not the only obstacle. Another constraint was the available means. In WWI, Germany took nearly three years to build its fleet of operational submarines. Almost half of all Allied and neutral shipping losses were inflicted as late as 1917.

WWII was widely expected to begin with devastating air attacks on cities, but the blows traded in the war's first three years were puny by comparison with what was to come. Three-quarters of Allied bombs on Germany's economic targets fell in the war's last year. Thus, economic warfare was slow to unfold.

Finally, the impact of economic warfare was delayed by the adversary's adaptation. Trade could be diverted through neutral neighbours. The war effort could be protected by cutting back on less-pressing civilian uses of fuel, textiles, and metal goods. Substitutes could be found for many foods and materials previously thought of as irreplaceable.

Faced with sudden shortages, both producers and consumers made extraordinary efforts to make do with less. No commodity was truly essential at the margin (Olson 1963, Harrison 2022). As a result, the immediate effect on fighting power of any attack on supply was always less than anticipated, and often zero.

Lesson 3. Economic warfare was powerful – eventually

When attacking the economy had no immediate effects on the battlefield, bored observers and analysts tended to withdraw attention, concluding that there was nothing to see. After 1940, Hitler decided to scale down Germany's air attack on Britain's cities on these grounds (Overy 1977: 47).

Like others, he lost sight of a key point: economic warfare took time and required patience. Its effects were slow but cumulative. Eventually, adaptation encountered limits. Once the limits were reached, economic warfare sped up and became fast.

The limits were found in the civilian sphere. The goal of economic warfare was to deny resources to the adversary's war effort. The adversary's countermove was to protect the war effort by shifting the costs of adaptation onto civilians.

In the short run, as a result, it was civilian resources and reserves that were gradually depleted by economic warfare. Somewhere there was a constraint on civilian cooperation. When the constraint was reached, the damage done by economic warfare would rebound into the war effort.

In the case of Germany, both World Wars gradually depleted civilian resources by restricting consumption and nutrition. WWI saw many hunger deaths. In WWII, Germany fed itself at the expense of the occupied territories, but there were still food shortages and, from 1944, signs of raised mortality.

For WWII there are numerous estimates of the effects of bombing on German war production and fighting power (US Strategic Bombing Survey 1945, British Bombing Survey Unit 1998; see also Overy 1983, Tooze 2006). Many are self-serving and few are well identified.

The most evidence-led estimates were made by the British Bombing Survey Unit (1998); they relied on a mix of direct calculations and differences in differences. While sample sizes were small and robustness tests lacking, they suggested that the period in which German war production was fully protected from the effects of relatively light bombing lasted through the second quarter of 1943.

From mid-1943, protection became partial (heavier bombing began to depress total output, while war production fell by less). The final collapse of war production was brought about by an overwhelming air campaign against German transportation from the third quarter of 1944.

Lesson 4. The threat of economic warfare was also powerful

If economic warfare proved to be powerful ex post, then it should also be powerful ex ante. Embedded in the League of Nations was the belief that a credible threat of blockade could deter aggression (Dehne 2019, Mulder 2022). Recall that sanctions can constrain (as in economic warfare), coerce, or signal. A threat does not constrain; it coerces and/or signals.

How did that work out? In the interwar period, the threat of blockade worked to deter smaller powers from making war on their neighbours. The story of the great powers is different (Mulder 2022). The expectation of blockade did not deter Germany from starting WWI, or Germany, Italy, or Japan from starting WWII.

The Axis Powers did not neglect the likelihood of blockade. Rather, they directed and timed their aggression to pre-empt it. They planned to conquer territories that would guarantee the war supplies they needed, leaving them self-sufficient. Thus, the threat of economic warfare became an accelerant of aggression, not a deterrent.

If the threat of sanctions was a powerful signal, the problem was that the signal received was not the signal sent. The signal sent was: *"Economically we are strong, and you are weak. Comply, or we will starve you."* The signal received was: *"Our enemies are strong economically but weak militarily. Strike them now."*

Conclusion

In both World Wars, economic warfare was at centre stage, not on the sidelines. It helped to decide what battles were fought and who would win them.

In both wars, economic warfare was unavoidable. It was a phase of attrition (O'Brien 2015), not an alternative to it. In wartime, economic and military actions were complements, not substitutes. In peacetime, without war readiness, attempts to constrain the adversary by economic sanctions invited violent escalation.

This is not an argument against sanctions. In peacetime, constraining sanctions cannot be relied on to act alone; they must be combined with deterrence. In wartime, economic warfare does not win battles, but it helps to decide who will win them when they are fought. ■

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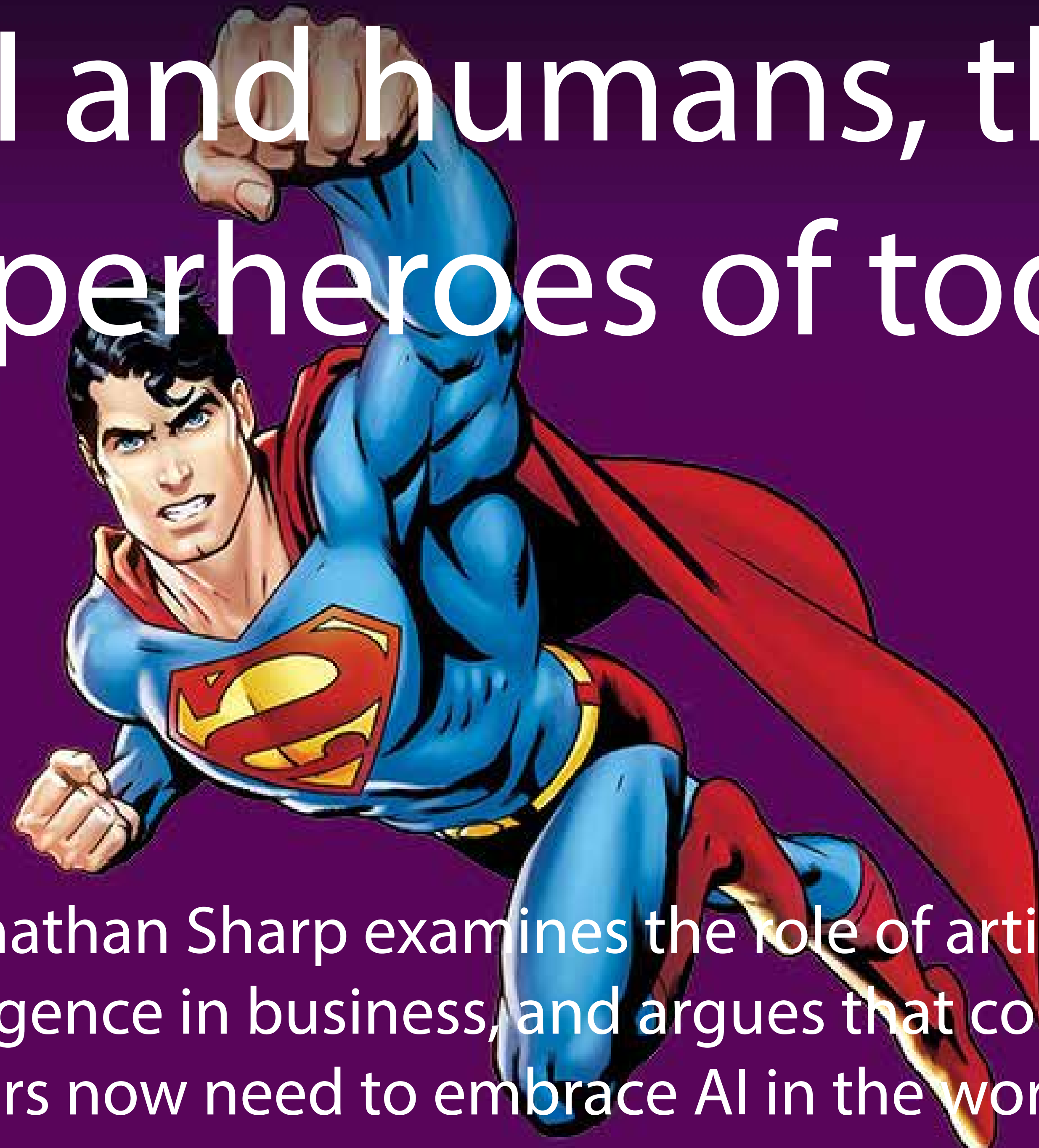
AI and humans, the superheroes of today



Jonathan Sharp examines the role of artificial intelligence in business, and argues that corporate leaders now need to embrace AI in the workplace

Businesses need to change the perception of AI from being the 'villain' to the invisible superhero that will augment employees' roles and create more jobs. McKinsey Global Institute estimates that as early as 2030 AI could contribute to the creation of 20 million to 50 million new jobs globally.

Leaders need to change strategies, look at where and why they need AI, re-deploying resources, and focusing on re-skilling and educating employees on AI. Leading like superheroes and empowering their team for transformation.

Stronger together

AI possesses extraordinary powers to transform and make a difference in the world with its superhuman characteristics such as exceptional speed, invisibility, agility, and genius level intellect beyond human capability. They are more akin to superheroes than villains, but superheroes and AI deployments also succumb to weaknesses because no one or nothing is perfect.

Yes, AI can read and interrupt data, predict trends and patterns, generate content, become your co-assistant, the list goes on and on. But it cannot do what humans do best, which is to form strategic, critical thinking, make emotional, rational, creative, and ethical judgements and decisions borne from human intuition.

By blending humans and AI together to act for good then you really do have a true superhero with superhuman powers to transform and improve the workplace forever!

"The only way to win is together," Iron Man.

Know your mission

Superheroes set out to make the world a better place, knowing what their mission is before they commence, understanding what their objectives are and seeing the end before they begin.

Digital transformation now sits top of the agenda and businesses need to know where in their organisation they want to deploy AI, why and what they want to improve, and what is the success criteria to measure the success of the project. Whether that's driven by cost-savings, increasing productivity or efficiencies, or improving the employee or customer experience.

This can be an overwhelming and daunting task so it is advisable to work with a consultative technology partner to work closely with you on your plan and the deployment of the solution.

"Part of the journey is the end," Tony Stark.

AI should no longer be seen as a complex or scary villain but as an invisible superhero that provides superhuman powers behind the scenes

Be brave

Every superhero is courageous and determined to face the obstacles that stand in their way, learning and growing in their quest to make a difference.

Managers, employees and customers are all somewhat fearful of AI for different reasons. Managers know that it will benefit them to streamline processes, increase productivity and efficiencies but they don't know what exactly they need it and how to deploy it. Employees are scared that it will take over their jobs and customers may be scared to use as it is new and different.

Humans are in control of AI and not the other way round, and AI needs humans to understand how it is going to be used and benefit employees' roles and the business. Managers can work with a solutions provider who will discover what your challenges are and how AI can solve them and benefit your business.

They need to instil to employees that AI will be used to assist employees with their jobs helping them be more productive and efficient by working with AI, making their roles easier but more fulfilling as they will be handing over the daily mundane tasks to AI. They should view AI as assistants to collaborate and learn with them.

For customers the AI option is just another choice in how they communicate with your business helping to improve the customer experience and increase revenue.

"There is a superhero in all of us, we just need the courage to put on the cape," Superman.

Leading with a superhero mindset

The deployment of AI requires the management team to fully advocate it and communicate to the business how it will benefit them for good and deliver improvements all round. They should lead like a Superhero by empowering and supporting employees through the change.

Empower and involve employees in designing an AI solution helping to reduce the fear factor by understanding how they think AI can improve and facilitate their roles and what challenges they are experiencing. By involving them from the offset you will get buy-in which will contribute to the success of the project.

Your Solutions Provider can assist you in re-engineering processes and helping you design an AI solution to meet your objectives, whether that's a chatbot, data entry and processing, email filtering, data analysis or admin tasks such as organising calendars, writing reports, or managing logistics.

"With great power comes great responsibility," Peter Parker, Spiderman.

Collaborating and transparent culture

Businesses need to welcome and champion AI communicating how change is a good by fostering a culture that is transparent, honest, providing the space for employees to make and learn from their mistakes and suggest new ideas and concepts.

AI reveals data insights where employees can identify areas that need improving or changing or spotting new areas to offer new products and propositions. Humans excel in critical thinking and reasoning and have the creativity and imagination to come with up solutions that AI cannot do. Encourage your employees to down tools and stop and think, cultivating a creative culture that presents them with the opportunity to suggest new ideas and improvements.

"Our greatest glory is not in never falling, but in rising every time we fall," Batman.

Integrity and equality

Superheroes are honest with great integrity and are trusted by citizens. It is vital to act with integrity and equality when deploying AI ensuring that your solution ethical and contains no biases and if issues arise, they must be amended immediately so you have agency and transparency.

"There is a right and a wrong in the universe and that distinction is not hard to make," Superman.

Learning and growing

AI is new and with all new things we must learn them. Ensure you and your employees are trained in using the AI by providing ongoing education and training sessions, allocate mentors and champions to support and help it roll out. Give them the time to play around with AI, practicing, and testing it out, be patient this will take time.

AI solutions provide insights into data resulting in information to make intelligent business decisions so ensure that this valuable information is being used strategically and across relevant departments, and it is not going unused and siloed in one department.

"I think a hero is an ordinary individual who finds strength to persevere and endure in spite of overwhelming obstacles." Superman.

Forever transforming

Through transformation and growth Superheroes are made and an AI deployment is an evolutionary process where humans and AI learn and grow together. Emphasis to your employees that it's OK to make mistakes when practising and using the AI solution.

When we fail, we learn and grow from our mistakes. By testing out AI and learning collectively you will become more comfortable on how to use the new solution and be confident on the benefits it delivers. Resulting in translating the business needs into system design and making what you thought was impossible possible all with the help of your Solution Provider.

"You're going to make a difference. A lot of times it won't be huge, it won't be visible even. But it will matter just the same." James Gordon, Batman.

Superheroes unite

AI and humans are the superheroes of the world of work today demonstrating superhuman powers to solve real business issues. AI can analyse and interpret masses of data at a speed and scalability that is not possible for humans, and employees can then take this data and make intelligent creative business decisions that transform processes or the employee and customer experience.

AI should no longer be seen as a complex or scary villain but as an invisible superhero that provides superhuman powers behind the scenes. Human employees will learn how to collaborate with their AI assistants utilising their superhuman powers to make their role easier and more fulfilling and transforming the workplace making the impossible possible.

"We're better together," Captain America. ■

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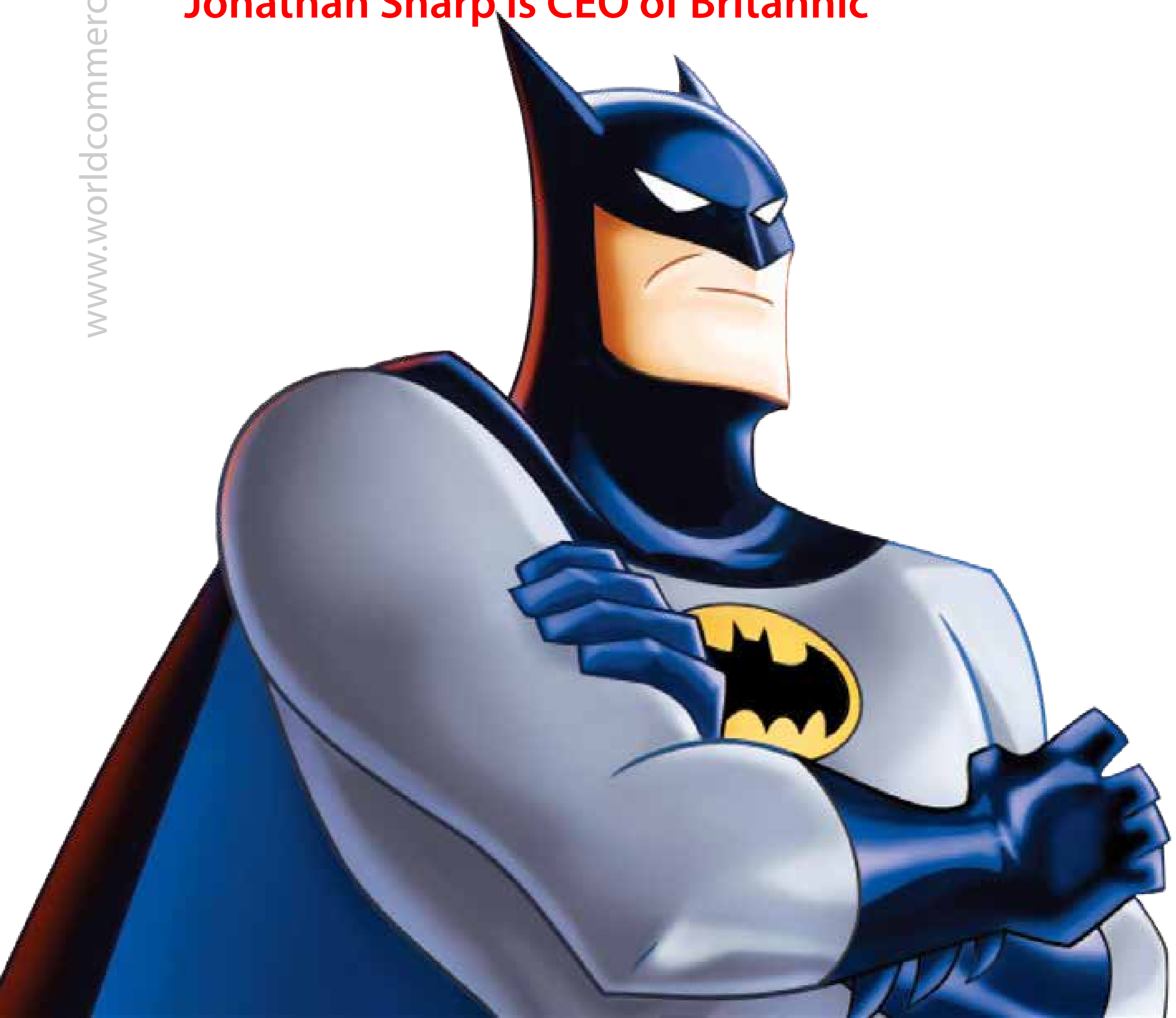


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