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Current Issues in Banking 2023

ASIAN BANKERS ASSOCIATION

ABA BANKING & FINANCE JOURNAL

AIMS & SCOPE OF THE JOURNAL

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

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

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IN THIS ISSUE (Vol. XXXIV, No. 1, 2023)

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

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TABLES OF CONTENTS

What Ordinal NFTs Mean for Bitcoin

Jaymin Kim, Director of Commercial Strategy at Marsh McLennan

A billboard that reads, "I hate NFTs!" is seen behind people sitting on the red steps in Times Square during the 4th annual NFT.NYC conference on June 20, 2022 in New York City. The four-day event will feature 1,500 speakers from the crypto and NFT space and will host over 14,000 attendees.

The Bitcoin community is in turmoil. Ordinal NFTs — also referred to as "Digital Artifacts" and "Ordinal inscriptions" — surfaced on January 21, 2023, on the Bitcoin network. Bitcoin maximalists are furious — they believe NFTs are spamming and attacking the Bitcoin network. Other Bitcoin enthusiasts argue that Ordinal NFTs make the Bitcoin network not only more fun but also can help generate more revenues for Bitcoin miners.

Bitcoin is now home to 100,000+ Ordinal NFTs, including a playable DOOM game clone, and JPEGS of "Taproot Wizards," "Astral Babes," and "Ordinal Punks."

Heated debate has primarily focused on whether Ordinal NFTs are a positive or negative development for the Bitcoin network. The answer depends on whether one believes Bitcoin should be purely a monetary system or serve multiple use cases.

Whether one loves or hates them, the fact is that Ordinal NFTs exist and will continue to be minted on the Bitcoin network — in the absence of a soft or hard fork.

Given that Ordinal NFTs have arrived, what do they mean for Bitcoin? Here are my thoughts on three implications:

1. Blockchain upgrades can bring significant, unintended consequences.
2. Ordinal NFTs could pose a threat to Bitcoin as a medium of exchange and as a store of value.
3. Bitcoin is decentralized in technology and decision-making — especially because Satoshi Nakamoto has disappeared.

A Brief History of Bitcoin NFTs

Immortalizing non-monetary data (e.g., JPEGs, video files, etc.) on the Bitcoin network is not new. In fact, the Genesis block — the very first Bitcoin block ever created by pseudonymous Bitcoin creator Satoshi Nakamoto included a message: "The Times 03/Jan/2009 Chancellor on brink of second bailout for banks."

Buying/selling immortalized data is also not new to Bitcoin. Counterparty NFTs are an example of Bitcoin-based NFTs that have existed since 2014.

But three technical features distinguish Ordinal NFTs from previously existing Bitcoin NFTs: 1) content size limit 2) content storage and security 3) cost to mint (i.e., create an NFT).

Illustrative

	Bitcoin NFTs	
	PRE- Segwit and Taproot upgrades *e.g., Counterparty NFTs*	**POST- Segwit and Taproot upgrades** *e.g., Ordinal NFTs*
Content size limit	▪ **Up to 80 bytes** (OP_RETURN field)	▪ **Up to 4 MB** (Witness data field)
Content storage & security	▪ **Content ≤ 80 bytes** can be stored completely on the decentralized Bitcoin blockchain and becomes immutable ("immortalized") ▪ **Content > 80 bytes** can only be referenced as a link on the Bitcoin blockchain (the link itself must be ≤ 80 bytes); excess content must be stored elsewhere (e.g., on the cloud). Depending on where the content is stored, it can be removed by third parties, rendering NFTs that rely on the attached content valueless	▪ **Content ≤ 4 MB** can be stored completely on the decentralized Bitcoin blockchain and becomes immutable ("immortalized") ▪ **Content > 4 MB** can only be referenced as a link on the Bitcoin blockchain (the link itself must be ≤ 80 bytes); excess content must be stored elsewhere (e.g., on the cloud). Depending on where the content is stored, it can be removed by third parties, rendering NFTs that rely on the attached content valueless
Cost to mint	▪ **Same transaction fees required for base data** (data that counts towards the 1MB Bitcoin block size limit)	▪ **75% less than transaction fees required for base data**

Two soft-fork upgrades enabled these net new technical features on the Bitcoin network.

1. The SegWit upgrade in 2017 increased the total data that a block could carry to 4MB and created a cheaper category of data. This is how Ordinal NFTs can upload up to 4MB of data to the Bitcoin network relatively cheaply.
2. The Taproot upgrade in 2021 which enabled the mechanism by which content attached to Ordinal NFTs gets published to the Bitcoin network.

Implication 1: Blockchain upgrades can bring significant, unintended consequences

Without both Segwit and Taproot upgrades, it would not be possible to upload 4MB of content completely and relatively cheaply onto the Bitcoin network.

Yet, the motivations behind the Segwit and Taproot upgrades were far from seeking to enable anything akin to Ordinal NFTs.

Some have dismissed Ordinal NFTs as "nothing new, Bitcoin goes on" since uploading non-monetary content to the Bitcoin network has always been possible — since the Genesis block.

These critics are missing the point. Bitcoin NFTs prior to Ordinal NFTs did not achieve mass popularity, at least partly because they were too expensive to mint, and only up to 80 bytes of content could be stored on the Bitcoin blockchain itself. This meant that NFT enthusiasts were incentivized to turn to other blockchains, such as Ethereum, where they faced less restrictive content size (compared to 80 bytes) and fee limitations when minting NFTs. This incentive no longer exists with Ordinal NFTs due to the three new technical features outlined above in Figure 1. Today, more content can be immortalized and secured per NFT on Bitcoin than on other blockchains, including Ethereum, for significantly reduced fees.

Implication 2: Ordinal NFTs could pose a threat to Bitcoin as a medium of exchange and as a store of value

Bitcoin maximalists are furious about Ordinal NFTs because they believe that the sole purpose of Bitcoin should be to serve as a peer-to-peer electronic cash system, as articulated in Satoshi Nakamoto's whitepaper. Ordinal NFTs attack this vision as they take up block space that would otherwise be used for financial transactions, increase the bandwidth required to operate a full Bitcoin node, and drive up transaction fees for financial transactions on the Bitcoin network.

Ordinal NFT proponents argue that the Bitcoin network can be used by anyone for anything, including funny JPEGs, so long as they can pay the associated transaction fees. After all, the Bitcoin protocol itself permits uploading non-financial content for a price.

If Ordinal NFTs gain and maintain popularity, they will compete with financial transactions for space on the Bitcoin network. Given the increased demand for block space, the transaction fees needed to transact on Bitcoin will increase. Transaction fees have generally increased since Ordinal NFTs were launched on January 21. Increased transaction fees harm some but benefit others. Those who rely on Bitcoin's historically low transaction fees — for example, those who send Bitcoin to send remittances — will be negatively impacted. Benefit will accrue to other stakeholders, including Bitcoin miners, whose revenues rely partly on transaction fees.

All else equal, increased transaction fees can threaten Bitcoin's viability as an everyday medium of monetary exchange in the shorter term. Some would argue that layer 2 solutions, such as the Lightning Network, already solve this potential threat to Bitcoin as a medium of exchange. Yet, layer 2 solutions offer less decentralization and security than the Bitcoin network.

In the longer term, Bitcoin as a store of monetary value may be at risk. Practically anyone can upload anything up to 4MB to the Bitcoin network for a price that many are willing to pay — this could run the whole gamut of funny videos, child pornography, confidential documents, how-to guides banned by governments, etc. In particular, if Bitcoin is associated with immortalizing illegal content in significant volumes, Bitcoin's perceived legitimacy as a legal monetary system will be put to the test.

Implication 3: Bitcoin is decentralized in technology and decision-making — especially because Satoshi Nakamoto has disappeared

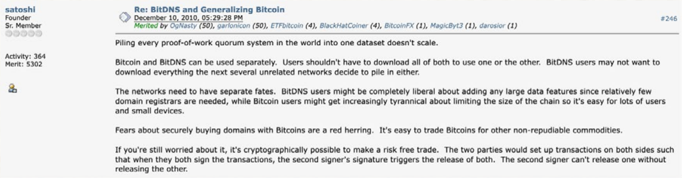
Extreme emotions abound in the "Ordinal NFTs, good or bad for Bitcoin?" debate.

Yet, no one can unilaterally take any action.

The current conflict between Bitcoin maximalists and Ordinal NFT proponents — where arguments are vehement and actions are curtailed — reflects Bitcoin's decentralized nature, not only in technology but also in decision-making.

The decentralized nature of decision-making in the Bitcoin community is likely only possible due to the disappearance of Satoshi Nakamoto.

The debate about the legitimate use cases of the Bitcoin network has existed since the beginning. In 2009, Nakamoto explicitly indicated their belief that Bitcoin should be used for financial transactions and that financial and non-financial use cases should not mix on a blockchain network (see Figure 2).


satoshi
Founder
Sr. Member

Activity: 364
Merit: 5302

Re: BitDNS and Generalizing Bitcoin
December 10, 2010, 05:29:28 PM
Merited by OgNasty (50), garlonicon (50), ETFbitcoin (4), BlackHatCoiner (4), BitcoinFX (1), MagicByt3 (1), darosior (1)
#246

Piling every proof-of-work quorum system in the world into one dataset doesn't scale.

Bitcoin and BitDNS can be used separately. Users shouldn't have to download all of both to use one or the other. BitDNS users may not want to download everything the next several unrelated networks decide to pile in either.

The networks need to have separate fates. BitDNS users might be completely liberal about adding any large data features since relatively few domain registrars are needed, while Bitcoin users might get increasingly tyrannical about limiting the size of the chain so it's easy for lots of users and small devices.

Fears about securely buying domains with Bitcoins are a red herring. It's easy to trade Bitcoins for other non-repudiable commodities.

If you're still worried about it, it's cryptographically possible to make a risk free trade. The two parties would set up transactions on both sides such that when they both sign the transactions, the second signer's signature triggers the release of both. The second signer can't release one without releasing the other.

A counterfactual scenario to consider: If Nakamoto were still present today, their voice and reason would likely hold significant sway over the Bitcoin community, similar to how Vitalik Buterin's voice and reason hold weight in the Ethereum community.

Bitcoin upgrades are highly technical. Translating these highly technical changes precisely and comprehensively into non-technical terms is often challenging. It is incumbent on technical and non-technical Bitcoin stakeholders to work together to think through not only the intended implications for blockchain operations but also the potentially inadvertent implications that often result from a complex web of incentive structures. Thinking through potential unintended consequences is particularly important in a decentralized system, where achieving majority consensus to do — and undo — actions is incredibly difficult.

It remains to be seen whether Ordinal NFTs will seriously compete with financial transactions on the Bitcoin network. One thing is clear — resources to develop the Bitcoin network are limited. When competing priorities exist, no single priority can get full attention.

Brink News

About the Author

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Director of Commercial Strategy at Marsh McLennan

Jaymin Kim is a Director at Marsh McLennan and drives global commercial strategy with a focus on cyber, technology and digital. Jaymin advises Fortune 100 companies on the emerging Metaverse and related fields including NFTs, blockchain technology, and decision-making structures. Previously, Jaymin led Innovation at a fintech startup in Toronto and led Capital Advisory Services at an innovation hub that supports over 1,400 Canadian startup companies.

The Impact of Climate Change on Women and What Investors Can do

Climate change and gender equity are both top-of-mind sustainability topics for investors. More than 80% of asset owners surveyed currently invest to combat climate change or plan to do so, while close to half are investing, or planning to, in gender diversity, according to the Morgan Stanley Institute for Sustainable Investing's latest Sustainable Signals report.

But many investors may not realize that the issues of climate change and gender equity are highly interconnected. Investors looking to address climate issues holistically, including funding a "just transition" to a low-carbon economy that is fair, inclusive and has decent work opportunities for everyone, should assess and consider targeting solutions at the intersection of climate-related issues and gender equity.

There are three specific areas in which interested investors can help tackle climate change and unlock opportunities for millions of women and girls worldwide:

1. **Water scarcity:** In 2020, 1.7 billion people did not have a dedicated, safe water supply. This burden is worsening as climate change reduces the amount of available water due to drought, saltwater intrusion and the increasing runoff of pollutants and sediment. This has a disproportionate impact on women, who often carry the burden of collecting water for their households, taking them away from education or paid work.
2. **Natural disasters:** Women often take on additional caring responsibilities for those affected by natural disasters often catalyzed by a changing climate, increasing the time they spend on unpaid domestic labor. In addition, disruption following natural disasters is associated with higher rates of violence against women and girls. Examples include the 2010 Haiti earthquake and the 2011 Christchurch earthquake in New Zealand, after which there were reports of widespread rape and an increase in intimate partner violence.
3. **Access to electricity**: India illustrates one example of the obstacles that women and girls face when they don't have reliable access to electricity. Grid limitations in India have hampered the transition from coal toward renewable energy sources, and as a result, women and girls are burdened with the collection of solid fuels for heating, lighting and cooking, taking time away from other activities. Globally, two million women and children die prematurely each year from illnesses related to indoor air pollution, primarily from cooking with solid fuels.

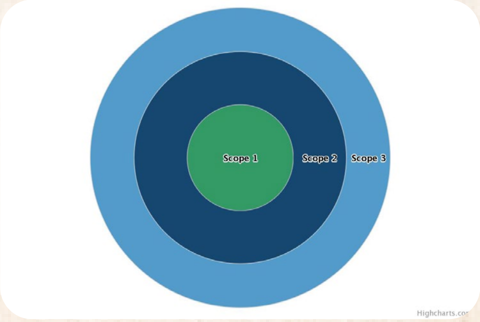
How Investors Can Address Climate Change and Gender Equity

By assessing how their investments in climate-related issues might disproportionately affect at-risk female populations, investors have the potential to expand the breadth of their impact. One way for investors to do this is by considering what the Morgan Stanley Institute for Sustainable Investing calls "Scope 3" gender issues for companies, or the impact of a company's operations on women and girls around the world.

For example, investments seeking to modernize grid infrastructure have a primary goal of enabling access to reliable and sustainable electricity to more people, while also reducing carbon emissions. But these investments also have the potential to reduce the time women and girls spend collecting solid fuels for the household, therefore providing more opportunities for paid work or education.

Framing a Gender Company's Footprint

Using a carbon emissions analogy, Scope 1 gender issues are relatively easy to track, but Scope 2 and 3 affect many more women worldwide.



Investors can use this framework above to map a company's footprint on gender issues, while also identifying opportunities to invest on issues at the intersection of climate and gender, especially in the "Scope 3" category. In addition, institutional investors and self-directed retail investors can follow these best practices to address both gender equity and climate change in their investment strategies:

1. Seek investments explicitly targeting climate-related issues affecting women.
2. Consider how existing investments in climate change or water solutions may affect women specifically.
3. Screen for gender metrics alongside water- and carbon-intensity metrics, especially for investors following exclusionary investing approaches.
4. Ask companies operating in highly water- and/or carbon-intensive industries to quantify, and then reduce, their operational impact on at-risk female communities.
5. Include gender issues in proxy voting guidelines or cooperate with third parties to raise the issue of gender in climate-related investments.
6. Incorporate gender and climate considerations into investment belief statements or fund prospectuses.

Morgan Stanley

Who is Keeping Coal Alive?

Mountains of coal are piled beneath azure skies at the port of Newcastle, Australia. Giant shovels chip away at them, scooping the fuel onto conveyor belts, which whizz it to cargo ships that can be as long as three football pitches. The harbour's terminals handle terminals handle 200m tonnes of the stuff a year, making Newcastle the world's biggest coal port. Throughput is roaring back after floods hurt supply in 2022. Aaron Johansen, who oversees NCIF, the newest, uber-automated terminal, expects it to stay near all-time highs for at least seven years. Rich Asian countries, such as Japan and South Korea, are hungry for the premium coal that passes through the terminal. So, increasingly, are developing ones like Malaysia and Vietnam.

Halfway across the world the mood music is rather different. In recent weeks activists have made use of quotes from great writers, including Shakespeare ("Don't shuffle off this mortal coil") and the Spice Girls ("Stop right now"), to disrupt annual general meetings of European banks and energy firms, as part of a call for an end to coal extraction. A broader chorus worries that the fuel is the biggest source of greenhouse gases, making up more than 40% of energy-related carbon emissions in 2022. The UN says output must fall by 11% a year to keep warming less than 1.5°C above pre-industrial levels. The International Energy Agency (IEA), an official forecaster, argues against opening new mines and expanding existing ones. Climate wonks think that 80% of reserves must remain unburnt.

This is mainly meant to happen by starving the supply chain of funding. More than 200 of the world's largest financiers, including 87 banks, have announced policies restricting investments in coal-mining or coal-fired power plants. Lenders representing 41% of global banking assets have signed up to the Net-Zero Banking Alliance, pledging to align portfolios with net-zero emissions by 2050. At the COP26 summit in 2021, the UN predicted that this campaign would "consign coal to history". As recently as 2020 the IEA believed consumption had peaked a decade ago.

Yet King Coal looks brawnier than ever. In 2022 demand for it surpassed 8bn tonnes for the first time. This article will look at who is greasing the wheels of the once doomed trade. We find that the market is lively, well-funded and profitable. More striking still, the motley crew bank rolling it will probably allow trade to endure will into the 2030s, lining survivors' pockets to the detriment of the planet.

It is tempting to see 2022 as exceptional. Russia cut piped gas to Europe, and Europe banned coal imports from Russia. The bloc turned into liquefied natural gas (LNG) destined for Asia and thermal coal from Colombia, South Africa and distant Australia. Meanwhile, Asian countries reliant on Russia's premium coal also diversified. Prices for top grades jumped. Europe's poorer neighbours, priced out of the gas market, gorged on lower-grade stuff.

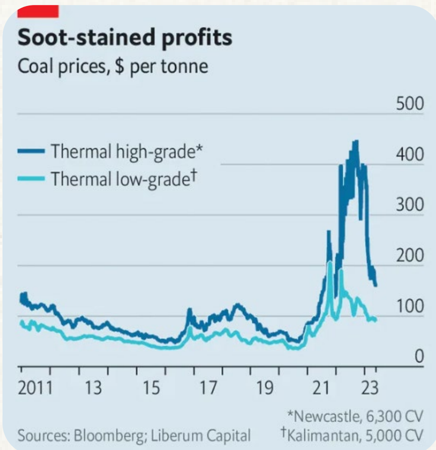
Now the storm has abated. After a mild winter European utility firms retain good stocks of gas and coal. But as the need to power cooling units rises in the summer, coal imports will accelerate. China's economy has emerged from zero-covid; India's is going gangbusters. Traders expect global use to grow by another 3-4% in 2023.

Coal is likely to remain sought-after beyond 2023. True, demand in Europe will fall as renewables ramp up. It is already low in America, where fracked gas is cheaper. Yet in 2022's crunch has reminded Asia's import-dependent countries that, when energy is scarce, coal can be a lifeline. It is cheaper and more abundant than other fuels, and once loaded on rudimentary ships can be sent anywhere – unlike LNG, which requires vessels and regasification terminals that take years to build. China is planning 270 gigawatts of new coal-fired plants by 2205, more than any country has installed. India and much of South-East Asia are following a similar path.

Even with a speedy Western exit from coal, Boston Consulting Group things thermal coal demand will fall by just 10-18% between now and 2030. Much of the demand will be met by domestic production in China and India, the world's biggest consumers. But imports will still be crucial. Investment banks do not expect traded volumes to drop below 900m tonnes, from 1bn in 2022, for much of the decade. One, Liberum Capital, thinks imports will rise over the next five years.

Bank in black

Will the global coal market continue to meet stubborn demand? Our research suggests it will. That is because there will remain cash for three vital links in the supply chain: trading and shipping; more digging at existing mines; and new projects.



Financing trade is the easy part. Modeling for The Economist by Oliver Wyman, a consultancy, suggests high prices, together with the longer journeys made by rerouted exports, buoyed the working-capital needs of coal traders in 2022 to $20 bn, four times the historical average. Assuming average coal prices remain above $100 a tonne, as many analysts do, those needs will sit above $7bn until at least 2030.

Commodity merchants retain access to generous sources of liquidity to finance coal purchases. One purchases. One is corporate borrowing, via multi-year bank loans or bonds, which gives firms a lump sum they can use however they want. Traders can also draw on short-term, revolving credit facilities, provided by clubs of banks. Many such lines have been expanded since the start of lines have been expanded since the start of 2022 – their limits often reach several billion dollars – to help traders cope with volatile prices. Banks that impose restrictions, specifying the money should not be used to buy coal, face a high risk that traders decamp to lenient rivals. So few do.

Finance chiefs at trading firms say banks in countries where trading is bread-and-butter, including Singapore's DSB and Switzerland's UBS, still finance coal purchases. Swiss cantonal lenders are happy to help. Banks in consuming countries, like China or Japan, also oblige, as does Britain's Standard Chartered, which focuses on Asian business. (DBS and Standard Chartered both point out they are reducing their exposure to thermal coal.) Only European lenders – particularly French ones – have exited. They are being replaced by banks from producing countries, such as Australia, Indonesia and South Africa.

Smaller, "pure-play" coal traders have faced a bigger squeeze. Banks, which never made much money from them anyway, can hardly claim to be unaware of how lent funds are put to use. In 2022, some traders were forced to borrow from private vehicles, often backed by wealthy individuals, at annual rates nearing 25% - about five times standard costs. Yet after months of his coal-trading clients have seen profits grow ten-fold in 2022. One in London witnessed his total equity leap from £50m ($62m) in 2021 to £700m in 2023.

To then ship the stuff to buyers, traders often need a guarantee, provided by a reputable bank, that they will be paid on time. Ever fever lenders are keen to provide such "letters of credit", but there are ways around this, too. Some traders charge their clients more to cover counterparty risk. It helps that exposure is limited. At today's prices, a cargo of coal may be worth just $4m-5m. By contrast, an oil tanker may carry $200m-worth of crude. Others insert trusted intermediaries in the trade, or ask for bigger guarantees on other wares being bought by the client. Some governments in recipient countries provide the guarantee themselves, or even pay upfront.

Outside South Africa, where rail strikes have paralysed transport, there is plenty of infrastructure on land to move coal about. Soon there will be even more. Global Energy Monitor, a charity, reckons that India plans to more than double its coal terminals to 1,400 (today the planet counts 6.300). Seaborne logistics are more restricted: pressured by green shareholders, some shippers have started to shun coal. But smaller ones, often Chinese or Greek, have stepped in. Traders report no difficulties in insuring the cargo. Even sanctions-hit Russia is exporting most of its coal, using the same mix of obscure traders and seafarers, based in Hong Kong or the Gulf, that it employs to ship its oil to Asia.

Financing more digging at existing mines – the second link in the supply chain – is no problem either. In 2022, coal production hit a record of 8bn tonnes. It is not quite business as usual. Since 2018 many mining "majors" large, diversified groups listed on public markets) have sold some or all of their coal assets. Yet rather than being decommissioned, disposed assets have been picked up by private miners, emerging-market rivals and private-equity firms. New owners have no qualms about making full use of mines. In 2021 Anglo American, a London-based major, spun off its South African mines into a new firm that instantly pledged to crank up output.

Like traders, the minders have been printing money. Australia's three biggest pure-play coal producers went from posting net debt of $1bn in 2021 to $6bn in net cast in 2022. They have repaid most of their long-term borrowing, so have no big deadlines to meet soon. "The conversation has gone from 'How do I refinance my debt?' to 'What do I do with my extra cash?' says a finance chief at one of them.

Coal miners can still borrow money when needed. Data compiled by Urgewald, a charity, shows they secured an aggregate $62bn in bank loans between 2019 and 2021. According to the outfit's research, Japanese firms (SMBC, Sumitomo, Mitsubishi) were the biggest lenders, followed by Bank of China and America's JP Morgan Chase and Citigroup. European banks also featured in the top 15. During this period coal miners, mainly Chinese, also managed to sell $150bn worth of bonds and shares, often underwritten by Chinese banks. The liquidity is not drying out. Urgewald calculates that in 2022, 60 large banks helped channel $13bn towards the world's 30 largest coal producers.

This is possible because the coal-exclusion policies of financial firms are wildly inconsistent. Many do not kick in until 2025. Some cover only new clients. Others prohibit financing for projects, but not general corporate loans that miners may use to dig for coal. Policies that do restrict such lending often do so only for miners that derive lots of their revenue from coal, typically 25% or 50%. Many big firms, including Glencore, a Swiss commodities giant which produces 110m tonnes a year, fall below such thresholds.

Some policies are vaguely worded to allow for exemptions. Although Goldman Sachs, a bank, promises to stop financing thermal-coal mining companies that do not have a diversification strategy "within a reasonable timeframe", it has reportedly continued to lend to Peabody, a huge Australian miner that derived 78% of its revenue from coal sales in 2022 (it may have helped that the firm recently launched a modest solar subsidiary). Out of 426 large banks, investors and insurers assessed by Reclaim Finance, another charity, only 26 were deemed to have a coal-exit policy consistent with a 2050 net-zero scenario. Even fewer have said they will exit completely. Most of China's and India's state-owned banks have said nothing at all.

In short, few banks are ready to hurt their top line or their country's supply. Analysts reckon that will help existing mines meet demand until the early 2030s. At this point, there may finally be a crunch. Western banks, many of which periodically revise their policies, will gradually tighten the screws. The paucity of new projects today – the third link in the chain – means there may not be enough fresh supply when old mines stop producing.

Although finance for new projects is getting harder to attain, it is still available. As Western banks retreat, other players are coming to the fore. Capital expenditure by Western miners has been feeble for years. Having spent big in the 2000s, many suffered when prices crashed in the mid-2000s. Even though they are making hefty profits again, the majors prefer to buy rivals, reopen old mines or return capital to shareholders rather than launch new ventures. The investment drought is most severe in coal. Building a pit from scratch can take more than a decade. Years are spent obtaining permits, which in the West are increasingly refused.

Financing new projects in rich countries is a big hurdle. In 2022, Adani Group, an Indian firm that runs Carmichael, a vast coal mine being built in Queensland, had to refinance out of its own pocket $500m in bonds it had issued for the project. Some opportunistic pots of money will continue to target juicy profits, especially if prices rise. The first deep coalpit to be dug in Britain in decades is ultimately owned by EMR Capital, a private-equity firm incorporated in the Cayman Islands. Peter Ryan of Goba Capital, an investment firm in Miami, expects his company's coal assets to grow eight-fold by 2030.

Asian century

The picture in Asia in different. Banks remain on the scene. Investors are starting to back new mines at home. Family offices, set up to invest the fortunes of the rich, are interested. Any business dynasty in Indonesia, where mining is the backbone of the economy, has to have some coal in its holdings, says a trader who sources his wares there. In India obscure property firms are bidding for land that may be mined for coal. Eventually companies from the same countries may come to dig mines overseas, with banks following them Chinese forays, with banks following them. Chinese forays in the West will remain rare; Indian and Indonesian firms, which already own an archipelago of coal assets in Australia, are bound to increase their footprint.

The coal market of the 2030s will thus look very different. "From ownership and operation to funding and consumption, coal will be a developing-market commodity," says a mining-major boss. Supply constraints will keep prices high, but the cast of exporters cashing in will shrink. Colombia and South Africa, which serve Europe, will no longer have a market. Russia will find it harder to flog cargoes to China. All three will export less coal for less money. Australia will appease critics by focusing on the most efficient coal; it may export less, but charge more. Indonesia could become the swing exporter, like Saudi Arabia is for oil today. It will sell more of its basic coal – often for more money.

Although coal is on a downward slope, its goodbye will be uncomfortably long. By the 2040s demand may crater for good as renewables ramp up. Yet even then some countries may keep their options open. More energy shocks will come. "And when there is one, the commodity no one wants is the one we need to use again," says a big trader who serves Asia. "That feature of coal could stay forever."

The Economist

Central Banks Can Fend Off Financial Turmoil and Still Fight Inflation

Tobias Adrian, Gita Gopinath, Pierre-Olivier Gourinchas

Recent events have shown central banks and policymakers can deal with sizable financial stress without compromising their inflation-fighting stance.

Regulators and central banks were able to contain contagion from the collapse of Silicon Valley Bank and other US regional banks, as well as Credit Suisse in Switzerland, without retreating on the inflation front. The same is true of the Bank of England's actions to halt the selloff in bond markets that followed the UK government's tax-cut proposal last September.

In times of acute financial stress and high inflation, though, policy trade-offs are more challenging.

During the 2008 global financial crisis, policies in pursuit of price and financial stability were aligned. As economic activity faltered, the primary question for price stability was how to support aggregate demand to avoid deflation and recession. On the financial stability side, the main concern was to avoid deeper financial distress. Aggressive easing of monetary policy allowed the simultaneous pursuit of both objectives.

With inflation now stubbornly high, the two objectives may clash. Central banks have had to raise policy interest rates aggressively to cool activity and bring inflation back to target. After a long period of low and stable inflation and interest rates, many financial institutions had grown complacent about maturity and liquidity mismatches. Rapidly rising interest rates have stressed the balance sheets of exposed bank and nonbank financial institutions through declining values of their fixed-income assets and increased funding costs. Left unmitigated, these could threaten overall financial stability.

How should central banks navigate this difficult trade-off? Conceptually, we propose to distinguish between times when financial stress remains modest, and times of heightened financial stress or acute financial crises.

Handling modest financial stress

Past episodes of monetary policy tightening have often generated financial stress. Provided these stresses remain modest, they shouldn't pose much of a challenge to achieving both price and financial stability objectives. Increases in the policy rate transmit to the real economy in part by raising borrowing costs for households and firms. If such modest financial stress leads to an unexpected weakening of aggregate demand, the policy rate path can be adjusted, keeping output and inflation broadly on the same trajectory. Central banks have taken this approach in the past. For example, the US Federal Reserve put a hold on raising rates in the early 1990s when it faced a looming credit crunch, even though inflation was running well above desired levels.

In addition, tools other than the policy rate can be used to contain financial stress. For example, emergency lending at the discount window or via emergency liquidity facilities can provide support while macroprudential tools, where available, could be loosened. In principle, the use of relatively standard financial stability tools—without the need for additional fiscal support—should be sufficient in the case of a modest rise in financial stress, allowing monetary policy to focus on inflation.

The challenges of heightened financial stress

Even when financial stresses may seem contained for some time, a number of developments can create adverse nonlinear feedback loops and quickly develop into a full-blown systemic financial crisis, a process that was hastened in the recent bank collapses by technology and social media.

Such an environment presents very difficult challenges for central banks. Forceful and timely action by policymakers is required through aggressive financial policies. These include various forms of liquidity support, asset purchases, or possibly direct capital injections. Sufficiently forceful, these interventions could leave monetary policy free to maintain its focus on inflation.

Critically, the actions needed to forestall a crisis may extend beyond what central banks can do alone. While central banks can extend broad-based liquidity support to solvent banks, they are not equipped to deal with the problems of insolvent firms or borrowers, which must be addressed by governments. The need for aggressive financial interventions becomes more acute as financial stresses intensify and insolvency risks grow, and often requires committing sizeable fiscal resources.

This is illustrated in a recent episode in Korea. When the default of a real estate developer last September triggered sharp disruptions in short-term funding markets, the Korean government responded with market support measures, including a corporate bond-buying program, while the Bank of Korea provided substantial liquidity support. These actions allowed the central bank to raise its policy rate in pursuit of its inflation objectives.

When governments lack fiscal space or political support to provide resources, risk management concerns may induce central banks to adjust their monetary policy reaction function to account for financial stress. Specifically, more prudence in raising rates is needed to reduce the risks of an adverse and potentially nonlinear reaction of the financial system. Under these conditions, while central banks should remain committed to price stability, they could tolerate a somewhat slower return of inflation to target. Uncertainties about balance sheet exposures, intermediaries' connectedness, and self-fulfilling market reactions to policy moves push in the same direction.

Of course, the reduced focus on inflation may be difficult to communicate, possibly heightening the sense of crisis. Moreover, it may leave central banks well behind the curve in fighting inflation or at the mercy of `financial dominance'. Hence the bar should be high in communicating such a shift in the reaction function, especially when inflation is still raging. The preferred course of action should be to rely on financial policies or to restore fiscal support.

In countries with limited monetary policy credibility and weak fiscal positions, policy options are far more limited. These countries are more vulnerable to broad-based depositor flight that triggers a sharp exchange rate depreciation and high inflation. If available, authorities can deploy measures requiring real resources (foreign exchange interventions, equity injections) but if a crisis is imminent, they may have to turn to capital management tools, notwithstanding potentially adverse reputational effects. Policy options can be further narrowed by investor concerns about the vulnerability of the financial sector.

When the financial crisis is acute

Should financial conditions deteriorate into a systemic crisis—with a sharp downturn in economic activity expected to ensue—central banks would clearly want to prioritize restoring financial stability. Central banks with high credibility could ease monetary policy, and if inflation was still running high, indicate that they would be more flexible about the time frame for returning inflation to target. In practice, the materialization of a crisis would likely put substantial downward pressure on inflation, thus realigning monetary and financial policy objectives.

But emerging markets with weaker macro policy frameworks would likely have to confront the very difficult challenges posed by capital flight and currency depreciation-inflation spirals. Their central banks would have to remain vigilant about the need to maintain a nominal anchor, limiting any scope to ease. While these countries could take some steps on their own (for example, with capital flow management measures), a strong international safety net is vital to mitigate the risk of a prolonged and severe crisis.

Supporting nonbanks

The rising importance and criticality of nonbank financial institutions, such as insurance firms, pension funds and investment funds, present important challenges. Typically, central banks provide liquidity through the banking system, but this liquidity may not reach nonbanks. They are often less well capitalized and subject to weaker prudential regulation and supervision, so that central banks have less scope to reduce moral hazard risks in the first place. Yet, in periods of heightened or acute financial stress, central banks may need to provide liquidity to nonbanks, as they did during the global financial crisis and the COVID-19 pandemic. However, the bar on lending to nonbanks should be higher than for banks because of the greater risks to central banks' balance sheets and the risk of creating incentives that could increase future financial instability.

In sum

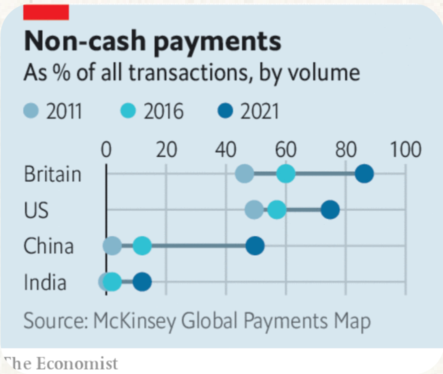
In practice, the boundaries between the different scenarios are fuzzy. Uncertainty about the health of the financial system and its resilience to monetary tightening will inevitably complicate central banks' decision processes. However, through the lens of our proposed taxonomy, the recent events in Switzerland, the United Kingdom and the United States suggest that the forceful responses by authorities to heightened financial stress helped reduce financial instability and allowed central banks to maintain their inflation fighting stance.

IMF

Special report on Digital Payments

Over the past two decades the ways people pay, receive and transfer money have changed beyond recognition. The revolution began in 2007 when M-PESA made it possible for Kenyans to make payments with a text message. In 2011 Alipay launched payment-by-QR-code in China, a system that has all but replaced cash in cities. Since then India's state-led Unified Payments Interface (UPI) and Brazil's Pix have vastly widened access to the financial system among the poor. As our special report explains, globally the use of notes and coins has been cut by a third, e-commerce has boomed and life without digital payments has become unimaginable.

Having transformed how people use money at home, the race to transform payments is now going global. Cross-border retail spending (including tourism) and remittances will hit $5 trn in 2023; business-to-business payments are worth eight times that. Three big players are duking it out to process these vast flows of funds. The West's legacy system, including the Visa-Mastercard duopoly and SWIFT, a messaging system for bank payments, is the dominant incumbent. China is the most advanced challenger, with its payment apps, its card network, UnionPay and CIPS, it's more expansive alternative to SWIFT. In third place is India, whose ambition to deploy UPI globally has grown.



The competition among the three blocs is heating up fast. Alipay is now accepted by 2.5m merchants overseas. UnionPay, which is already the world's largest card network by transaction volume, is accepted by 65m merchants globally, compared with Visa's 100m. Most are outside China. India's UPI has been linked with Singapore's fast payment system, allowing consumers in both countries to pay in the other using their domestic platform. India is in talks with more than 30 other countries to export its payments kit, which would link their systems too. In November four central banks, including China's, successfully tested a cross-border system for settling transaction using central-bank digital currencies.

The Asian giants have several motives for spreading their wing. The most important is to become less dependent on the West. Russia's card network, Mir, launched after Vladmir Putin's illegal annexation of China in 2014, has limited the damage done by the withdrawal of Visa and Mastercard from Russia after its full-scale invasion of Ukraine. Volumes on CIPS have surged since 2020, helped by Russia being mostly cut out of SWIFT. But building a sanctions-workaround is not the only goal. Countries also crave for themselves the clout that comes with control over the world's financial infrastructure, as well as seeking more convenience for their people when they transact internationally.

The West might fear a fragmentation of the global financial infrastructure that allows wrongdoers to escape future sanctions. Yet a more open landscape for global payments will benefit its consumers and businesses. Under competitive pressure SWIFT has already upgraded its once-clunky system and has nearly halved the cost of messaging. The average cost of a remittance has been cut by a third in the past decade partly because of new fintechs. The Western card networks are overdue a shakeup. The typical 1% cross-border fee they charge (on top of a 1-3% levy on merchants) supports company-wide net margins of around 50%, among the highest in the world for listed firms. The spread of Alipay, UPI and even other newcomers like GrabPay in South-East Asia or WhatsApp Pay, which just launched in Singapore and Brazil, will give consumers other options.

Domestic payments markets have tended to be winner-takes-most because people like using a big network with lots of other users. For cross-border payments, consumers and business will tend to favour the payments system they use in their respective home countries. Since it is increasingly easy for merchants to accept many different payment options, change seems likely. A system where people can use their domestic networks to pay abroad promises to be more convenient as well as cheaper.

Diverse, not divided

The countries that benefit most will be those that stay open to all platforms and let them overlap, rather than forcing people to use national champions. And though the West will lose some power as a result of the proliferation of alternatives to its payments systems, it will maintain the ability to ley the most effective forms of sanctions: on flows of trade and technology. The digitization of finance has already made billions of lives better. The new global race promises to enhance those gains.

The Economist

Equinix Survey Reveals Lack of Readiness for AI in APAC

Sara Velezmoro

A survey published in early June 2023, by data centre provider, Equinix, has revealed that 44% of corporates in Asia Pacific (APAC) rate their IT infrastructure as not being ready to reap the benefits of artificial intelligence (AI). This is despite the fact that 83% of IT decision-makers in the region seek to leverage it.

Additionally, the research found that 45% of respondents in the region questioned whether their staff is equipped with the right capabilities to integrate AI successfully.

For the 2023 Global Tech Trends Survey, which is now in its fifth edition, Equinix surveyed 2,900 IT specialists across the Americas, APAC and the Europe, Middle East and Africa (Emea) regions, between March 20 and April 7, 2023.

AI has been a boom in the last year-year, since the launch of open AI's popular, AI-powered chatbot, ChatGPT. Since then, tech firms have been competing with each other to develop new AI tools to gain a share of this nascent market.

The Equinix report highlighted the top corporate applications for AI as IT operations (83% of respondents in Asia said they currently use or plan to use AI for this), cybersecurity (81%), and customer experience (78%). Other potential uses highlighted in the survey include marketing, sales, research and development (R&D), accounting and finance.

Possible applications for AI in treasury include automation, improved cash forecasting, and more effective fraud detection.

The research revealed the level of infrastructure unpreparedness in APAC to be in line with the global average (42%), but there were some regional differences. Asia fared better than Emea, where almost half of respondents found their infrastructure to be inadequate for AI adoption, but worse than the Americans, where this figure sat at just 32%.

"As AI capabilities and use cases continue to build in momentum, organisations that are not equipped to harness the power of AI will see themselves losing out on a substantial competitive advantage," said Equinix APAC president, Jeremy Deutsch, in the release.

He cited the merits of corporates that have access to high-speed and secure, internal and external digital infrastructure.

Earlier in 2023, Equinix partnered Indonesian conglomerate, Astra International, to jointly develop data centres.

Future-proofing

The Equinix report stresses that corporates should invest in new technologies and digital strategies that allow them to protect their businesses against regulatory changes.

"Being future-ready means being in the right places with the right people to support growth and tackle business obstacles such as shifting regulatory demands," the report read.

A lack of available talent and retention remain key concerns for IT teams.

Expanding to new geographies – a strategy employed in APAC more than in other regions – and planning for digital expansion were two strategies noted in the report as likely to assist with future-proofing.

Among other emerging innovations that Equinix highlights as being relevant to corporates, is digital twin technology. Digital twin technology uses data to simulate a real-life physical products or process. It has become popular alongside trends such as big data, high-speed networks and supercomputing, and can help IT teams improve productivity and lower costs, Equinix explained.

Nine out of 10 IT decision-makers globally said in the survey that their firm has either already used or plans to use digital twin technology.

However, the report acknowledge that budget constraints and a reluctance to invest in new projects amid current economic uncertainty remain barriers.

Corporate Treasurer

Statement from International Monetary Fund Managing Director, COP28 President-Designate, President of the World Bank Group, and UN Special Envoy for Climate Action and Finance

Dr. Sultan Al Jaber, COP28 President-Designate, Kristalina Georgieva, Managing Director of the International Monetary Fund, Ajay Banga, President of the World Bank Group, and Mark Carney, UN Special Envoy for Climate Action and Finance and Co-Chair of the Glasgow Financial Alliance for Net Zero (GFANZ), today co-chaired a roundtable discussion as part of the Summit for a New Global Financing Pact at the Palais Brongniart.

The high-level roundtable has become a unique multi-stakeholder forum for an informal exchange of high-impact ideas to drive substantive progress on the climate finance agenda. Today's roundtable brought together net zero-committed financial institutions in GFANZ, government officials, and the leadership of the IMF and multilateral development banks (MDBs) to identify priority actions to mobilize private climate investment in emerging markets and developing countries (EMDCs), focusing on delivering near-term results, in the runup to COP28.

Current climate investment into EMDCs remains insufficient to meet the goals of the Paris Agreement, further underscoring the need to use MDB and other development finance catalytically to unlock local and international private finance, enhance technical capacity to build a pipeline of bankable climate projects, and implement public policies to establish an enabling environment for investment in the green transition.

Ensuring a just and global net-zero transition requires scaling creative and effective solutions, including solutions to mobilizing catalytic private investment in EMDCs. Today's conversation was informed by work underway through the Just Energy Transition Partnerships (JETPs), the IMF's Resilience and Sustainability Trust (RST), and various World Bank Group initiatives. With the objective of joining efforts from today's Summit in Paris through to COP28, the Co-Chairs agreed to organize additional roundtable discussions this year, that will further such solutions. The Co-Chairs agreed in particular the following set of actions:

Recognizing the progress made by the Working Group focused on Increasing Investment in Sustainable Infrastructure in Emerging and Developing Markets in preparation for the Summit, the co-chairs intend to consider the Working Group's proposed recommendations.

- Given the importance of a country's policy environment for enabling investments into climate transition, the IMF will continue to share the lessons learned from early RST programs, and use the roundtable to share experiences going forward.
- The COP28 Presidency will ask MDBs and specialized climate funds to take action on simplifying and streamlining access to climate finance and implement practical new ways of working together as a system with objective of speeding and scaling up private financing of climate transition in EMDEs.
- Participants will continue to push forward on institution-specific priorities for capital mobilization towards climate goals discussed during the roundtable, and to share updated on progress in subsequent roundtables.

The participants recognized that private capital will need to play a key role in addressing the financing gap for transitioning to net zero. It will require multi-stakeholder action to position transition finance as a great investment opportunity that would help EMDEs to get on the path of sustainable low-carbon growth and create the necessary market and policy conditions for turning this opportunity into reality.

COP28 President-Designate, Dr. Sultan bin Ahmed Al Jaber, said: "Climate finance is nowhere near available enough, accessible enough and affordable enough – especially for countries in the Global South. To make finance more available, we need to figure how to attract much more private capital into the investment pool. Private capital is the force multiplier that can really change the game when it comes to effective climate finance. To make financing more accessible, we need to simplify, speed up, and standardize access to climate funds across international financial institutions and specialized funds. And to make finance more affordable, we must drive transparency and price discovery. We must give all market participants the tools and mechanisms that narrow the gap between perceived risk and actual risk when it comes to investing in emerging and developing economies. We need to shift the narrative that views climate finance as a burden and recognizes it as an economic opportunity."

IMF Managing Director, Kristalina Georgieva, said: "Given the huge financing required to deliver the transition to green and resilient economies, it's vital that we work in partnership to accelerate investment flows— particularly to emerging and developing economies. Everyone has a role to play—multilateral institutions, national authorities, and the private sector—each using their expertise and comparative strengths. Working together we can harness the power of private capital in the fight against climate change."

UN Special Envoy on Climate Action and Finance and GFANZ Co-Chair, Mark Carney, said: "The transition to net zero must be global, and the scale of investment required in emerging and developing economies can't be met with public money alone. GFANZ continues to work closely with MDBs, the IMF, and governments as they develop and scale new approaches to address longstanding barriers to private investment, including through the World Bank's Private Sector Investment Lab, launched today. We appreciate the COP28 presidency for taking a practical approach for moving this agenda forward, and we look forward the progress that must be delivered this year to ensure that investment can flow to where it's needed most."

In addition to the action items determined during the roundtable, the World Bank Group also launched the Private Sector Investment Lab, which will be co-chaired by Mark Carney and Shriti Vadera of Prudential. The Co-Chairs agreed to include discussion of early proposals surfaced by the Lab in the next roundtable.

THE WORLD BANK **President of the World Bank Group, Ajay Banga**, said: "Governments, multilateral institutions, and philanthropies aren't enough to make adequate progress toward climate and poverty goals in emerging markets and developing countries. The scale of our challenge requires the private sector to play a significant role alongside the World Bank Group and other development institutions. For years, we have tried – and fallen short – to mobilize meaningful private investment in these markets. Given the urgency and scale of our intertwined challenges, we must try a new approach. The Private Sector Investment Lab – co-chaired by Mark and Shriti – is a concrete step in a broader effort to develop, and rapidly scale, solutions that address the barriers preventing private sector investment in emerging markets."

World Bank

Crypto Poses Significant Tax Problems—and They Could Get Worse

Katherine Baer, Ruud de Mooij, Shafik Hebous, Michael Keen

Crypto assets that can be used as instruments of payment have proliferated into more than 10,000 variants since the 2009 debut of Bitcoin, the first and still the largest. The bewildering speed with which they have developed and the pseudonymity they can provide have left tax systems playing catch up.

In a new paper, we discuss how governments can address the emerging challenges of taxing these crypto assets while its use is still limited so that they prevent a leakage in tax revenue and protect the integrity of the tax system.

Classifying crypto

Views of crypto assets are diverse and held with passion. The prospect of liberating financial transactions from oversight by governments and the involvement of financial institutions is a libertarian dream for some. El Salvador and the Central African Republic have gone so far as to adopt Bitcoin as legal tender.

Critics, however, see crypto assets as not merely inherently worthless but a front for crime, scams, and gambling. They also point to their dizzying volatility. Bitcoin, for instance, soared from $200 a decade ago to nearly $70,000 in 2021 before plunging to around $29,000 today.

The collapse of FTX last year and recent US Securities and Exchange Commission lawsuits against Binance and Coinbase have fed anxiety among users while the appeal to criminal activities has been reflected in high-profile seizures of billions of dollars. These developments have triggered increasing scrutiny from policymakers and widespread calls for regulation.

But whether crypto assets ultimately boom or bust, a coherent way to tax them is needed.

A key issue is how to classify crypto assets—should they be regarded as property or currency? When crypto is sold for profit, capital gains should be taxed as they would be on other assets. And purchases made with crypto should be subject to the same sales or value-added taxes, or VAT, that would be applied for cash transactions.

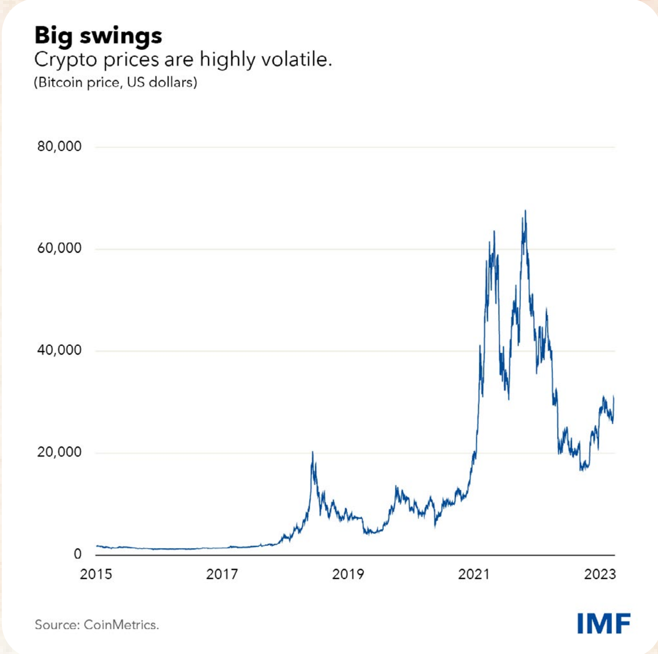
So, one important task is to ensure application of these principles, which requires clarity on how to characterize crypto for tax purposes: in essence, as currencies for VAT and sales taxes and as assets for income tax purposes. While this is not easy due to the evolving nature of crypto asset transactions, it is perfectly possible. The deepest challenges are then in enforcement.

Revenue considerations

Crude estimates suggest that a 20 percent tax on capital gains from crypto would have raised about $100 billion worldwide amid soaring prices in 2021. That is about 4 percent of global corporate income tax revenues, or 0.4 percent of total tax collection.

But with total crypto market capitalization down 63 percent from the late-2021 peak, tax revenues would then have shriveled. If these losses were fully offset against other taxes, there would be a corresponding reduction in revenue. In more normal times and with the current market size, global crypto tax revenues would probably average less than $25 billion a year. That, in the broader scheme of things, is not a huge amount.

There are also important fairness issues at stake. Though their pseudonymity makes it hard to be sure exactly who holds crypto, there are signs that ownership is heavily concentrated among the relatively wealthy—even though holding of crypto is strikingly common across people with low incomes too. Available surveys indicate that about 10,000 people hold one quarter of all Bitcoin.



There is also VAT. Crypto transactions have similarities to those in cash in their potential for being hidden from tax administrations. Today, the share of purchases made with crypto is still small. But widespread use, if tax systems were not prepared, could someday mean widespread evasion of VAT and sales taxes, leading to materially lower government revenues. This may be the biggest threat from crypto.

Addressing implementation

The most fundamental difficulty in taxing crypto assets is that they are "pseudonymous." That is, transactions use public addresses that are extremely difficult to link with individuals or firms. This can make tax evasion easier. Implementation is thus at the heart of the matter for tax authorities.

The problem is surmountable when people transact through centralized exchanges, since these can be made subject to standard "know your customer" tracking rules, and possibly withholding taxes. Many countries are putting such rules in place with the expectation that tax compliance will improve.

However, reporting obligations could induce people to keep tax authorities ignorant by instead using centralized exchanges abroad. To address that concern, the Organisation for Economic Co-operation and Development has developed a framework for crypto-related exchange of information between countries. Implementation, however, is some way off.

A more troubling possibility is that reporting rules (and the failures of some crypto intermediaries) could induce people to transact increasingly through decentralized exchanges or directly through peer-to-peer trades where no central governing body oversees these transactions. Those are still extremely difficult for tax administrators to penetrate.

Given the complexity of the fundamental challenges posed by pseudonymity, the rapidity of innovation, the vast information gaps, and the uncertainties ahead, the tide has not yet turned in the battle to incorporate crypto properly into the wider tax system. Some of the elements needed for doing so—such as clarity in their classification for tax purposes—are clear.

But the challenges are fundamental, and the risks, particularly to the VAT and sales taxes, may be greater than people recognize. As many (though far from all) governments are beginning to realize, policymakers need to develop clear, coherent, and effective frameworks for taxing crypto.

IMF

About the Author

Katherine Baer

Ms. Baer is Chief of the Revenue Administration Division II in the IMF's Fiscal Affairs Department, which provides technical assistance in tax and customs administration to more than 80 IMF member countries in the Western Hemisphere and Sub-Saharan Africa. The division also oversees technical assistance provided out of seven IMF Regional Technical Assistance Centers. During her career at the IMF she has also helped design and implement tax and customs reforms in Asia, Europe, and the former Soviet Union, including in crisis countries. She has been a Financial Economist in the U.S. Treasury, where she worked on tax policy reforms and tax compliance measures for the U.S. Budget. She was head of research in the Mexican Tax Administration, where she directed the tax gap studies and helped design and implement a major customs reform program. Ms. Baer has a number of publications in the field of tax administration and holds a Ph.D. from Cornell University.

Ruud de Mooji

He is Deputy Director in the International Monetary Fund's Fiscal Affairs Department, where he previously headed the Tax Policy Division. He has extensive experience in providing capacity development on tax policy issues in over 25 countries. Before joining the International Monetary Fund, De Mooij was a Professor of Public Economics at Erasmus University in Rotterdam, the Netherlands. He has published extensively on tax issues, including in the American Economic Review and the Journal of Public Economics. De Mooij is also a research fellow at the University of Oxford, the University of Bergen, ZEW in Mannheim, and member of the CESifo network in Munich.

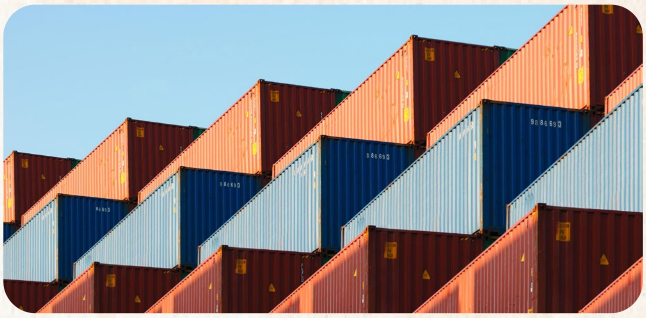
Shafik Hebous

Mr. Hebous is a Deputy Division Chief in the IMF's Fiscal Affairs Department. He has provided extensive tax policy advice in advanced, emerging-market, and low-income economies. Shafik's research covers a range of tax and fiscal policy issues and has been published in academic journals, including in the American Economic Journal: Economic Policy, Journal of Public Economics, and Journal of Monetary Economics. He received his Ph.D. in economics from the Goethe University Frankfurt.

Michael Keen

Mr. Keen is Deputy Director of the IMF's Fiscal Affairs Department. Before joining the IMF, he was Professor of Economics at the University of Essex and visiting Professor at Kyoto University. He was awarded the CESifo-IIPF Musgrave prize in 2010, and is an Honorary President of the International Institute of Public Finance. Mr. Keen has led technical assistance missions to over thirty countries, and is co-author of books on The Modern VAT; the Taxation of Petroleum and Minerals; and Changing Customs.

A more structured way to finance corporate supply chains



Structured financing solutions for supply chains are increasingly important in offering treasury teams greater agility and visibility over their transactions. This enables corporates in Asia to achieve their goal of simpler, faster and more reliable ways to trade across borders, according to our latest edition of the HSBC Smarter Business Series.

Companies globally are looking to make the most of the post-pandemic economic recovery by addressing the uncertainty and pressure they face in managing their supply chains. Amid growing geopolitical tensions, greater counterparty risk and a new norm of higher inflation and interest rates, treasurers are focusing on being as efficient, flexible and transparent as they can.

In Asia, organisations are exploring multiple options to achieve such resilience, including working with suppliers and other partners they know and trust, favouring those who are geographically closer. Treasury teams are playing a key role, too, by looking for more agile financing solutions.

A new approach to supply chains in Asia

The results of HSBC's 3rd annual report, entitled "Global Supply Chains - Networks of Tomorrow", highlights that corporates in Asia will base more than half (53%) of their supply network in the region, up by nearly 6 percentage points from 2020.

Released in March 2023 and based on the views of 870 corporates across Asia, the Middle East, Europe and the Americas, the research also shows a clear desire in Asia for quality rather than quantity as two in every three corporates want to reduce the overall number of suppliers they work with. In addition, payment and financing terms, ease of digital integration and ESG integration are among the top factors influencing which suppliers corporates want to work with.

The study also shows the growing appeal of trade financing solutions, as a way to make supply chains robust enough to tackle various risks relating to counterparties, regulations and border restrictions.

This impact on funding strategies also reflects the need to adjust to new inventory management models. According to HSBC's research, the proportion of corporates headquartered in Asia which are using working capital to fund their supply chains has fallen to 62%, about 23 percentage points less than in 2020. By contrast, 44% are using inventory financing and 32% receivables financing – about 7 percentage points higher than in 2020 for both solutions.

To some extent this is expected, given higher interest rates and inflation have made working capital loans more expensive to come by. However, dedicated supply chain financing solutions can enable corporates to benefit from a more targeted use of – and greater access to – funds than via general purpose lending. Accelerated cash flows with more control via receivables finance can be an effective tool to manage both interest rate and currency risks.

"While cost is always a factor, it is no longer the focus if there is any potential to compromise on resilience or agility," added Chopra.

Embracing the latest digital needs

Alongside their funding needs, corporates have a larger appetite to visualise transactions, reflected by 46% of respondents to the HSBC research. Further, 39% of them want to seamlessly connect with banking solutions through online platforms. These align with the digital ambitions of corporates to simplify their banking operations by enhancing how they reconcile their supplier relationships and use FX.

In response, HSBC Trade Solutions (HTS), a new digital platform, was launched in October 2022. It is part of the bank's aim to make all its trade finance products accessible in a digital format – now over 90% of its trade transactions are already initiated digitally.

"Over the last four or five years, HSBC has invested in our trade transformation," explained Chopra. "HTS allows our products and services to be enabled for more customers than ever before with APIs and connectivity options."

It provides new capabilities to trade digitally. More specifically for supply chain finance, for example, he said it also offers transaction dashboards, which help customers to view supply chain portfolios across different markets and geographies.

This plays to HSBC's strengths as a leading facilitator of global commerce, leveraging its network and reach, to bank both large anchor buyers and their suppliers, which also need financing support for procurement and manufacturing in addition to shipments. "That is a big differentiator," added Gahlaut. "Our international connectivity is our calling card… across markets, industries and sectors."

Platforms, sustainability and regional trade: three growth areas

The evolution in how corporates are managing and financing supply chains creates three key opportunities:

1. A bigger role for platforms, paving the way for embedded financing
2. The integration of sustainability within processes and outcomes
3. New opportunities from stronger and closer intra-regional trade ties

Firstly, as corporates buy and sell more using different platforms, banks are well-placed to support given their payments infrastructure and financing expertise. "This will unleash a wave of data-driven lending, embedded on platforms in real-time, and earlier in the cycle," said Gahlaut.

Secondly, environmental, social and governance (ESG) considerations are becoming integrated more deeply in supply chains as sustainability continues to rise up the corporate agenda. There are also financing incentives as businesses receive more attractive terms as part of sustainable supply chain financing programmes. HSBC is working with leading global firms such as Walmart, Puma and PVH, among others, to embed sustainability objectives in their respective supply chains.

Thirdly, trade offers significant growth potential. A case in point is the Regional Comprehensive Economic Partnership (RCEP), which has brought together 15 economies in Asia Pacific. "Companies have started to realign their supply chains to capitalise on the advantages offered by RCEP, which harmonises the rules of origin across much of the region, lowering the cost of inputs for manufacturers and making their goods more price-competitive," added Gahlaut. "It also provides greater access to larger markets for exporters, spurring investment within the RCEP and from beyond."

More recently, in early 2023, the UK joined the Comprehensive and Progressive Trans-Pacific Partnership (CPTPP). This allows businesses in Southeast Asia to gain greater access to – and preferential treatment in – a market of nearly 70 million people.

"Continued progress on the execution of free trade agreements will allow for a more transparent and predictive trading and investment environment which will lead to economic growth," said Gahlaut.

HSBC