Proceedings

Due to the COVID-19 pandemic, the 7th Asian Monetary Policy Forum was conducted entirely virtually on 12 June 2020. Dr. Gita Gopinath, the Economic Counsellor and Director of Research Department of the International Monetary Fund, delivered the opening address, and Dr. Adam Posen, the President of Peterson Institute for International Economics gave the keynote speech. Prof. Markus Brunnermeier of Princeton University presented this year's commissioned paper, which he co-authored with Prof. Sebastian Merkel and Prof. Yuliy Sannikov. Prof. Viral Acharya of New York University and Dr. Frank Smets of the European Central Bank and KU Leuven prepared written comments for the commissioned paper, and Prof. Bernard Yeung of the NUS Business School drew from those comments when engaging Prof. Brunnermeier in a dialogue on the paper. Prof. Steven Davis of University of Chicago Booth School of Business summarised and concluded the Forum.

The forum opened with welcome remarks by Deputy Managing Director Edward Robinson, who began by characterising the extraordinarily sharp economic decline effected by COVID-19 within a very short time span. He emphasised that the consequences and mechanisms of the COVID-19 shock are very different from those of usual business cycle recessions. On the demand side, there has been a sharp fall in global consumption and investment demand, as well as disruptions to global trade. On the supply side, there has been a reduction in labour supply due to lockdowns and social distancing measures, which itself has the potential to amplify the magnitude of the demand deficiency. The reinforcing interactions of supply and demand shocks have produced a sharper decline in economic activity than conventional business cycle recessions, and resulted in a "sudden stop". He noted that it would be appropriate to characterise COVID-19 as a Keynesian supply shock, since containment measures also disrupt production, with a coincident demand-side response.

Against this backdrop, Dr. Gita Gopinath delivered the Forum's opening address. Dr. Gopinath's remarks were structured around three related themes. First, the global dimensions of the COVID-19 crisis. Second, the unique features and unusual characteristics of the Covid-19 economic shock and their implications for the world economy, specifically on the Asian region. Third, the outlook

for the economic recovery, and a discussion of policy issues that governments would have to grapple with as they re-open their economies.

1. Opening Address: Gita Gopinath

i. Characterising the COVID-19 Shock

Dr. Gopinath opined that COVID-19 represented the first truly global crisis since the Great Depression. Unlike other crises since the 1930s, where an economic shock in a few countries typically generates spillovers in other economies, the current crisis originated from a global health shock which hit almost all countries' economy at about the same time with a direct and severe demand and supply shock, even for relatively closed economies. Nevertheless, there has been a large degree of heterogeneity across countries in managing this public health crisis. Countries have experienced different degree of success in containing the spread of the virus. Asian economies in general have done particularly well relative to many countries in the world in keeping the number of cases low.

Accentuating the global dimensions of the current crisis is that COVID-19 has hit both advanced and emerging economies. Governments had to race to contain the pandemic which included restricting face to face human interactions. Simultaneous recessions for advanced and emerging economies represent a highly unusual feature, even for past shocks that have had global reach. For example, during the Global Financial Crisis (GFC), some large emerging markets, notably China and India, managed to largely avoid the severe crisis experienced by many advanced economies. Thus, Dr. Gopinath argues that the current crisis is significantly broader and deeper than the GFC. As countries attempt to reopen their economies, heterogeneity in countries' success at containing the pandemic is already leading to desynchronised phasing out of containment measures across countries, which will continue to disrupt the global economy recovery. It would be interesting to see how these unfold if there are subsequent waves of infections.

Aside from direct negative impacts on the real economy emerging from the public health crisis, COVID-19 has also led to a multi-faceted external shock—disrupting commodities markets and portfolio flows across countries. In particular, the health crisis has led to a collapse in demand for transportation and hence a sharp decline in oil and commodity prices. Many Asian economies that are oil and commodity importers have benefited somewhat from the large drop in oil and commodity prices in Q2 of 2020. However, for commodity or oil exporters, the collapse in oil prices has led to a significant terms of trade decline, along with the domestic shock from the public health crisis. Further, many emerging market economies have experienced large reversals in portfolio flows at the beginning

of the crisis, which has had negative impacts on many Asian economies. The risk of sharp withdrawals in external financing remains a prominent risk as the crisis unfolds.

A feature further distinguishing the present crisis is that the services sector has seen more severe declines than the goods producing sector. Even during the recovery phase in China, where COVID-19 cases had peaked in February, the recovery in manufacturing has been quicker than in the service sector, likely due to continued suppression of economic activities for in-person services while some social distancing measures remain in place.

The effects of the crisis on inflation have so far been relatively muted. Amidst global supply and demand shocks, all major central banks have taken aggressive monetary easing measures. Although a contraction in aggregate supply combined with monetary easing should in principle lead to inflationary pressures, thus far there is little evidence of a significant uptick in inflation in most emerging markets, with some countries even experiencing deflationary pressures.

There has been disconnect between financial markets and real economy in both advanced and emerging market economies, unlike, e.g., the GFC. Despite the crisis, there have been substantial increases in stock prices across the globe, beyond what could be explained by the good performance of technology and pharmaceutical firms in stock indices. Besides, while some emerging markets' borrowing spreads have widened during the Covid-19 crisis, their spreads have been lower than during the global financial crisis. In particular, Dr. Gopinath highlighted three Asian countries, namely Vietnam, Malaysia and India, where sovereign spreads were larger during the GFC than those seen so far during the COVID-19 crisis, despite a smaller hit on the real economy in 2009. Similarly, exchange rate depreciations among emerging market and developing economies have been far more modest relative to the scale of the pandemic shock.

ii. Policy Responses So Far

The speed of the improvement in financial markets may be due to the scale and timeliness of monetary policy responses, via the cutting of policy rates and the infusion of liquidity. Dr. Gopinath noted that central bank swap lines have played a salutary role, an example of constructive international cooperation. Nevertheless, the sustainability of these measures remains a key question. Furthermore, the need for monetary policy to maintain financial and currency market stability may intensify as the recession unfolds. Aside from monetary policy, many countries have also expanded fiscal spending on a much larger scale than during previous crisis. However, many emerging markets, in particular some low-income Asian economies, are more constrained in fiscal space. Another

challenge is that this is a crisis that requires policymakers to disburse funds to a large number of people quickly. This is particularly challenging for low-income Asian economies that have a large proportion of informal employment. The IMF estimates that a transfer to informal workers to sustain their incomes for two months would impose substantial fiscal costs that range between 2.2 and 5.7% of a country's GDP.

iii. Outlook for Recovery and Policy Considerations

Dr. Gopinath highlighted that deep uncertainty about pandemic outcomes in the second half of 2020 will affect the economic recovery. In the April World Economic Outlook, the IMF had projected a contraction of 3% in 2020, followed by a growth rebound of 5.8% in 2021. However, these projections may have to be downgraded significantly if the pandemic lingers until the end of 2020 or if a new outbreak occurs in 2021. Given the depth of this crises, there is a need for reallocation of labour across sectors, as sectors like tourism and transportation may see longer-term demand declines. There could be serious scarring effect of this deep recession in terms of pending bankruptcies and changes in consumer behavior.

For Asian economies, several factors may prove advantageous. First, many benefit from low global oil prices as net importers, and the region has shown a much better success rate in containing the virus spread. Second, in general, compared to its peers, Asian emerging market economies also have lower external and fiscal vulnerabilities.

Conversely, several vulnerabilities are especially pertinent to Asian economies. First, Asian countries are exposed to contractions in international trade, given their relatively high degree of openness. Second, ongoing developments around geopolitical risks stemming from US-China tensions and protectionism in general have spillover effects on Asian economies, through impacts on global supply chains. The mild positive aspect is that China has contained the virus spread well which benefits Asian economies. Third, the potential for high volatility in capital flows remain, which have so far been mitigated by central bank actions to ease monetary conditions via currency swap lines and emergency liquidity facilities.

As long as a medical solution to COVID-19, especially in the re-opening phase, remains elusive, economic policymakers will have to continue finding ways to support incomes and revenues for workers and firms, in order to preserve job matches. Amidst the threat of recurring waves of the pandemic, and lingering economic effects, policymakers have to find more sustainable ways of supporting incomes. As some sectors may become unviable, a policy shift from one that emphasises

preserving job matches, to one that focuses on reallocating workers to growing sectors may have to take place. Policymakers may also have to contend with difficult choices about allocating targeted support to firms that have strategic importance.

To complement economic policy support, public health policies that involve minimal economic disruption, such as widespread testing, contact tracing (effective if the numbers of cases are low), and mask wearing should continue. Intelligent use of cumulated experiences across countries can lead to more effective and efficient public health measures. Effective communication to the public about the phased reopening will also be important for reducing precautionary motives and encouraging consumption. International cooperation in medical supplies and vaccine development and production would be welcome.

Maintaining financial stability and ensuring sufficient liquidity in international debt markets will also be crucial, as critical spending needs of developing economies have to be met. The IMF has so far implemented several policies to ensure that financing needs are met; making available emergency financing for countries that face difficulties undertaking health spending; providing debt service relief so that they can use their resources for local health spending needs; putting in place a new short-term liquidity line so countries can meet their liquidity needs. These measures will likely need to be expanded in the event of a lingering public health and economic crisis.

Dr. Gopinath concluded by emphasising the importance of global cooperation, which is particularly important for the Asian region as there are real risks from rising protectionism and geopolitical tension. The benefits from globalisation will continue to be substantial, even while efforts to mitigate some of its distortionary consequences continue.

2. Keynote Speech: Adam Posen

In his speech, Adam Posen considered the challenges of global cooperation and provided an evaluation of realistic international coordination and cooperation possibilities against the backdrop of the current global health and economic crisis. His theme is that positive international cooperation is built on trust, behavioral based agreements, and international leadership.

Dr. Posen reflected that the experience of global policy coordination during the current pandemic has seen a mixture of successes and failures. On both monetary and fiscal policy fronts, there has been rapid convergence within the international community on optimal economic policy responses to the pandemic. Dr. Posen attributed the ability to achieve such convergence on the

lessons learned from the GFC experiences.

Dr. Posen shared his views on failings in international coordination that have characterised the current crisis. In particular, he highlighted the importance of political divisions, both domestic and international, in preventing international coordination that would have helped to reduce the severity of the public health crisis. At the root of these political divisions is geopolitical distrust, which has manifested in two broad forms. The first is distrust between the political leadership of the US and China, and to a lesser extent between the EU and other liberal democracies and the Chinese government. The second pertains to the rise of international distrust of the United States under President Trump.

Dr. Posen presented potential solutions to the problem of geopolitical distrust, drawing on his joint work with Maurice Obstfeld (2020). They emphasize the key principle for international policy coordination: an agreement should be sought over establishing commonality in the actions and approach of governments, rather than over tradeoffs individual countries are required to make. A salient example of the former is in the G20's agreement on currency issues in 2012, under which the world's major economies agreed to avoid competitive currency devaluations, which has by and large been adhered to. By requiring each country to adhere to the same broad standard of behaviour that binds all other parties, the 2012 G20 agreement on currency devaluation avoided disputes over what constituted desirable target outcomes for individual countries.

This approach is in contrast to one where parties to an agreement are each required to make significant private tradeoffs in pursuit of a target outcome, such as in the example of the Plaza Accord of 1985 between the US and its major trading partners. Countries that had large trade surpluses with the US, such as Japan and Germany, were required to appreciate their currencies against the USD, which led to subsequent unresolved disagreements over whether each country did enough to ensure desirable outcomes. Dr Posen argues that the international agreement to establish USD swap lines between central banks is an example of the desired approach, where an agreement is reached on common behaviour for central banks to supply USD liquidity to other central banks in the event of market stress.

In assessing the finer practicalities of the current G20 agenda, Dr Posen (in collaboration with his colleagues at PIIE) identified four crucial components around which international cooperation should be prioritised going forward. The first component is to increase peer pressure between governments to encourage compliance with best policy practice. The second is to take decisive action

to prevent financial crises. The third is to prevent mutual economic aggression between economies that are already suffering from effects of the pandemic. The last and most crucial component of the G20's agenda should be to help the world's poor survive the current pandemic.

Returning to the subject of international policy coordination in the current crisis, Dr Posen reflected that the relative success of monetary policymakers so far in the response to COVID-19 can partly be attributed to a common analytical understanding among central banks about the causes and symptoms of financial crises. This has led to the shared recognition that financial crises can be prevented with timely interventions to provide market liquidity, via a combination of quantitative easing, credit swap lines and direct credit provision. This is in sharp contrast with the coordination failures among public health authorities around mutual reporting of disease data, coordinated tracking of border movements and sharing of scientific information during the pandemic. Dr Posen attributes these failures of collective action to self-interested national governments who might have avoided data disclosures in the interests of avoiding panic, or faced political incentives to deny the severity of the disease. These exemplify the need of trust and leadership in developing international cooperation.

Dr Posen remarked on several "ironies" that have emerged in the area of global economic policy coordination in recent years. The first is that secular stagnation, which reduced interest rate differentials and slowed economic growth globally, has made international economic coordination somewhat easier. Convergence of economic outcomes across countries may have facilitated agreement in economic policies across countries in similar economic circumstances. A related "irony" is that international coordination to find a vaccine, a classic example of a global public good for which the benefits from coordination are abundantly clear, has proved difficult to establish. Furthermore, the world's experience reveals the difficulty in keeping international rules for states, as they sometimes follow their own self-interest and politicize policies. The irony is that the pandemic blatantly exposes government failure, but politicians are not disciplined, at least not yet.

Dr Posen concluded on a positive note, reflecting on the successes of the G20 in fostering international coordination in monetary policy and, to some extent, fiscal policy in recent years. These successes give a measure of confidence that international coordination can be constructive during the current crisis. The nature of the COVID-19 crisis as a common threat with similar impacts across countries implies that effective frameworks for international coordination should rely on establishing common behaviour, rather than targeting outcomes.

3. Commissioned Paper

The background of this year's Commissioned paper is the IMF's proposal for an integrated policy framework (IPF) for the joint use of monetary policy, macroprudential policies, foreign exchange interventions and capital controls to address the challenges of macroeconomic policymaking in a world with volatile capital flows and monetary policy spillovers. Building on New Keynesian models, the IMF's IPF analysis typically motivates policy interventions based on frictions caused by price stickiness. The MAS commissioned paper, jointly contributed by Professor Markus Brunnermeier, Professor Sebastian Merkel and Professor Yuliy Sannikov, analyses the integrated policy framework motivated by financial frictions that are particularly relevant for EMDEs from a safe-asset perspective. In his presentation, Professor Brunnermeier emphasised that financial frictions, such as collateral requirements, create a demand for safe assets, which include domestic money and government debt. The demand for the services provided by safe assets allow governments that issue them to borrow at lower rates, but EM safe assets have to compete with international safe assets denominated in dollars. Monetary policy, foreign exchange interventions, capital control, and macroprudential regulation will together shape the international competition among safe assets, the distribution of risks, and the efficacy of the capital market system. These are important consideration for EM's integrated policy framework.

i. Safe Asset and Monetary Sovereignty

A safe asset is characterised by two distinguishing features; it has the property of a "good-friend", and it fulfills a safe-asset tautology. The good-friend analogy means that a safe asset is like a good friend that is available when one needs it, especially in times of market stress. The safe-asset tautology suggests that a safe asset is safe because others perceive it as such. These conditions mean that the safe asset maintains a relatively stable value after a negative shock and high market liquidity even during market stress.

Professor Brunnermeier and his co-authors argue that safe assets are worth more than the discounted value of their underlying stream of cash flows. Safe assets provide services to their holders as they may be used as collaterals, hedges, and even as a medium of exchange. Because of these additional service flows, their prices may be higher than their fundamental values.

The prime component of safe assets are domestic money and government debt. Safe assets are a large share of citizens' wealth and important component of their strategy to hedge against risks. Monetary policy can have real effects via the revaluation of these safe assets. With monetary sovereignty, the monetary authority can lower the amount of endogenous risk in the domestic

economy and thus the risk premia. Monetary policy thus affects both risk distribution and risk-taking with real economic consequences.

Analytically, the value of safe assets consists of the expected present value of primary fiscal surpluses, future transaction services, collateral services as well as insurance services. The last three terms form a “bubble” component which reflects not a cash flow payoff but the intangible services.

Professor Brunnermeier and coauthors provide a simple condition to characterise the conditions for emergence of a “bubbly” component in the value of the safe asset:

$$\underbrace{r}_{\textbf{Risk-free rate}} + \text{Safe Asset risk premium} < \underbrace{g}_{\textbf{Growth of the economy}} \qquad (1)$$

The inequality above states that the sum of the real risk-free discount rate and the safe asset risk premium have to be smaller than the growth rate of the economy for the “bubble” value to be sustainable. That is because, to a first approximation, the growth rate of the economy provides an anchor for the growth rate of the value of services provided by the safe asset – for its use as insurance, collateral and in transactions. When US interest rates are low and growth is high, EM governments have “room” to increase the supply of safe assets by the gap between the two sides of the inequality, without increasing indebtedness relative to GDP.

ii. The Three Phases of a Financial Cycle

Professor Brunnermeier and his co-authors categorise the global financial cycle in three key phases. The initial phase is termed the *risk-off phase*, characterised by tight US monetary policy with high US interest rate. Households and firms in the EMEs see the US dollar safe asset, namely US Treasuries, as an attractive investment. Thus, the domestic safe asset faces fierce competition from the dollar safe asset and hence the value of EM government debt is equal to the expected present value of fiscal primary surpluses. In this phase, there is no bubble.

Next comes the *temptation phase*, which starts when the US interest rate drops. With a lower US interest rate, the domestic safe asset becomes more attractive relative to the US dollar as a safe asset. Households and firms borrow US dollars up to their collateral constraints or any restrictions as a result of macroprudential policy and use the domestic safe asset as a hedge for their risk. Cheap dollar funding leads to an investment boom which in turn boosts the growth rate, g. When the growth rate of the economy is larger than the sum of real risk-free rate and safe asset risk premium, the safe

asset acquires a bubble component. It is this bubbly value of government liabilities that tempts the EME's government into "mining" the bubble. So long as the bubble term remains, the government can continue to supply new debt and hence generate a steady flow of revenue that does not have to be paid for by future taxes.

Finally, the *wobbly bubble phase* begins when the prospect of rising a US interest rate makes it more difficult for the domestic safe asset to sustain the bubble. Specifically, the right-hand side of inequality (1) is increasingly binding. First, in order for the domestic safe asset to remain competitive with the dollar safe asset, the real risk-free rate must be higher making it harder to satisfy the bubble condition. Second, the possibility of bursting the bubble requires a positive risk premium making it tougher to satisfy the bubble condition. When the bubble bursts, the value of the safe assets falls back down to its fundamental and there is a reduction in asset prices and domestic investment.

iii. Policy Implications

How should EMDEs insulate their economies against the US monetary policy cycle, and the bursting of safe-asset bubbles? Professor Brunnermeier and co-authors suggest an interpretation of integrated policy frameworks as a menu of policy interventions to prevent the bursting of the EMDE's safe asset bubble and avoid the third stage of the cycle.

They depict the macroeconomic policy considerations through the lens of inequality (1). As long as inequality (1) holds, the EMDE's safe asset's bubble value is intact. From this perspective, fiscal measures that shore up the EMDE's fiscal position, like a commitment to hike future taxes, can support the fundamental value of government debt and sustain the bubble. However, tax hikes may be self-defeating because they may lower the growth rate (g) making harder for inequality (1) to hold.

Another set of policies aims to prop up the bubble component of EMDE safe assets, by ensuring their stability in value and high market liquidity. Ex-post policies during the 'wobbly bubble' phase may take the form of ex post capital controls or exchange rate intervention. By preventing capital outflows, holders of the EMDE safe asset may be persuaded that there will not be a run on the safe asset, enabling it to maintain its stable value. It is also noted that such ex post capital controls may also help raise the bubbly value of domestic asset from an ex ante perspective. If agents know that the bubble will remain even after the increase in the US interest rate, they will be more willing to hold the domestic safe asset. Foreign exchange interventions, in the form of large purchases of the EMDE safe assets, can also help to maintain their value and market liquidity during the wobbly bubble phase.

Ex-ante macroprudential policies can prevent the bursting of safe asset bubbles by preventing the EMDE risk premium from rising, during the boom phase of large capital inflows. By ensuring that banks retain sufficient capital buffers during the boom phase, the EMDE develops a larger buffer to avoid a run even when there is a fall in g during the risk-off phase. Additionally, central banks can also accumulate reserves to credibly signal that they are committed to do foreign exchange interventions making it much less enticing for speculators to launch an attack against them. Ex post macro-prudential policy that forces banks to hold more domestic government debt also implicitly imposes a restriction on capital flows. All these help EMDE's safe assets to keep their status.

The paper also explains why the Mundell-Fleming trilemma is realistically a dilemma. The conventional Mundell-Fleming trilemma states that countries may choose two out of three alternatives: fixed exchange rates, perfect capital mobility and monetary independence. The dilemma states that even if the exchange rate is fully flexible, the competition of the domestic safe asset with the US Treasury bonds curtails EMDEs' monetary independence. When the economy faces inflationary pressure and the central bank chooses to tighten monetary policy to stabilize prices, banks' capitalisation is impaired which then triggers a contractionary loop within the domestic economy. Conversely, if the central bank chooses to make monetary policy more accommodative, it helps banks, but this is difficult to implement as it makes the domestic safe asset vulnerable to the loss of its safe-asset status. In other words, an accommodative monetary policy might trigger a sudden collapse i.e. the bursting of the bubble component of the safe asset. Therefore, EMDEs faces not a Mundell-Fleming trilemma but a dilemma.

In summary, macro-prudential and capital control are substitutes while monetary policy is complementary to macro-prudential policy, capital control policy, and foreign exchange interventions. Stricter ex ante and/or ex post macro-prudential and/or capital controls creates more space for monetary policy. The integrated policy framework includes recognizing the policy complementary and substitution to accommodate, or even to shape, the international competition among safe assets and global risk appetites for the purpose of maintaining financial stability and health risk taking.

iv. Improving the Global financial Architect

How can we build a global financial architecture where EMDEs are less vulnerable to sudden stops? Professor Brunnermeier and co-authors point out that the core of the problem is not necessarily a shortage of safe assets per se but that safe assets are not symmetrically supplied around the globe all the time. Under the existing global financial architecture, the crisis management toolkit comprises IMF lending facilities and bi-lateral swap lines, on top of reserve accumulation during the

normal times, which is costly in terms of resources. Prof. Brunnermeier and co-authors suggest addressing the root of the problem. The approach involves tranching the domestic sovereign bond into a senior and a junior bond with all the risk concentrated on the junior bond and no risk left for the senior bond. The senior bond becomes a safe asset making it easier and more sustainable to satisfy the bubble condition with no risk premium. Investors can now flee into this senior bond instead of the US Treasury, reducing the pressure on exchange rate and inflation.

In order to prevent the moral hazard problem of a country diluting its senior bonds by issuing super-senior bonds, the authors propose a system of international coordination. The idea is to create Global Safe Bonds (which they call GloSBies), that pool liabilities from a group of countries and tranche the pooled liabilities into senior and junior grades. The proposal calls for an international special-purpose vehicle (SPV) that buys a fraction of EMDE sovereign bonds and requires commitment by participating EMDEs to service the portion of the debt sold as the senior tranche first. The senior tranche will then be given safe-asset status, lowering overall funding costs for EMDEs. Under such a system, the authors argue that during risk-on periods, international investors allocate a larger part of their portfolio to junior tranches, reversing the allocation during risk-off periods. Such a system will benefit from diversification of the pooled liabilities, if the pool contains bonds from a sufficiently large group of EMDEs. Further, it can help to prevent large scale capital flight from EMEs, as EMEs retain the ability to issue liabilities via senior tranches of GloSBies.

The advantage of this system is that when EMDEs experience a sudden stop, their investors would have the senior bond as safe haven instead of US Treasury bonds. Eventually, the EMEs would not need the Fed to intervene with swap lines or the IMF to provide short term liquidity and so forth. Because this system is self-stabilising, no intervention is needed.

v. Comments and Discussion

Following Professor Brunnermeier's presentation of the Commissioned Paper, Professor Bernard Yeung engaged him in a dialogue on the paper, based on comments by Viral Acharya and Frank Smets.

Professor Acharya argued that when government expenditures are myopic in motivation and wasteful in terms of long-run economic outcomes, expanding the provision of safe assets may lead to crowding-out of private sector growth, as most domestic savings would remain parked in the safe assets, and increase the endogenous risk in the economy. On the policy recommendations, Acharya highlighted some difficult trade-offs: while capital controls may be desirable in good times to limit the

exposure to external shocks, they may choke the growth of the already crowded-out private sector and aggravate the endogenous risk to the safe asset bubble.

Professor Smets questioned the empirical relevance of the dilemma characterised by Rey (2018), mentioning the findings by Dedola et al (2017) that US monetary policy tightening is deflationary in EMEs. He also raised concerns about moral hazard issues arising from *cleaning* (ex-post policies) instead of *leaning* (ex-ante policies). If agents realise that the central bank or the other government authorities will intervene by satisfying the demand for safe assets and thereby short-circuit the financial bust and negative feedback loops, that may further increase the size of the domestic safe asset bubble and the amplitude of the financial cycle.

Professor Brunnermeier concurred with the importance of governance quality, to support the safe asset bubble and curb endogenous risk. Ideally, the safe asset bubble may reinforce the advantages of having strong governance. To maintain the safe asset, ex-ante policies are more desirable. EM could accumulate reserves as a protection against speculative attacks, maintain fiscal space to support credibility and seek more resilient forms of external finance, such as foreign direct investment. As a last resort, capital flow measures could be used when the bubble is wobbly, but authorities should have a clear strategy about how to remove them because losing access to international capital markets would cause damage to long-term growth. He acknowledged that there is a risk, however, that restrictions on capital flows may allow authorities in countries with poor governance to use the safe asset bubble to finance wasteful spending.

Professor Brunnermeier highlighted the importance of building an international financial architecture that is self-stabilising. He proposed that the senior tranche of a pool of EM bonds could become a resilient safe asset for EMs with good governance. No EMs would be able to do it alone because they would face the temptation of diluting their senior bonds by issuing super-senior ones. The pooled structure, with membership set by a neutral party with strong governance, would mitigate that moral hazard.

In his conversation with Professor Brunnermeier, Professor Yeung explored in greater detail the paper's implications for the implementation of an IPF for EMDEs. Specifically, the conversation revolved around (1) possible policy responses from the already low-growth high-debt EMDEs to deal with huge capital outflows that they are experiencing in the midst of the covid-19 pandemic, (2) the challenges faced in developing domestic safe assets by EMDEs that have weak governance, (3) what EMDEs' governments can do to create a more stable financial system, (4) the considerations between

ex-post and ex-ante policies and (5) how a self-stabilising global financial architecture can become a reality.

Sum-Up

Closing remarks were delivered by Professor Steven Davis. Reflecting on the extraordinary global challenges of 2020, Professor Davis stressed the importance of discussions like the AMPF for considering evidence, sharing insights, wrestling with ideas and identifying ways to address the world's economic and financial challenges. He remarked that the AMPF had served as a good platform to discuss policy issues especially relevant for central banks and monetary policymakers in Asia. Professor Davis systematically reviewed the presentations, beginning with Edward Robinson's introduction that highlighted the rapid and severe deterioration of the economic environment caused by COVID-19. To emphasise this observation, Professor Davis cited the example of the US economy, where the unemployment rate had risen from the lowest level in 60 years to its highest in over 80 years within a very short span of time. Professor Davis reviewed insights from Gita Gopinath's presentation on the unusual character of the Covid-19 crisis and policy concerns, including her observation that currency depreciations among EMEs have been modest relative to the scale of the pandemic shock. He noted Adam Posen's concern on the failures of international cooperation in areas other than in the monetary sphere, reflecting a fundamental distrust between the key strategic players in the global economy. However, in contrast to Adam Posen's view on the failure of international cooperation, Professor Davis shared his view that in securing and supporting the liberal international system, we have witnessed tremendous human development in most parts of the world. Professor Davis acknowledged the significant contributions of this year's commissioned paper by Professor Markus Brunnermeier and co-authors to the discussion on the role of safe assets, the conditions to support safe assets and how vulnerabilities can emerge in safe asset markets. The paper develops an integrated policy framework for the joint use of monetary policy, macroprudential policies, foreign exchange interventions and capital controls and proposes a global safe asset for a more self-stabilising global financial architecture beneficial to EMEs.

As this year's AMPF took place in the form of recorded videos, all conference sessions and accompanying materials are available on the ABFER AMPF webpage.

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