The Thirty-Ninth Singapore Economic Roundtable

November 2023

Jointly organised by
Institute of Policy Studies
& The Business Times

Edited by Manu Bhaskaran Faizal bin Yahya Serene Ho R Avinash





The Singapore Economic Roundtable

The Singapore Economic Roundtable (SER) is a forum of leading economists, policy makers and business leaders who gather twice a year to discuss important issues that affect Singapore's position in the global economy. It deliberates on the role that government agencies and the private sector in Singapore should play in meeting new challenges facing the Singapore economy.

About the Institute of Policy Studies

The Institute of Policy Studies (IPS) was established in 1988 as an independent think-tank to study and generate public policy ideas in Singapore. IPS became an autonomous research centre of the Lee Kuan Yew School of Public Policy at the National University of Singapore in 2008. Today, IPS continues to analyse public policy, build bridges between thought leaders, and communicate its findings to a wide audience. The Institute examines issues of critical national interest across a variety of fields, and studies the attitudes and aspirations of Singaporeans through surveys of public perception. It adopts a multi-disciplinary approach in its analysis and takes the long-term view in its strategic deliberation and research.

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Institute of Policy Studies

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Foreword

The Institute of Policy Studies (IPS) held the 39th Singapore Economic Roundtable (SER) on 9 November 2023. In its 20 years of existence, the SER has acted as a platform led by IPS to gather feedback on the economy and related policy matters. In this spirit, IPS gathers together private sector economists, academics, business leaders and policy makers twice a year. One session of the SER studies current economic matters pertaining to the economic cycle, with a particular focus on monetary and fiscal policy implications. Another session studies longer-term issues of a structural nature and floats possible policy responses.

The 39th SER benefited from the presence of Minister of Trade & Industry, Mr Gan Kim Yong. His keynote address was a *tour d'horizon* of the major changes in Singapore's environment and the strategic responses that the government was pursuing as a result. The globalisation that was so beneficial to Singapore would be less helpful in future due to shifts in the geo-economics that are spurring supply chain reconfiguration as well as a rebalancing of priorities between economic

imperatives and national security considerations. Singapore was pursuing three broad directions of strategic response. First, it would continue to expand its connectivity to regional and international economies so that it could widen its economic space and ride the wave of global opportunities. Second, it would seek out new areas of cooperation that would strengthen its relevance as a global business hub. Finally, in a nod to the greater emphasis on national security, it would safeguard the ownership and control of critical entities.

The second session took a close look at the cyclical state of the economy. It was noted that the global economy had shown an unexpected resilience in the face of the most aggressive monetary policy tightening in several decades. Singapore, however, still had to face challenges such as a manufacturing sector that was still in the doldrums. There was a general view that the economy would put these difficulties behind it in 2024. Nevertheless, Singapore needed to watch two areas carefully. One was the rise in business costs and the other was the risks created by geopolitics taking such a central role in energy markets.

The success of the SER depend on the insights provided by MAS and the generous contribution of ideas from private sector economists. IPS will continue to collaborate closely with these partners in the SER for its role as a platform for policy ideas.

1. Speech by Minister for Trade and Industry Mr Gan Kim Yong

Introduction

Good morning. I am happy to join you today and thank you for giving me the opportunity to share about our economic strategies, in particular Singapore's approach to navigating the increasingly turbulent global order.

Overview of Global Geoeconomic Developments

For the past 30 years since the Cold War, globalisation has benefitted the world. Markets were liberalised and trade flourished. This rising tide lifted many boats, especially small *sampans* like Singapore.

Since the inaugural Singapore Economic Roundtable in 2003, Singapore's GDP per capita has grown from about \$\$40,000, to slightly more than \$\$100,000 in 2023. This is an increase of more than 5 per cent per annum, for 20 years.

However, globalisation is at an inflexion point. The Washington Consensus of liberalisation and free markets is being challenged. There are many reasons for this, including the growing role that security plays in driving economic policy.

The war in Ukraine and the conflict in the Middle East have compounded supply chain disruptions first triggered by the COVID-19 pandemic, and in turn contributed to global inflation.

The battle for economic supremacy among the major powers has caused a heightened sense of zero-sum competition.

Greater volatility and an erosion of trust have led more economies to move away from "just in time" to "just in case." More economies are now rolling out massive subsidies and grants to attract investments to build up their own domestic production, especially in strategic industries such as semiconductors and clean energy.

These shifts portend a major reorganisation of the global economy:

First, a reorganisation of alliances, as countries seek new partners against the backdrop of a changing geoeconomic landscape. Multilateral institutions such as the BRICS bloc of top emerging economies are increasingly seen as alternatives to established global bodies dominated by traditional powers. Foreign investment flows are also becoming more concentrated amongst countries that are geopolitically aligned.

Second, a reorganisation of global supply chains. Countries are pursuing de-risking strategies, such as "near-shoring" or "friend-shoring" their supply chains, to enhance their resilience. This bifurcation in economic systems has the potential to exacerbate rivalries and frictions between countries rather than cooperation and partnership.

Third, a rebalancing of priorities. In such an environment, economic imperatives are increasingly being weighed against national security considerations. Countries are more ready to

pursue policies such as sanctions, export and import controls, investment restrictions, and technology transaction rules, even if this may be at the expense of economic growth.

Singapore's Approach

As a small and open economy, Singapore's survival will depend on our ability to adapt our economic strategies in response to the changing global landscape and manage the economics-security nexus better than our competitors. This morning, I would like to speak about three strategies, which together, will steady our sampan in these choppy waters.

Expand connectivity

First, we must continue to expand our connectivity to regional and international economies so that we can widen our economic space and ride the wave of global opportunities. Singapore is a small economy, and we cannot afford to turn away from the global market. We also cannot afford to have the global market turn away from us.

We will therefore need to continue to support and strengthen the rules-based global trading architecture, by reinforcing key multilateral institutions, such as the World Trade Organization.

An effective and well-functioning dispute settlement system is the cornerstone of a rules-based trading system. This is why Singapore has been a strong supporter of reforming the WTO dispute settlement system.

Our leadership role in the WTO's Joint Statement Initiative (JSI) on Electronic Commerce also demonstrates our commitment to explore practical and inclusive ways to foster collaboration. Members that are ready and willing to commit to rules on trade-related aspects of electronic commerce can join the JSI. To keep JSI inclusive, the door must remain open for others to come onboard whenever they are ready.

At the same time, we must continue to enlarge our network of trading partners and establish new connections with emerging markets.

We are already a hyperconnected economy, with 27 free trade agreements with economies accounting for 60 per cent of the global GDP. But we want to do more.

Last year, we signed the Pacific Alliance-Singapore Free Trade Agreement, collectively, the eighth-largest economy in the world, and are in the midst of negotiating the MERCOSUR-Singapore FTA.

These agreements allow our companies to unlock new market opportunities and diversify our supply chains. For example, in recent years, we have seen a greater variety of food-related imports from Latin America, such as pork from Mexico, and we look forward to having more. This has helped to strengthen the resilience of Singapore's food supply chains.

Seek out new areas of cooperation

Second, we must seek out new areas of cooperation. This will allow us to deepen collaboration while also strengthening our relevance as a global business hub.

Sustainability is one area where there are interesting opportunities for growth and strong potential for international collaboration. Green financing, carbon services, and trading are some examples of the new industries that we can look forward to in the green economy.

Singapore's Green Economy Agreement (GEA) with Australia, the first of its kind, will facilitate our businesses' overseas trade and investments in green goods and services, and catalyse businesses to pursue emissions reduction and decarbonisation. We hope that the GEA can be a pathfinder for cooperation in our journey for a sustainable future.

The digital economy is continuing to thrive and is another area that holds great potential for like-minded partners to come together and collaborate.

The Southeast Asian digital economy is expected to reach US\$1 trillion by 2030. To unlock Singapore's potential in this space, our various Digital Economy Agreements provide

international frameworks to foster interoperability of standards. These Agreements will support our businesses' participation in digital trade and e-commerce.

These common frameworks will grow our digital economy, enabling companies in Singapore to increase their reach to global customers and digitally connect with them more seamlessly.

Besides identifying new areas of cooperation, we must also forge new models of collaboration, to respond to shifts in the global economic landscape. The JSI initiative is one example I mentioned.

The IPEF Supply Chain Agreement, which allows parties to collaborate on supply chain developments, is an example of how the global community can turn challenges into opportunities, and continue to find "bright spots" of collaboration even amidst growing risks of fragmentation.

Bolstering domestic economic resilience and security

Remaining open to trade and investments continues to be a linchpin of our economic strategy. At the same time, we need to fortify our domestic toolkits to address the increasingly complex operating landscape and strengthen the resilience of our economy.

Identifying critical entities crucial to our economy and society and ensuring their continuity will provide investors with confidence that we have adequate and effective provisions to ensure the proper functioning of our economy.

Globally, an increasing number of jurisdictions have recognised the importance of safeguarding the ownership and control of such critical entities.

Many countries have tightened or introduced measures to screen investments for national security reasons in recent years, with more planning to do so as well. These include traditionally open economies like Switzerland and Ireland.

Singapore currently relies on a range of sectoral legislation, to monitor and manage entities in regulated sectors such as telecommunications, banking, and utilities. These tools have served us well and will continue to be important in our overall strategy.

However, because of the increasingly complex economic environment, it is important for us to take a broader view on how we can more effectively manage the risks that may arise from some of these critical entities.

This is why my ministry introduced a new Significant Investments Review Bill earlier this week. This Bill will complement existing sectoral legislation by setting out a new investment management framework for critical entities not adequately covered under existing sectoral legislation. As the majority of critical entities are already covered by sectoral legislation, we expect only a handful of entities are expected to be designated under the Bill and be regulated.

The Bill has been designed to be business-friendly. Designation applies to individual entities, rather than whole sectors. It applies to both foreign and local investors. We closely consulted industry representatives to take into account the views and suggestions from businesses and investors.

Over the next few weeks, we will be engaging with industry, particularly the entities being considered for potential designation.

We will share the details of the Bill and work with them on the implementation details, as well as to address their concerns. When the Bill is passed, a dedicated Office will be set up to implement the legislation and to closely engage businesses and investors. We will ensure that the process is as efficient as possible.

It is timely for us to introduce the new Bill amidst a rapidly evolving and increasingly complex operating landscape, to enhance our economic resilience and national security. The

Bill will strengthen our position as a trusted hub for businesses to invest with confidence in a stable, safe and secure Singapore.

Conclusion

Singapore must navigate the complexities of an evolving world. We will do so by continuing to deepen our networks and expand trade and investment flows, while also fortifying our domestic strategies to adapt to the growing economic-security nexus. Together, we will transform the challenges of today into the opportunities of tomorrow, so that we continue to grow our economy, and create good jobs for our people.

Thank you, and I look forward to an engaging discussion.

Comments by Discussants

2. Mr Ong Sin Beng

Head
EM Asia Economics Research
JP Morgan Chase & Co



Engels' pause: Technical change, capital accumulation, and inequality in the British industrial revolution Robert C. Allen, Nuffield College

One observation from the late 18th and 19th centuries during the first Industrial Revolution is the divergence between output per worker and real wages, with the latter failing to

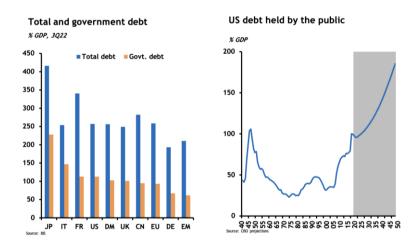
keep pace with the former. This runs against what we have seen in more recent times, where productivity and real incomes moved broadly in sync. We posit one possible hypothesis, put forward by RC Allen, that is Engel's pause.

Engel's Pause

Not coincidentally, *Les Misérables* (written in the 1860s) to some extent reflected the public's angst from this period. Although total output rose, the returns to the economic factors of production — namely, capital and labour — diverged with the returns from the former outstripping that of labour. Consequently, and perhaps not surprisingly the compensation for labour followed suit. One concern is that the world could be on the cusp such a phenomenon, leading to asymmetry in income distribution and with it, spillovers into the sociopolitical dimension.

While Singapore has responded by retraining and retooling its workers, it is important to bear in mind that Singapore is the exception, not the norm. Moreover, the labour markets are currently tight; there will be adaptation, possibly through

higher marginal investment in technology to offset escalating labour costs. Whether this eventually leads to a subsequent reduction in median real wages remains to be seen and should not be ignored given its ramifications for policy, including redistributive and fiscal ones.



There are recurring questions surrounding the fiscal position of the US and if the US dollar can remain as a reserve currency of the world. While there is no certain answer, a few observations and inferences can be made. First, based on the Congressional Budget Office projections, debt-to-GDP in developed markets are worse than that in emerging markets.

In fact, currently, US debt-to-GDP for the government is about 100 per cent. If this path continues, it would be just shy of 200 per cent of GDP by 2050, which is a material escalation.

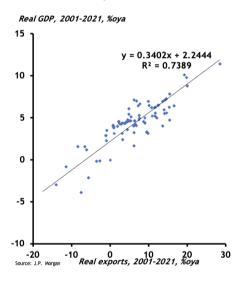
One factor driving this is entitlements. Entitlements, also known as social security spending, are relatively sticky and could also be a politically divisive topic, especially if real wages turn out to be stagnant. Once again, the issue surrounding entitlements would be compounded by some of the dynamics that was discussed previously — demographics, productivity, technology. The question arising from this would be how should government and the state address these distributional issues? This is an important question to answer, as the political ramifications will also determine the extent to which policy evolves.

This serves as one of many developments as note earlier, that might shape the public discourse and could accelerate the transition from the post-Roosevelt world of a rules-based/open capital system to one that is less open should protectionism and a "them-vs-us" mindset emerge. This is

where Asia's export-led growth model could come under pressure.

Asia Trade and Growth

EM Asia real exports and GDP



Growth in Asia and exports are perfectly correlated in the above chart, which goes back 20 years. From this chart, it can be gathered that income flows exogenously through the trade channels into the region, generate prosperity and growth. Conversely, on the trade side, significant disruption is observed. On the surface, China's export trends seem quite

gentle and smooth, but beneath the surface, significant disruptions leading to changes in trade flows have been observed. To exemplify, China's exports to the US have gone from about 55 per cent to about 45 per cent. Furthermore, a similar phenomenon has been observed in Europe. Hence, the European share of exports from China has risen substantially, effectively diverting away from the US.

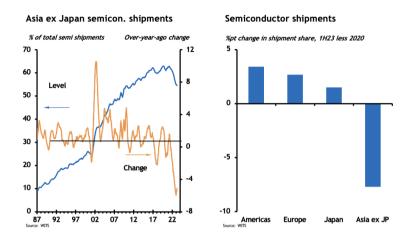
Trade Shift Underway for US and China



The main beneficiaries from the aforementioned occurrence are ASEAN, EU, Latin America, but at the cost of Hong Kong. It is notable that the initial beneficiary is ASEAN.

Examining the graph on the left, it is evident that exports from China to the US have declined. In the chart on the right, it is observed that ASEAN's share of Chinese exports has increased. On that same chart, the inverse scale represents ASEAN. Initially, ASEAN almost completely offset the adjustments by acting as a conduit for trade flowing from China through the US to ASEAN shores. However, what is more interesting — and concerning — is the trend observed over the past six to 12 months. While China's exports to the US have declined, ASEAN's share, instead of increasing, has actually started to decrease. The question arises: where is this share going? The answer is that it is being redirected to Latin America. The bottom line is that, within just four years, there have been significant shifts in these trade flows, prompting the need to understand what is driving these changes.

Industry Policy in Focus



One dynamic driving this decline is a very muscular industrial policy. This is observed in the actual shares of semiconductor shipments in the region. The above chart exhibits the share of Asia ex-Japan semiconductor shipments globally increasing since 1987, since the inception of the data. However, a substantial decline about 4 percentage points has been observed in the last two years (2021 and 2022) if not slightly more. The decline of shipment shares in Asia ex-Japan (see above chart on the right) can be attributed to the rise in new shipments originating from the Americas, Europe and Japan and could reflect the impact of industrial policies on trade

flows, as new manufacturing facilities shift from one region to another.

Non-Tech Trade Undergoing Change

| | 2018 | 2019 | 2020 | 2021 | 2022 | Chg.1 |
|----------------------|-------|-------|-------|-------|-------|-------|
| Total, US\$bn. | 340.5 | 343.3 | 262.0 | 406.3 | 546.3 | 284.3 |
| Russia | 12.1 | 12.1 | 12.8 | 12.9 | 15.1 | 2.3 |
| Saudi Arabia | 9.1 | 12.0 | 10.9 | 10.9 | 12.0 | 1.1 |
| Iraq | 6.6 | 6.9 | 7.3 | 6.5 | 7.1 | -0.2 |
| United Arab Emirates | 3.0 | 2.8 | 4.3 | 4.9 | 6.7 | 2.4 |
| Malaysia | 3.0 | 3.3 | 2.7 | 4.2 | 6.4 | 3.7 |
| Australia | 10.0 | 10.9 | 11.3 | 8.6 | 6.3 | -5.0 |
| Oman | 5.2 | 5.4 | 5.5 | 6.4 | 6.3 | 0.8 |
| Qatar | 3.7 | 3.3 | 3.9 | 3.9 | 5.8 | 1.9 |
| Indonesia | 3.7 | 3.3 | 3.9 | 5.9 | 4.7 | 0.7 |
| Kuwait | 3.9 | 3.5 | 3.7 | 4.0 | 4.6 | 0.9 |
| Angola | 7.6 | 6.8 | 5.6 | 5.0 | 4.2 | -1.4 |
| United States | 3.0 | 1.1 | 4.0 | 6.6 | 3.5 | -0.5 |
| Brazil | 4.8 | 5.4 | 5.3 | 3.6 | 3.3 | -2.0 |
| Tajikistan | 2.3 | 2.5 | 2.3 | 1.7 | 1.9 | -0.4 |
| Colombia | 1.5 | 1.6 | 1.4 | 1.2 | 1.1 | -0.3 |
| Canada | 0.3 | 0.5 | 0.6 | 1.2 | 1.1 | 0.4 |
| Mongolia | 0.9 | 1.0 | 0.8 | 0.6 | 1.0 | 0.2 |
| Congo | 1.9 | 1.6 | 1.2 | 1.1 | 0.9 | -0.2 |
| Kazakstan | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 0.4 |
| Total | 83.0 | 84.4 | 87.9 | 89.6 | 92.7 | 4.9 |

Currently, there is increasing emphasis on security over profit even in the commodity. The charts above show China's energy imports. The past two years have seen a shift away from Australia, for reasons that are not fully apparent to us. This shift marks the emergence of further segregation in trade flows. Whether this would be further weaponised remains to be seen.

As a small open economy, Singapore needs to make as many friends as possible. The worst outcome for Singapore is if the small country were to be forced to pick sides. While it is hoped that Singapore will not resort to choosing sides, Singapore needs to be aware of how there are some fundamental, profound changes that have been occurring that changing the way businesses work. Singapore and ASEAN may be a short-term beneficiary of this phenomenon. However, how can Singapore present itself in ASEAN as a singular trading block? Could ASEAN stand collectively together despite some differences? The answers to these questions remain uncertain amid testing times, which may prove to be transformational or perhaps, disruptive.

3. Mr Ziad Haider

Global Director
Geopolitical Risk
McKinsey & Company, Singapore

Mr Ziad presented at the 39^{th} Singapore Economic Roundtable but his employer's rules preclude us from publishing his views.

4. Discussion with Minister for Trade and Industry

Three main questions were posed. The first question explored Singapore's access to talents and its ability to remain competitive. The second discussed the pressures on the population in balancing the greater need for competitiveness while dealing with other pressures on Singaporeans and Singaporean businesses. The final question broached the idea of how the state envisions the evolution of the manufacturing sector.

Singapore's Access to Talent

A question regarding Singapore's access to talent and its ability to remain competitive was posed to the panellists. Could the city-state become the target of other countries and therefore, must increase its competitiveness even more? This includes competitiveness across all domains including the fields of human talent and business. The response was that the race for talent was a constant. This was due to the highly competitive environment Singapore found itself in, as well as

non-static nature of her competitors. Even as Singapore improved its competitiveness, others were also strengthening their competitiveness.

Singapore's competitors were also changing, with more challenges from low-cost countries that were improving their quality, as well as traditionally high-income countries that were beginning to improve their costs. As such, Singapore has to be competitive, cost-effective and high-quality. Singapore's ability to remain an attractive place to do business is dependent upon good governance, clear rules and a consistent approach to investments so that business investors would have confidence. In the case of talent, Singapore needs to ensure that talented people who work here are able to live in a safe and secure place with their family members too.

In addition to this, it is necessary for Singapore to be a place for talent to easily pass through. This is to the city-state's advantage as the talent that moved to other countries would allow Singapore to build greater networking ties with these states. The healthy flow of talent also entails a healthy flow of

investment for Singapore. As such, it is in Singapore's interest to remain open to investment. However, being open to people from around the world also requires a balance between competitiveness and managing risks that came with it. These include greater scrutiny of inflowing investments into Singapore as alluded to earlier.

Pressures on the Population

How can Singapore balance the need for greater competitiveness with managing the greater pressure that are wrought on Singaporeans as well as Singaporean businesses? As such, businesses had to constantly renew themselves. Long gone were the days when one would stay in one job for decades. As such, there needs to be a great deal of flexibility and adaptability. The analogy of Singapore as a sampan is relevant in this regard.

The government is doing what it can to install stabilisers that would support Singaporeans and their businesses in their efforts. This is so because Singapore had more resources now to look after those who are vulnerable so that no one would be

left behind. This also involves helping Singaporean companies stay innovative so that they can allow Singapore to have their own offering of services and products.

Manufacturing Sector Evolution

Given the importance of manufacturing to the Singapore economy, as well as the increasing number of challenges, how does the government envisage the manufacturing sector evolving? Is maintaining the manufacturing share of GDP at the desired 20 to 25 per cent of GDP a realistic goal for manufacturing in the foreseeable future? If not, what are some of the incremental domestic tools or policies the government needs to think about? Increasing cost pressures can hamper the government's desire to ensure manufacturing stays rooted in Singapore.

In this regard, the government has announced the Manufacturing 2030 Plan a few years back, where policy makers target to grow Singapore's manufacturing sector to slightly more than 20 per cent. As a result, manufacturing will

continue to be an important component of the overall economy.

Furthermore, Singapore's manufacturing strategy has shifted and now focuses on an ecosystem approach. This entails creating a network of interdependent companies with strong synergies that share a symbiotic relationship with one another. It does not matter whether these are in the semiconductor, food technology or biotechnology industry, for example. The plan is to entrench an ecosystem in Singapore that will make relocation for companies easier.

It was noted that it would be extremely difficult to relocate an entire ecosystem. Once Singapore has a competitive ecosystem built, it would be hard for competitors to replace Singapore in the value chain. Nevertheless, other countries are also offering grants and incentives to get companies to set up their bases, and Singapore may not have the resources to compete with them. The city-state could find other ways to attract companies through support for innovation and research and development.

Overall, Singapore can be confident of growth in the manufacturing sector due to certain advantages like the ecosystems it has been built, and its infrastructural investments and extensive connectivity around the world. With Asia being the growth engine of the world for the next decade, manufacturing plants will look at Singapore as an attractive destination.

Recent Economic Developments

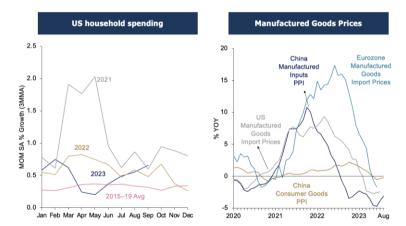
5. Presentation by Mr Edward Tsang

Lead Economist

Economic Policy Group

Monetary Authority of Singapore

Global Economy Slowly Unevenly, Alongside Pullback in Inflation



The global economy has shown remarkable resilience despite aggressive monetary policy tightening, but growth has been uneven across regions and sectors with the manufacturing sector still in the doldrums. The US continues to outperform

amid robust household spending. Chinese activity has stabilised, but the property sector remains a drag. In contrast, activity has deteriorated in the Eurozone. For the rest of Asia, economic growth has been dampened by weak demand for consumer goods and electronics.

Concurrently, global headline inflation has fallen as the effects of the commodity price shock have receded, and supply chain pressures have been largely resolved. Subdued Chinese demand and overall weaker global demand for manufactured goods are adding to the disinflationary trend. However, elevated services inflation has meant that the moderation in core inflation across most advanced economies (AEs) has been gradual.

Below Trend Growth Expected in Most Regions in the Coming Quarters, Led Primarily by G3

| | QOQ SA (%) | | | Annual (%) | | |
|---------------|------------|-------------|-------------|------------|-------|-------|
| | 2023 Q2 | 2023 Q3* | 2023 Q4* | 2022 | 2023* | 2024* |
| G3 | 0.6 | 0.5 | 0.1 | 2.3 | 1.7 | 0.7 |
| Asia ex-Japan | 0.9 | 1.1 | 0.9 | 4.1 | 4.5 | 4.5 |
| ASEAN-5 | 1.1 | 1.2 | 1.1 | 6.2 | 4.2 | 4.8 |
| Global | 0.8 | 0.8 | 0.5 | 3.4 | 3.1 | 2.8 |

Note: The G3 grouping refers to the Eurozone, Japan and the US, while the ASEAN-5 are Indonesia, Malaysia, the Philippines, Thailand and Vietnam. Asia ex-Japan comprises China, Hong Kong SAR, India, South Korea, Taiwan and the ASEAN-5.

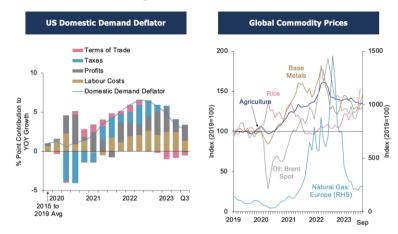
All aggregates are weighted based on Singapore's value added by destination of final demand (using TiVA data).

Global economic growth is expected to ease over the coming quarters. The slowdown will be led primarily by the US and the Eurozone as the impact of tighter policy and diminishing saving buffers increasingly weigh on spending and activity. Activity is expected to remain weak in the first half of 2024 before staging a mild pick-up in the second half, as financial conditions ease and consumer spending on goods and the inventory cycle normalise.

In China, the recent ramp-up in policy measures is expected to provide some support to the economy, but structural challenges facing the property market pose a significant headwind to the recovery. Despite the softening external outlook, resilient domestic demand will provide some offsetting support to growth for Asia ex-Japan. Overall, the global economy is projected to moderate to 2.8 per cent next year from 3.1 per cent in 2023.

On the prices front, following this year's rapid pace of global disinflation, further progress is likely to be slower. Still-tight labour markets and elevated wages in the AEs are expected to keep core inflation above 2 per cent targets into next year. Across the region, headline and core inflation are set to remain within central bank targets next year, but several economies are more vulnerable to near-term volatility in food and energy prices and higher imported inflation arising from a stronger US dollar.

Risks Remain From Stubborn Inflation, Tighter Financial Conditions and Sharper China Slowdown



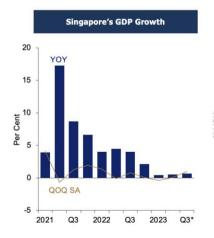
There are several risk factors that could derail the growth outlook. Inflation could re-accelerate from a stronger catch-up in wage growth edging labour costs up. Additionally, adverse supply shocks could emanate from extreme weather events such as a strong El Niño, and escalation in geopolitical conflicts could lead to a renewed surge in food and energy prices.

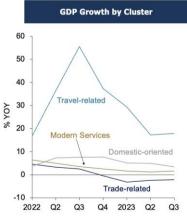
Such upside inflation surprises would likely prompt further central bank policy tightening, or rates remaining higher for longer, possibly leading to renewed banking stress, increased

global risk aversion and capital outflows, which could put pressure on regional economies with external financing needs.

China's property market slowdown could also become more severe, leading to increased developer defaults, a sharper contraction in real estate investment, and intensified fiscal difficulties among local governments. Trade-dependent Asian economies with strong export ties with China would be the most affected.

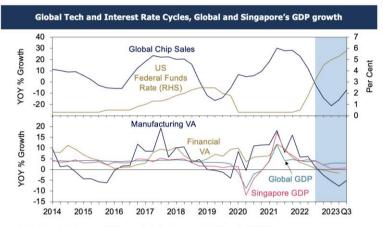
Singapore Economy Picked Up in Q3 2023, After Stagnating in Preceding Three Quarters





The Singapore economy stagnated from late 2022 to the middle of this year, driven by weakness in the manufacturing and financial services sectors. The third quarter of 2023 likely marked the turning point in this slowdown, with GDP expanding by 1 per cent quarter to quarter seasonally adjusted (QTQ SA). On a year-to-year basis, GDP growth also picked up to 0.7 per cent, from 0.5 per cent in the first half of this year. There were signs of convergence among the broad clusters of the economy, with some recovery in the external-facing sectors, even as growth in the domestic-oriented sectors moderated.

In Quarters Ahead, Growth in Singapore Economy Expected to be More Even Across Sectors



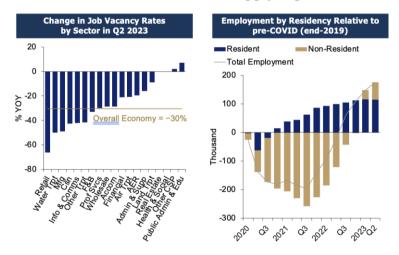
Note: The blue shaded area denote the manufacturing downcycle which began in H2 2022.

The strength and sustainability of the pickup in the Singapore economy will hinge on external final demand, which could be weighed down by uncertainties, including any broadening of the Israel-Hamas conflict. Barring renewed shocks in the global economy, the convergence in growth rates across sectors towards their pre-COVID trends is expected to continue in the quarters ahead.

Manufacturing in Singapore should see a cautious recovery alongside nascent signs of stabilisation in the global electronics industry, while financial services growth appears to have bottomed out amid plateauing interest rates.

Conversely, growth in the travel-related and domesticoriented sectors is expected to normalise as the postreopening momentum wanes. Overall, GDP growth is projected to be at the lower half of the 0.5 to 1.5 per cent forecast range in 2023 and coming closer to its potential rate next year.

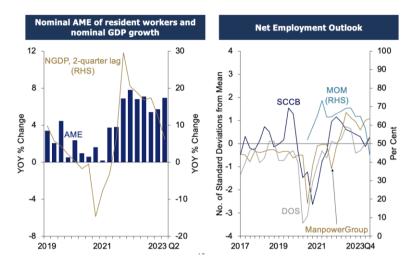
Labour Market Tightness Eased as Labour Demand Slowed and Non-Resident Labour Supply Expanded



Overall, tightness in the labour market receded further in recent months. Labour demand continued to moderate with the external facing industries such as water transport and

manufacturing, seeing larger falls and job vacancy rates compared to the overall economy. At the same time, non-resident labour supply expanded, helping to ease labour shortfalls in several sectors. Amid the easing of labour market tightness, the resident unemployment rates ticked up to 2.8 per cent in September from its trough of 2.6 per cent in April, although this remains below the pre-pandemic average of about 3 per cent.

Wage Growth Should Ease Next Year as Labour Market Conditions Soften, But Employment Should Remain Supported

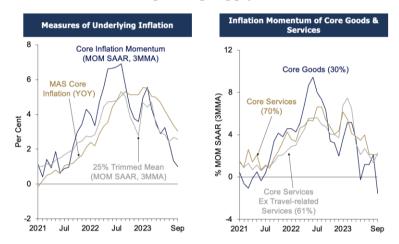


Nominal resident wage growth should ease from its highs this year as the labour market cools. This would follow the weaker nominal GDP growth in recent quarters. A significant part of the decline in wage growth in the coming quarters would likely reflect lower bonus payments, which is lifting average monthly earnings this year. The significant flexibility in resident wages should ensure that employment remains well supported in 2024, even as labour demand slows.

Recent employment surveys have been mixed, but labour demand is likely to remain more resilient in the sectors facing

residual labour shortages, such as domestic oriented and travel related sectors. Hiring could also pick up in the external facing sectors in the latter half of 2024 in tandem with firmer global demand.

Core Inflation Fell in Q3 2023 on Account of Easing Import Cost Pressures and Improving Supply Conditions

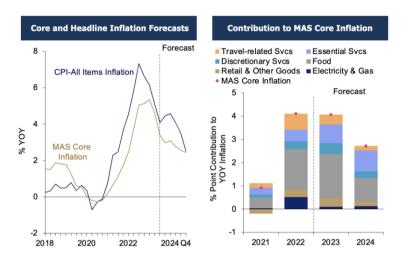


Underlying inflation in Singapore continued to ease in the third quarter. MAS core inflation stepped down to 3 per cent in September, down significantly from its peak of 5.5 per cent in January. Looking at the most recent pace of price increases

over the last three months, core inflation has moderated even more to 1 per cent on the month-on-month annualised basis.

The step down in core inflation reflects a slower pace of price increases across both goods and services, although goods inflation has fallen more sharply. Lower overall core inflation has been driven by easing imported costs and greater alignment in demand and supply conditions in most sectors. In particular, food inflation fell as lower imported costs passed through to consumer prices and weaker discretionary spending weighed on inflation of components such as restaurant meals. Travel-related services and point-to-point transport services inflation also slowed as supply capacities in these sectors expanded.

Core Inflation Expected to Remain on Broad Moderating
Trend



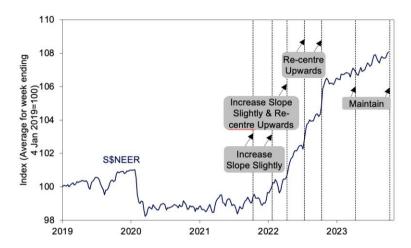
Core inflation is projected to edge down to between 2.5 and 3% year-on-year by December this year, although outturns in the months ahead could see some volatility because of higher electricity and gas prices. In early 2024, inflation is also expected to be lifted by the increase in GST and seasonal effects associated with the lunar new year. However, over the course of the year, core inflation should continue to broadly moderate as imported costs remain contained and unit labour costs rise at a slower pace.

Singapore's imported cost of most non-energy goods and services should continue to be dampened by appreciating

Singapore dollar and favourable global supply conditions for manufactured goods as well as most food commodities. Slower unit labour cost growth in the services sector should also undergird the continued moderation in services inflation. Nonetheless, inflation for some services components such as public transport, will remain elevated due to the passthrough of previously accumulated costs.

For 2024 as a whole, taking into account all factors including the GST increase, core inflation is projected to slow to an average of 2.5 to 3.5 per cent, while CPI-All items inflation is forecast to come in around 3 to 4 per cent. Excluding the impact of the GST hikes, the forecast range of core and headline inflation are 1.5 to 2.5 per cent and 2.5 to 3.5 per cent, respectively.

In October 2023, MAS Kept S\$NEER on Current Appreciating Path



In October, MAS maintained the prevailing rate of appreciation of the Singapore Dollar Nominal Effective Exchange Rate (S\$NEER) band, with no change to the width of the band or the level around which it was centred. Even as growth picks up, the output gap is expected to stay slightly negative in 2024. Meanwhile, core inflation is forecast to remain on its broad downward trend. Against this backdrop, the current appreciating path of the S\$NEER policy band is assessed to be sufficiently tight. A sustained appreciation path for the S\$NEER policy band is necessary to dampen imported inflation and curb domestic cost pressures, and thus ensure medium-term price stability.

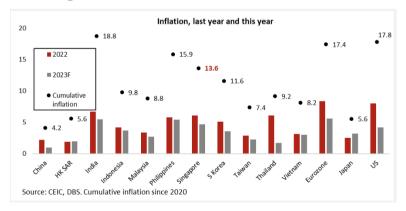
6. Presentation by Mr Chua Han Teng

Economist

DBS Bank Ltd

I will build upon Edward's presentation to touch more on inflation dynamics in Singapore, which is also something that is of concern globally, and also discussed extensively in Parliament just this week. In particular, I will touch upon the elevated business cost environment in Singapore.

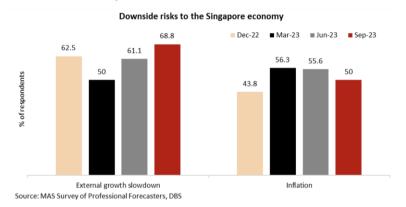
Third Highest Cumulative Inflation in Asia Since 2020



In the context of the global environment, Singapore's inflation in cumulative terms since 2020, is the third highest in Asia, at

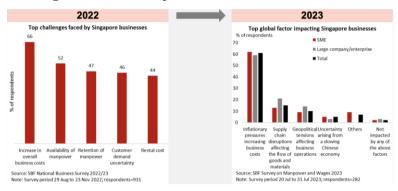
close to 14 per cent, closely behind EM Asia peers like India and the Philippines. Singapore is a global price taker that has seen its inflation evolve in line with global peers; however, Singapore's inflation is less acute than advanced economy such as the US and Europe.

Inflation is a Key Downside Risk



Apart from external headwinds, Inflation is also cited as a key downside risk. Inflation risk would have a big impact on the purchasing powers of consumers and the increase in business cost hurting margins. This is something to watch out for quite closely with 50 per cent of correspondents claiming that inflation is a key downside risk to the Singapore economy.

For Singapore companies, business costs are a top challenge. These concerns are well reflected in the surveys conducted by the Singapore Business Federation (SBF). This has been a top challenge in 2022 which persisted into 2023.

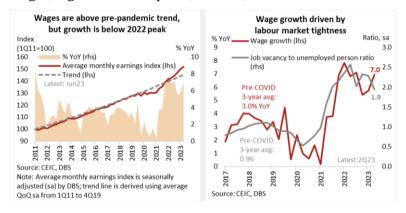


In 2022, the SBF National Survey showed 66 per cent of respondents claiming that the increase in overall business cost remained a top challenge apart from manpower issues such as the availability of manpower. In 2023, SBF also conducted a survey of manpower and wages in July, which saw around 60 per cent of respondents saying that inflationary pressures had led to increased business costs. This shows how inflationary pressures are a top factor that has been impacting businesses

apart other than supply chain disruptions or geopolitical tensions. There is a clear consensus among SMEs and large companies since 2022 that business costs are a challenge.

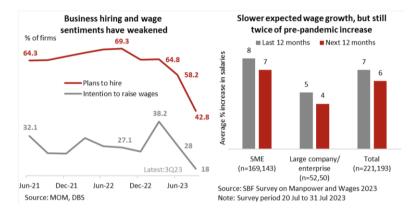
Tracking Business Costs

Business costs can be tracked using four perspectives — wages, logistics and imports, utilities, and rentals.



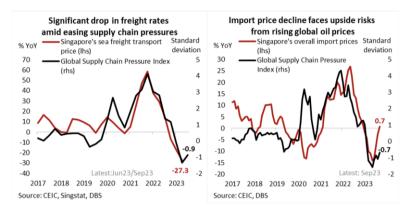
First, wages were identified in the 2022 SBF survey as a topcost challenge. Observing the wage growth chart on the left that was adapted from MAS's macroeconomic review, it shows how wages are above what would have been projected by the pre-pandemic trend. A reason for this robust wage growth is

because the market is driven by a tight labour market due to the competition for talent.



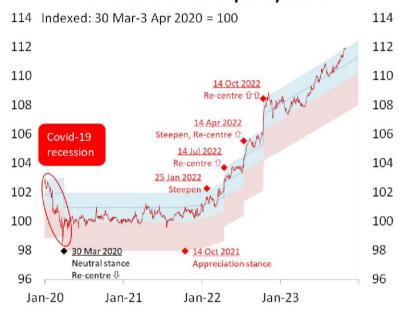
Wages are projected to grow further, but at a slower rate. The reason for this is because business hiring sentiment and wage sentiment has weakened amidst an uncertain economic environment. In fact, according to the SBF survey, business are expecting slower wage growth in the next 12 months. But, this growth rate is still twice of what was observed in the prepandemic era.

Logistics Costs Contained While Import Costs Face Upside Risk



Moving onto to logistics and import costs, Singapore as a trading hub is exposed to such costs. Fortunately, logistics costs are more contained now. Examining the New York FED Indicator, it is evident that global supply chain disruptions have largely been resolved and are currently below the historical mean. Additionally, import costs, as shown in the chart on the right, have also moderated. However, global supply chains now face upside risks due to a potential increase in global oil prices.

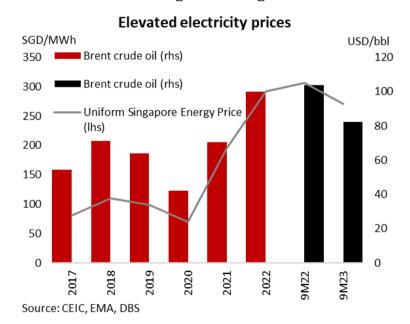
Import Costs Dampened by Strong SGD Policy DBS SGD NEER and policy band



A strong Singapore dollar policy adopted by the MAS has dampened import costs. MAS has been proactive in policy tightening to arrest the momentum of price increases by starting its tightening earlier than the FED. By DBS' own estimates, since the MAS tightened the policy from October 2021 to October 2022, the appreciation of the Singapore dollar nominal effective exchange has increased to a rate of 3 per

cent per annum. Moreover, during the October 2023 decision, MAS stated that sustained appreciation of the S\$NEER policy band would be necessary to dampen imported inflation and also to curb domestic cost pressures. This move would also allow the Singapore dollar to appreciate into 2024. In fact, some of the efforts in terms of widening supply sources such as food have also helped to contain imported costs.

Utilities Cost: Moderating but Still High



In the area of utilities, electricity prices are crucial. According

to PUB, for most businesses including the services sector,

utilities bills are not that high and comprise around 5 per cent

of total costs. However, this relatively small percentage might

still be causing a noticeable strain, contributing to the

challenging situation. Although electricity prices remain high,

they are moderating and somewhat contained due to below-

peak oil prices, to which natural gas contracts are closely

linked. Hence, utilities and electricity costs would probably

stay elevated due to tight power supply and still growing

demand. Furthermore, as long as the Singapore economy

grows, the electricity demand would continue to grow. There

would also perhaps be some spillover from rising carbon

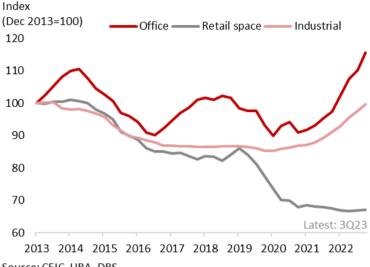
taxes. Additionally, water prices will be raised in two phases.

resulting in further upside to costs.

Commercial Rentals: Mixed Conditions

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Mixed conditions in commercial rentals



Source: CEIC, URA, DBS

Commercial rentals are another cost challenge. First, steady increases and higher rents for offices have been observed by the URA. Even as the country shifts towards a hybrid working environment, there is still a tight supply in the office market, keeping these rents high.

Second, industrial rents have also risen. This is due to supply being disrupted during the pandemic. The other reason would be how Singapore has continued to attract FDI inflows in the

industrial sector, both in the electronics firms and in logistics firms expanding their presence in Singapore.

Lastly, retail rents are the weakest area, which has fallen since 201. However, it is observed that there has been some stabilisation as the above chart shows. There is also some room for retail rents to improve amid returning tourism.

In summarising the various costs discussed, the business cost tracker above allows for the costs to be examined from two angles.

First, it shows the level of the cost — index versus the five-year average. Second, it shows the year-on-year growth trend. From here, it can be observed that there is some relief in the increase in these various costs.

However, across these various indicators, these costs are still high against the five-year average except for the retail rents. While in terms of the growth trends, there is some relief in

certain areas such as logistics or utilities, wages and certain rents remain high.

There are three key takeaways in conclusion. First, business costs remain a major challenge as they have been elevated compared to the previous years. Second, the positive news is that increases in areas such as logistical costs have cooled. Wage growth has also been robust and is set to ease in a more contained business sentiment. Lastly, with import costs facing upside risk and MAS moving to maintain its policy of appreciation of the S\$NEER, the monetary stance has been appropriate.

7. Presentation by Mr Yu Kaho

Head
Energy and Resources Research
Verisk Maplecroft

Navigating Market Risks: Key Trends in 2024

Geopolitics have re-emerged as a key issue in the global energy market, complicating the balance of security, affordability, and sustainability. In 2024, key risks include geopolitical tensions and potential supply shocks, along with OPEC+ production cuts that have disproportionately tightened the global energy supply. Additionally, the weakening global economy and persistent inflation continue to cloud the demand outlook, impacting industry growth and downstream expansion.

Economic challenges have also intensified resource nationalism, with increased state intervention in resource-rich nations potentially disrupting energy supply chains. Developed countries are balancing offensive and defensive strategies to secure resources, while developing nations face dilemmas between pursuing nationalistic policies and

economic diversification, particularly in the context of the ongoing energy transition.

Socioeconomic risks, including civil unrest, have surged globally, causing further instability in energy markets. Civil unrest has hit new highs, with widespread protests, labour strikes and political instability adding further volatility to energy markets. For instance, strikes in Australia's LNG sector led to fears of gas shortages and price spikes in 2023. These events underscore how deeply interconnected energy security is with political and social stability, posing ongoing challenges for both suppliers and consumers worldwide.

Regulatory changes, particularly around carbon pricing, are introducing new risks for businesses. As more countries develop their own carbon pricing mechanisms — such as emissions trading schemes, voluntary carbon markets, and carbon taxes — the growing divergence between these tools in developed and developing markets is heightening the compliance and operational costs. The significant carbon price gap, exemplified by mechanisms like the EU's Carbon Border

Adjustment Mechanism (CBAM), could escalate trade tensions and regulatory pressure, particularly for exporters in less mature markets.

With global pressures for decarbonisation and geopolitical tensions rising, sudden regulatory changes could drive rapid shifts in market dynamics, posing significant risks for businesses operating across these markets. Companies must evaluate the potential impact of these policies on their supply chains, not only in terms of compliance with carbon regulations but also considering broader issues like trade disruptions, resource security and socioeconomic instability. Effective risk management will be crucial for navigating this increasingly complex and volatile regulatory landscape.

8. Discussion Session Two

The second discussion revolved around two main questions. The first question posed to the panellists was regarding the softness in energy prices despite ongoing geopolitical affairs. The second question examined whether investment data were matched with the physical actions in reality, given the changes that are occurring in the geopolitical arena.

Softness of Energy Prices

A question regarding the surprising lack of persistence in rising energy prices was posed to the panellists. Why were energy prices back at lower levels given the latest conflict between Israel and Hamas?

The market had nightmares in the past whenever there was a geopolitical crisis, with utility prices increasing. This happened during the Ukraine crisis. However, the Israel-Hamas conflict showcases the difference in the structure of the energy market. The Ukraine crisis mainly affected gas prices more so than utilities. In the Israel-Hamas conflict, the supply

of oil has not really been affected. If the conflict is constrained, the global supply will not be impacted as much.

Nevertheless, if there is an escalation of the conflict that draws regional players like Iran and Saudi Arabia, supply will be affected. The Israel-Hamas conflict is important for people who observe the commodity market there. For now, this issue is not impacting the market as much. This is also the reason why the oil prices are expected to stabilise in a few weeks.

Investment Diversification Data Match Real Life

It was noted that supply chains were notoriously hard to restructure. Despite everything that was reported in the press, significant shifts in company investment decisions were not being observed. As such, given the magnitude of risk premium or cost increases being estimated, was there an actual, physical orientation of global production organisation in the world? In other words, were physical actions in the world matching what the data or numbers were stating? This point was raised in reference to the effects of geopolitics or rising costs on

supply chains and whether companies were diversifying their investments, mainly out of China.

A response was that it would take a while for these things to gather momentum. However, incipient changes were already being observed. For example, the new rendition of the 2022 CHIPS Act would already have had a profound impact as it effectively limits certain technologies from migrating from one part of the world to another. This is being reflected in some of the corporate decisions of companies to set up plants in their home countries, which is already happening. However, this is also very sector-specific and is happening more rapidly in some sectors than other. De-risking was certainly on the minds of corporations as the direction of foreign direct investment was certainly trending away from China.

It was noted that there would sometimes be a lag in the data that was being produced. The reconfiguration of supply chains was indeed accelerating based on the media reporting, company announcements and earnings statements. However, this was a complex issue as de-risking was easier in some

sectors, whilst extremely difficult in others given the absurd advantages China had in them. These included areas like chemicals, automobile parts, electrical vehicles, solar panels and batteries, and many types of equipment. In fact, many companies were doubling down on investments in China due to the clear benefits China brought them.

The outflow of investments was also not one-sided. Investment outflows were not only being undertaken by Western companies. Chinese and Taiwanese companies were also increasing investments in ASEAN, with Thailand, Malaysia and Vietnam being potential destinations. As such, the diversifying of supply chains and investment flows is a reality that countries around the world, including the US and China, are bringing about due to internal and external trends. Derisking was certainly on the minds of corporations as the direction of foreign direct investment was certainly trending away from China.

Appendix 1: List of Participants

Chairperson

Mr Manu BHASKARAN Adjunct Senior Research Fellow Institute of Policy Studies, Singapore

Keynote Speaker

Mr GAN Kim Yong Minister for Trade and Industry

Discussants

Mr ONG Sin Beng Head EM Asia Economics Research JP Morgan Chase & Co

Mr ZIAD Haider Global Director Geopolitical Risk McKinsey & Company, Singapore

Mr Edward TSANG
Lead Economist
Economic Policy Group
Monetary Authority of Singapore

Mr CHUA Han Teng Economist DBS Bank Ltd

Dr YU Kaho Head Energy and Resources Research Verisks Maplecroft

Participants

Ms Adele TAN
Deputy Chief Executive Officer & Chief Planner
Management
Urban Redevelopment Authority

Mr Alvin LUI Chairman Strategic Capital Global CapitaLand Investment Limited

Mr Andrew LIM Group Chief Operating Officer Group COO's Office

Mr ANG Yuit Managing Director The Adventus Consultants

Mr Aylwin TAN Chief Customer Solutions Officer Customer Services & Solutions CapitaLand Investment Limited

Mr AZHAR Othman Deputy President Singapore Malay Chamber of Commerce & Industry

Mr Benjamin CHUA Chief Executive Officer SPECO Shop

Ms Catherine WONG Director-General Southeast Asia Directorate Ministry of Foreign Affairs

MS Celine SIA Assistant Managing Director Economics & Knowledge Management Monetary Authority of Singapore

Ms Celine TAN Economist Centennial Asia Advisors Pte Ltd

Mr CHANG Sanghae Director General Korea Trade-Investment Promotion Agency (KOTRA)

Mr Charlie LAY Regional Economist & FX Strategist Research Commerzbank AG

Mr CHEONG Wei Si Economist Economic Surveillance and Forecasting Department Monetary Authority of Singapore

Mr Chris POH Global Markets Analyst BNP Paribas

Mr Christopher WONG Partner & Head of Assurance Ernst & Young Solutions LLP

Mr CHUA Han Teng Economist DBS Bank Ltd

Dr CHUA Hak Bin Regional Co-Head Macro Research Maybank Securities

Mr CHUA Zi Jun Director DP Architects Pte Ltd

Ms Deborah NGA Director for Government Affairs Group COO Office Sea Limited

Mr Douglas LEOW Manager Business Environment Economic Development Board

Mr Girija PANDE Chairman Apex Avalon Consulting

Ms GOH Swee Chen Non-Executive Director Singapore Airlines Ltd

Mr HENG Koon How Executive Director and Head of Markets Strategy Global Economics & Markets Research United Overseas Bank Limited

Mr Johnson PAUL Director, Group Strategy & Business Development and Director Meinhardt Capital Meinhardt Group

Ms Karen WONG Director Public and Government Affairs ExxonMobil Asia Pacific Pte Ltd

Mr Keith KEE Director Asian Resources Centre Pte Ltd

Mr KWOK Kian Tow Director Singasia Capital Partners Pte Ltd

Mr LAW Tat Win Singapore Country Chairman / General Manager International Fuels & Lubricants, JV Assets Chevron Corporation

Dr LEI Hsien-Hsien Chief Executive Officer AmCham Singapore

Mr LIM Eng Hong Chief Commercial Officer ASEAN Group Level Deloitte Southeast Asia Ltd

Mr LIM Kim Cheong Partner Lim Kim Cheong Consultants

Ms Melody HONG Vice President Strategic Planning, Planning & Policy Economic Development Board

Ms Miki ZHU Deputy Director Business & Trade Insights Enterprise Singapore

Mr MOHD SAIFUL Saroni Partner General Assurance PwC Singapore

Mr NGIAM Shih Chun Chief Executive Chief Executive's Office

Energy Market Authority

Mr Rolf GERBER Independent Director LGT Bank (Singapore) Ltd

Mr SAKTIANDI Bin Supaat Executive Vice President Global Markets, Global Banking Maybank

Dr TAIMUR Baig Managing Director and Chief Economist DBS Bank Ltd

Mr TAN Hee Teck Chairman and Chief Executive Officer Executive Office Genting Singapore Limited

Mr TAY Thiam Peng Head Special Projects Wilmar International Limited

Mr THAKRAL Karan Singh Executive Director Thakral Group

Mr TIEN Sing Cheong Director Santec Corporation Pte Ltd

Mr Tristan CHEW Chief Executive Officer Management BGC Group Pte Ltd Mr Victor TAY Chief Executive Officer Global Catalyst Advisory

Mr Vivek CHHABRA Advisor IMA Asia

Mr YEN Peng Khuan General Manager Corporate Relations Shell Eastern Petroleum (Pte) Ltd

Ms Yvette CHEE Deputy Director Strategic Planning Singapore Business Federation

Institute of Policy Studies

Dr FAIZAL Bin Yahya Senior Research Fellow Governance and Economy

Ms LIANG Kaixin Associate Director Public Communications

Mr R Avinash Research Assistant Governance and Economy

Ms YAP Jia Hui Research Assistant Governance and Economy

Ms Sarah LIM Intern

Appendix 2: Curricula Vitae of Presenters, Discussants & Chairperson

Chairperson

Manu BHASKARAN is Adjunct Senior Research Fellow at the Institute of Policy Studies. He is concurrently Partner and Member of the Board, Centennial Group Inc, a policy advisory group based in Washington DC, where he heads the group's economic research practice. Mr Bhaskaran co-leads the institute's work in the area of economics. His major area of research interest is the Singapore economy, and the policy options it faces. Prior to his current positions, he worked for 13 years at the investment banking arm of Societe Generale as its Chief Economist for Asia. He began his professional career at Singapore's Ministry of Defence, focusing on regional security and strategic issues. Mr Bhaskaran graduated from the University of Cambridge with a Master of Arts and also has a Masters in Public Administration from Harvard University.

Speakers

Mr GAN Kim Yong was appointed Minister for Trade and Industry on 15 May 2021. One of his key priorities is to identify new growth opportunities in support of Singapore's continued economic development. Mr Gan is also Deputy Chairman of the Monetary Authority of Singapore Board, and was co-chair of the Multi-Ministry Taskforce which directed and coordinated Singapore's COVID-19 response until it stood down on 13 February 2023. From May 2011 to May 2021, Mr Gan was Minister for Health. He oversaw efforts to drive Healthcare 2020, a masterplan to ensure accessibility, quality, and affordability of healthcare in Singapore. Under his leadership, the Ministry of Health invested significantly in building new healthcare infrastructure, and expanded the polyclinic and General Practitioner networks. Enhancements to long-term care financing measures were also launched, and a universal lifelong medical insurance was introduced. As Minister for Manpower from April 2008 to May 2011, Mr Gan led the ministry's efforts to minimise mass retrenchments during the economic recession in 2009. He also played an instrumental

role in the development of manpower policies to meet the challenges of a rapidly changing business environment, and in building a Continuing Education and Training system for a globally competitive workforce. Mr Gan's other previous appointments include Minister of State for Education and Minister of State for Manpower.

Sin Beng ONG is the Managing Director of Emerging Markets Asia, in Economic and Policy Research at JP Morgan. Mr Ong joined JP Morgan in October 2003. He is the Head of the EM Asia economics team and Chief Economist for ASEAN, covering regional macro themes for Emerging Asia. He has also worked as a rates strategist and sovereign strategist within Emerging Asia for JP Morgan. Prior to joining JP Morgan, he worked in Hong Kong with the Boston Consulting Group. He holds a BA and MBA from Cornell University.

Ziad HAIDER is Global Director of Geopolitical Risk at McKinsey & Company based in Singapore. Prior to joining McKinsey, Mr Haider served in a range of senior roles in the U.S. Government including Special Representative for

Commercial and Business Affairs at the US Department of State; Senior Advisor to the US Secretary of State for strategic planning around Asia and geo-economics; and as a Foreign Policy Legislative Aide in the US Senate. Mr Haider serves on the Board of Advisors of the International Rescue Committee and is a Senior Advisor with the Centre for Strategic and International Studies (CSIS). He received his BA from Yale, MPA from the Harvard Kennedy School, and JD from Georgetown Law

CHUA Han Teng covers ASEAN economics at DBS Group Research. He is responsible for analysing macroeconomic trends and developments in the region, with a focus on Singapore. Prior to joining DBS, Mr Chua worked at the International Monetary Fund's Resident Representative Office in Singapore covering Singapore and Malaysia macroeconomic analysis as well as Asian financial markets. He has published on a wide range of topics, including Asian offshore currency markets and sustainable finance. Mr Chua holds a BSc in economics from the Singapore Management University and is a Chartered Financial Analyst.

Edward TSANG is a Lead Economist in the Economic Policy Group at the Monetary Authority of Singapore (MAS). Having been in the Public Service since 2011, he is currently on secondment from the Economic Development Board (EDB) to the MAS' Economic Surveillance and Forecasting Department, covering the trade-related sectors in the Singapore economy. Prior to that, he was an Assistant Vice President in the EDB's Research and Statistics Unit, leading statistical and economic research work. Mr Tsang holds a bachelor's degree in economics and management and a master's degree in applied economics from the National University of Singapore.

Dr Kaho YU is the Head of Energy and Resources Research and Lead China Analyst at Verisk Maplecroft, a global risk consultancy. He is an energy market and geopolitics specialist with 15 years of professional experience. His current research focuses on the energy transition infrastructure, carbon market, and critical mineral security in the Asia Pacific and their implications for policy makers and businesses. He has worked in think tanks, MNCs, and academia across China, the

US, and the Asia-Pacific region. Additionally, Dr Yu also serves as the Chief Research Officer at the Asia Carbon Institute, and a visiting fellow at the London Asia-Pacific Centre for Social Science at King's College London. Previously, he held academic positions at Harvard Kennedy School's Belfer Center, the Chinese University of Hong Kong, and Renmin University in Beijing. He obtained a PhD in International Political Economy from King's College London and publishes peer-reviewed research regularly.