Appendix I. ASEAN+3: Factors that Could Influence Regional Capital Flows as a Result of US Interest Rate Rises

Factor	Member Economy			
	Brunei Darussalam	Cambodia	China	Hong Kong, China
Channel/ Trigger				
Interest rate differential (against the U.S.)[1]	•	• Capital flows attracted by the high interest rates in Cambodia could stop or reverse with the tightening of monetary policy by the US Fed.	• Interest rate differentials have not been a very big driver of capital flows for China.	• Local policy rates move with US rates, but the ample liquidity in local banking system has kept the HKD interbank rate low, leading to widening negative interest rate spreads between HIBOR and LIBOR and consequent pressure for capital outflows. • However, the 1-month and 3-month HIBOR have risen sharply in recent weeks, suggesting tightening HKD liquidity after a series of HKMA interventions to support the currency.
Monetary policy stance	• Given the Currency Interchangeability Agreement with Singapore, there is no autonomy in the conduct of monetary policy in Brunei.	• With its high level of dollarization, the NBC uses exchange rate management to anchor price stability. Liquidity remains ample and credit growth has remained strong amidst the pandemic.	• Capital tends to flow into China when the growth outlook is positive and the authorities indicate that the monetary policy stance will remain/ be supportive of the economy.	• Not relevant as HKMA follows the monetary policy moves of the US Fed.
Exchange rate regime	• The exchange rate regime follows the SGD's exchange rate policy.	• A managed-float exchange rate regime has been adopted with occasional interventions in the FX market to ensure smooth fluctuations in line with market and macroeconomic development. • The highly dollarized economy could come under USD funding stress if global financial conditions tighten.	• The RMB exchange rate is essentially a managed float, with authorities on alert to ensure that fluctuations are "within a reasonable range". • In recent years, China authorities have demonstrated their willingness to allow the exchange rate to move within an increasingly wide range. • The authorities can guide exchange rate movements by using exchange rate fixings to manage market expectations in periods of market stress.	• Currency board, pegged to the USD. The HKMA remains committed to defending the currency peg during episodes of capital flight.
Adequacy of FX reserves	• Using base money as the metric for assessing FX reserves adequacy, the metric stands at > 300 percent.	• FX reserves remain sizeable at USD 19.9 billion as of May 2022, equivalent to 7.5 months of imports of goods and services or 4.6 times of short-term external debt.	• China's ample FX reserves provide a critical buffer for the exchange rate regime, and for authorities to pursue gradual capital account liberalization as a multiyear project, bearing in mind developmental objectives and macro stability priorities.	• Hong Kong's sizeable FX reserves support its ability to defend the currency peg system, reducing the risk of panicky capital flight.
High foreign participation in LCY bond market	• Foreign participation is negligible. The government bond "Sukuk" is mostly held by domestic investors, including domestic institutional investors and foreign commercial banks operating in Brunei.	• The corporate bond market is thin, with only 3 issuers. The target is to launch the government bond market this year.	• Foreign participation is not high, at 10 percent or less.	• Hong Kong's LCY bond market is very small and any impact of capital outflows through this channel is limited.
High foreign participation in equity market	• There is no stock exchange in Brunei.	• The equity market is small, with only 9 listed stocks	• Foreign participation is significant but still limited due to controls. • Foreign investors can freely trade in Chinese stocks that are listed on overseas stock exchanges, in accordance with rules. B-shares and ETFs can be traded through both domestic and foreign brokerage accounts that offer B-shares as a product. • Direct participation in the A-share market is more tightly regulated. Foreign investors and institutions can trade in China's A-share markets through the QFII and RQFII programs and the Stock Connect program.	• There is significant foreign participation in Hong Kong's equity market and any impact of equity outflows could be large.
Macroeconomic conditions	•	•	• Changes in views and sentiment about China's growth outlook have been a key driver of capital flows into and out of China.	•

[1] Narrowing interest rate differential implies US rates/yields rising faster than local rates/yields.

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Factor	Member Economy			
	Brunei Darussalam	Cambodia	China	Hong Kong, China
			• In recent times, key policy announcements / measures, such as those related to regulatory tightening for tech sectors, have also been a significant factor.	
Perceived safe haven	• No	• No.	• Some analysts have observed that the RMB has remained stable during stress events in other parts of the world, which suggests that it shows some safe haven characteristics. However, the general consensus is that it is still too early to draw any definitive conclusion; nonetheless, investor confidence in China and in the RMB remain strongly anchored.	• No.
Mitigation Strategy/ Policy				
	•	• The NBC has calibrated LPCO and NCD—its main tools for influencing KHR and USD liquidity in the market—to dampen excess liquidity that could fuel risky lending. In addition to siphoning off KHR liquidity, the NBC has also sold USD in recent months to stabilize the KHR and signal to the market a tighter band around the exchange rate. • The other risk is that US Fed tightening could lead to capital flight. However, the risk of capital outflows resulting in significant KHR depreciation is unlikely in the short-term, given that the economy is less connected to global financial markets, and is instead mainly reliant on FDI and concessional loans for FX.	• China has taken a cautious approach to financial and capital account liberalization. The recent wave of opening up the financial sector has focused more on liberalizing financial services than the capital account. Within the capital account, there has been more relaxation of controls on capital inflows than outflows. • Recent efforts to liberalize capital outflows have focused mainly on the facilitation of two-way portfolio flows by institutional investors, while capital outflows from China's corporate and household sectors are still controlled. Capital outflows from households and retail investors should be liberalized cautiously over a longer timeframe to avoid very large and destabilizing outflows. • With greater capital account openness over time, enhancing the resilience of the financial system and developing policy tools to manage capital flow volatility will be vital. Continuous progress in financial reform will be key to further liberalization measures. Strengthening the frameworks, systems, and procedures for monitoring capital flows, and earmarking tools for tightening capital flows management during times of excessive capital flow volatility, will enable authorities to cope with risks promptly and effectively.	•
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Appendix I. ASEAN+3: Factors that Could Influence Regional Capital Flows as a Result of US Interest Rate Rises

Factor	Member Economy				
	Indonesia	**Japan**	**Korea**	**Lao PDR**	**Malaysia**
Channel/ Trigger					
Interest rate differential (against the U.S.)[1]	• US interest rate rises would narrow the interest rate gap with Indonesia and reduce the attractiveness of IDR-denominated assets, hence triggering capital outflows and IDR depreciation.	• Japanese investors' demand for overseas direct and portfolio investments have been persistent. Narrowing rate differentials (i.e., US rates rising more than Japanese rates) may increase portfolio investment overseas to some extent, but is unlikely to cause significant capital outflows due to strong home bias.	• Narrowing interest rate differential is one of the key drivers of KRW weakness against the USD.	• Interest rate differential is unlikely to trigger significant capital reversals from Lao PDR, given the very low levels of portfolio investment in the country.	• Narrowing interest rate differentials could trigger outflows and MYR depreciation.
Monetary policy stance	• The central bank has normalized its monetary policy (from an expansionary policy stance during the pandemic) by raising the reserve requirement ratio (RRR) to reduce excess liquidity in the system. The central bank raised the policy rate in August 2022 to tackle inflationary pressures.	• Strong commitment to maintain ultra-easy monetary policy under the yield curve control.	• The BOK embarked on a rate hiking cycle in August 2021 in order to curb rising household debt. More recently, the hikes have been in response to rising inflation.	• The central bank has started to normalize its monetary policy by raising the RRR, the policy interest rate, and issuing BOL bills to stabilize macroeconomic conditions and exchange rate volatility.	• Pre-emptive normalization of monetary policy. BNM surprised markets in May 2022 with a 25-basis-point rate hike, as it began to reduce the degree of monetary accommodation; it followed with another 25 basis point hike in July
Exchange rate regime	• Free-floating exchange rate regime with judicious interventions to reduce excessive FX volatility.	• Free-floating system; no FX market intervention since the last operation in November 2011.	• Floating, but authorities can intervene at times of high volatility.	• Managed float regime. The central bank sets the daily reference rate, and the commercial banks and licensed currency exchange bureaus set their exchange rates within a band of the reference rate.	• Malaysia maintains a flexible exchange rate. BNM intervenes occasionally to smoothen FX volatility.
Adequacy of FX reserves	• FX reserves are adequate in terms of import and short-term external loans metrics (reserves stood at USD 136.4 billion as of June 2022, equivalent to 6.6 months of imports of goods and services, and about 200 percent of short-term external debt by remaining maturities).	• Ample FX reserves, which stood at USD 1.3 trillion as of May 2022, equivalent to 18 months of imports of goods.	• Total FX reserves stood at USD 447 billion as of May 2022. IMF ARA was at around 99 percent as of end-2020, which is deemed adequate.	• Thin FX reserves. The estimated amount of FX reserves as of March 2022 is around USD 1.3 billion, which covers approximately 2.2 months of total imports, making the economy highly vulnerable to capital outflows.	• FX reserves are adequate when compared to short-term external debt, and more than adequate based on the IMF ARA metric and imports cover.
High foreign participation in LCY bond market	• Foreign holding of LCY government bonds declined significantly to about 16 percent of total bonds outstanding, as of June 2022, compared to about 40 percent prior to the pandemic.	• . Foreign investors accounted for 13.4 percent of total JGB and T-Bill holdings, as of September 2021.	• Foreign holdings are at around 18 percent of outstanding debt securities, as of end-2021. Debt are large held by the foreign official sector, at around 11 percent of outstanding debt securities, whose demand is relatively stable.	• Little foreign participation in LCY bond market.	• High relative to market peers, but low relative to historical levels. • Typically long-term real money investors.
High foreign participation in equity market	• Foreign ownership has stabilized at about 27 percent of equity market capitalization for the past few years, moderating from 36 percent in 2015. • As most of the speculative, short-term flows had already left the market in 2016–17, the remaining foreign equity investment is often regarded as more stable and long-term.	• High at 30.2 percent as of 2021.	• Foreign investors held 30.83 percent of stocks listed on the KOSPI by market value, as of June 17, 2022, according to the Korea Exchange. The latest figure was the lowest level since August 18, 2009 during the global financial crisis.	• Small equity market with only 11 listed companies, and some foreign participation in the equity market.	• At 15 percent, low relative to historical levels.
Macroeconomic conditions	• Solid growth outlook is supported by recovering domestic demand and robust commodity exports. Strong trade performance and increased FDI inflows support the external balance.	•	• Weaker-than-expected growth outlook and narrowing current account surplus due to slowdown in export growth and rising imports could discourage foreign portfolio inflows and add to the downward pressures on the currency.	• The economy is recovering following the post-COVID reopening. • The fiscal deficit narrowed from 5.2 percent of GDP in 2020 to 1.3 percent of GDP in 2021. • The 2022Q1 balance of payments showed a surplus of USD 28 million	• The economy is recovering robustly and benefitting from a favorable terms-of-trade shock from higher prices in commodities and electronic products. • Malaysia is also attracting large FDI inflows from the US and Europe.

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Factor	Member Economy				
	Indonesia	Japan	Korea	Lao PDR	Malaysia
	• Inflation, albeit rising, remains moderate, as energy subsidies help mitigate the impact of higher global oil prices. • Tax reform measures and commodity price windfalls support fiscal consolidation in 2022 and restoration of fiscal rules in 2023.			with a continuous positive current account balance. • However, the recent LAK depreciation and high inflation could reduce preference for using the LCY.	
Perceived safe haven	• No. Historically, the IDR has been highly sensitive to changes in global risk backdrop.	• Yes.	• No. Instead, Korean won and equities are sensitive to global risk sentiment.	• No.	• No.
Mitigation Strategy/ Policy					
	• To safeguard financial stability, the central bank has reduced excess liquidity in the domestic market by adopting an aggressive schedule to raise the RRR to 9 percent this year (pre-pandemic: 6.0-6.5 percent). • Lower foreign holding of LCY government bonds (from pre-pandemic 40 percent to 16 percent as of June 2022), and Indonesia's strengthened external position should help mitigate adverse spillovers. • Higher FX reserve levels and the availability of policy tools such as the Domestic Non-Deliverable Forward (DNDF) have also placed the central bank in a better position to respond to external headwinds. • In the long run, efforts to deepen the domestic capital market and broaden the investor base will strengthen its resilience against shocks.	• Despite continuing JPY depreciation, mainly driven by narrowing interest rate differentials, both the JMOF and the BOJ are of the view that the exchange rate should be determined by market forces. Hence, there has been no specific policy measure to address possible capital outflows. • That said, JMOF officials have escalated their concerns on the rapid pace of JPY depreciation against the USD, and its adverse impact on the economy.	• Korea has been using prudential measures, including setting the maximum limits on banks' FX derivatives contracts and imposing a levy on banks' non-deposit foreign-currency liabilities to manage capital inflows, since October 2010. Amid pressure on capital outflows, authorities can relax the abovementioned measures to improve net flows. • KMOEF and BOK can intervene directly in the FX market to support the KRW, which could mitigate, to some extent, the pressure of capital outflows.	• The BOL limited access to the parallel rate by individuals and set the maximum transaction amount per person per day. • The BOL issued bills to stabilize macroeconomic conditions and exchange rate volatility. • The amendment of the FX Management Law was approved at the National Assembly in July 2022.	• BNM has started to normalize monetary policy, thereby easing concerns of Malaysia "falling behind the curve" with respect to the interest rate increases by the US Fed. • With the steady improvement in its FX reserves since March 2020, BNM has a greater capacity to smoothen FX volatility. • Fiscal reforms are also forthcoming, with the tabling of the Fiscal Responsibility Act in H2 2022 and ongoing works to shift to a targeted subsidy scheme.
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Factor	Member Economy				
	Myanmar	Philippines	Singapore	Thailand	Vietnam
Channel/ Trigger					
Interest rate differential (against the U.S.)[1]	•	• Interest rate differentials narrowed in H1 2022, and may have contributed to the weakness of the PHP by 7 percent against the USD. However, there is little evidence of capital outflows as yet. However, the risk of capital outflows triggered by further narrowing of interest rate spreads cannot be ruled out.	• The SIBOR has increased in line with US interest rates, albeit at a more gradual pace given the relatively greater SGD liquidity in the financial system. However, a proactive monetary policy stance, toward a strengthening of the SGD NEER by MAS may limit the impact of the interest differential on capital flows.	• The narrowing interest rate differentials between US and Thai policy rates (i.e., US rates rising more than Thai rates) have sparked intermittent episodes of outflows from BOT and Thai government bonds, put downward pressure on the THB.	• Interest rate differential may not trigger capital reversals from Vietnam's financial market because a substantial portion of foreign portfolio inflows are usually kept or stored in Vietnam after foreign investors sell off their Vietnamese stocks or bonds, instead of being transferred overseas. • Most of the capital inflows into Vietnam is in the form of long-term direct investments rather than short-term portfolio flows that focus on trading revenue. Foreign portfolio inflows accounted for only 1.7 percent of the sum of foreign portfolio and direct investment flows (liabilities) in 2021.
Monetary policy stance	• The CBM sets the money supply target as an intermediate target and reserve money as the operating target to ensure macroeconomic consistency as well as to reach the ultimate objective of price stability. • The need to finance the fiscal deficit has pushed up the growth of the monetary base.	• The BSP started to unwind its accommodative monetary policy with policy rate hikes in May and June 2022. It also delivered an off-cycle hike of 75 basis points in July and followed up with a 50 basis point hike in August 2022.	• The MAS has started tightening its monetary policy since Q4 2021, and the current stance is tight.	• The BOT has signaled gradual monetary policy normalization, and has delivered a 25 basis point hike in August 2022.	• The SBV continues to take an accommodative monetary policy stance in 2022 to support economic recovery.
Exchange rate regime	• A fixed exchange rate regime has been introduced, and the central bank's official exchange rate is currently pegged at MMK 1,850 per USD.	• Floating exchange rate regime. The central bank intervenes to limit the volatility of the exchange rate.	• Managed float (basket-band-crawl system) is used as the primary monetary policy tool by the MAS. The MAS allows the exchange rate to trade within the undisclosed band (against a basket of currencies).	• Managed float, intervenes to smooth exchange rate volatility.	• Vietnam's de jure exchange rate regime is a managed float (State Bank of Vietnam Decree No. 70 (2014)), but the de facto exchange rate arrangement is classified as a type of soft peg, namely, a stabilized arrangement.
Adequacy of FX reserves	• Limited information on actual level of FX reserves.	• FX reserve adequacy remains high. FX reserves stood at around USD 103.5 billion as of May 2022, which is more than sufficient to cover the country's short-term external funding needs (more than four times of short-term external debt and nine months of imports).	• FX reserves stood at USD 370.1 billion, with an import cover of 8 times.	• As of end-2021, IMF ARA metric is at 250 percent, import cover is at 10 times and short-term external coverage is at 2.7 times.	• FX reserves are adequate to cover short term obligations. The current level of FX reserves is equivalent to around 96 percent of IMF's ARA matrix (at end-2019) or 3.6 months of goods and services imports (at end-2021).
High foreign participation in LCY bond market	• Foreign investors are in principal able to participate in the Myanmar bond market and the securities market. However, foreign investors are not yet able to engage in domestic securities market activities until such actions are explicitly set in forthcoming regulations. In addition, foreign investors need to obtain approval from the Myanmar Investment Commission of DICA prior to commencing investment activity in Myanmar.	• Only 1.28 percent of LCY government bonds were held by foreigners as of March 2022; over 80 percent of LCY bonds are government bonds.	• No data.	• Non-resident bond holdings are less than 10 percent as of April 2022.	• Foreign holdings in LCY government bond accounted for 0.8 percent of total outstanding LCY government bond as of Q3 2021.

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Factor	Member Economy				
	Myanmar	Philippines	Singapore	Thailand	Vietnam
High foreign participation in equity market	• Very small equity market; only 7 listed stocks without foreign investment.	• No. **** Note: No publicly available data for the share of foreign investors' equity holdings.*	• No data.	• 27 percent of total investment value in the Thai equity market.	• The total transaction value of foreign investors reached VND 798,821 billion, accounting for 7.39 percent of the total trading value of both buying and selling directions of the whole market in 2021. **** Note: No publicly available data for the share of foreign investors' stock holding; therefore, the share of trading value is used instead.*
Macroeconomic conditions	•	• The economy has recovered strongly in recent quarters and headline inflation has picked up due to the rapid rise in oil and food prices. • The current account deficit may widen due to the recent surge in global commodity prices but with a stronger PHP REER, any widening in the current account deficit could be limited. • The Philippines will benefit from capital inflows from remittances, portfolio investments, while FDI have been robust, offsetting portfolio outflows. Meanwhile, the external position remains healthy, as reflected by low external debt.	•	•	•
Perceived safe haven	• No.	• No.	• Yes.	• Considered somewhat of a safe haven prior to the pandemic, but the THB has moved in line with regional EM peers since then.	• No
Mitigation Strategy/ Policy					
	• The transfer by residents of FX to a destination abroad may only be done with the approval of the Foreign Exchange Regulatory Committee according to Notification 12/2022 (Directive 6) dated 3 April 2022. Therefore, any transfer, including those specified below, must be submitted for approval according to the Foreign Exchange Management Law and Regulation: – Payment for imported goods (including advance payment); – Payment of service and other fees; – With regard to foreign investment, transfer of profit from the investment; – Payment made for investment abroad; – Payment for loans from abroad and interest thereon;	• The BSP has started to tighten monetary policy, which could narrow interest rate differentials with the US, and hence reduce the risk of capital outflows. • Given the adequacy of FX reserves as a cushion for mitigating the impact of capital outflows, the BSP could inject USD liquidity to temporarily support any excess need for USD.	• As an international financial center, there are no policies in place to restrict capital flows.	• Kick start the monetary policy normalization cycle from record low policy rates, albeit at a gradual pace. It would narrow interest rate differentials and help reduce FX and capital flow volatility.	• Given the growing amount of FX reserves, the SBV should stand ready to inject USD liquidity into the FX market if there is any abrupt excess demand for the USD.

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Factor	Member Economy				
	Myanmar	**Philippines**	**Singapore**	**Thailand**	**Vietnam**
	– Payment of expenses specified in para. 27 Foreign Exchange Management Regulation.				
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