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ASEAN+3 Corporate and MSME Debt-at-Risk in a High Interest Rate Environment: From Pandemic to Pandemonium?

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ASEAN+3 Corporate and MSME Debt-at-Risk in a High Interest Rate Environment: From Pandemic to Pandemonium?

Prepared by an AMRO team led by Li Lian Ong, and comprising Min Wei (both Macro-Financial Research Group), and Siang Leng Wong (Financial Surveillance)[1]

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Executive Summary

Credit risks posed by ASEAN+3 non-financial corporate (NFC) sectors have risen. NFC debt as a percentage of GDP has increased from pre-COVID-19 pandemic levels albeit down from its pandemic peak. These risks are expected to persist as the region's central banks continue to confront inflationary pressures by raising policy rates. Meanwhile, any manifestation of downside risks to economic growth—amid tight global financial conditions and intensifying geopolitical crises—could hit firm earnings, while inducing greater risk aversion among lenders. Micro, small, and medium-sized enterprises (MSMEs), which bore the brunt of the pandemic, remain most vulnerable.

The Indonesia Ministry of Finance has requested that AMRO staff assess the risks and vulnerabilities associated with NFC debt across ASEAN+3 economies and offer recommendations for strengthening resilience. Staff's analyses comprise: (1) an overview of NFC debt trends since before the COVID-19 pandemic; (2) estimates of firm debt-at-risk (DAR) across economies, firm types, and industries, which are presented in detail in the supporting Background Paper (AMRO 2024); and (3) an examination of the sufficiency of liquidity buffers on firms' balance sheets for servicing interest obligations and repaying short-term debt if lenders were to retrench. Responses by ASEAN+3 MSME associations to a short AMRO survey aimed at identifying challenges and requisite support measures are also discussed.

Both the interest coverage ratio (ICR) and debt service ratio (DSR) are employed in empirical analyses of NFC debt risks in the region. Firm debt as a percentage of GDP and DAR are generally higher than before the COVID-19 pandemic period, albeit down from the pandemic peak. In several ASEAN economies, both were lower in 2022 than prior to the pandemic. In many economies, firms have sufficient liquidity to cover interest payments but some may struggle to repay their short-term debt if lenders pull out. Listed firms in advanced economies and unlisted firms in several emerging market economies appear most vulnerable to rollover risk.. Scenario analyses of firm profit and loss statements and balance sheets underscore that more vulnerable NFC sectors are also most sensitive to interest rate and earning shocks.

Two salient features of firm debt bear highlighting. In the wake of the pandemic, firms took the opportunity of lower interest rates to borrow at longer-term tenors rather than just take out short-term debt to tide over immediate needs. This strategy is particularly important

[1] Benyaporn Chantana, Thanh Thuy Giang Dao, Laura Grace Gabriella, Kimi Xu Jiang, Naoaki Inayoshi, Catharine Kho, Vanne Khut, Wee Chian Koh, Chunyu Yang, Kana Yoshioka provided liaison support for the survey of MSMEs.

given firms' ability to cover interest expense—from liquidity buffers if necessary—while giving them time to rebuild their profitability and assets. Firm DAR is diversified—it is driven by those in both the listed and unlisted categories and spread across industries, with manufacturing, property and construction, and raw materials recording the weakest ICRs and DSRs.

To gain deeper insights into the challenges confronting MSMEs, which are the lifeblood of the economy but often its most vulnerable sector, AMRO staff conducted a short survey of MSME associations across the region. MSMEs are mainly concerned about the global macroeconomic environment and how any sharp slowdown in demand could affect their businesses. They generally view COVID-19 pandemic support measures favorably, particularly those that directly supported their balance sheets and facilitated reopening of the economy. MSMEs find bank and government-related financing sources useful but cannot as easily tap on unconventional sources such as nonbank financial institutions—although alternatives such as crowdfunding and peer-to-peer lending have the potential to widen financial inclusion. Finally, MSME financing preferences appear to be influenced by economy-specific attributes.

It is critical that appropriate policies are employed to maintain creditor confidence in the region's NFC sector so that they continue to provide necessary funding to businesses. Governments, lenders, and firms themselves could each play a part in improving NFC resilience and address existing vulnerabilities. In the short term, potential solutions include fiscal support for viable industries and firms, loan restructuring and increased provisions by lenders, and consolidation and strengthened buffers by firms. Over the medium- to longer-term, structural reforms could improve the labor market, business environment, and financing ecosystem; lenders could widen the scope of collateral to include valuable intangible assets; while firms should continue to innovate to remain relevant in the new economy.

Meanwhile addressing data gaps in firm information through greater transparency and accessibility would offer several benefits for surveillance and financial stability, and growth. It would allow firms to attract new business or financing by facilitating due diligence by counterparts; reduce borrowing costs; and enable more accurate assessments of the health of the NFC sector. In particular, it could help generate financial support for MSMEs that account for more than 90 percent of enterprises in all regional economies, the majority share of national employment, and are more vulnerable to shocks. Last but not least, NFC sector vulnerabilities also represent spillover risks to the region, and improved NFC data availability would strengthen collective surveillance of the sector.

Contents

Boxes

Figures

Tables

Abbreviations

ASEAN	Association of South-East Asian Nations (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam)
ASEAN-5	Indonesia, Malaysia, Philippines, Singapore, Thailand
ASEAN+3	ASEAN plus China (including Hong Kong), Japan, Korea
BIS	Bank for International Settlements
BN	Brunei Darussalam ("Brunei")
CN	China
COVID-19	coronavirus disease 2019
DAR	debt-at-risk
DSR	debt service ratio
EBIT	earnings before interest and taxes
EBITDA	earnings before interest, taxes, depreciation, and amortization
GDP	gross domestic product
HK	Hong Kong, China ("Hong Kong")
ICR	interest coverage ratio
KH	Cambodia
LA	Lao PDR
MM	Myanmar
MSME	micro, small, and medium-sized enterprises
MY	Malaysia
NFC	nonfinancial corporate
PDF	portable document format
Plus-3	China (including Hong Kong), Japan, Korea
PH	Philippines
SG	Singapore
TH	Thailand
VN	Vietnam

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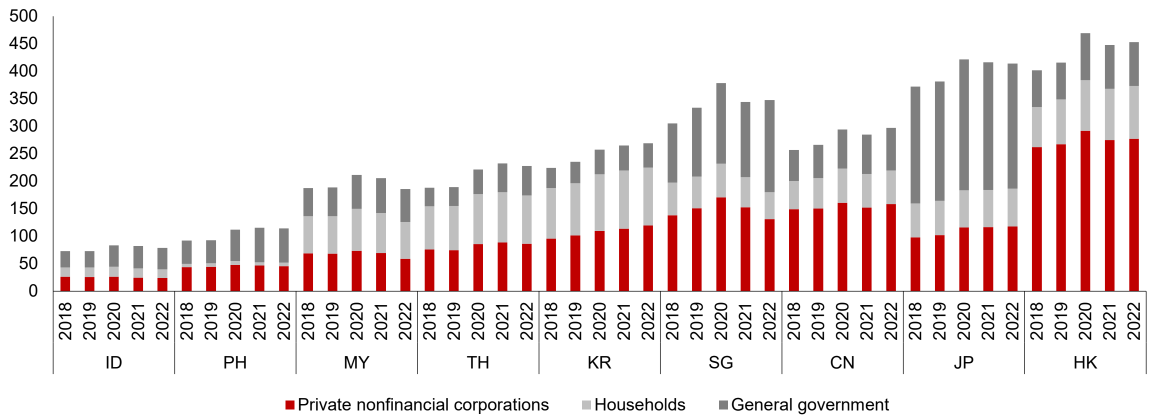
I. Introduction

1. **The debt of ASEAN+3 nonfinancial corporations (NFCs) has risen since before the onset of the COVID-19 pandemic and is now exposed to much tighter financial conditions and a weakening growth outlook.** During the pandemic, some firms were forced to take on more debt to tide over cash flow difficulties while others took advantage of accommodative monetary conditions and lower borrowing costs to expand their businesses (Ho and Ong 2022). Firm debt-to GDP ratios peaked during the pandemic in 2020 and have since stabilized or declined somewhat in most economies (Figure 1). Debt in other sectors of the economy, namely, households and government, followed similar trends. Consequently, overall indebtedness in the region is well above pre-pandemic levels.

2. **During the pandemic, loans to struggling businesses were exposed to greater credit risks and consequently, lenders were afforded support to keep credit flowing.** Regulatory forbearance in the form of easing capital and liquidity requirements and treatment of nonperforming loans helped buffer banks against credit impairments and—along with highly accommodative monetary policy measures that kept debt service costs low and contained losses on bank balance sheets—facilitated the continuous supply of liquidity to the financial system and funding to the real economy. Consequently, the legacy from the pandemic is the accumulation of higher levels of corporate debt amid sharply rising interest rates and much tighter monetary and financial conditions as economic growth recovered. In the current environment, any credit contraction to firms could pose significant risks to their viability (Gourinchas and others 2021), and economic activity.

3. **Among firms, micro, small, and medium-sized enterprises (MSMEs) were hardest hit by the pandemic.** The sudden drop in revenues created acute liquidity shortages that threatened the survival of many viable businesses and the employment of their workers. The unprecedented scope and scale of policy responses undertaken by governments, which included special lending programs, subsidies, and payment deferments, helped keep businesses afloat, and prevented large-scale layoffs and massive defaults on debt obligations. There was also an increase in demand for bank credit among MSMEs (OECD 2020a).

Figure 1. ASEAN+3: Composition of Debt by Economy, 2018–22
(Percent of GDP)



Sources: Bank for International Settlements and national authorities, both via Haver Analytics; and AMRO staff calculations.
Note: CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, MY = Malaysia, PH = Philippines, SG = Singapore, TH = Thailand.

4. **The unprecedented COVID-19 pandemic support measures may have also camouflaged the amount of actual problem loans on banks' balance sheets.** The bankruptcy gap—defined by Banerjee, Noss, and Vidal Pastor (2021) as the decoupling between expected bankruptcy rates based on declining economic activity and actual realized bankruptcies, which they attribute to the monetary and fiscal support measures—could be followed by a postponed wave of insolvencies. Similarly, Juselius and Tarashev (2021) argue that high indebtedness accumulated by firms when real economic activity was impaired may have increased tail risks of ballooning corporate bankruptcies. Although recovery from the pandemic and judicious use of policy support measures to date appear to have forestalled such events, increased indebtedness among firms and rising debt service may have postponed rather than canceled their insolvency.

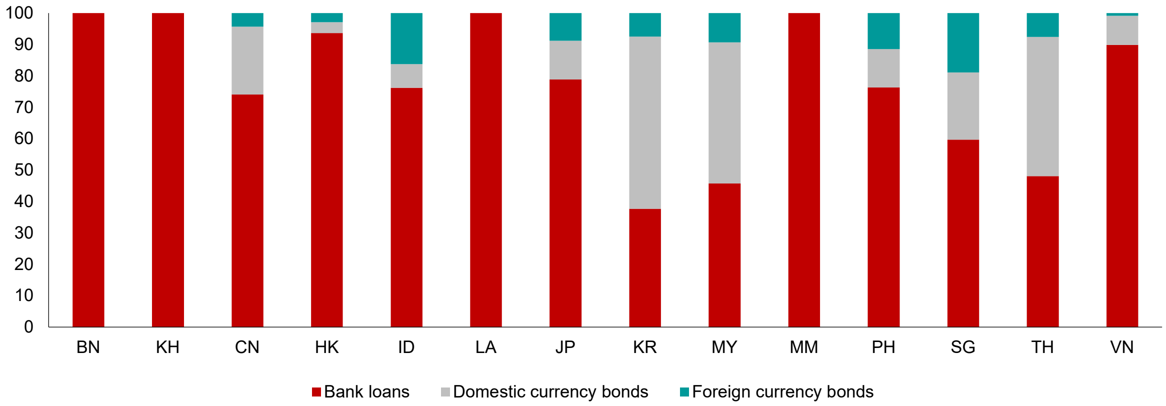
5. **In the ASEAN+3 region (and elsewhere), credit risks have intensified as the stresses from the pandemic give way to rising interest rates.** Governments have been gradually phasing out the raft of pandemic support measures afforded to firms (Appendix I), while central banks hike interest rates to alleviate inflationary pressures induced by pent-up demand following the economic recovery. The increase in borrowing costs is squeezing firms even as the outlook for global growth remains tilted on the downside. Geopolitical crises, trade conflicts, sticky inflation, high and rising sovereign debt, and climate emergencies further heighten the vulnerability of the region's NFC sector. More specifically, AMRO staff had assessed MSME distress to be an important risk to the outlook for growth and financial stability in the aftermath of the pandemic, in economies such as Korea (AMRO 2021a); Singapore (AMRO 2021b); Thailand (AMRO 2021c); Indonesia (AMRO 2022a); and Japan (AMRO 2022b).

6. **Importantly, banks remain the main source of financing in the ASEAN+3 region and hence pose systemic risks to financial stability and economic growth.** Domestic institutional investors, through their purchases of largely local-currency denominated corporate bonds, became key liquidity providers to East Asian firms in the years following the global financial crisis (Abraham, Cortina, and Schmulker 2021). Corporate bond issuance doubled among economies in the region, largely through relatively smaller firms issuing bonds at shorter maturities. However, the outstanding stock of the region's NFC debt is, by far, still held by banks (Figure 2), in loans and corporate debt securities (Dembiermont, Drehmann, and Muksakunratana 2013).

7. **Consequently, elevated NFC debt levels present significant challenges for both policy making and surveillance, and the Indonesia Ministry of Finance has requested that AMRO staff to conduct a study on NFC debt in the region as a standalone agenda of the ASEAN+3 Finance Track.** The conundrum for policy makers is how to support firms—and by association, their lenders—without introducing moral hazard or increasing the fiscal burden on the government. From a surveillance perspective, the aim is to accurately assess contemporary and forward-looking risks to domestic and regional financial stability posed by corporate indebtedness, in an environment where large swathes of firm's financial information may be incomplete or missing. The findings of this study inform AMRO staff's recommendations for member authorities and staff's own surveillance activities.[2]

[2] AMRO staff would like to thank member authorities for their inputs as well as connecting AMRO staff to both the official sector agencies and private sector participants based in the region.

Figure 2. ASEAN+3: Sources of Corporate Debt by Economy, 2022
(Percent)



Sources: AsianBondsOnline; IMF via Haver Analytics; and AMRO staff estimates.
Note: Bank loans are from the domestic banking system. BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, LA = Lao PDR, JP = Japan, KR = Korea, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

8. **The underlying analysis in this paper covers both publicly-listed and privately-held firms across industries in the ASEAN+3, focusing in particular on MSMEs.** It extends the work of Ho and Ong (2022)—which estimates the debt-at-risk (DAR) of **listed** companies in the region—and incorporates forward-looking scenario analyses of NFC sector vulnerabilities. Policy measures to support viable firms and industries are proposed. The availability of information to conduct this study and corresponding data gaps are also assessed, and recommendations for improvements to facilitate future surveillance of the sector are proposed. AMRO staff draw on several sources to inform their analysis, comprising: (1) staff's own modeling and estimates, using commercial information; (2) discussions with and/or surveys of MSME associations throughout the ASEAN+3 region; and (3) findings from AMRO's regional surveillance of member economies.

9. **The rest of the paper is structured as follows.** Section II assesses the indebtedness of the NFC sector in the region, with particular focus on the MSME sector that has been hard hit by the pandemic. Section III summarizes the vulnerabilities of the NFC sector based on estimates of firm DAR in AMRO (2024). Section IV proposes policies for strengthening resilience of NFC sector and suggestions for improving surveillance. Finally, Section V raises several issues for members' deliberation.

II. Indebtedness of the Nonfinancial Corporate Sector

A. General Overview

10. **Firm debt as a percentage of GDP has increased markedly in some ASEAN+3 economies since the pre-pandemic period but has fallen in others.** Among the Plus-3 economies, firm debt in Japan and Korea has continued to rise in GDP terms (Figure 3); it has declined in several major ASEAN economies, aside from Thailand and Vietnam. Analyzed by firm type, the aggregate debt of listed firms has been expanding relative to GDP in both ASEAN (notably, the Philippines and Thailand) and in Plus-3 economies (Japan, Korea) (Figures 3 and 4). It has dropped in the "unlisted: other" category (notably, China, Malaysia, and Vietnam) but increased among MSMEs in ASEAN (Vietnam in particular). Firm debt to GDP has moderated or declined across most industries in ASEAN, except in the miscellaneous "others" category. China appears to be driving the aggregate decline across industries among Plus-3 firms (Figure 3).

11. **The rise in debt relative to GDP has largely been in longer-term tenors, which is important for firms' debt profiles, in half of the ASEAN+3 economies.** This change in tenor has occurred across both ASEAN and Plus-3. Listed firms across the region appear to have taken the opportunity of low interest rates in the years before and during the pandemic to borrow at longer tenors, as have the ASEAN MSMEs. The pattern is less obvious across industries in ASEAN, while the declining overall trend among the Plus-3 likely reflect developments in China. Across economies, firm types and industries, the share of long-term debt is typically much larger relative to the short tenors. Exceptions are observed in Korea and Vietnam, where the shares are about equal, among MSMEs in general, and in the "manufacturing" and "retail, wholesale, and others" industries.

12. **Comparisons of growth in firm debt during the periods before the COVID-19 pandemic and following its onset highlight the sector's rising indebtedness.** NFC sectors in many ASEAN+3 economies, which had increased their borrowing in the years leading up to the COVID-19 pandemic, *continued* to augment their stock of both short- and long-term debt from 2020 to 2022, albeit at a slower rate in several economies (Figure 5):

- Within the CLMV group, Cambodia's NFC debt grew by about 95 percent (+29 percent short term, +66 percent long term), Lao's expanded by about 28 percent (+9 percent short term, +19 percent long term), while short-term tenors dominated the 280 percent rise in Myanmar's debt and 30 percent increase in Vietnam's debt.

- Among the ASEAN-5 plus Brunei group of economies, firms in Indonesia, the Philippines, and Thailand increased both their short- and long-term debt stock during this period—growth in short-term debt was minimal in Indonesia (listed firms only) and the Philippines but was about 13 percent in Thailand, whereas long-term debt across these three economies rose by between 8 percent and 16 percent. Firms' long-term debt declined elsewhere, but short-term debt generally expanded—in Singapore by about 12 percent.

- In the Plus-3 group, longer-term loans of Chinese firms more than doubled from 2020 to 2022 on an aggregated basis, while they reduced short-term debt; Hong Kong firms cut their long-term debt, and Japanese and Korean firms took on more loans in both tenors. The increase in the debt of Korean firms stands out, with short-term debt growing by 34 percent and long-term debt by 18 percent.

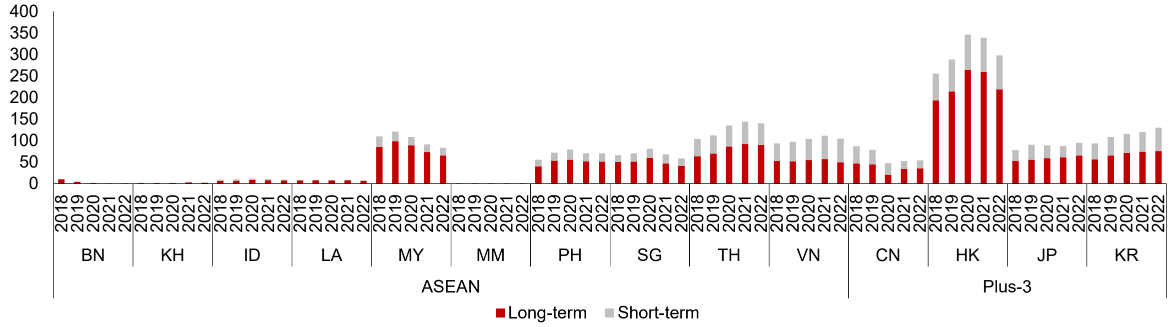
- During 2020–22, growth in NFC debt stock across ASEAN was much smaller than nominal GDP, whereas it largely kept pace among the Plus-3.

13. **Greater debt take-up among ASEAN+3 NFCs is also reflected in their leverage (debt-to-asset) ratios.** In several economies, debt relative to assets jumped sharply during the COVID-19 pandemic (2020 or 2021) and then stabilized (Figure 6). This trend is particularly observable in China and Korea (among the Plus-3) and in Singapore and Thailand (among ASEAN). Elsewhere, leverage ratios have either remained relatively stable since the pre-pandemic period (for example, Japan) or have been declining (Hong Kong, Indonesia, Vietnam). In most economies, NFC leverage ratios are generally in the 20 percent to 30 percent range, with Lao PDR the exception at about 50 percent.

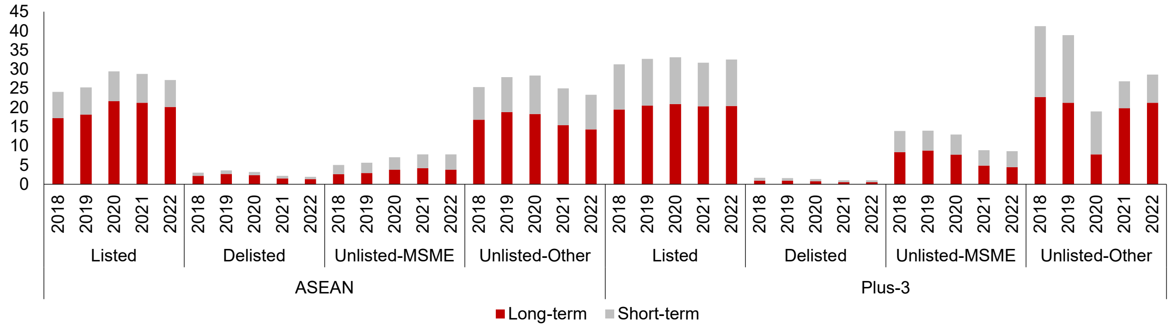
Figure 3. ASEAN and Plus-3: Composition of Debt by Tenor, 2018–22

(Percent of GDP)

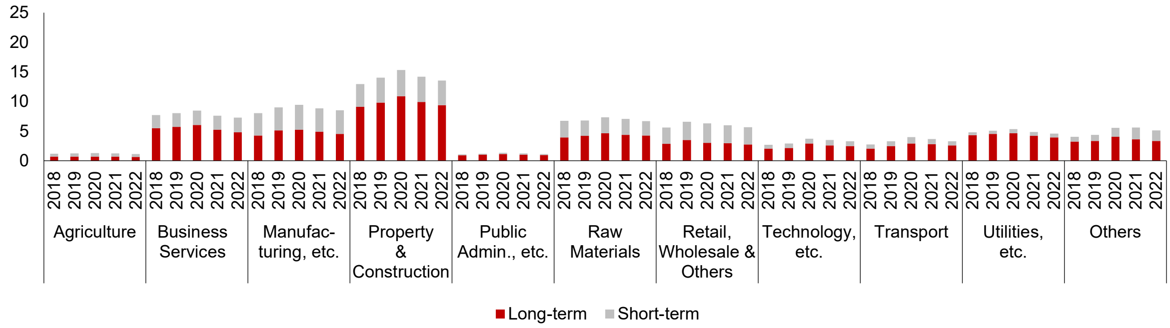
By Economy



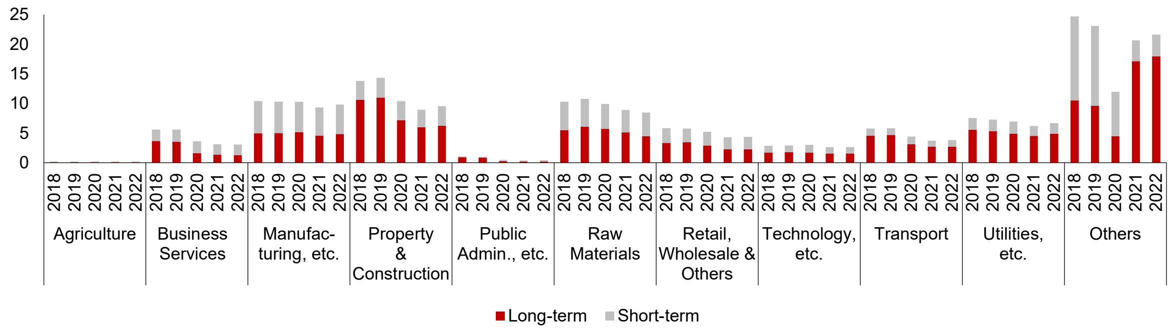
By Firm Type



By Industry: ASEAN

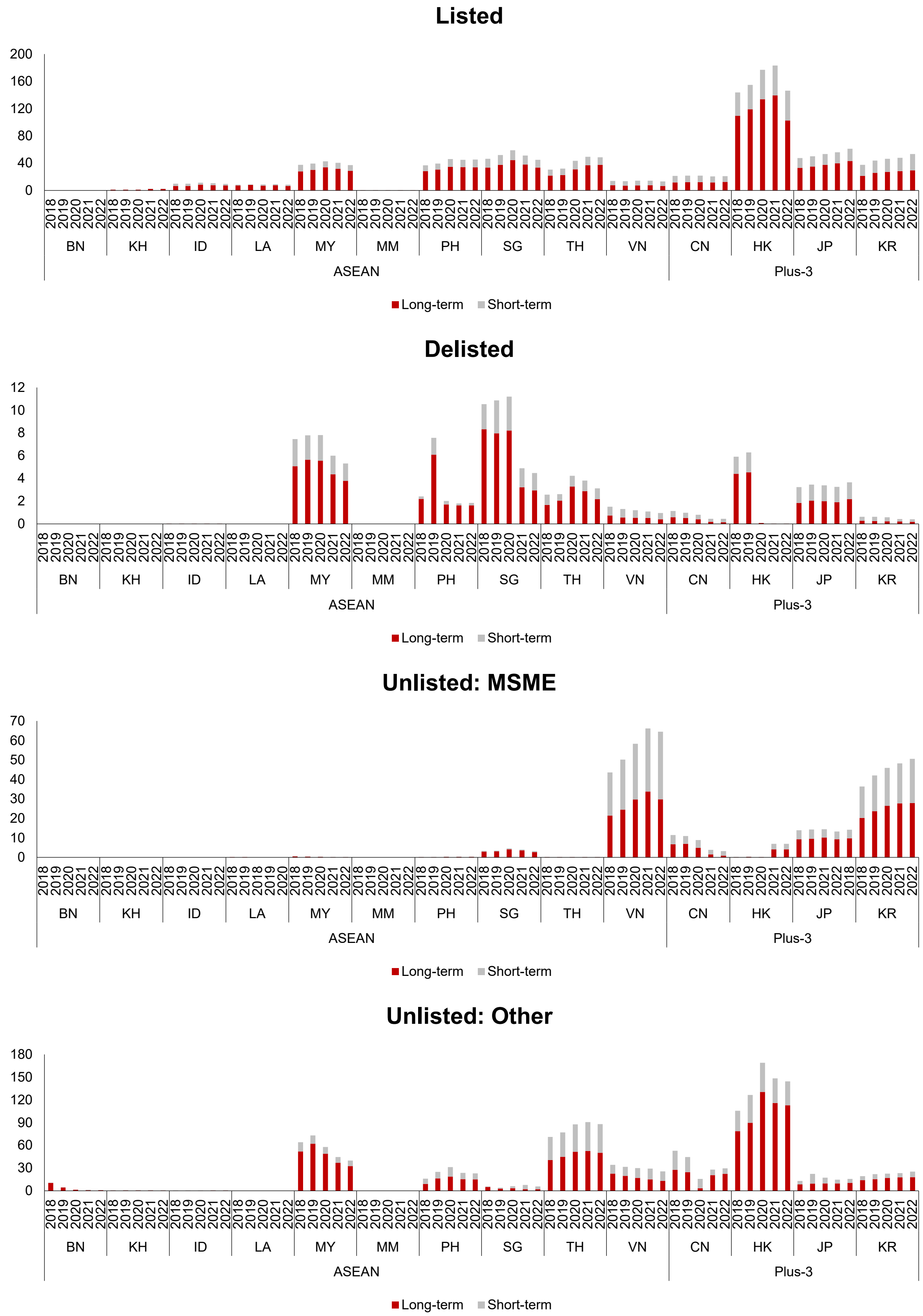


By Industry: Plus-3



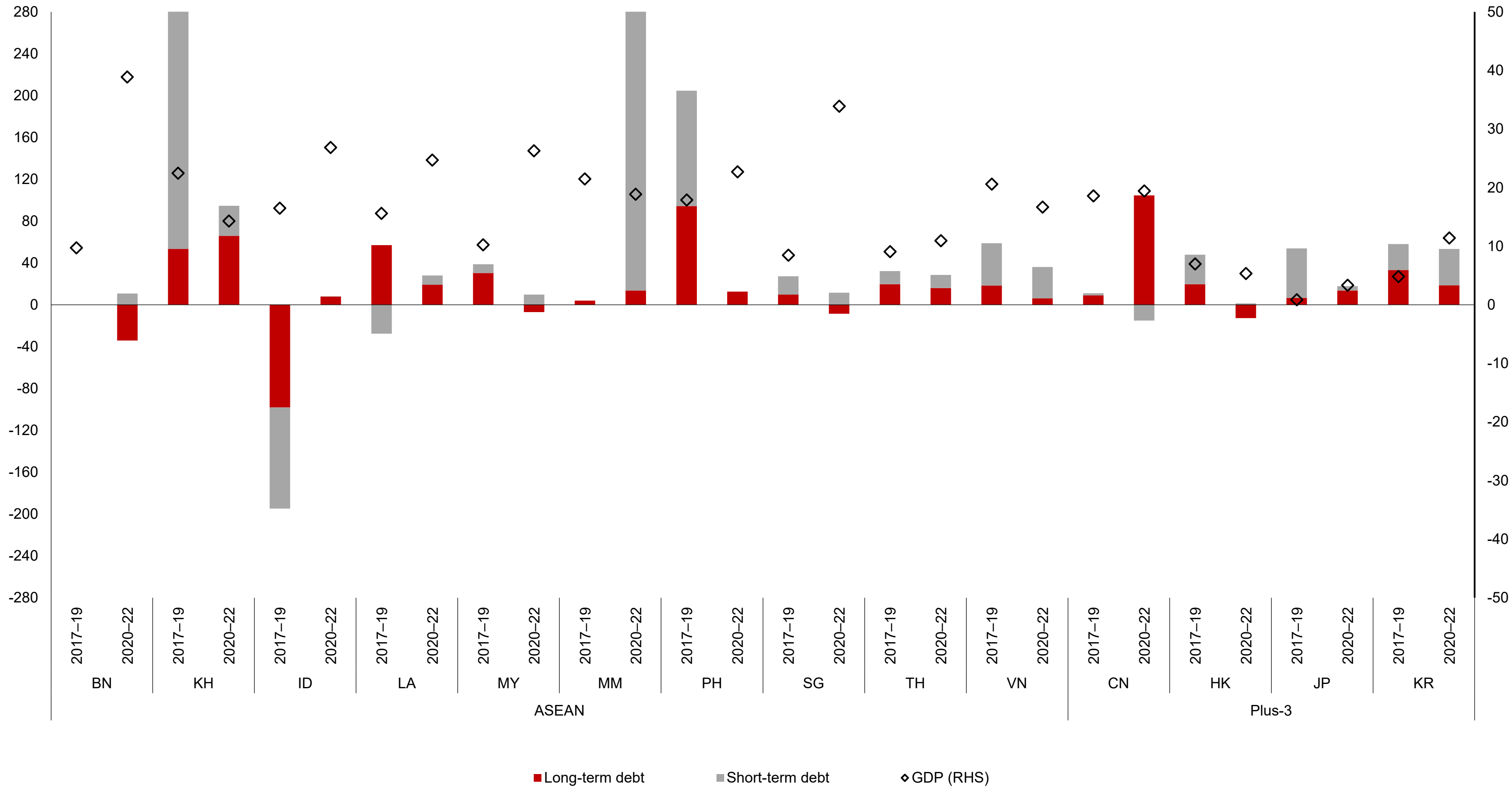
Sources: International Monetary Fund and national authorities, both via Haver Analytics; Orbis; and AMRO staff calculations.
Note: Coverage comprises all firms reporting short- and long-term debt in the Orbis database, not just those included in the debt-at-risk estimates.
BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Figure 4. ASEAN+3: Composition of Debt by Tenor and Firm Type, 2018–22
(Percent of GDP)



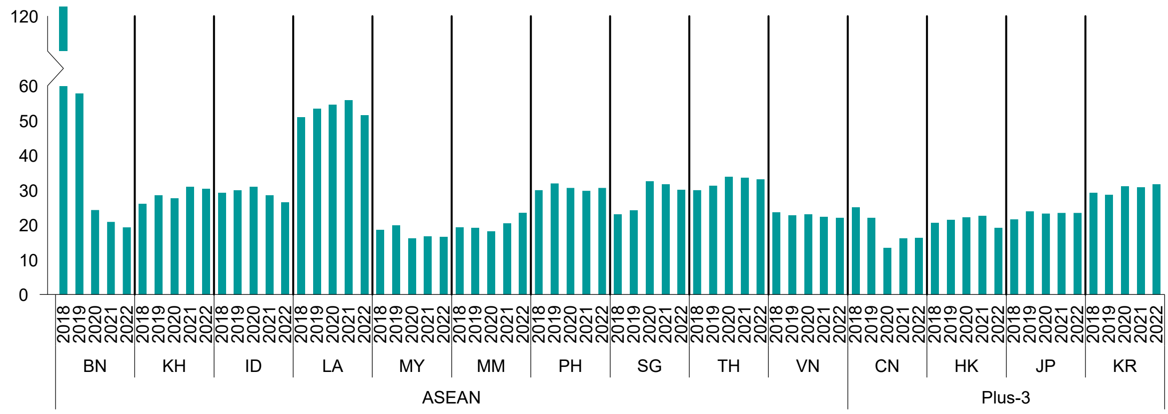
Sources: International Monetary Fund and national authorities, both via Haver Analytics; Orbis; and AMRO staff calculations.
Note: BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Figure 5. ASEAN+3: Growth in NFC Debt in Periods Before and After the COVID-19 Pandemic
(Percent, local currency terms)



Sources: International Monetary Fund and national authorities, both via Haver Analytics; Orbis; and AMRO staff calculations.
Note: BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, NFC = nonfinancial corporation, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Figure 6. ASEAN+3: Debt-to-Asset Ratios of Reporting NFCs, 2018–22
(Percent)



Sources: International Monetary Fund and national authorities, both via Haver Analytics; Orbis; and AMRO staff calculations.
Note: The debt-to-asset ratio for each year is calculated by dividing the aggregated debt of all reporting firms in an economy by the aggregated assets of those firms. BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, NFC = nonfinancial corporation, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

B. MSMEs

14. **MSMEs are important drivers of growth in ASEAN+3.** They are largely concentrated in the wholesale, retail, and hospitality industries (Appendix II). MSMEs accounted for an average of 97 percent of all enterprises and 69 percent of the national labor force in Southeast Asia from 2010 to 2019, and they contributed an average 41 percent of each economy's GDP (ADB 2020a). Among the Plus-3, MSMEs account for 98.5 percent of all firms in China, contribute more than 60 percent of GDP, and are responsible for 75 percent of job creation and 80 percent of urban employment (Ping An 2020; OECD 2022a); they make up 99.7 percent of all firms in Japan, generate slightly more than 50 percent of national value added and employ around two-thirds of the private sector labor force (OECD 2017, 2022a). MSMEs play a similarly large role in Korea, accounting for 99.9 percent of domestic enterprises, contributing more than 60 percent of all business sector GDP, and employing 83 percent of the labor force (OECD 2022a). However, MSMEs may not be realizing their full potential because of the many challenges they face.

15. **MSMEs tend to be more vulnerable to economic shocks than larger firms because of their size and lack of buffers.** In particular, the COVID-19 pandemic had a disproportionate effect on these firms. The severity of the pandemic on MSME employment and businesses in emerging and developing Asia is evident in surveys by ADB (2020b) and Sonobe and others (2021), which show that demand for their products and services plummeted following the outbreak, and they were exposed to supply chain disruptions and tighter financial conditions. Up to 70 percent of MSMEs had to suspend their operations, while up to two-thirds were faced with shortage of working capital. MSMEs were particularly vulnerable in lower-income economies and prone to using up their liquid assets and having to cut employment. Hence, it is unsurprising that MSMEs in ASEAN+3 consider any sharp slowdown in growth to be a significant risk to their survival—as is apparent in the AMRO short survey of MSME associations (Box 1).

16. **MSMEs typically have difficulty in raising financing, underscoring the importance of inclusion and access.** MSMEs rely mostly on their own funds/retained profits or informal financing sources such as borrowing from family, relatives, and friends

(ADB 2020b), including during the pandemic crisis. Bank credit tends to be limited, although medium-sized firms might be able to apply for bank or nonbank finance institution loans. Even then, interest rates tend to be very high (typically in the double digits). Governments in the region have introduced a range of policies and initiatives aimed at supporting MSMEs. For example, they have implemented MSME loan targets to ensure lenders make credit available, credit guarantee schemes to mitigate credit risk to lenders, and lower interest rates and taxes to reduce MSME expenses (Appendix III). Additional measures were introduced during the pandemic—notably, special refinancing facilities, soft loan programs, and special guaranteed loans—to facilitate credit to the MSME sector.

17. **Nonetheless, there is still significant room for improving MSME access to credit, which requires a more conducive financing environment than currently exists.** Several strategies could be employed, notably, governments could: (1) establish a range of support schemes for *viable* firms, such as credit guarantee programs; (2) introduce specialized banks and government-supported organizations to facilitate *targeted* lending (ADB 2021), recognizing that banks remain a primary source of MSME credit; (3) streamline application processes to increase the adoption of support measures, while providing advisory services and educational resources to help MSMEs better understand the availability and requirements of existing support programs; and (4) facilitate the adoption of technology to enhance MSME efficiency, through partnerships between MSMEs and government research institutions or by intensifying efforts to promote financial digitalization (Kapfer 2022), all while being mindful of moral hazard and associated risks to financial stability.

III. Debt-at-Risk

18. **A firm's solvency risk may be measured using two separate metrics that estimate its DAR.** They comprise: (1) the interest coverage ratio (ICR), which measures the firm's ability to cover its interest payments from earnings before interest and taxes (EBIT) over a specific period; and (2) the debt service ratio (DSR), which measures the firm's ability to use its operating income (earnings before interest, taxes, depreciation, and amortization, or EBITDA) to repay all its debt obligations.[3] AMRO (2024) defines firms with ICRs lower than 1.25 and/or DSRs lower than 1.0 as financially stressed borrowers, with extensive empirical analyses on ASEAN+3 NFC sectors indicating that:

- The share of reporting firms posting losses and/or lower profits has risen since 2018, in many economies and across firm types and industries. Correspondingly, firm debt as a percentage of GDP is *generally* higher, albeit down from the pandemic peak, along with DAR. In Indonesia, Malaysia, and Singapore, firm debt is lower in 2022 than it was prior to the pandemic and DAR has fallen. Listed and unlisted firms largely drive DAR, which is quite widely distributed across industries.

- Firms in most economies have sufficient liquidity on their balance sheets to cover interest payments, but some would struggle to repay short-term debt if lenders were to pull out. The remaining number of at-risk firms would make up a reasonably

[3] For this analysis, EBIT is used where EBITDA is unavailable, with the caveat that EBIT results would be more conservative given that depreciation and amortization would have been deducted from the earnings outturn. However, the sample firms would be different so the results are not comparable. The number of firms for which EBIT and EBITDA information is available in each economy is presented by firm type in the supporting Background Paper (AMRO 2024).

significant portion of the NFC sector. Listed firms in advanced economies are most vulnerable to rollover risk, while unlisted firms in some emerging market economies appear most exposed.

- The NFC sectors in Hong Kong, Korea, and Thailand appear most vulnerable, with the largest DAR relative to GDP before and after liquidity buffers are applied (Table 1). Separately, the “manufacturing,” “property and construction,” and “raw materials” industries in the region have the weakest ICRs and DSRs in GDP terms, while “transportation” industry debt is at-risk across most economies.

- Scenario analyses of firm profit and loss statements and balance sheets reveal that shocks to interest rates would increase firm DAR most in selected Plus-3 (Hong Kong, Japan, Korea) and ASEAN economies (Thailand, Vietnam), as a percentage of GDP (Table 2). Firms in these economies would also be most vulnerable to any drop in earnings from an economic slowdown. Meanwhile, haircuts to the liquid assets of listed firms form any interest rate rise would have the largest impact on those in Hong Kong, Japan, and Korea (Table 3), further reducing their capacity to repay debt if creditors were to refuse to roll over maturing loans.

19. **The findings underscore the importance of maintaining creditor confidence so that they continue to provide funding to businesses to rejuvenate economic activity.** The COVID-19 pandemic had widened the output gaps of the region’s economies, significantly so in some cases, and output has yet to return to previous levels in all cases except Singapore (Appendix IV). Scarring appears to be permanent in some economies, and the region can ill-afford having the NFC sector come under more financial stress, given its importance as the key engine of economic activity. Another salient point is that at-risk firms have borrowed much greater amounts of long-term debt (Figure 7)—while this strategy has improved the debt profile of borrowers, it could also mean greater credit risks for lenders if borrowers are unable to service their corresponding short-term debt obligations.

20. **Given the existence of significant data gaps, care should be exercised in arriving at any definitive conclusion about the vulnerability of NFC sectors.** Economies such as Japan, Korea, Thailand, and Vietnam report financial information for a very large number of unlisted firms (including MSMEs which tend to be more vulnerable financially), which suggests that their estimated aggregate DAR as a percentage of GDP is likely to be larger than that of their peers (Box 2). Hence, the appearance of relatively stronger performance of more opaque NFC sectors should be analyzed more closely, perhaps using more qualitative information (Tables 1–3).

Box 1. Findings from AMRO's Survey of ASEAN+3 MSMEs

AMRO staff surveyed MSME associations across ASEAN+3 economies, facilitated in some instances by member authorities. The short questionnaire sought participant perceptions in three areas: (1) key risks to MSMEs; (2) effectiveness of government support measures during the COVID-19 pandemic; and (3) financing sources.[1/] In each question, participants were asked to rank their views on specific issues, from 1 to 5 (1 = strongly agree, 5 = strongly disagree); the same rating could be assigned to more than one issue. Responses were received from 11 of 14 member economies and categorized into Plus-3, ASEAN-5 plus Brunei, and CLMV (Cambodia, Lao PDR, Myanmar, Vietnam) subgroups (Box Figure 1).

The main perceived risks to ASEAN+3 MSMEs are related to the global macroeconomic environment. Average ratings suggest that respondents' biggest concern is the possibility of any sharp slowdown in global demand (AMRO 2023a). Next is supply chain disruption resulting from geopolitical tensions—reflecting the concentration of MSMEs in the region on retail, trade, and manufacturing. MSMEs consider longer-term issues such as climate change and financial fraud of lower priority than the immediate challenges. Two risk factors appear more pronounced for ASEAN MSMEs, namely, high borrowing costs and resurgence of COVID-19 infections. Because the Plus-3 economies did not experience similar inflationary pressures compared to the ASEAN economies, the former's borrowing costs have not risen as much or as sharply on average (Box Figure 2).[2/] Additionally, the COVID-19 pandemic has had greater impact on ASEAN economies than on their Plus-3 peers, on average (Box Figure 3).

MSMEs generally assess all COVID-19 support measures to have been effective, particularly those that directly supported business balance sheets and reopening. Forbearance measures are viewed positively as they gave vulnerable firms time to repair their balance sheets and service their obligations, while policies to reopen the economy were welcomed. Both fiscal measures and loan assistance are also considered useful given that that they provided direct support to firms at a time of need. In contrast, monetary measures are perceived to have been less important, likely because their impact on MSMEs through lower borrowing costs were more indirect and not as obvious, especially given the general difficulty that small firms face in obtaining financing.

MSMEs seem to find bank and government-related financing sources useful but appear generally less enthusiastic about nonconventional sources. Although nonbank financial institutions are gaining popularity, their role in financial intermediation is minor compared to the banking industry (ADB 2021). Nonetheless, the region's MSMEs could benefit from crowdfunding and peer-to-peer lending, as these alternatives offer opportunities for greater financial inclusion. Promoting financial digitalization could advantageous for some developing economies (AMRO 2023c), but they have adopted a more cautious stance to protect consumers and safeguard financial stability. For example, Cambodia, Lao PDR, and Vietnam have banned initial coin offerings (ICOs), while other ASEAN+3 economies have tightened their regulations, including on crowdfunding, ICOs, and peer-to-peer lending (OECD 2020b).

MSME financing preferences appear to be influenced by economy-specific attributes. MSMEs generally consider mandatory loan targets for banks to be the least effective strategy as a source of financing. While Plus-3 MSMEs consider credit guarantees the most important instrument for obtaining funding, ASEAN MSMEs tend to give more weight to interest subsidies:

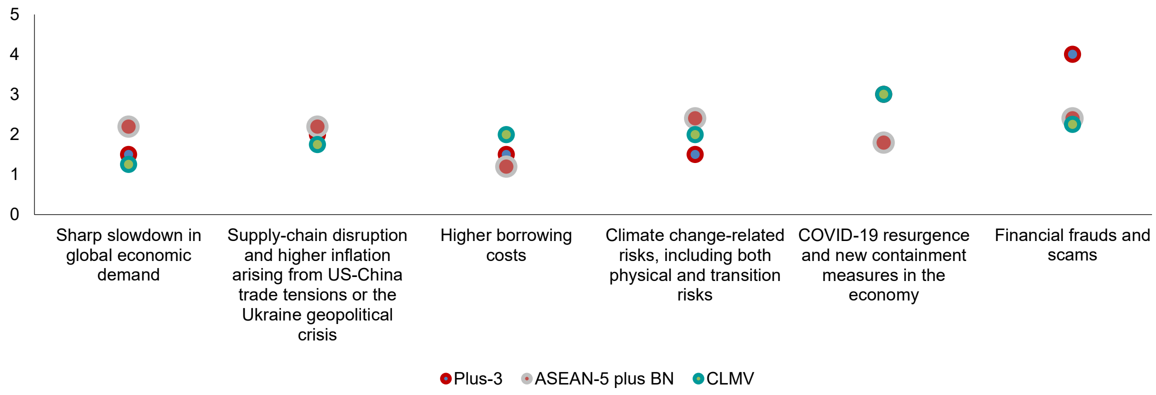
- **Credit guarantees.** Credit guarantee schemes are well-established in the Plus-3 economies (Japan Finance Corporation 2023; Korea Credit Guarantee Fund 2023). Such schemes primarily operate through larger and state-owned banks, which often bear responsibility for promoting economic growth and stability. In contrast, credit guarantees are often unavailable or ineffective in the less-developed economies in the region, typically hindered by overly strict conditions in some cases (Dang and Chuc 2019; World Bank 2020a). However, foreign governments have established credit guarantees in some of these economies (Sok 2021), which might offer useful alternatives and expertise for local MSMEs.

- **Interest rate subsidies.** Among ASEAN economies, MSMEs welcome schemes that put a cap on interest rates (for example, Lao PDR and Indonesia) or lower interest rates even in the absence of collateral (such as in Brunei) (OECD 2018). In Plus-3 economies, such as China and Japan, lower inflation and corresponding interest rate environment have made interest rate subsidies less of a priority.

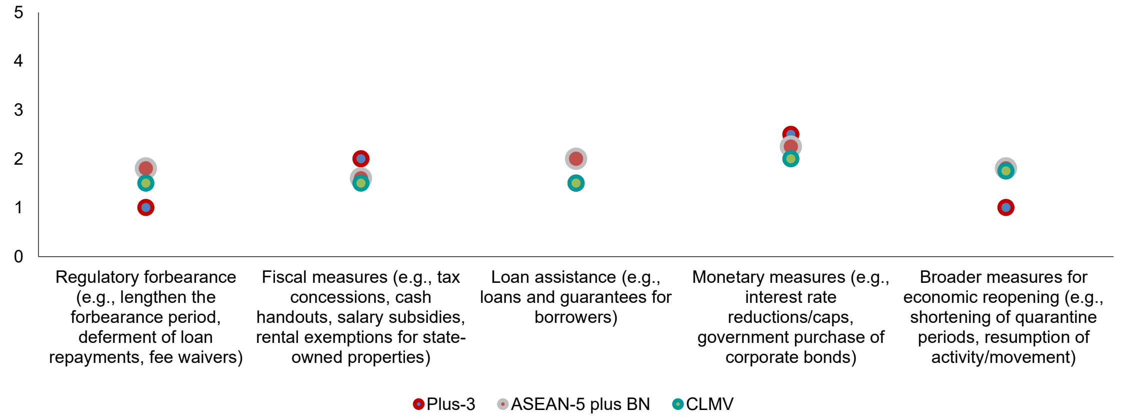
- **Mandatory loan targets.** In most jurisdictions, established schemes or institutions support innovative MSME businesses or those in priority industries (Sok 2021; OECD 2020c). However, they do not usually set explicit targets for support loans (including loan growth rates). Only a handful of economies, such as China, Korea, Indonesia, and Vietnam, have implemented precise targets, which are often expressed as a percentage of bank loans. Where the availability of credit for MSMEs may not be a concern, the focus should be on improving lending terms and conditions to facilitate the flow of funds to these firms.

Box Figure 1. ASEAN+3: MSME Responses to AMRO Survey
(1 = strongly agree, 5 = strongly disagree)

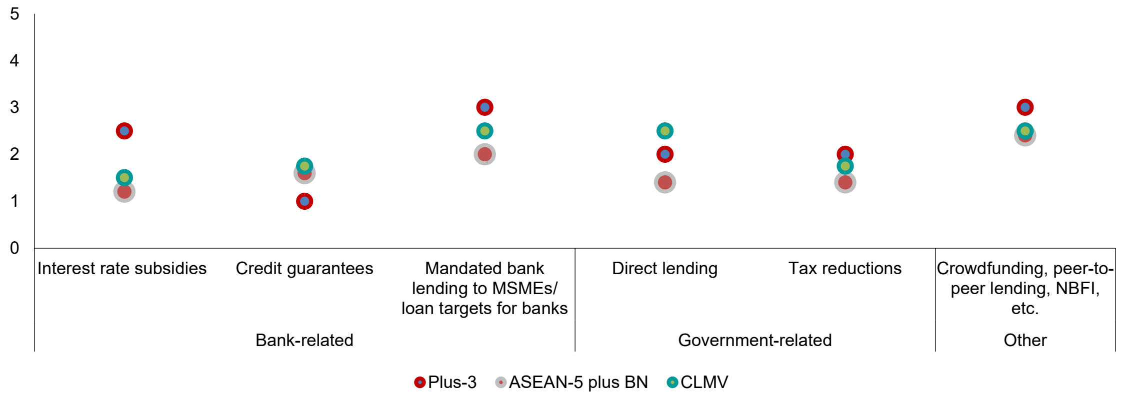
Q1. Key Risks to MSMEs



Q2. Effectiveness of COVID-19 Pandemic Policy Support Measures

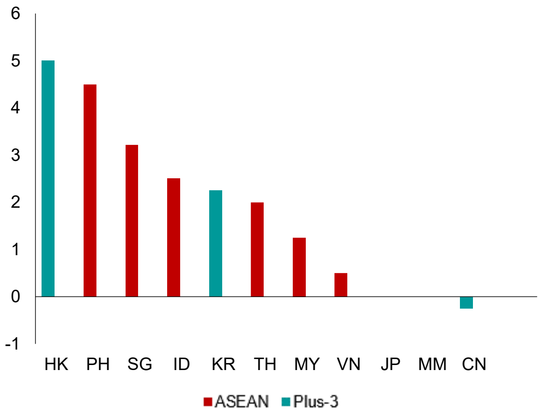


Q3. Main Sources of Funding



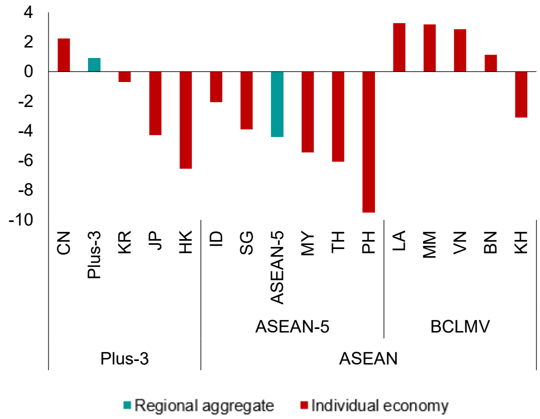
Sources: MSME associations; and AMRO staff compilations.

Box Figure 2. ASEAN+3: Total Policy Rate Changes, March 2022 to October 2023
(Percent)



Sources: National authorities via Haver Analytics; and AMRO staff calculations.
Note: CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Box Figure 3. ASEAN+3: Real GDP Growth of 2020
(Percent)



Sources: National authorities and IMF via Haver Analytics; and AMRO staff calculations.
Note: BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Fiscal measures, such as government lending and tax concessions, seem to be more popular among the ASEAN-5 plus Brunei group of economies. The availability of loans from the government may be linked to public sector indebtedness and the associated fiscal space. AMRO (2023b) assesses that most ASEAN economies still had medium fiscal space even after the expanded fiscal measures to save lives and livelihoods during the COVID-19 pandemic. Separately, corporate tax rates in most ASEAN economies, typically ranging from about 17 percent to 22 percent, are generally lower than the 25 percent to 30 percent among Plus-3 economies (Trading Economics 2023). Hence, ASEAN MSMEs appear to benefit from more favorable tax environments, complemented by tax reduction and exemption schemes (Inland Revenue Authority of Singapore 2023; Medina 2023).

1/ The survey questionnaire that was sent to MSME associations in the ASEAN+3 region is presented in Appendix V.
2/ Hong Kong is the exception, with a currency board arrangement in which the monetary base is fully backed by US dollar assets.

Table 1. ASEAN+3: Summary Heatmap of Corporate Debt-at-Risk Estimates by Economy, Firm Type, and Industry
(Percent of GDP)

Dimension			Original Estimates			With Liquidity Buffer		
			ICR	DSR (EBIT)	DSR (EBITDA)	ICR	DSR (EBIT)	DSR (EBITDA)
Economy	Plus-3	China	6.43	49.62	40.52	2.15	15.62	9.81
		Hong Kong	89.80	231.26	192.17	22.33	80.81	63.81
		Japan	18.34	81.14	66.21	1.55	46.29	37.20
		Korea	46.11	110.08	106.41	28.02	85.49	82.64
	ASEAN-5 plus Brunei	Brunei	1.05	1.05	1.05	1.05	1.05	1.05
		Indonesia	1.74	5.15	4.11	0.72	2.77	2.36
		Malaysia	19.03	59.91	49.77	10.02	31.51	22.13
		Philippines	9.72	52.82	36.55	4.70	18.75	10.13
		Singapore	12.37	45.13	39.16	6.55	27.67	26.56
		Thailand	48.28	107.10	56.65	27.20	84.98	35.59
	CLMV	Cambodia	0.39	0.43	0.43	0.04	0.43	0.43
		Lao PDR	0.01	0.51	0.50	0.01	0.51	0.50
		Myanmar	0.02	0.02	0.02	0.02	0.02	0.02
		Vietnam	67.81	93.92	45.86	39.13	76.70	35.80
Firm type	Listed		6.95	26.87	23.64	1.63	13.89	11.72
	Delisted		0.30	1.00	0.73	0.18	0.83	0.58
	Unlisted	MSME	3.23	7.60	5.06	1.80	5.45	3.64
		Other	3.58	25.50	20.30	1.76	7.89	4.69
Sector	Agriculture		0.07	0.29	0.24	0.03	0.21	0.18
	Business Services		1.12	3.26	2.20	0.69	1.99	1.37
	Manufacturing, Industrial, and Machinery		1.84	8.27	7.15	0.56	5.13	4.47
	Property and Construction		2.17	8.78	7.57	0.99	3.94	3.20
	Public Administration, Education, Health Social Services		0.11	0.41	0.31	0.04	0.29	0.23
	Raw Materials		1.41	5.90	4.56	0.35	3.13	2.16
	Retail, Wholesale, and Others		1.04	4.05	2.76	0.24	1.99	1.34
	Technology, Computer, Communications, and Media		0.95	2.15	1.42	0.18	1.14	0.93
	Transport		1.35	2.95	2.58	0.77	2.14	1.73
	Utilities and Waste Management		2.59	5.98	4.39	0.82	4.98	3.22
	Others		1.13	18.56	16.28	0.56	2.89	1.64

0.01	2.89	93.92	>100

Source: AMRO (2024).
Note: DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio.

Table 2. ASEAN+3: Summary Heatmap of Corporate Debt-at-Risk Scenario Analysis for Interest Rate and Earning Shocks
(Percent of GDP)

Dimension			Plus-3				ASEAN-5 plus Brunei						CLMV			
			CN	HK	JP	KR	BN	ID	MY	PH	SG	TH	KH	LA	MM	VN
Interest Rate Shock (Percentage points)	+2.0	ICR	9.53	100.57	34.44	62.97	1.05	3.08	27.51	14.17	12.95	67.51	0.39	0.01	0.02	73.86
		DSR (EBIT)	49.77	240.40	83.14	114.10	1.05	5.49	64.51	54.99	46.44	112.51	0.58	0.51	0.02	96.56
		DSR (EBITDA)	40.95	193.20	68.52	109.10	1.05	4.21	50.09	37.14	39.72	58.73	0.43	0.50	0.02	47.34
	+4.0	ICR	12.04	121.33	44.26	75.26	1.05	3.46	39.85	19.82	21.94	82.27	0.54	0.01	0.02	78.00
		DSR (EBIT)	50.22	240.93	85.34	116.07	1.05	5.59	66.91	56.37	49.41	114.73	0.91	0.51	0.02	97.29
		DSR (EBITDA)	41.41	212.73	70.80	112.56	1.05	4.39	53.44	39.84	42.29	59.45	0.43	0.50	0.02	48.22
	+6.0	ICR	14.70	139.34	52.34	84.73	1.05	3.73	47.76	26.84	28.28	91.91	0.54	0.01	0.02	80.75
		DSR (EBIT)	50.42	248.55	85.97	117.06	1.05	5.73	69.26	59.16	54.43	118.63	0.91	0.51	0.02	98.10
		DSR (EBITDA)	41.60	222.13	73.31	113.69	1.05	5.09	53.84	40.67	44.52	60.64	0.43	0.50	0.02	49.08
Earnings Shock (Percent)	–10.0	ICR	6.81	89.81	18.54	48.97	1.05	2.62	19.27	10.01	12.46	51.23	0.39	0.01	0.02	69.50
		DSR (EBIT)	50.00	240.40	81.77	111.88	1.05	5.56	61.85	54.92	47.31	111.42	0.43	0.51	0.02	95.27
		DSR (EBITDA)	41.08	192.57	67.99	107.92	1.05	4.31	50.11	37.06	39.75	58.67	0.43	0.50	0.02	47.04
	–30.0	ICR	8.21	91.31	20.19	56.27	1.05	3.10	26.14	12.53	13.00	61.04	0.54	0.01	0.02	74.83
		DSR (EBIT)	51.05	244.92	84.87	116.56	1.05	6.03	67.40	56.73	51.21	116.97	1.57	8.30	0.02	97.72
		DSR (EBITDA)	42.33	220.08	71.60	112.62	1.05	4.97	53.10	42.24	45.22	62.01	0.43	0.50	0.02	48.92
	–50.0	ICR	10.44	103.11	21.39	63.35	1.05	3.96	36.36	21.58	18.63	79.60	1.20	0.01	0.02	80.28
		DSR (EBIT)	52.10	255.63	87.97	121.67	1.05	6.64	70.59	62.65	55.33	118.92	1.57	8.30	0.02	99.16
		DSR (EBITDA)	42.97	243.92	78.10	118.77	1.05	5.88	57.84	45.81	49.87	65.39	0.58	8.29	0.02	52.34

0.01	39.75	121.67	>130

Source: AMRO (2024).
Note: DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Table 3. ASEAN+3: Summary Heatmap of Haircut to Liquid Buffer by Firm Type and Economy

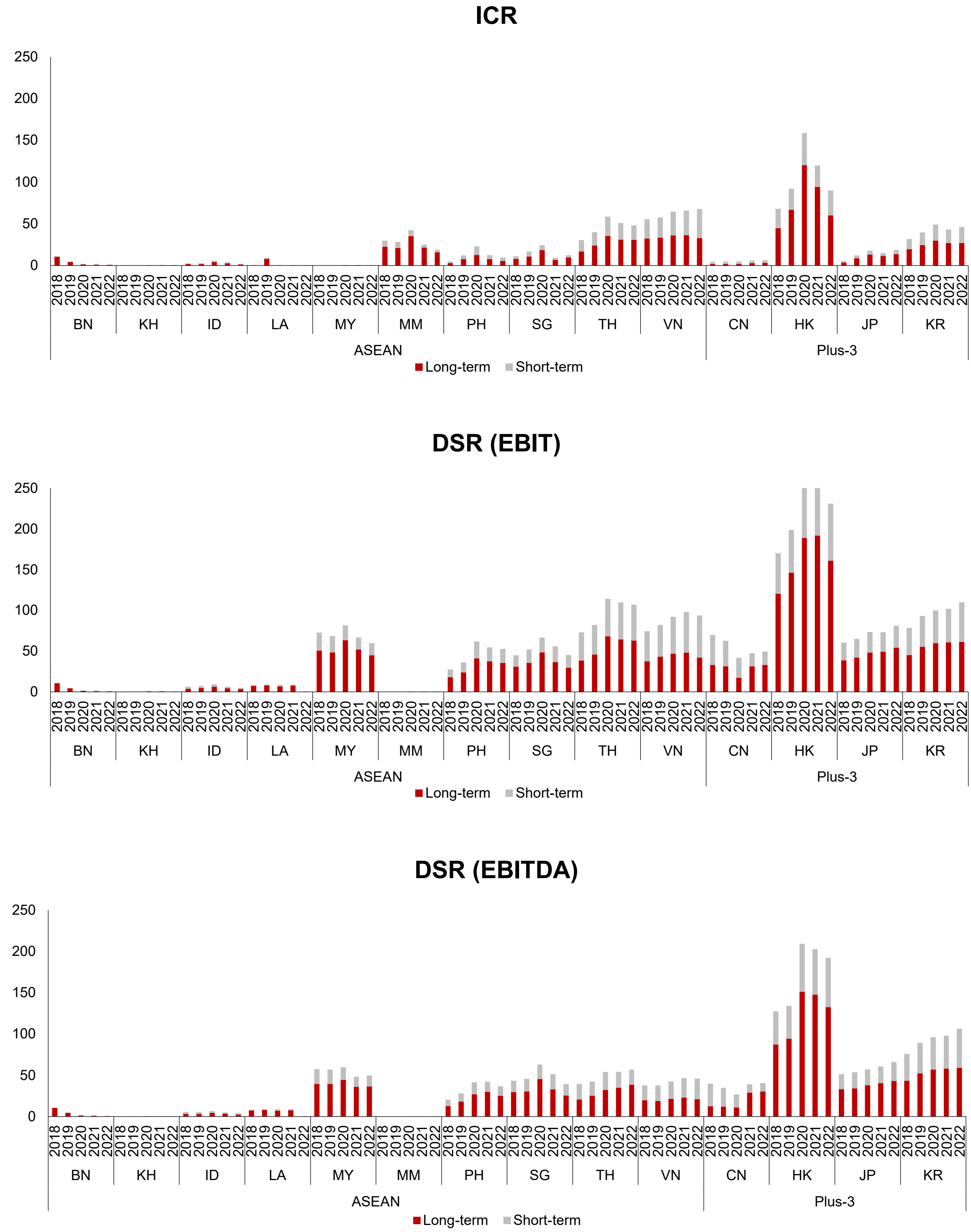
(Percent of GDP)

Dimension				Scenario Analysis		
				Haircut to Cash and Cash Equivalents (Percent)		
				–5.2	–9.5	–13.0
Firm Type	Listed	Plus-3	China	-0.747	-1.365	-1.868
			Hong Kong	-6.280	-11.473	-15.700
			Japan	-1.533	-2.801	-3.833
			Korea	-1.001	-1.828	-2.502
		ASEAN-5 plus Brunei	Brunei			
			Indonesia	-0.275	-0.502	-0.686
			Malaysia	-0.804	-1.468	-2.009
			Philippines	-0.724	-1.323	-1.810
			Singapore	-0.818	-1.495	-2.046
			Thailand	-0.585	-1.068	-1.462
		CLMV	Cambodia	-0.021	-0.038	-0.052
			Lao PDR	-0.009	-0.016	-0.022
			Myanmar	0.000	-0.001	-0.001
			Vietnam	-0.394	-0.721	-0.986
	Delisted	Plus-3	China	-0.016	-0.028	-0.039
			Hong Kong	-0.001	-0.002	-0.003
			Japan	-0.046	-0.085	-0.116
			Korea	-0.008	-0.015	-0.021
		ASEAN-5 plus Brunei	Brunei			
			Indonesia	0.000	-0.001	-0.001
			Malaysia	-0.086	-0.157	-0.214
			Philippines	-0.021	-0.038	-0.051
			Singapore	-0.066	-0.121	-0.166
			Thailand	-0.034	-0.061	-0.084
		CLMV	Cambodia			
			Lao PDR			
			Myanmar			
			Vietnam	-0.024	-0.044	-0.060

<-5	-3.833	-0.116	0.000

Source: AMRO (2024).
Note: Black cells indicate no data available.

Figure 7. ASEAN+3: Composition of Debt-at-Risk Debt Tenor, 2018–22
(Percent of GDP)

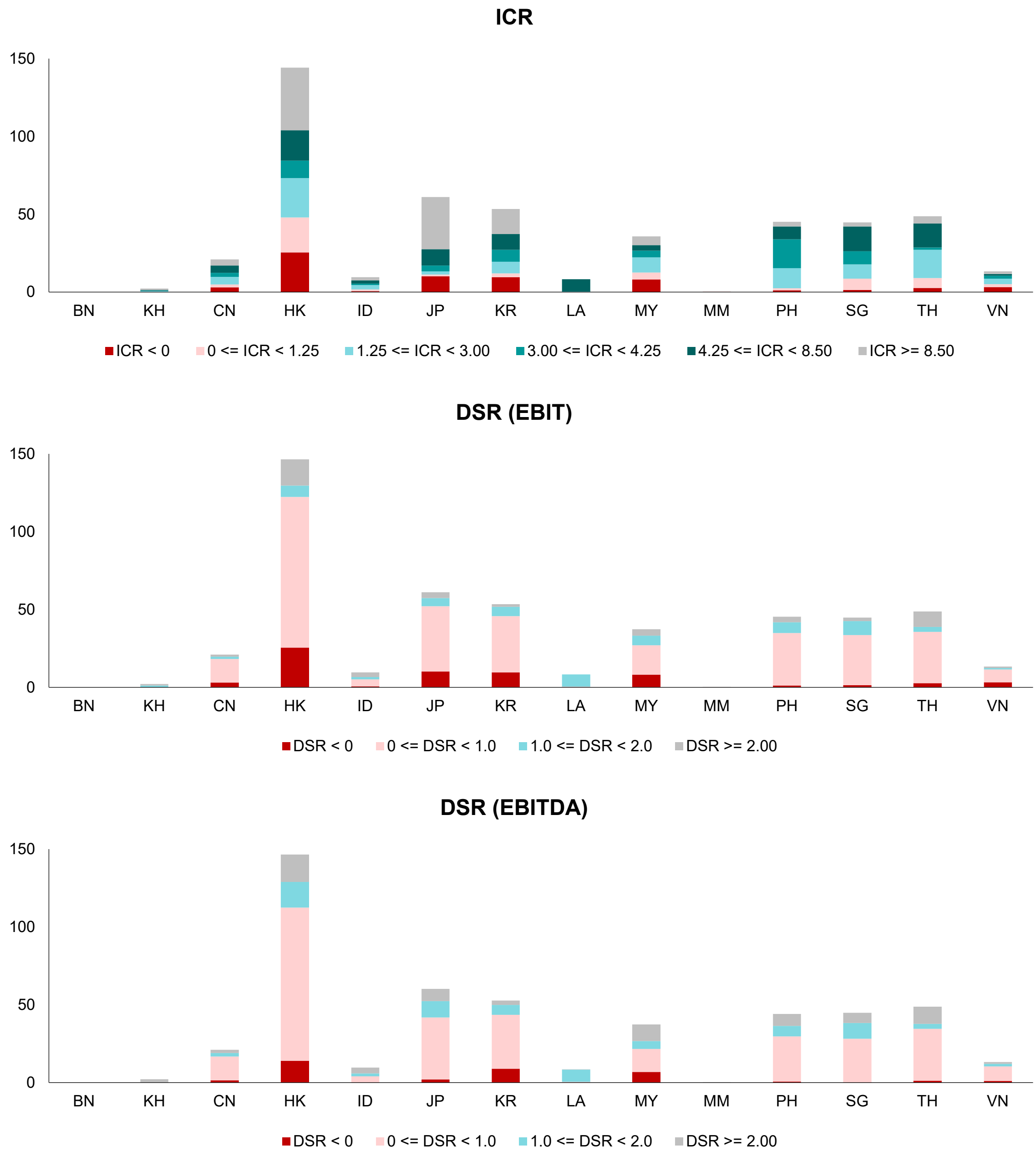


Sources: International Monetary Fund and national authorities, both via Haver Analytics; Orbis; and AMRO staff calculations.
Note: The short- and long-term debt of firms identified as financially stressed borrowers (ICRs < 1.25 and/or DSRs < 1.0) is separately aggregated to arrive at the breakdown for each economy. DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Box 2. Implications of Data Gaps for Cross-Economy Comparisons

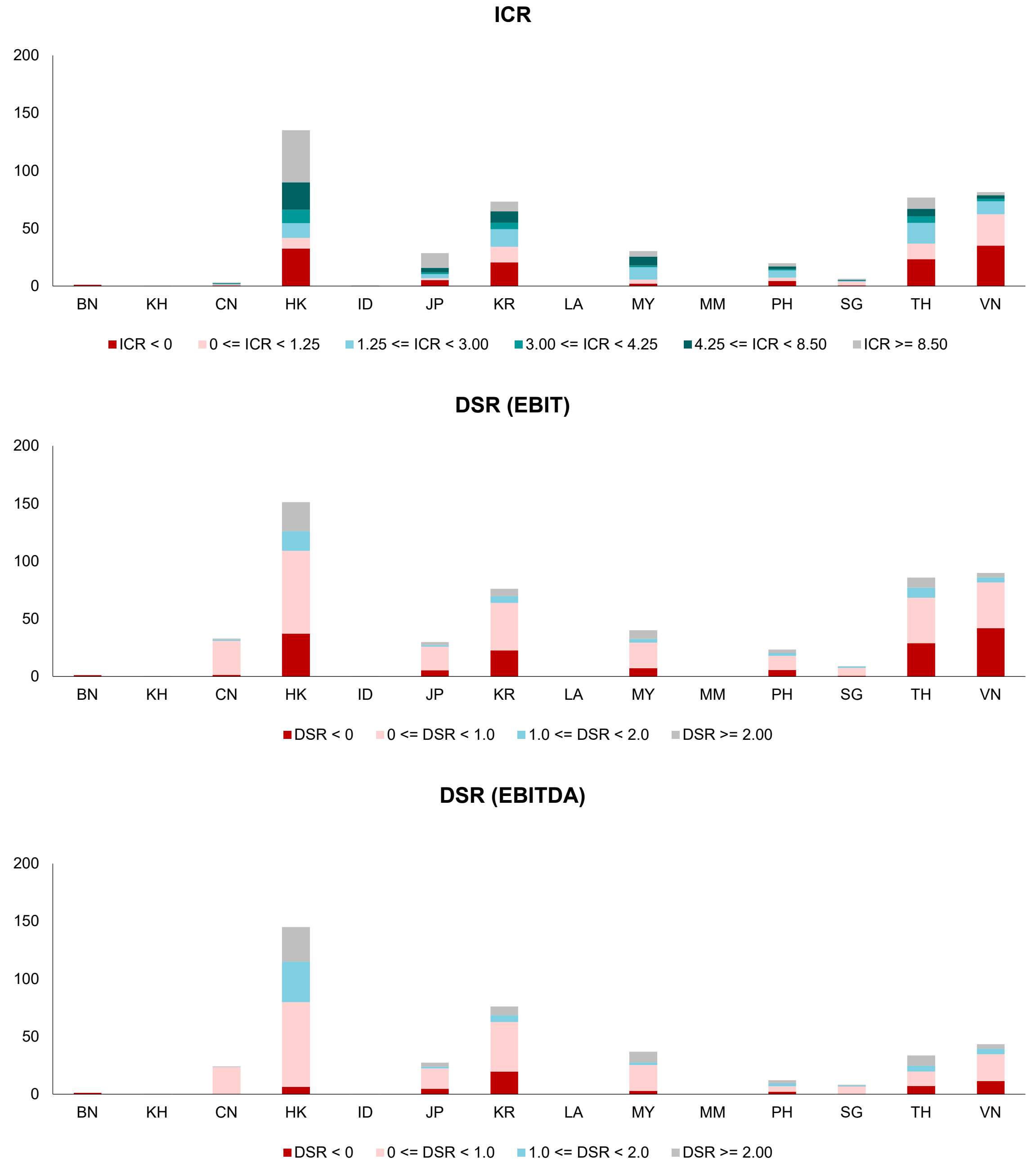
Incomplete data may unfairly skew comparisons of NFC vulnerabilities across economies in the ASEAN+3 region. As detailed in AMRO (2024), there are obvious gaps in the “cleaned” Orbis dataset used in this study. In particular, unlisted firms in many ASEAN+3 economies either do not report their financial information, or only a small proportion do so relative to the sector as a whole. Japan, Korea, Thailand, and Vietnam are the exceptions, with hundreds of thousands of unlisted firms transparently publishing their financial statements, which allows for more complete DAR analysis of the NFC sector. Hence, while listed firm DAR may be comparable across economies (Box Figure 2.1), comparisons of unlisted firm DAR are incomplete (Box Figure 2.2).

Box Figure 2.1. ASEAN+3: Debt-at-Risk of Listed Firms across Economies, 2022
(Percent of GDP)



Sources: Orbis; national authorities via Haver Analytics; and AMRO staff estimates.
Note: DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Box Figure 2.2. ASEAN+3: Debt-at-Risk of Unlisted Firms across Economies, 2022

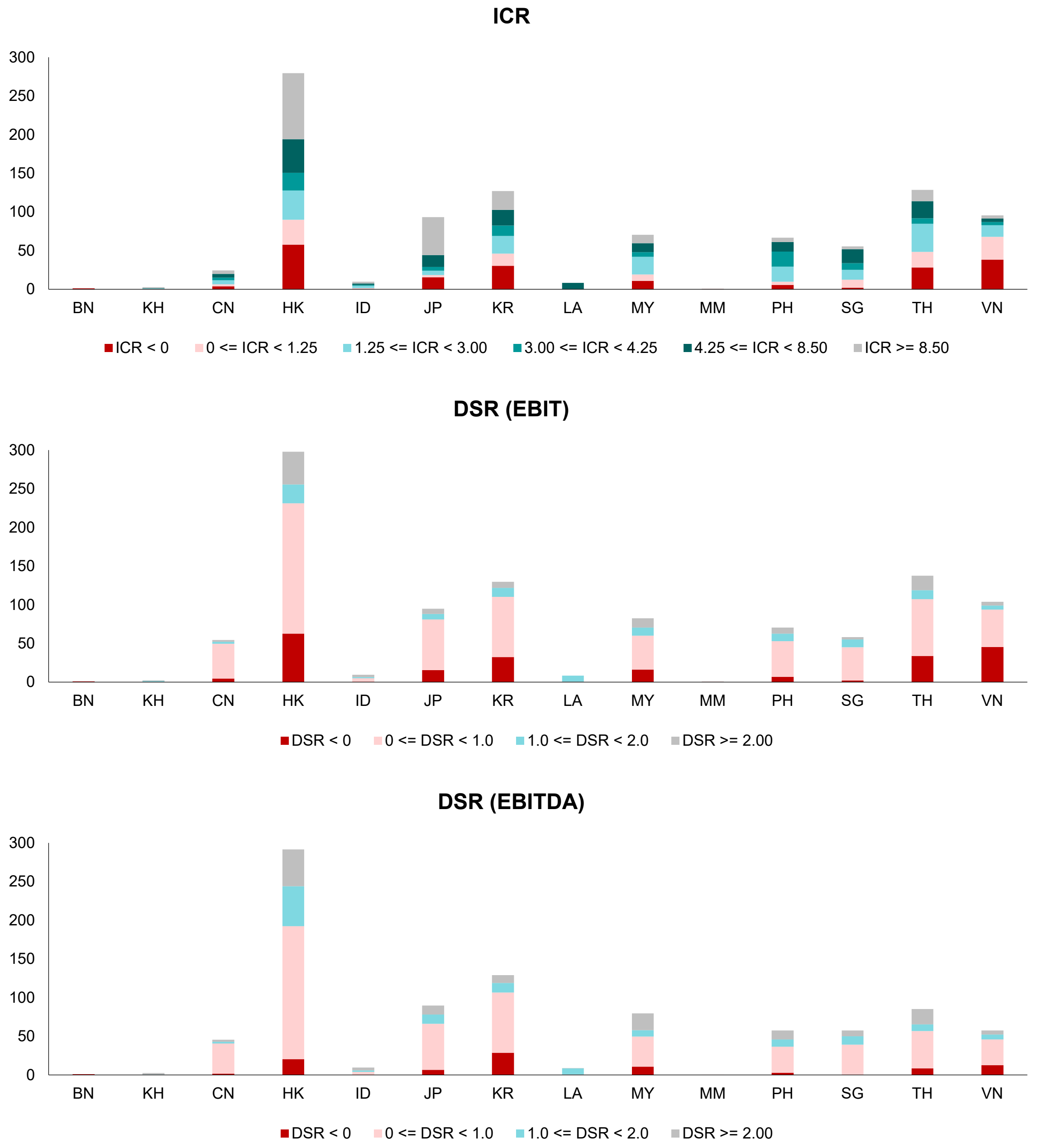


Sources: Orbis; national authorities via Haver Analytics; and AMRO staff estimates.
Note: DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

The unfortunate result is that economies that provide more transparency in terms of reported financial information may appear more vulnerable. For example, Korea's and Thailand's aggregate DSR DAR for 2022 would have been estimated at about 45 and 35 percent of GDP, respectively, if few of their unlisted firms had published their financial data (Box Figure 2.1). However, the greater completeness of reporting by their unlisted firms (which include MSMEs that are typically more vulnerable) means that their aggregate DAR is likely to be higher. In this case, the additional coverage increases Korea's DSR DAR to more than 100 percent of GDP and Thailand's to between 55 percent and 110 percent (Box Figure 2.3).

Incompleteness of reporting of private non-financial corporation debt information is not a new challenge for assessing risks to financial stability. In the Bank for International Settlements database on credit to the private non-financial sector, for instance, the credit data for selected ASEAN+3 NFC sectors are sourced from banks (Dembiermont, Drehmann, and Muksakunratana 2013). Only Japan and Korea present more complete (flow of funds) information from their financial accounts and hence may be reporting larger debt than their peers. In this regard, the bottom-up Orbis estimates may be more comprehensive to the extent that it also captures credit to firms from sources other than banks, as reported in firm balance sheets, across economies.

Box Figure 2.3. ASEAN+3: Debt-at-Risk of All Reporting Firms across Economies, 2022



Sources: Orbis; national authorities via Haver Analytics; and AMRO staff estimates.
Note: DSR = debt service ratio, EBIT = earnings before interest and taxes, EBITDA = earnings before interest and taxes, depreciation, and amortization, ICR = interest coverage ratio, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

IV. Policy Considerations

21. **The region's corporate DAR carries important implications for growth and financial stability.** Beyond domestic considerations, spillovers arising from distress in the NFC sector could pose risks to the rest of the region. Some potentially important corporate insolvency triggers for the ASEAN+3 region include ill-timed or poorly considered withdrawals of policy support, continuing interest rate rises from stubbornly high or further surges in inflation, and lender concerns over downside risks to the economic outlook. Lender balance sheets are already exposed to greater credit risks from the NFC sector because of the pandemic. At the time, pandemic policy support measures were necessary and effective in injecting liquidity, keeping debt service costs low, and containing losses to lenders. However, the large debt accumulated by firms when real economic activity was impaired and the current environment of elevated interest rates amid downside risks to growth have generated significant uncertainty.

A. Addressing Nonfinancial Corporate Vulnerabilities

22. **Concerted efforts to address NFC vulnerabilities—and consequently, risks to the financial system—require close coordination among government agencies, banks, industry associations, and firms themselves.** Events surrounding periods of turbulence in emerging markets—such as during the Asian financial crisis—have shown that lenders may choose not to roll over short-term credit to firms because of rising risk aversion. Potential widespread corporate debt defaults could trigger a chain reaction throughout the economy, threatening financial stability and growth (IMF 1998). Banks, as key intermediaries, would bear the brunt of those defaults, leading to a credit crunch; NFC sector activity would slow sharply or even contract, affecting employment and household income, which would feed back to banks through households finding it tougher to service personal loans. Given the interconnectedness across ASEAN+3 economies, such outcomes would likely result in regional spillovers. Hence, it is crucial to devise policies that mitigate such risks and strengthen resilience in the NFC sector.

23. **There are several measures that each protagonist could undertake in the short-term to mitigate the immediate risks.** Specifically:

- The **government** could offer fiscal support in the form of subsidies and grants to businesses that are operating in more volatile, but critical, industries and sectors (for example, agriculture, commodities, MSMEs), or tax incentives to firms that are beneficial to economic development (such as for digitalization). Depending on their mandates, **supervisory authorities** could engage closely with identified large, at-risk NFCs whose risks to systemically important lenders are significant, or with the lenders themselves to ensure appropriate mitigation of credit risks. Such engagement is typically more straightforward when the stakeholders are state-owned enterprises or government-affiliated.

- **Lenders** could increase their own provisions if they assess the default probabilities to have risen or grow their liquidity buffers by reducing dividend payouts, instead of rolling back on the financing for firms in the first instance. If necessary, lenders could restructure loans to firms they assess to be viable but struggling as a result of the pandemic and high interest rates, to reduce the debt service burden and continue to provide necessary liquidity support.

- In turn, **firms** could help themselves by implementing several measures, such as:
    - *Selling off assets that might be redundant to the firm's operations, to build cash buffers.* For instance, noncore business assets such as real estate could be sold if the firm determines that it is more economical to rent than own.
    - *Purchasing insurance plans to improve the firm's risk profile.* Aside from credit insurance, general insurance plans could also enhance a firm's access to loans. For instance, purchasing an insurance policy for the firm's premises would reduce its overall risks, and either increase the likelihood obtaining bank credit (OECD 2022b), or reduce the cost of that credit. That said, such policies might not be cost-effective especially for smaller firms.

24. **Over the medium to longer-term, various strategies could be adopted to support the NFC sector.** For example:

- The ***government*** could target several areas, mainly through improvements to the general operating and financing environment, such as:
    - *Improving the ease of doing business.* A more competitive and business-friendly environment incentivizes innovation by firms and motivates them to invest in both human and physical capital, which would generate higher incomes and address rising debt levels (Herodotou 2023).
    - *Enhancing labor productivity.* Labor costs are estimated to make up more than half of corporate expenses in Asia (TMX Global 2021). Government initiatives that encourage investment in capital equipment or upskilling labor could raise productivity. A more efficient labor force reduces corporate expenses, which could go a long way toward helping firms allocate more earnings to servicing their loans.
    - *Setting up state-owned or policy banks to shoulder and balance developmental and social objectives.* Such institutions could be potential levers in facilitating credit or reducing borrowing costs for certain industries/firms that contribute to an economy's growth potential. That said, strong governance of such institutions would need to be in place to ensure that lending policies are guided by sound economic and financial rationale, or they could become conduits for crony capitalism.
    - *Refining the determination and payment structure of government contracts.* Firms that are awarded public sector contracts are typically important nodes in the supply chain. First, the government should not delay making payment to the firms upon the completion of their deliverables, given that any delay could affect cash flows, in particular of smaller firms (OECD 2022b). Second, downstream payment performance should be a criteria for awarding public sector contracts (CBI 2018), to encourage firms to make timely payments to their suppliers in turn.
    - *Providing the requisite environment for diversifying the financing ecosystem.* ASEAN+3 economies should continue to move away from their traditional reliance on bank-based, debt-based financing to other alternative sources, especially in the age of digitalization where technology has made it possible to

source funds in new ways, including more equity-type financing; financing that offer better risk-sharing; or are more bespoke to the risk profiles and needs of the different types of firms, such as peer-to-peer or crowdfunding; or venture-capital-based private-market financing.

- ***Lenders*** should adopt more innovative policies over the types of collateral that they are prepared to accept from NFC borrowers, both to fortify their own balance sheets and enable firms to obtain liquidity. Intangible assets represent one area with significant potential but most lenders are not accustomed to assessing the recoverable value of intangible assets (OECD 2022b), hence the little use of such assets as collateral. Lenders should improve their expertise in this area, which would enable them to collateralize various forms of intangible assets. In this context, OECD (2011) lists three major categories of intangible assets: (1) computerized information such as software and databases; (2) innovative property such as Research & Development results, copyrights, designs, and trademarks; and (3) economic competencies such as brand equity, firm-specific human capital, networks, and organizational know-how.

- ***Firms*** themselves have important roles to play in improving their internal processes and growing their earnings. They could do so by:

  - *Streamlining and modernizing business processes.* Digitalization could reduce errors, improve the timeliness of invoicing and collection, as well as make timely payments (CBI 2018), reducing the overall cost of doing business and generating cash flows to pay down debt. Such efforts could have positive spillover effects for the rest of the NFC sector.

  - *Diversifying into new markets to expand income streams and increase revenues, while reducing costs to maximize profits.* Diversification, which reduces the volatility of earnings, can clearly be more easily achieved by larger firms than by MSMEs. Larger firms could also consider mergers and acquisitions, whereas MSMEs could partner with other firms to tap new markets and grow their businesses (MBO Partners 2023). More generally, higher cash buffers from increased revenues/profits would help cushion firms when risks manifest.

25. **Policies to ensure that economic recovery is entrenched are critical for supporting such reforms**. In a roundabout way, sustained growth would require nonviable old-economy sectors to be gradually phased out, upskilling of labor, and more efficient reallocation of resources to new sectors. Support policies should be complemented with restructuring or resolution of nonviable firms to avoid debt overhang and any support to zombie firms, which ultimately would harm the economy (Pazarbasioglu and Reinhart 2022).

B. Improving Surveillance

26. **This study has underscored the difficulty in obtaining complete, consistent, and comprehensive firm financial information for surveillance purposes.** Besides the varying quality of corporate governance across countries, which would affect the accuracy of company information, clear differences exist in the availability of information for listed and private firms. Data for listed firms are generally available because these companies are required to report to their respective securities commissions and they also typically publish their annual reports on their websites. In contrast, data gaps are prevalent among unlisted

firms that are typically not required to publish comprehensive financial information. Given that NFC sector vulnerabilities also represent potential financial stability risks to the region, improved data availability would strengthen collective surveillance of the sector.

27. **A third-party database is utilized for this study, with significant "cleaning" of the data necessary.** Discussions with the private sector provider reveals two important challenges in terms of collecting and compiling firm information within individual economies for public use:

- ***The first issue is availability.*** Regulations or laws pertaining to the filing and/or publication of firm financials vary across firm type—especially for unlisted companies—and economies in terms of their stringency and hence information may be incomplete. An example is where some registries collect company profiles such as the identity of directors, major shareholders, and so forth, but not their financials. In some cases, a significant percentage of firms report outdated or sparse information, or the source of financial records may not be publicly available.

- ***The second issue pertains to the objectives of local authorities, which affect accessibility even if the information is available.*** Although some authorities are quite transparent and open in making firm information lodged at company registries readily accessible to the public,[4] others may eschew easy public access because they consider the data to be of strategic national interest or take the position that unlisted firms have the right to confidentiality. In the latter case, official agencies may not be allowed to share information with each other, even to facilitate policymaking.[5] There could be no centralized source of records, or poor infrastructure for documenting and/or storing company records or financial filings, and/or an archaic data structure (for example, where company records are maintained as scanned portable document format (PDF) files at some registries).

28. **Improved transparency and accessibility of firm information would have important benefits for both the official and private sectors.** Specifically:

- ***From an operational perspective,*** these features would facilitate firms setting up branches or subsidiaries overseas, if desired, or attracting new business, given that it would be much easier for counterparts to carry out due diligence;

- ***From a financing perspective,*** it would facilitate access to credit for more firms and consequently improve financial inclusion in a particular economy. Higher quality information and greater transparency would lead to improvements in risk

[4] In this regard, some consider New Zealand the "gold standard"—it is completely open and transparent with company information, which is made freely available and accessible from the registry.

[5] For example, financial data on unlisted firms collected by the tax office or prudential data available to financial supervisors may not be readily accessible to fiscal policy counterparts, who might require the information to design support measures and estimate corresponding budget expenditures.

assessments and greater assurance, and as a result, increase access to financing and reduce borrowing costs or even the need for collateral altogether.[6]

- ***From a supervisory, regulatory, and surveillance perspective,*** it would facilitate monitoring the financial performance of the NFC sector. In particular, it would allow better assessments of the health of the large MSME sector that accounts for more than 90 percent of enterprises in all regional economies and the majority share of national employment, and is much more vulnerable to shocks.

That said, cross-country analyses may still be challenging for several reasons. In particular, source information would usually be published in the local language in most economies, and accounting and disclosure standards may differ too substantially to facilitate comparison.

29. **Some practical measures could be adopted to improve surveillance of the NFC sector, taking into account existing limitations and constraints.** First, major NFCs that pose potential credit risks to the banking system—that is, NFCs with large balance sheets and high foreign currency borrowings—should be closely monitored. Second, greater effort should be made to collect information on private market financing (for example, privately placed debt, venture debt, private credit). Third, official agencies could coordinate better to compile and share financial information on MSMEs, where legally possible, and last but not least, conduct demand-based surveys of firms' access to financing.

V. Issues for Members' Discussion

30. The following are issues pertinent to the soundness of the NFC sector and its surveillance that warrant attention from members:

- Are members concerned about corporate indebtedness in their respective economies? Are there internal estimates as to what appropriate debt thresholds might be?

- What else can either the public or private sector do to manage the high indebtedness and rollover risks faced by some sectors and types of firms? What measures are authorities implementing to address the vulnerabilities in the NFC sector and strengthen its resilience to shocks?

- What are the measures needed to address the financing challenges faced by MSMEs? How can the full potential of financial digitalization be deployed to support MSMEs and expand financial inclusion?

- How can data gaps in the ASEAN+3 NFC sector, and among unlisted/MSME firms in particular, be addressed? Should regional guidelines be devised for improving data transparency in this category of firms?

[6] AMRO (2023c) cites the example of MYbank, China's first digital bank, which leverages massive, real-time transactions data of its MSME borrowers with their consent and applies artificial intelligence technology to gain insights into their creditworthiness and manage credit risks. It has lent to nearly 16 million firms that had previously struggled to obtain credit, loan applications are made online within three minutes, and approvals are almost instantaneous, all with a default rate of 1 percent.

- What support can AMRO provide to improve the quality, availability, and accessibility of firm financial information among member economies? What other support can AMRO provide to help strengthen resilience in the NFC sector?

- What features, if any, could be incorporated into an enhanced Regional Financing Arrangement that could mitigate NFC sector risks?

Appendix I. COVID-19 Pandemic Policy Support Measures in ASEAN+3

Appendix Table 1. ASEAN+3: Policy Support Measures for Firms during COVID-19 Pandemic

Policy	BN	KH	CN	HK	ID	JP	KR	LA	MY	MM	PH	SG	TH	VN
Virus containment policies														
Domestic mobility restrictions *e.g., social distancing, work closures, school closures*	●	⭘	●	●	●	●	⭘	●	●	●	●	●	●	●
Border closure *e.g., entry restrictions for foreign travelers*	●	⭘	●	●	●	●	●	●	●	●	●	●	●	●
Fiscal policy support														
Support for households *e.g., cash handouts, personal income tax exemptions*	⭘	●		●	●	●	○	⭘	●	⭘	●	○	●	●
Support for businesses *e.g., wage subsidies, tax cuts, fee waivers*	⭘	●	●	●	●	●	●	⭘	●	●	●	●	●	●
Targeted to specific domestic sectors (food and beverage, retail, and entertainment outlets, transport operators, etc.)	⭘		●	●	●	●	●		●	●		●	●	
Targeted to specific export sectors (travel and tourism, export-manufacturing)		●		●	●	●	●	●	●	●		●	●	
Monetary policy support *e.g., policy rate reduction, reduction in required reserve ratio*		●	●		●		⭘	●	⭘	●	●			●
Financial/macroprudential policy support *e.g., time-bound and flexible regulations on bank capital or liquidity buffers, loan classification and provisioning, etc.*		●		●	●	●	●	●	⭘	●	●	●	●	●
Targeted to households *e.g., loan guarantees, incentivized lending, flexible and favorable lending terms, loan restructuring for individuals*	●	●		●	●	●			●	●	●	⭘	●	
Targeted to businesses *e.g., special lending facilities, incentivized lending, loan restructuring for businesses*	●	●	●	●	●	●	●	●	●		⭘	●	●	
Pandemic support from international donors *e.g., ADB, World Bank*		●			○			●		⭘	●			●

Source: AMRO (2022c).
Note: ⭘ indicates support still in place as of the end of 2021; ● indicates support expired on or before December 31, 2021; ○ indicates support expired on or before December 31, 2020. ADB = Asian Development Bank, BN = Brunei, KH = Cambodia, CN = China, HK = Hong Kong, ID = Indonesia, JP = Japan, KR = Korea, LA = Lao PDR, MY = Malaysia, MM = Myanmar, PH = Philippines, SG = Singapore, TH = Thailand, VN = Vietnam.

Appendix II. Profile of MSME Sectors

Appendix Table 2. ASEAN+3: MSME Sectors and Importance in Economy

Group	Economy	Top Sectors	Share of Employment (Percent)	Share of Firms (Percent)
Plus-3	China	• Services	79	99
	Hong Kong	• Import/export trade and wholesale • Professional and business services	45	98
	Japan	• Retail trade • Accommodation, eating and drinking • Construction	69	100
	Korea	• Wholesale and retail trade • Accommodation and restaurants • Manufacturing	90	100
ASEAN-5 plus Brunei	Brunei	• Wholesale and retail trade • Manufacturing • Construction	55	97
	Indonesia	• Manufacturing of food products, wood, and wearing apparel	97	100
	Malaysia	• Services • Manufacturing • Construction	66	99
	Thailand	• Wholesale and retail, and services	86	100
	Philippines	• Wholesale and retail trade, repair • Accommodation and food service activities • Manufacturing	65	100
	Singapore	• Services industry	71	100
CLMV	Cambodia	• Agriculture • Manufacturing • Restaurant and hotel • Transport and storage	70	90
	Lao PDR	• Product production • Trade • Services	82	90
	Myanmar	• Agriculture • Wholesale and retail • Transportation	50–95	99
	Vietnam	• Wholesale and retail trade, repair • Accommodation and food service activities • Manufacturing	47	98

Sources: Aung (2019); Brunei Darussalam Ministry of Finance and Economy (2023); Chhea (2019) ; Charltons (2023); Dang and Chuc (2019); Asia-Pacific Economic Cooperation (2020); Department of Trade and Industry of the Philippines (2023); Goh and Tang (2022); Hong Kong Support and Consultation Centre for SMEs (2023); Lao National Chamber of Commerce and Industry (2023); National Bureau of Statistics of China (2022); OECD (2018); OECD (2022a); Sok (2021); World Bank (2020b); and AMRO staff compilation.
Note: Data are based on the latest publicly available information; shares are rounded to the nearest digit.

Appendix III. Financial Support Measures for ASEAN+3 MSMEs

Appendix Table 3. ASEAN+3: MSME Financing Schemes

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
Plus-3	China	• During the COVID-19 pandemic, large banks provided interest rate discounts of at least 50 basis points. • Apart from preferential rates, the central government also offers subsidies equivalent to 50 percent of interest expenses to eligible enterprises.	• In 2018, the banking and insurance regulator approved having four state-owned banks (China Development Bank, the Export-Import Bank of China, Agricultural Development Bank of China and Postal Savings Bank of China) jointly invest and set up a national financing guarantee fund. • The fund started with an initial registered capital of CNY 66.1 billion, with the aim of directing more financial resources to MSMEs and encouraging entrepreneurship development.	• In 2021, the government's work report set a growth target of MSME lending by large commercial banks at 30 percent, to address the financing difficulties confronting these firms.	• The National SME Development Fund was established in 2020 to support the development of MSMEs. Its registered capital is CNY 35.75 billion. This fund is aimed at delivering large-scale support to small businesses during start-up by backing subfunds and directly investing in high-quality projects. • In 2020, the National Financing Guarantee Fund offered re-guarantee services, of about CNY 70.91 billion, for 45.6 million MSMEs.	• In 2020, MSMEs were exempted from about CNY 360 billion of additional service charges for their loan applications as part of the government's supply-side structural reforms, where tax and fee reductions were key to deepening "cost reduction."	• From 2007 to 2020, P2P lending market experienced a dramatic boom-and-bust and ended up with no surviving platform. The key reason attributed to the collapse was the market's deviation from the role of information intermediary, instead taking on the role of shadow banks offering principal guarantees.
	Hong Kong	• During the COVID-19 pandemic, borrowers were given interest subsidies for a maximum of 12 months, with the first payment required by the end of June 2021.	• The SME Financing Guarantee Scheme (the "Scheme") was launched on January 1, 2011 by the Hong Kong Mortgage Corporation Limited (HKMC). The business was transferred to HKMC Insurance Limited (HKMCI)—a wholly-owned subsidiary of the HKMC—on May 1, 2018, and has since been carried on by the latter. • The Scheme aims at helping local MSMEs and non-listed enterprises (collectively, "Enterprises") to obtain financing from participating lenders	• The Banking Sector SME Lending Coordination Mechanism ("Mechanism") was established by the HKMA in October 2019. Participants include the 11 banks most active in MSME lending. The Hong Kong Association of Banks and the HKMC Insurance Limited are also represented. • The Mechanism has rolled out several rounds of relief measures for corporate customers, including the Pre-approved Principal Payment Holiday Scheme, loan tenor	• The Government provides over 40 funding schemes with different scopes, amounts, and requirements to promote and support the development of enterprises and industries in Hong Kong. A dedicated service team, SME ReachOut, commenced operations on January 1, 2020, to support MSMEs through face-to-face meetings to help identify appropriate funding schemes, and to respond to questions from applicants.	• For incorporated and unincorporated companies, the two-tiered tax rate for assessable profits at HKD 2 million could reduce the tax burden of most MSMEs.	• There is no dedicated legislation for the regulation of crowdfunding in Hong Kong. There is also no designated government department responsible for regulating such activities. However, the Government is considering enacting legislation in this area and plans to conduct a public consultation exercise to gather views on the matter.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
			(“Lenders”) to meet their business needs and enhance their productivity and competitiveness in the rapidly changing business environment. Under the Scheme, the HKMCI may provide guarantee coverage of 50, 60, or 70 percent to the credit facilities of eligible Enterprises approved by the Lenders. • During the COVID-19 pandemic, the Financial Secretary announced the introduction of the Special 100 Percent Loan Guarantee to enhance cash-flow support to affected enterprises (both large companies and MSMEs).	extensions, and the conversion of trade financing lines into temporary overdraft facilities. As of the end of March 2023, banks had approved over 113,000 applications for loan tenor extension and other forms of relief, involving an aggregate amount of HKD 1.1 trillion.			
	Japan	• During the COVID-19 pandemic, government financial institutions (e.g., Japan Finance Corporation, Shoko Chukin Bank) offered lower interest rates to MSMEs to support their businesses.	• The SME Unit of Japan Finance Corporation provides credit insurance programs in addition to other loan programs for MSMEs. • The amount of MSME loans guaranteed by the Credit Guarantee Corporations accounted for 13 percent of all MSME loans in 2022. • During the COVID-19 pandemic, the Ministry of Economy, Trade and Industry (METI) introduced a safety net guarantee program (guarantee limit of JPY 280 million) and crisis-related guarantees (guarantee limit of JPY 280 million) to support MSMEs.	• A direct loan program was put in place after the 2011 earthquake, tsunami, and nuclear accident, which supported the restructuring of affected MSMEs through loans of additional funds at extremely low interest rates.	• In 2021, the direct loan program reached 1.24 million of Japan’s 3.81 million MSMEs.	• Among the tax incentives are Research & Development tax credits, fiscal support for productivity improvement, support of capital investment for certain equipment for MSMEs, including foreign ones.	• The Financial Services Agency (FSA), which is in charge of the nation’s financial markets and services, regulates crowdfunding, which is booming. • Investment-type crowdfunding is subject to the Financial Instruments and Exchange Act (FIEA), which regulates securities and investment products. • Donation/reward-type crowdfunding is subject to the Payment Services Act (PSA), which regulates payment services and electronic money.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
			• That said, most small business owners in Japan provide personal guarantees in order to obtain business loans. In some respects, personal guarantees are regarded as strong tools for ensuring good corporate governance and mitigating credit risks arising from the low creditworthiness of customers and information asymmetries.				
	Korea	• Low interest rate funding is made possible through Local Credit Guarantee Foundation (LCGF) guarantees and municipal authorities' interest subsidies (1–3 percentage points) to small businesses that have difficulty in raising new funds. • Interest rates for early-stage businesses (established after January 2021) may be reduced by up to 1.5 percentage points through the preferential guarantee program. • Lower interest loans are also available to alleviate cost burdens related to increases in materials and labor prices.	• Credit guarantee services involve a series of interactions among three parties: the guarantor (Korea Guarantee Fund, KODIT), the debtor (MSMEs), and the creditor (banks, other financial institutions, and so on). If the debtor defaults, KODIT pays the guarantee obligation to financial institutions in place of the debtor. • Regardless of business category, individuals, and companies conducting for-profit business are eligible for credit guarantees, with the exception of firms involved in gambling, adult entertainment, real estate and so on. • KODIT places guarantee limits to prevent excessive guarantee amounts from going to any single firm and thereby maintain the soundness of guarantee funds.	• The Government has set up specialized banks to provide credit to MSMEs. • Industrial Bank of Korea (IBK) was established in 1961 as a public bank under the Industrial Bank of Korea Act to provide financial services to MSMEs whose access to market resources was limited, with the Act designed to facilitate IBK's outreach. The bank is required to allocate at least 70 percent of its loan portfolio to MSMEs. • The Government has also employed IBK to provide countercyclical funding scalability in times of crisis.	• Korea SMEs and Startups Agency (KOSME) provides funds to support high-tech startups and SMEs that are keen to enhance their technology and management capability.	• General MSMEs, as well as those involved in new growth technologies, are provided with tax credits. • Special tax reductions or exemptions of about 5 percent to 30 percent of corporate tax are available to MSMEs. The amount of tax subsidy could be more for the startups.	• In 2019, the Cabinet Council passed an amendment to the Financial Investment Services and Capital Markets Act so that all MSMEs could conduct securities-based crowdfunding for financing purposes.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
			• In principle, differentiated coverage ratios, generally between 70 percent and 85 percent, apply depending on the credit rating of the guarantee-receiving firms and the terms for guarantee services. • The guarantee fee of KODIT varies according to the credit rating of the applying firm within the range of 0.5 percent to 3.0 percent annual rate of the outstanding guarantees.				
ASEAN-5 plus Brunei	Brunei	• The Micro Financing Scheme (MFS) is co-managed by Darussalam Enterprise (DARe) and Bank Islam Brunei Darussalam (BIBD), with no collateral required and lower interest rate. The scheme has been in place since 2016.	• No credit guarantee scheme is in place.	• There are limited financial schemes targeted at building and upgrading the capability and capacity of local MSMEs.	• The Government has launched SME finance schemes with the banks.	• Tax and investment privileges are provided to MSMEs.	• Jana Kapital, which was launched in November 2021, provides alternative financing for MSMEs. • Investor warnings against cryptocurrencies and crypto-assets have been issued, although initial coin offerings are not banned.
	Indonesia	• Kredit Usaha Rakyat (KUR—People's Business Credit) is a microcredit program which combines loan guarantees with interest rate subsidies that allow banks to lend to MSMEs at a capped interest rate. • The addition of the interest rate subsidy was introduced in 2015, but there have been concerns about the sustainability of the initiative, following a tenfold increase in costs.	• The Credit Guarantee Scheme has a long history. Several credit guarantee corporations from the private and official sectors, such as the Indonesian Entrepreneurs Credit Guarantee (PKPI), Indonesia Credit Insurance (ASKRINDO), and Public Company Jamkrindo and Jamkrida, are involved. • The Government provides 70–80 percent of the total credit associated with the credit guarantee programs.	• The Government directed banks to allocate 20 percent of credit to MSMEs, a target the banking industry was required to reach by 2019.	• Loans are distributed by the Revolving Fund Management Institution (LPDB), directly from the state budget. However, the size of direct government loans is quite small compared to the amounts guaranteed by the Government.	• MSMEs with gross revenues lower than IDR 4.8 million are subject to a corporate income tax rate of 0.5 percent, which is lower than the regular corporate income tax of 25 percent.	• Securities Crowdfunding (SCF) is an alternative financing scheme for MSMEs. Investment on the platform has increased in recent times. The Indonesian Crowdfunding Association sets target for the disbursement of funds to the MSMEs. • A new listing regulation (Listing Rule No. I-V) to accommodate SME listings through a new board on Indonesia's stock exchange (IDX), called "Acceleration Board" was introduced in 2019.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
							• P2P lending is regulated by the Indonesian Finance Authority OJK through Regulation No. 77/POJK.01/2016 concerning Information Technology-Based Lending Services (LPMUBTI) (OJK, 2016[122]). • In 2018, Bank Indonesia issued a warning against virtual currencies, such as Bitcoin (Bank Indonesia, 2018[168]) and notified all market participants not to buy, sell, or trade crypto-assets. • In 2018, the Commodity Futures Trading Supervisory Agency (Badan Pengawas Perdagangan Berjangka Komoditi (BAPPEBTI)) issued guidance explaining that it considered cryptocurrencies commodities that may be traded on futures exchanges. • Initial coin offering (ICO) issuances remain unregulated.
	Malaysia		• Credit Guarantee Corporation Malaysia Berhad (CGC) was established in 1972; it provides guarantee cover to assist MSMEs that have inadequate or are without collateral and track record to obtain credit facilities from financial institutions.	• BNM's Fund for SMEs complements bank lending to SMEs by providing financing at reasonable cost through participating financial institutions. Post pandemic, facilities under the Fund were realigned toward incentivising and crowding in private financing for SMEs in identified new growth areas and encouraging	• On April 6, 2020, the Malaysian government issued additional funding worth MYR 10 billion to support the country's MSMEs.	• In Malaysia's 2023 budget, the MSME corporate income tax rate was reduced from 17 percent to 15 percent for the first MYR 150,000 of chargeable income. MSMEs earning between MYR 150,000 and up to MYR 600,000 on the first chargeable income will be taxed at 17 percent, and those earning more	• Malaysia was one of the first countries to regulate P2P lending and provide licenses to platforms for this activity, issued by the Securities Commission Malaysia. • Malaysia was the first ASEAN country to create a framework aimed at facilitating equity crowdfunding, with the objective of allowing

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	**Credit Guarantees**	**Mandated Bank Lending to MSMEs/ Loan Targets for Banks**	**Direct Lending**	**Tax Reductions**	**Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.**
				the transition toward a greener, low-carbon future.		than MYR 600,000 will be taxed at 24 percent.	MSMEs to raise early-stage financing. In August 2014, the Securities Commission Malaysia issued the Public Consultation Paper N° 2:2014 Proposed Regulatory Framework for Equity Crowdfunding. As of May 2019, the Securities Commission Malaysia had registered 10 crowdfunding operators.
	Philippines	• The interest rates offered to MSMEs are equivalent to prevailing market rates. Little guidance is given on preferential treatment for MSMEs.	• The Philippine Guarantee Corporation, or PhilGuarantee, provides support to financial institutions supervised by the Bangko Sentral ng Pilipinas in serving the financing needs of priority economic sectors, including the MSME sector. The support covers both working capital and/or term loans, which observe a pro-rata risk-sharing arrangement. Between 50 percent and 80 percent of principal amounts are guaranteed, at a fee of 1.25 percent per year.	• There is no specific target but the Department of Science and Technology (DOST) does provide soft loans for financing startups and innovative MSMEs.	• Specialized lending programs are in place in the form of loans from government financial institutions that aim to help startup projects and expansion projects, in addition to rehabilitation and relocation projects. Some loans have maturities of up to 20 years.	• R. A. No. 9178 or Barangay Micro Business Enterprises (BMBEs) Act of 2022. Accredited BMBEs who have a total asset value of not more than PHP 3 million are exempted from payment of income tax. This exemption from income tax, however, does not equate to exemption from payment of value-added tax (VAT) and percentage taxes. • R.A. No. 10963 or Tax Reform for Acceleration and Inclusion (TRAIN Law). Self-employed individuals and/or professionals whose gross sales or gross receipts do not exceed PHP 250,000 are exempted from payment of income tax. • Republic Act No. 11534: The Corporate Recovery and Tax Incentives for Enterprises (CREATE) Act signed into law on March 26, 2021, the CREATE Act is the second package of the Comprehensive Tax	• The Philippine Stock Exchange (PSE) launched an SME Board in 2001, which has attracted a limited number of SMEs so far. • The P2P lending market is small but has been picking up in the past few years, gaining popularity among MSMEs and investors. • There are caps on crowdfunding investments from retail investors. • The Enforcement and Investment Protection Department of the Securities and Exchange Commission (SEC) of the Philippines imposed a cease and desist order against four companies issuing ICOs.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
						Reform Program. It was made to provide fiscal relief and incentives to local and international businesses within the Philippines that were negatively impacted by the effects of the COVID-19 pandemic. If an MSME has a net taxable income below PHP 5 million and total assets, excluding land, of below PHP 100 million then it is be entitled to pay corporate income tax (CIT) at a reduced 20 percent rate, instead of the normal 25 percent corporate income tax rate. Additionally, the minimum CIT rate was reduced from 2 percent to 1 percent and Percentage Tax is reduced from 3 percent to 1 percent from July 1, 2020, until June 20, 2023. Businesses can also be granted an income tax holiday from 4 years to 7 years, followed by a special CIT rate of 5 percent for 10 years. Registered enterprises are also entitled to duty exemption on imported raw materials, spare parts, accessories, or capital equipment.	
	Singapore	• During the COVID-19 pandemic, the Enhanced Enterprise Financing Scheme of Enterprise Singapore (ESG) provided MSME working capital loans and introduced a temporary bridging loan program	• EnterpriseSG could cover the unrecovered amount in proportion to the risk-share, should the MSME default on loans issued by participating financial institutions. Loans to SMEs with less than 5 years of history	• During the COVID-19 pandemic, financial Institutions provided working capital loans to eligible firms through the introduction of a Temporary Bridging Loan (TBL) Programme and enhancements of the	• The EFS-WCL is meant to help MSMEs finance their operational cash flow needs.	• A tax exemption scheme for new start-up companies and partial tax exemption scheme for companies are in place, mainly in the form of tax relief to reduce firms' tax bills.	• Singapore is a leading market for P2P lending in ASEAN, benefiting from a mature FinTech ecosystem and a well-developed financing system. P2P lending is regulated.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
		offering lower interest rates. • The Monetary Authority of Singapore (MAS) also provided lower-cost funding to participating financial institutions to support their lending at lower interest rates to MSMEs under the ESG Loan Schemes through the MAS SGD Facility for ESG Loans.	have a risk share of 70 percent and the risk share of the rest is 50 percent.	existing Enterprise Financing Scheme—SME Working Capital Loan (i.e., Enhanced Enterprise Financing Scheme—SME Working Capital Loan (EFS-WCL) or Enhanced Working Capital Loan). The TBL was introduced in Budget 2020 (Unity Budget) for firms in the tourism sector, and later expanded to cover all enterprises under the Resilience Budget in March 2020.			• The vast majority of ASEAN ICO issuance has taken place in Singapore, partly explained by its role as an international financial center, as well as the timely provision of regulatory guidance on token offerings. • In 2017, MAS clarified its regulatory position around the offering of digital tokens in Singapore.
	Thailand	• Soft loan packages with lower interest rates for MSMEs were introduced during the COVID-19 pandemic.	• During the COVID-19 pandemic, state-owned Thai Credit Guarantee Corporation (TCG) launched six new loan guarantee programs for MSMEs that were facing financial pressures from the impact of the pandemic. • The loan guarantee programs incentivized six affiliated banks to provide loans to vulnerable borrowers such as merchants, street vendors, business operators at the grassroots level and freelancers. • The maximum claims for the six banks are capped (depending on the bank) at 35–40 percent, which is higher than the previous threshold of 25–30 percent.	• There is no overall target; individual banks such as Krungsri Bank and Export-Import Bank of Thailand (EXIM) appear to set their own target for MSME loans.	• In 2020, the Government, under the amended ministerial regulations on supplies and procurement mandated that government agencies spend at least 30 percent of their procurement on MSMEs products/services.	• Although most businesses are subject to a 20 percent corporate income tax, the ones that have net taxable profits lower than THB300,000 baht are not required to pay corporate income tax; the next tier of businesses with net taxable profits below THB3,000,000 are required to pay 15 percent corporate income tax rate, which is still lower than that for other firms.	• The Stock Exchange of Thailand announced plans to launch a blockchain-based market, which gathered interest from 600 businesses wishing to participate. • ICO issuance is a regulated activity and issuers are required to obtain approval from the Securities and Exchange Commission.
	Cambodia	• Interest rates for loans extended to MSMEs are similar to those for loans to other enterprises.	• The Government has established a credit guarantee fund of USD 200 million as a risk-	• SME Bank was established in early 2020 with initial capital of USD 100 million to extend	• The Government, through SME Bank, is making available USD 250 million worth of loans	• Qualified investment projects are eligible for tax incentives and import duty exemptions.	• SMEs are allowed to raise capital through Initial Public Offerings

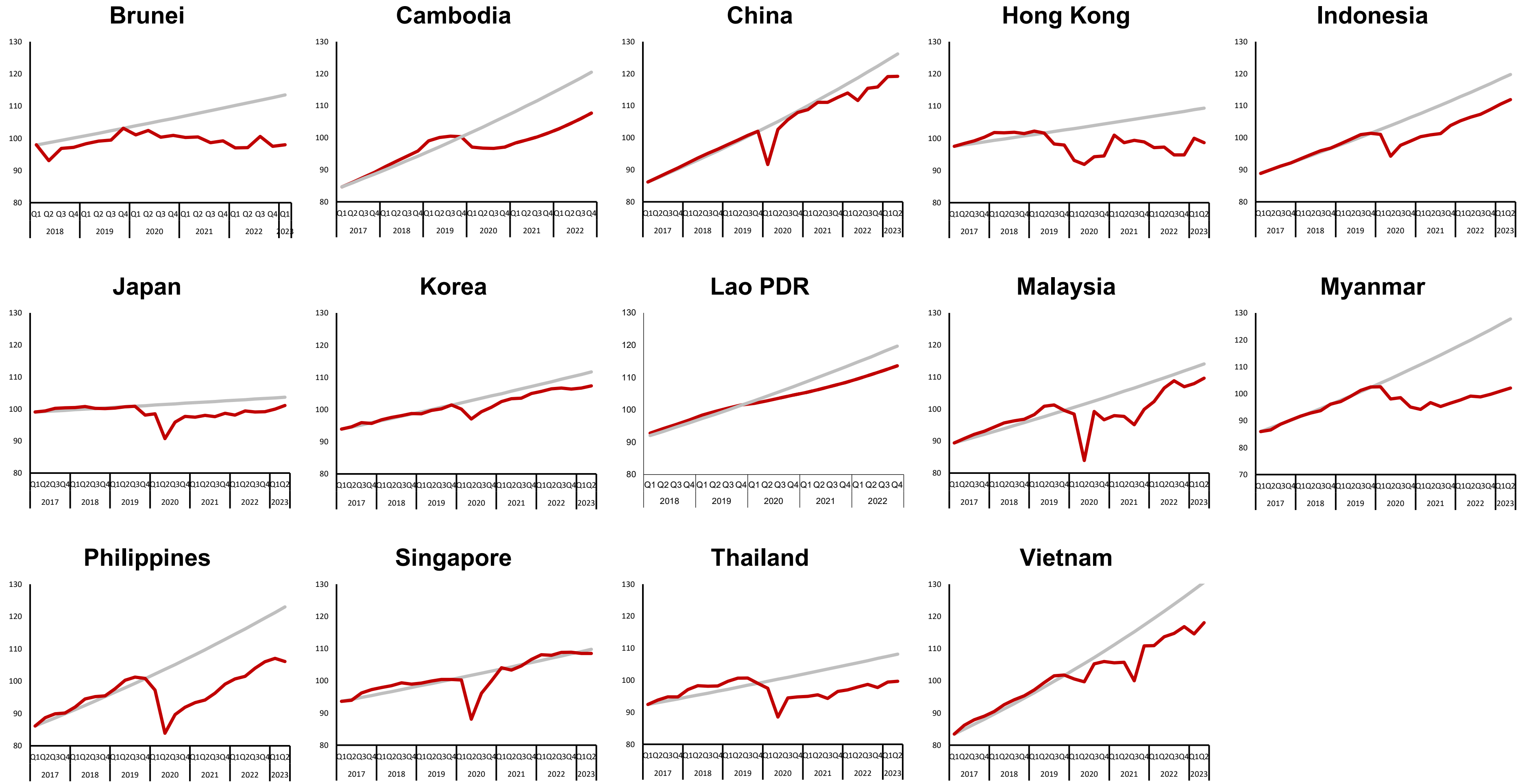
Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
			sharing mechanism with financial institutions, guaranteeing up to 80 percent of individual outstanding loans to overcome MSME financing challenges and bring new opportunities to banks and microfinance institutions. • Credit guarantee schemes have been initiated and supported by development partners, including Agence Française de Développement and United States Agency for International Development.	accessible and affordable financing to MSMEs. The scheme targets MSMEs in priority sectors, such as manufacturing and assembling activities, digital innovation, and the information and communications technology sector, consistent with the country's Industrial Development Policy.	to MSMEs to support them in the wake of the pandemic.		(IPOs) on the stock exchange. • Venture capital (VC) and private equity firms have been proliferating over the past decade to tap market opportunities. However, venture debt is still less popular among MSMEs because of limited information about the financial channel and lack of awareness about how to deal with them. • ICO issuances have been banned.
	Lao PDR	• Lao Development Bank provides loans to MSMEs at a capped annual interest rate of 9–10 percent (depending on the loan tenor) through the SME Promotion and Development Fund.	• The Bank of Lao PDR plans to establish a public credit guarantee scheme (PCGS) for MSMEs and has requested World Bank support for Technical Assistance to strength its capacity to supervise and monitor the PCGS.	• In 2014, the World Bank approved the SME Access to Finance Project, which provides medium and long-term funding resources to businesses across the country.	• Lao Development Bank, a specialised government-owned development bank, was formed through merger in 2003 to address the missing market and subsequently transformed in 2008 to focus on MSME lending.	• A preferential tax regime is in place to reduce the administrative burden on MSMEs of filing taxes: Enterprises with annual revenues of less than LAK 12 million, which are exempt from value-added tax payments, are not taxed on profits but must instead pay lump-sum progressive tax rates of between 3 percent and 7 percent, depending on their revenues and activities. • Small enterprises amongst the MSMEs cite tax rates as a key constraint to doing business. • During the COVID-19 pandemic, MSMEs were exempted from paying income tax for three months from April to June 2020.	• There is currently no information on policies around P2P lending or data about such activity. • ICO issuances and Bitcoin have been banned.

Region	Economy	Bank-Related			Government-Related		Other
		Interest Rate Subsidies	Credit Guarantees	Mandated Bank Lending to MSMEs/ Loan Targets for Banks	Direct Lending	Tax Reductions	Crowdfunding, Peer-to-Peer (P2P) Lending, NBFIs, and so on.
	Myanmar	• The Japan International Cooperation Agency offers/offered low interest rates to MSMEs.	• A credit guarantee scheme for MSMEs and high-growth sectors will be established, conditional on maintaining employment (currently in design stage with Asian Development Bank assistance),	• While there is no government target, most banks reportedly try to grant as much in loans to MSMEs as possible.	• Most government and private financial institution loans to MSMEs have been provided by the Myanmar Economic Bank (MEB), Myanmar Investment & Commercial Bank (MICB) and Myanmar Industrial Development Bank since 2004; MEB and MICB are state-owned banks.	• MSMEs not covered by the Income Tax Law are not required to pay profit tax.	• Investor warnings against cryptocurrencies and crypto-assets have been issued; ICOs are not banned.
	Vietnam	• Annual interest rate subsidies of 2 percent were offered in 2022, under Decree No. 31/2022/ND-CP. Borrowers would need to meet loan requirements prescribed by applicable laws and apply for loans from credit institutions. The loans should be in VND and the borrowers should not have received interest rate subsidies elsewhere.	• A credit guarantee scheme managed by local governments was established in 2001 and combined with a scheme run by the Viet Nam Development Bank.	• Preferential credit programs as directed by the Government and the Prime Minister, including those targeting MSMEs, have been implemented.	• Lending either directly or indirectly through commercial banks is made through the SMEs Development Fund, which was established in 2017. • Lower interest rates of 4.16 percent for short-term loans and 6 percent for medium- to long-term tenors are offered. • The amount of loans should not exceed 80 percent of the value of the project.	• Lower income tax has been granted to MSMEs since January 1, 2018.	• VC is a common mode of fund raising, with financing to startups and small businesses in exchange for equity. • Crowdfunding remains uncommon the number of campaigns per user has fallen, but the average funding per campaign increased in the past 5 years. • Debt financing is also a popular fundraising option especially for established businesses with a stable cash flow. • ICO issuances have been banned.

Sources: Acclime; AMRO; ARC Group; ASEAN; Asian Development Bank; Asia-Pacific Economic Cooperation; Asiamoney; Bank of Agyudhya Public Company Limited; Bank Negara Malaysia; BCR Publishing; Brunei Darussalam BIMP-EAGA Business Council; Brunei Revenue Department; BusinessKorea; China Briefing; China Banking News; China National Financing Guarantee Fund; Economic and Social Commission for Asia and the Pacific; Economic Research Institute for ASEAN and East Asia; Enterprise Singapore; EU-Japan Centre; First Circle; GovHK; Indonesia Otoritas Jasa Keuangan; International Labor Organization; JFC Japan; Hong Kong Monetary Authority; Hong Kong Mortgage Corporation; Hong Kong SME Link; HRM Asia; Inland Revenue Authority of Singapore; International Monetary Fund; Invest Korea Summit 2023; Korea Credit Guarantee Fund; Korea Financial Services Commission; Korea SMEs and Startups Agency; KPMG; Ministry of Trade and Industry Singapore; Monetary Authority of Singapore; OECD; Philippine Guarantee Corporation; Philippine National Bank; PricewaterhouseCoopers; ScalingYourCompany; State Bank of Vietnam; The Government of the Hong Kong Special Administrative Region of the People's Republic of China; The Jakarta Post; World Bank; Thu Vien Phap Luat; Vietnam Agency for Enterprise Development; and AMRO staff compilations.

Appendix IV. ASEAN+3 Output Gaps

Appendix Figure 1. ASEAN+3: Actual Real GDP Levels against Pre-Pandemic Trends, Q1 2017 – Q2 2023



Sources: National authorities via Haver Analytics; and AMRO staff estimates.
Note: Quarterly series for Cambodia and Lao PDR are interpolated from their respective annual series.

10 Shenton Way
#15-08, MAS Building
Singapore 079117
T: +65 6323 9844
F: +65 6223 8187
www.amro-asia.org

Appendix V. Template of MSME Survey

Survey of Micro-, Small- and Medium-Sized Enterprises (MSMEs) Key Economic Challenges and Policy Support Measures

Q1. There are several key risks to the business operating environment generally. Do you agree that the following risks will pose challenges to MSMEs over the next two years?
(1 = strongly agree, 5 = strongly disagree)

Risks to the Outlook	Assessment (Rate 1 to 5)
Sharp slowdown in global economic demand	
Supply-chain disruption and higher inflation arising from US-China trade tensions or the Ukraine geopolitical crisis	
Higher borrowing costs	
Climate change-related risks, including both physical (e.g., natural disasters, volatile weather conditions) and transition risks (e.g., regulations and tariffs)	
COVID-19 resurgence and new containment measures in the economy	
Financial frauds and scams	

Note: The same response (i.e., rating) may be repeated for the different categories above.

Q2. A number of policy support measures were rolled out during the COVID-19 pandemic to support businesses. Do you agree that they were effective/useful measures in helping to tide MSMEs over the difficult period?
(1 = strongly agree, 5 = strongly disagree)

COVID-19 Pandemic Measures	Assessment (Rate 1 to 5)
Regulatory forbearance (e.g., lengthen the forbearance period, deferment of loan repayments, fee waivers)	
Fiscal measures (e.g., tax concessions, cash handouts, salary subsidies, rental exemptions for state-owned properties)	
Loan assistance (e.g., loans and guarantees for borrowers)	
Monetary measures (e.g., interest rate reductions/caps, government purchase of corporate bonds)	
Broader measures for economic reopening (e.g., shortening of quarantine periods, resumption of activity/movement)	

Note: The same response (i.e., rating) may be repeated for the different categories above.

Q3. There are several financing sources that MSMEs may be able to tap to augment their cash flows or for credit. Do you agree that the following are important sources of funding for MSMEs?
(1 = strongly agree, 5 = strongly disagree)

Funding Sources		Assessment (Rate 1 to 5)
Bank-related	Interest rate subsidies	
	Credit guarantees	
	Mandated bank lending to MSMEs/ loan targets for banks	
Government-related	Direct lending	
	Tax reductions	
Other	Crowdfunding, peer-to-peer lending, NBFI, etc.	

Note: The same response (i.e., rating) may be repeated for the different categories above.

Other comments

References

Abraham, Facundo, Juan J. Cortina, and Sergio L. Schmulker. 2021. "The Rise of Domestic Capital Markets for Corporate Financing: Lessons from East Asia." *Journal of Banking and Finance* 122: 105987. https://www.sciencedirect.com/science/article/abs/pii/S0378426620302491.

ASEAN+3 Macroeconomic Research Office (AMRO). 2021a. "Korea: 2021 AMRO Annual Consultation Report." Singapore, August 23. https://www.amro-asia.org/amros-2021-annual-consultation-report-on-korea/.

———. 2021b. "Singapore: 2021 AMRO Annual Consultation Report." Singapore, November 8. https://www.amro-asia.org/amros-2021-annual-consultation-report-on-singapore/.

———. 2021c. "Thailand: 2021 AMRO Annual Consultation Report." Singapore, December 3. https://www.amro-asia.org/amros-2021-annual-consultation-report-on-thailand/.

———. 2022a. "Indonesia: 2021 AMRO Annual Consultation Report." Singapore, April 21. https://www.amro-asia.org/amros-2021-annual-consultation-report-on-indonesia/.

———. 2022b. "Japan: 2021 AMRO Annual Consultation Report." Singapore, March 9. https://www.amro-asia.org/amros-2021-annual-consultation-report-on-japan/.

———. 2022c. *ASEAN+3 Regional Economic Outlook 2022: ASEAN+3 Growth Strategy in the Pandemic's Wake*. Singapore, April 12. https://amro-asia.org/asean3-regional-economic-outlook-areo-2022/.

———. 2023a. "Quarterly Update of the ASEAN+3 Regional Economic Outlook—October 2023." Singapore, October 4. https://amro-asia.org/quarterly-update-of-the-asean3-regional-economic-outlook-areo-october-2023/.

———. 2023b. *ASEAN+3 Regional Economic Outlook 2023: On the Road to Net Zero*. Singapore, April 6. https://amro-asia.org/asean3-regional-economic-outlook-areo-2023/.

———. 2023c. "Opportunities and Challenges of Financial Digitalization: A New Perspective on ASEAN+3 Regional Financial Cooperation." AMRO Policy Position Paper 23–01, Singapore, May. https://amro-asia.org/opportunities-and-challenges-of-financial-digitalization-a-new-perspective-on-asean3-regional-financial-cooperation/.

———. 2024. "ASEAN+3 Corporate and MSME Debt-at-Risk in a High Interest Rate Environment: Empirical Analysis." AMRO Background Paper 23–01, Singapore.

Asian Development Bank. 2020a. *Asia Small and Medium-Sized Enterprise Monitor 2020: Volume 1—Country and Regional Reviews*. Manila, October. https://www.adb.org/publications/asia-sme-monitor-2020-country-regional-reviews.

———. 2020b. *Asia Small and Medium-Sized Enterprise Monitor 2020: Volume II—COVID-19 Impact on Micro, Small and Medium-Sized Enterprises in Developing Asia*. Manila, November. https://www.adb.org/publications/asia-sme-monitor-2020-covid-19-impact-msmes.

———. 2021. *Redefining Strategic Routes to Financial Resilience in ASEAN+3*. Manila, December. https://aric.adb.org/resilientASEAN3.

Asia-Pacific Economic Cooperation (APEC). 2020. “Overview of the SME Sector in the APEC Region: Key Issues on Market Access and Internationalization.” APEC Policy Support Unit, Singapore, April. https://www.apec.org/publications/2020/04/overview-of-the-sme-sector-in-the-apec-region.

Aung, Khin. 2019. "SMEs are Integral to the Economic Growth of Myanmar.” Myanmar Digital News, Yangon, April 4. https://www.mdn.gov.mm/en/smes-are-integral-economic-growth-myanmar.

Banerjee, Ryan Niladri, Joseph Noss, and Jose Maria Vidal Pastor. 2021. “Liquidity to Solvency: Transition Cancelled or Postponed.” BIS Bulletin No. 40, Bank for International Settlements, Basel, March 25. https://www.bis.org/publ/bisbull40.htm.

Brunei Darussalam Ministry of Finance and Economy. 2023. “Over 97pc MSMEs Recorded in 2019.” Bandar Seri Begawan, accessed October 31, 2023. https://www.mofe.gov.bn/Lists/News/NewDispForm.aspx?ID=179.

Charltons. 2023. “SMEs in Myanmar.” Yangon, access on October 31, 2023. https://www.charltonsmyanmar.com/myanmar-economy/smes-in-myanmar/.

Confederation of British Industry (CBI). 2018. “Improving Prompt Payment by Government Suppliers on Public Sector Contracts.” London, June 1. https://www.cbi.org.uk/articles/improving-prompt-payment-by-government-suppliers-on-public-sector-contracts/.

Dang, Le Ngoc, and Anh Tu Chuc. 2019. “Challenges in Implementing the Credit Guarantee Scheme for Small and Medium-Sized Enterprises: The Case of Viet Nam.” ADBI Working Paper Series No. 941, Manila, April. https://www.adb.org/publications/challenges-implementing-credit-guarantee-scheme-sme-vietnam.

Dembiermont, Christian, Mathias Drehmann, and Siriporn Muksakunratana. 2013. “How Much Does the Private Sector Really Borrow—A New Database for Total Credit to the Private Non-Financial Sector.” BIS Quarterly Review, Bank for International Settlements, Basel, March 18. https://www.bis.org/publ/qtrpdf/r_qt1303h.htm.

Goh, Matthew, and Yew Tong Tang. 2022. "Enterprise Landscape of Singapore's Services Sector." Department of Statistics, Singapore. https://www.singstat.gov.sg/find-data/search-by-theme/industry/enterprises/publications-and-methodology.

Gourinchas, Pierre-Olivier, Şebnem Kalemli-Özcan, Veronika Penciakova, and Nick Sander. 2021. "COVID-19 and SMEs: A 2021 'Time Bomb'?" NBER Working Paper 28418, National Bureau of Economic Research, Cambridge, Massachusetts. https://www.nber.org/papers/w28418.

Herodotou, Constantinos. 2023. "Constantinos Herodotou: The Global Debt Trap—The Implications for Growth and Possible Solutions to Tackle It." Central Bankers' Speeches, Basel, January 19. https://www.bis.org/review/r230302d.htm.

Ho, Yin Fai, and Li Lian Ong. 2022. "The COVID-19 Pandemic and ASEAN+3 Corporate Debt-at-Risk." AMRO Working Paper 22-04, ASEAN+3 Macroeconomic Research Office, Singapore. https://www.amro-asia.org/the-covid-19-pandemic-and-asean3-corporate-debt-at-risk/.

Hong Kong SAR Support and Consultation Centre for SMEs. 2023. "Small and Medium Enterprises." Trade and Industry Department, accessed on October 31, 2023. https://www.success.tid.gov.hk/english/aboutus/sme/service_detail_6863.html.

International Monetary Fund (IMF). 1998. "The Asian Crisis: Causes and Cures." *Finance & Development* 35 (2), Washington, DC, June. https://www.imf.org/external/pubs/ft/fandd/1998/06/imfstaff.htm.

Inland Revenue Authority of Singapore. 2023. "Corporate Income Tax Rate, Rebates & Tax Exemption Schemes." Singapore, accessed on October 19, 2023. https://www.iras.gov.sg/taxes/corporate-income-tax/basics-of-corporate-income-tax/corporate-income-tax-rate-rebates-and-tax-exemption-schemes.

Japan Finance Corporation. 2023. "Small and Medium Enterprise Unit: Feature of Operations." Tokyo, accessed on October 19, 2023. https://www.jfc.go.jp/n/english/sme/features.html.

Juselius, Mikael, and Nikola Tarashev. 2021. "Could Corporate Credit Losses Turn Out Higher Than Expected?" BIS Bulletin No 46, Bank for International Settlements, Basel, August 18. https://www.bis.org/publ/bisbull46.htm.

Kapfer, Chris. 2022. "Alternative SME Financing in Asia Pacific to Grow Two or More Times by 2022." *The Asian Banker*, April 18. https://www.theasianbanker.com/updates-and-articles/will-alternative-financing-for-smes-survive-in-`asia-pacific.

Korea Credit Guarantee Fund. 2023. "Credit Guarantee." Seoul, accessed on October 19, 2023. https://www.kodit.co.kr/koditEng/cm/cntnts/cntntsView.do?mi=2770&cntntsId=11562.

Lao National Chamber of Commerce and Industry. 2023. “SMEs in Laos.” Vientiane, accessed on October 31, 2023. https://lncci.la/smes/.

Layhy Chhea. 2019. “The Current Situation of SME in Cambodia—MSME Financing.” Cambodia Ministry of Industry and Handicraft, Phnom Penh.

MBO Partners. 2023. “5 Ways to Diversify Your Small Business.” Ashburn, July 28. https://www.mbopartners.com/blog/how-grow-small-business/5-ways-to-diversify-your-small-business/#:~:text=Key%20Points&text=Expanding%20your%20services%20offerings%20and,to%20prepare%20for%20uncertain%20times.

Medina, Ayman Falak. 2023. “Malaysia Budget 2023: Changes to Corporate and Individual Tax Regimes.” ASEANBriefing, March 14. https://www.aseanbriefing.com/news/malaysia-budget-2023-changes-to-the-corporate-and-individual-tax-regimes/#:~:text=Reduction%20in%20corporate%20income%20tax,US%2433%2C400)%20of%20chargeable%20income.

National Bureau of Statistics of China. 2022. *China Statistical Yearbook 2022*. Beijing. https://www.stats.gov.cn/sj/ndsj/2022/indexeh.htm.

Organization for Economic Co-operation and Development (OECD). 2011. “New Sources of Growth: Knowledge-Based Capital.” OECD Publishing, Paris, October. https://www.oecd.org/sti/inno/newsourcesofgrowthknowledge-basedcapital.htm.

———. 2017. “Improving the Performance of Japan’s SME Sector.” Japan Policy Brief, OECD Better Policies Series, OECD Publishing, Paris, April. https://www.oecd.org/japan/publicationsdocuments/policybriefs/#:~:text=Japan%20Policy%20Brief%3A%20Greater%20Gender,for%20second%20earners%20in%20households.

———. 2018. “SME Policy Index: ASEAN 2018: Boosting Competitiveness and Inclusive Growth.” SME Policy Index, OECD Publishing, Paris. https://www.oecd-ilibrary.org/development/sme-policy-index-asean-2018_9789264305328-en?itemId=/content/component/9789264305328-16-en&_csp_=d4546e491a57024f0bc8f021142db948&itemIGO=oecd&itemContentType=chapter.

———. 2020a. “The Impact of COVID-19 on SME Financing.” OECD SME and Entrepreneurship Papers, OECD Publishing, Paris, November 17. https://www.oecd-ilibrary.org/economics/financing-smes-and-entrepreneurship-an-oecd-scoreboard_ecd81a65-en.

———. 2020b. “Alternative Financing Instruments for ASEAN SMEs.” OECD Publishing, Paris, September 23. https://www.oecd.org/finance/alternative-financing-instruments-for-ASEAN-SMEs.htm.

———. 2020c. “Financing SMEs and Entrepreneurs 2020: An OECD Scoreboard.” OECD Publishing, Paris. https://www.oecd-ilibrary.org/sites/5989eb3a-en/index.html?itemId=/content/component/5989eb3a-en.

———. 2022a. “Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard." OECD Publishing, Paris. https://doi.org/10.1787/23065265.

———. 2022b. “SME and Entrepreneurship Financing.” OECD Publishing, Paris, accessed on October 19, 2023. https://www.oecd.org/cfe/smes/sme-entrepreneurship-financing.htm.

Pazarbasioglu, Ceyla, and Carmen M. Reinhart. 2022. “Shining a Light on Debt.” *Finance and Development*, International Monetary Fund, Washington, DC, March. https://www.imf.org/en/Publications/fandd/issues/2022/03/Shining-a-light-on-debt-Pazarbasioglu-Reinhart.

Ping An. 2020. “China’s SMEs Amid the Pandemic Are Facing Cash Flow Problems” Hong Kong, Shanghai, June 2. https://group.pingan.com/media/news/News-2020/Ping-An-Chinas-SMEs-Amid-the-Pandemic-Are-Facing-Cash-Flow-Problems.html.

Sok, Sotheareach. 2021. “Bridging the Financing Gap for Cambodia’s Small Firms to Support Post-pandemic Recovery.” Singapore, November. https://amro-asia.org/bridging-the-financing-gap-for-cambodias-small-firms-to-support-post-pandemic-recovery/.

Sonobe, Tetsushi, Asami Takeda, Susumu Yoshida, and Hoa Thi Truong. 2021. “The Impacts of the COVID-19 Pandemic on Micro, Small, and Medium Enterprises in Asia and Their Digitalization Responses. ADBI Working Paper No. 1241, Asian Development Bank Institute, Tokyo. https://www.adb.org/publications/impacts-covid-19-pandemic-msme-asia-their-digitalization-responses.

Trading Economics. “List of Countries by Corporate Tax Rate | Asia.” New York, accessed on October 19, 2023. https://tradingeconomics.com/country-list/corporate-tax-rate?continent=asia.

World Bank. 2020a. “Project Appraisal Document (PAD): Lao People’s Democratic Republic.” PAD4010, October 8. https://www.worldbank.org/en/search?q=PAD4010&currentTab=1&x=0&y=0.

———. 2020b. “Unlocking Access to Finance for Small and Medium Enterprises in Lao PDR.” Washington, DC, September 18. https://www.worldbank.org/en/news/feature/2020/09/18/unlocking-access-to-finance-for-small-and-medium-enterprises-in-lao-pdr.

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ASEAN +3 MACROECONOMIC RESEARCH OFFICE

Address: 10 Shenton Way, #15-08
MAS Building, Singapore 079117
Website: www.amro-asia.org
Tel: +65 6323 9844
Email: enquiry@amro-asia.org
LinkedIn | Twitter | Facebook | YouTube