Annexes: Selected Issues

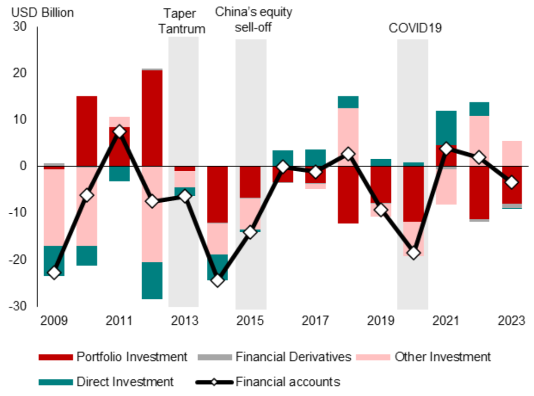
1. Taking the Pulse of Malaysia's Portfolio Investments[88]

Over the last decade, Malaysia has experienced net portfolio investment outflows amounting to USD8.5 billion or 1.9 percent of GDP on average in most years. The outflows not only carry implications for exchange rate movements, but also reflect underlying imbalances that might need to be addressed. This year, the trajectory of portfolio investments has returned to the spotlight, with interest rates in the United States remaining higher than in Malaysia and future U.S. interest rate path still uncertain. This selected issue takes a closer look at the drivers and outlook of Malaysia's portfolio investment trends. The findings suggest that the outflows have been dominated by resident investors, mainly through GLICs. Meanwhile, non-resident flows are more sensitive to relative returns. Successful structural reforms will support well-balanced flows going forward.

1. **Resident investors are the main drivers of net portfolio investment outflows.** In most periods, portfolio investment registered net outflows (Figure A1.1). Foreign portfolio investments by Malaysian residents have been rising persistently, surpassing USD110 billion on a cumulative basis between 2009 and 2023 (Figure A1.2). Meanwhile, cumulative non-resident portfolio investments over the same period have registered net inflows of USD80 billion – insufficient to offset the resident outflows.

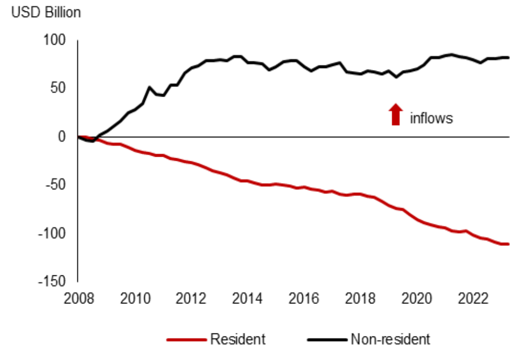
2. **However, the growth in residents' foreign investment is not unique to Malaysia.** ASEAN peers such as Indonesia, the Philippines and Thailand have experienced a similar trend, albeit to a lesser extent. The same is true of many emerging economies outside ASEAN.[89] The growth in residents' foreign investment is in part a natural result of persistent current account surplus, rising per capita income, and deepening financial sector development in the country. The growth in assets of pension funds and sovereign wealth funds also contributes to the trend (IMF, 2016). Malaysia is relatively advanced on these fronts compared with ASEAN peers (Figures A1.3, A1.4).

Figure A1.1. Malaysia's Financial Account



Source: BNM; CEIC; AMRO staff calculations.

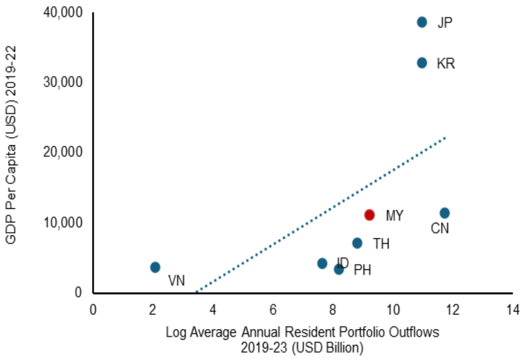
Figure A1.2. Malaysia Cumulative Portfolio Investment



Source: BNM; CEIC; AMRO staff calculations.

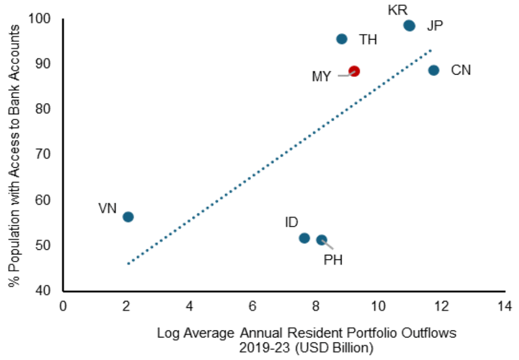
[88] Prepared by Pim-orn Wacharaprapapong.
[89] Between 2019–2023, resident portfolio investment outflows were observed in Russia, Mexico, South Africa, Turkey, Brazil, Israel, and India, among others.

Figure A1.3. Resident Portfolio Flows and Per Capita Income



Source: CEIC; Haver Analytics; IMF; World Bank; AMRO staff calculations.
Note: CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; TH = Thailand; and VN = Vietnam.

Figure A1.4. Resident Portfolio Flows and % of Population with Access to Bank Accounts

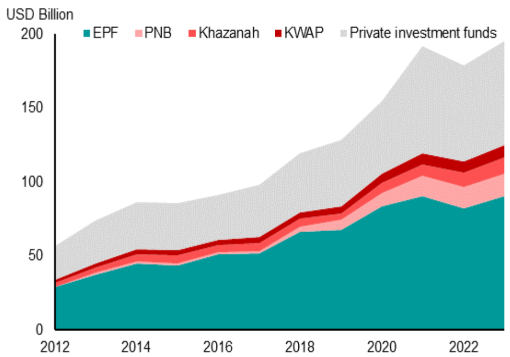


Source: CEIC; Haver Analytics; IMF; World Bank; AMRO staff calculations.
Note: Vertical axis is the share of population aged >15 years old with accounts at financial institutions or mobile money service providers. CN = China; ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; TH = Thailand; and VN = Vietnam.

Residents' portfolio flows: trends and determinants

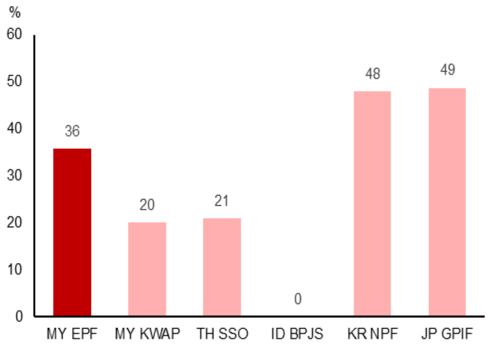
3. **Government-linked pension and investment funds were the main vehicles for residents' outward investment.** Around two-thirds of residents' foreign portfolio investment assets are invested through government-linked investment companies (GLICs), notably the Employees Provident Fund (EPF), Permodalan Nasional Berhad (PNB)[90], and Khazanah Nasional (Figure A1.5). These funds' foreign investments have been growing steadily over the past decade in line with their long-term diversification strategy to ensure resilient investment returns amid uncertain market conditions. The EPF, for example, has been diversifying its investments to foreign assets since 2006, given its large investment size in relation to the domestic market. In 2022, foreign investment totaled 36 percent of its total portfolio (EPF, 2022).[91] Likewise, PNB doubled its foreign exposure from 9 percent to 19 percent between 2019 and 2022 (PNB, 2022). Under prudent risk management frameworks in line with their respective investment objectives, well-diversified GLIC funds contribute to securing retirement savings for the Malaysian population.

Figure A1.5. Foreign Asset Holdings by Investment Funds



Source: BNM; CEIC; EPF; IMF; KWAP; PNB; SC; AMRO staff calculations

Figure A1.6. Share of Foreign Investment by Public Pension Funds



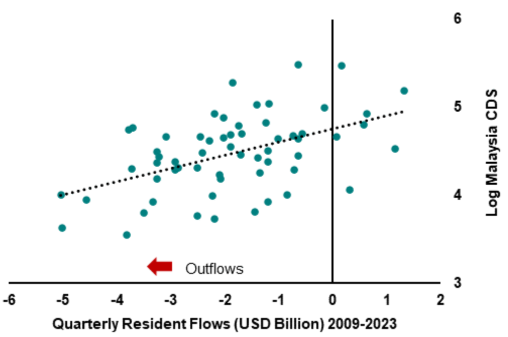
Source: Public pension funds websites; AMRO staff calculations.
Note: Data as of 2022. ID = Indonesia; JP = Japan; KR = Korea; MY = Malaysia; TH = Thailand.

[90] PNB is set up by the government as a fund management company with a mandate to enhance the economic wealth of the Bumiputera community and all Malaysians.
[91] In 2022, Return on Investment (ROI) of foreign assets was 8.7%, compared to 4.8% for domestic assets.

4. The share of foreign investment by Malaysia's pension funds does not stand out compared with developed markets, though it is higher than some ASEAN peers. The EPF's share of foreign investment stood at 36 percent in 2022, while KWAP's was 20 percent in 2021. They are higher compared with Thailand's Social Security Fund (SSO) or Indonesia's BPJS (Figure A1.6).[92] However, public pension funds in Japan and Korea invest close to half of their assets abroad, and pension funds based in OECD countries invest on average 62.4 percent of their total investments abroad (OECD, 2022). The optimal foreign asset allocations should be determined by the individual GLIC's investment objectives and risk appetite. Consequently, the call for more EPF investment in domestic assets must be weighed against the fund's overall risk-return profile.

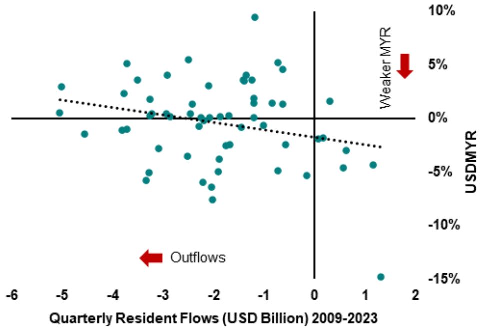
5. Despite persistent outflows, there is evidence that GLICs display some counter-balancing flows during stress periods. Although resident portfolio investments recorded net outflows in most quarters, the outflows tended to moderate or turn into inflows during periods of heightened risks in Malaysia, as indicated by higher credit default swaps (CDS) price and ringgit depreciations. This pattern, as shown in Figures A1.7 and A1.8, reveals that GLICs, possibly taking the opportunities to buy selected oversold investment assets during stress periods, provide some counter-balancing flows in the domestic market. For example, after news of the 1MDB scandal broke in Q3 2015, Malaysia's CDS rose to the highest level since the Global Financial Crisis (GFC) and the ringgit depreciated 11 percent on an NEER basis from the previous quarter. In that quarter, resident portfolio investment reverted to net inflows, cushioning the impacts from non-resident outflows.

Figure A1.7. Resident Flows vs. Malaysia CDS



Source: BNM; CEIC; AMRO staff calculations

Figure A1.8. Resident Flows vs. USDMYR



Source: BNM; CEIC; AMRO staff calculations

6. A regression analysis confirms this pattern. AMRO staff estimated the relationship between resident portfolio investment flows and a set of determinants that represent relative returns and risks of investment in Malaysia compared to foreign investment. We found that larger resident investment inflows are positively correlated with a higher CDS and a weaker ringgit, after controlling for other factors (Table A1.1). In addition, the regression did not find a statistically significant relationship between contemporaneous relative returns and resident flows, an expected result given that resident outflows are driven in large part by the long-term diversification strategy of a few GLICs. Based on this result, resident outflows are not expected to gather speed amid elevated U.S. interest rates.

[92] BPJS does not have a mandate to invest in foreign asset.

The following equation is estimated using OLS, with quarterly data between Q1 2009 and Q4 2023.

$$Y_t = \beta X_t + c$$

Y_t is resident or non-resident portfolio flows (USD billion)

X_t represents a set of independent variables that includes

- GDP difference between Malaysia and U.S.
- Real interest differentials between MY and U.S.
- Return differentials between KLCI index and global stock indices
- Risk sentiments (VIX and Malaysia's CDS)
- Ringgit value (USDMYR and forecast, NEER)

Table A1.1. Regression Results on Resident Portfolio Flows

Explanatory Variables	Specifications				
	1	2	3	4	5
GDP differential MY-US	0.00		0.00	0.00	0.00
GDP forecast MY		0.07			
Real policy rate diff MY-US	0.12	0.13		0.11	0.1
Real 10Y yield diff MY-US			0.12		
KLCI - SPX diff	0.01	0.01	0.01	0.01	0.01
Log(VIX)	**-1.00***	-0.87	**-1.05***	**-2.13***	**-0.96***
Log(Malaysia CDS)	**2.14*****	**2.04****	**2.23*****	**2.31*****	**2.18*****
USDMYR(-1)	**0.71***	**0.76****	0.51		
USDMYR forecast				**0.55***	
Log(NEER(-1))					**-5.22****
Constant	**-11.42****	**-11.8****	**-10.84****	**-13.50***	4.35
Adjusted R^2	**0.25**	**0.27**	**0.25**	**0.26**	**0.25**

Note: To avoid the endogeneity problem, the first lags of USDMYR and NEER, and Bloomberg median forecast for one-quarter-ahead USDMYR values are used to capture the impact of ringgit values on portfolio flows. Standard errors are homoscedastic, and no serial correlations are found.
***, **, and * denote statistical significance at 1 percent, 5 percent, and 10 percent confidence levels, respectively.

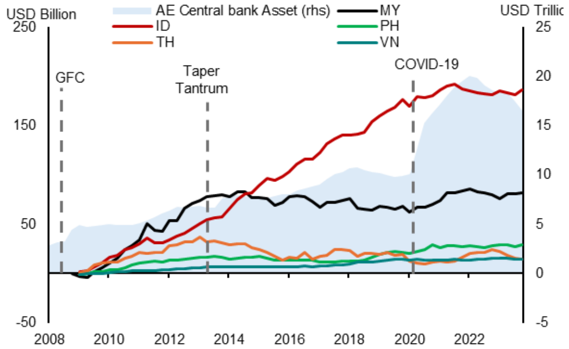
Non-residents' portfolio flows: trends and determinants

7. **On the non-resident side, portfolio inflows rose sharply in the aftermath of the Global Financial Crisis (GFC) but have moderated in recent years.** Non-resident portfolio flows accelerated during 2009-2013 when the GFC prompted advanced economies' central banks to cut policy rates to record lows and resorted to quantitative easing by injecting liquidity into the market through asset purchase programs. As a result, the global markets were flushed with liquidity and a significant part of the liquidity flowed into emerging market economies, including Malaysia, in search of higher returns. Cumulative inflows to Malaysia had totaled USD80 billion by the end of 2013, ahead of ASEAN-5 peers (Figure A1.9). After 2013, however, unconventional monetary policy easing was scaled back, and the global oil price experienced a sharp decline. These developments triggered an unwinding of the carry trade in Malaysia. This period also coincided with the 1MDB scandal and the ensuing political uncertainties in the country that weighed on investors' confidence in Malaysian assets.

8. **Malaysia saw a milder wave of non-resident inflows following the COVID-19 pandemic.** The global pandemic prompted even larger quantitative easing programs from the central banks of both advanced and emerging economies' central banks. Nevertheless, compared with the GFC, a smaller share of global liquidity flowed into emerging market assets during 2020-2023. Data from global investment funds showed that during the pandemic, investors favored ultra-safe assets, such as U.S. money market funds, over emerging market assets, not only due to the high uncertainties of the situation, but also because emerging markets were vulnerable to the disruptions in global trade (Figure

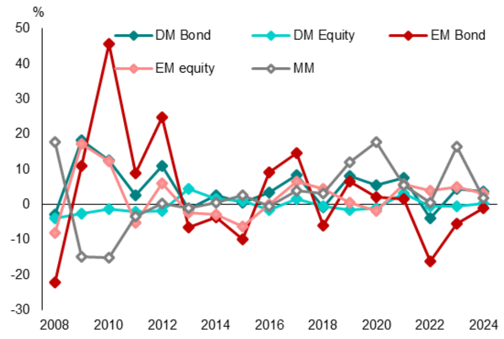
A1.10). The cautious global investment trend amid the pandemic, followed by the forceful global monetary policy tightening to combat inflation from 2022 onwards, contributed to the moderation in non-resident inflows to Malaysia.

Figure A1.9. Cumulative Non-Resident Portfolio Flows



Source: Central banks; CEIC; AMRO staff calculations.

Figure A1.10. Growth in Global Funds Size



Source: EPFR; AMRO staff calculations.

9. **In addition to global investment trends, the regression results suggest that lower relative returns in Malaysia could help explain the subdued non-resident inflows of the post-pandemic years.** Based on a regression analysis similar to that of resident flows, larger non-resident portfolio inflows are associated with higher relative interest in Malaysia, higher KLCI returns, positive global risk appetite, lower Malaysia CDS and a stronger ringgit (Table A1.2). Unlike resident investors, foreign investors appear to be more sensitive to risk and return variables. Moreover, the elevated U.S. interest rates and strong U.S. dollar can weigh on foreign inflows.

Table A1.2. Regression Results on Non-Resident Portfolio Flows

Explanatory Variables	Specifications				
	1	2	3	4	5
GDP differential MY-US	-0.17		-0.22	-0.17	-0.18
GDP forecast Malaysia		-0.08			
Real policy rate diff MY-US	0.98***	0.98***		1.03***	0.92***
Real 10Y yield diff MY-US			0.69**		
KLCI - SPX diff (-1)	0.14***	0.12**	0.13**	0.14***	0.12**
Log(VIX)	-4.52***	-4.40***	-4.56***	-4.56***	-4.50***
Log(Malaysia CDS)	-3.48**	-3.70**	-3.39**	-3.57**	-3.39**
USDMYR (-1)	-1.74	-1.79	-3.24**		
USDMYR forecast					-2.35**
Log(NEER(-1))				12.84	
Constant	36.10***	36.69***	42.36***	-30.00	38.02***
Adjusted R^2	0.38	0.37	0.33	0.38	0.4

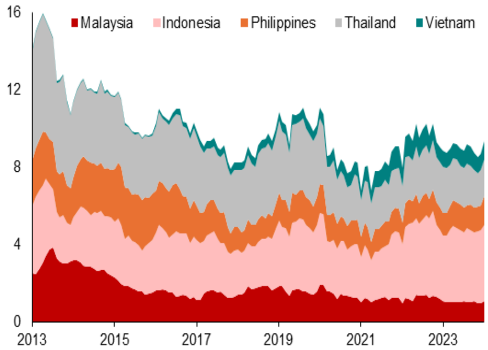
Note: To avoid the potential endogeneity problem, the first lags of USDMYR and NEER, and Bloomberg median forecast for 1-quarter-ahead USDMYR are used to capture the impact of ringgit values on portfolio flows. The same applies for the KLCI-SPX return differentials. Standard errors are homoscedastic, and no serial correlations are found.
***, **, and * denote statistical significance at 1 percent, 5 percent, and 10 percent confidence levels, respectively.

10. **The relatively weak performance of the Malaysian equity market contributed to subdued non-resident inflows.** The domestic equity market has consistently underperformed the bond market in attracting foreign investors. Since 2009, equities have received only 15 percent of cumulative foreign inflows into Malaysia. Moreover, investment allocation data from global investment funds show that among Asia ex-Japan regional equity funds, the allocation to Malaysia has been declining gradually from 3.1 percent at end-2013 to 0.9 percent at end-2023. Meanwhile, the proportions of investment in

Indonesian and Vietnamese equities have been on the rise. The declining attractiveness of Malaysia's equity market reflects its relatively low returns. Annual returns of the KLCI averaged 0.4 percent during 2013-2019 and fell to 0.1 percent during 2020-2023, putting it among the worst performers in the region (Figure A.1.12). The low profitability of listed companies, predominance of defensive or low-growth sectors such as banks and utility companies, and political uncertainties also contributed to the weak performance.

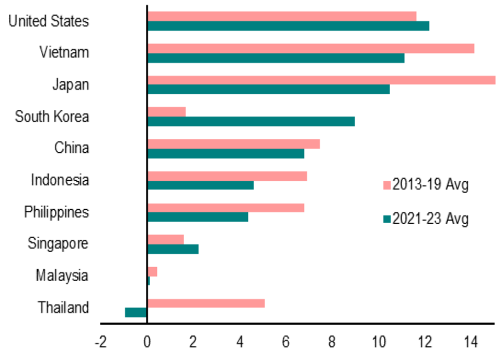
11. **However, Malaysia's equity market is set for a strong recovery if structural reforms give rise to enhanced competitiveness.** The KLCI has been improving since H2 2023, supported by not only the strong global equity performance, but also confidence on the domestic front from the government's commitments to key reforms, including the New Industrial Master Plan (NIMP) 2030 and the National Energy Transition Roadmap (NETR). If these reforms are successfully implemented, they will foster an ecosystem of competitive and innovative firms that revitalize the local capital market. At the same time, the Securities Commission's commitment to enable funding access for companies in the early growth stage and broaden investors' participation are timely initiatives to promote a more vibrant and attractive capital market.

Figure A1.11. Allocations of Asia Ex-Japan Regional Equity Funds to ASEAN-5 Markets



Source: EPFR; AMRO staff calculations.
Note: Shares do not add up to 100 as some countries' are not shown, such as China, India, and Korea.

Figure A1.12. Average Annual Stock Index Returns



Source: Bloomberg; CEIC; AMRO staff calculations.

12. **In conclusion, the deep dive into Malaysia's portfolio investments finds the risks to external stability to be manageable. Moreover, successful structural reforms will support well-balanced flows going forward.** Resident portfolio outflows are expected to continue in an orderly manner with the expansion of GLICs' assets. The growing outward investment is a natural and welcome trend, as it boosts the long-term savings of the Malaysian public. Meanwhile, non-resident inflows may remain subdued in the short run due to higher interest rates abroad. However, in the medium to long term, if structural reforms gain traction and political stability is maintained, Malaysia's investment appeal will gradually improve. Such positive developments will lead to sustainable and well-balanced investment inflows into the country.

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