FINANCIAL STABILITY REPORT

2023

FINANCIAL STABILITY COORDINATION COUNCIL

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Prepared by:

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ABOUT THE FSCC

We are an inter-agency council composed of the Bangko Sentral ng Pilipinas (BSP), the Department of Finance (DOF), the Insurance Commission (IC), the Philippine Deposit Insurance Corporation (PDIC), and the Securities and Exchange Commission (SEC). Our Executive Committee is made up of the heads of the five member agencies plus a senior official from each of our agencies. We regularly meet to assess possible systemic risks and to decide appropriate macroprudential policy interventions.

The Financial Stability Coordination Council (FSCC) was first convened on 4 October 2011 at the initiative of the BSP Governor. Though voluntary in structure, we provided structure through the signing of a Memorandum of Agreement on 29 January 2014. Upon the initiative of the BSP Governor and the Secretary of Finance, Executive Order (EO) No. 144 was signed by then President Rodrigo R. Duterte on July 6, 2021, institutionalizing the existence of the FSCC as well as outlining the powers and responsibilities of the Council. EO No. 144 provides the FSCC with a legal personality to set guidelines and regulations in line with the country's Financial Stability Agenda.

SITUATING EACH FSCC MEMBER AGENCY IN THE FINANCIAL STABILITY AGENDA

- **BSP** – The revised charter of the BSP (Republic Act no. 11211) specifically ascribes financial stability as one of its four mandates. Its focus on contagion-driven systemic risks naturally complements its other mandates over monetary policy, banking supervision, and payments system oversight. Since inception, the technical work of the FSCC has been provided by a unit of the BSP, now institutionalized under EO no. 144.

- **DOF** – An integral role is played by the fiscal authority in mitigating systemic risks. The Finance Secretary has a direct hand in leading government financial institutions (GFIs), and the conduct of the government securities market. The DOF's tax-related policies have wide-ranging influence, impacting the country's economic growth as well as transactions in the financial market.

- **PDIC** – As an attached agency to the BSP under its revised charter, the PDIC provides a critical safety net for depositors. However, the design of this safety net has been shown to affect risk-taking behaviors by the banks and, thus, has systemic implications. Calibration and coverage of deposit insurance are critical considerations for both normal and stressed market conditions.

- **SEC** – In supervising the capital market and the corporate sector, the SEC is essential in the pursuit of a stable financial system and sustainable economic activity, respectively. The risk choices in the non-bank financial sector as well as those made by the non-financial corporations (NFCs) are drivers of growth but can just as easily be potential channels of amplifying risks.

- **IC** – Seen from the vantage of personal coverage, insurance has a distinctly micro perspective. The contingent claims market has broadened, however, creating important interlinkages with other segments of the financial market. Bridging longer-term liabilities with shorter-term assets raise liquidity, valuation, and investment issues, all of which are central in mitigating systemic risks.

Taken collectively, the FSCC positions the financial system as an enabler of economic growth and stakeholder well-being. It does this by pro-actively mitigating evolving systemic risks, while instituting needed macroprudential policies that build the system's resilience against such systemic risks.

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LIST OF ACRONYMS, ABBREVIATIONS and SYMBOLS

AEs	-	Advanced Economies
AFS	-	Available-For-Sale
AI	-	Artificial Intelligence
BCPs	-	Business Continuity Plans
BIS	-	Bank for International Settlements
BPS	-	Basis points
BSP	-	Bangko Sentral ng Pilipinas
CCyB	-	Countercyclical Buffer
CET1	-	Common Equity Tier 1
CME	-	Chicago Mercantile Exchange
COVID-19	-	Coronavirus disease
CPIS	-	Consolidated Portfolio Investment Survey
CRE	-	Commercial Real Estate
CS	-	Credit Suisse
DEBT	-	Debt-to-Earnings-of-Borrower's Test
DOF	-	Department of Finance
DTI	-	Debt-to-income
EBIT	-	Earnings Before Interest and Taxes
EMDEs	-	Emerging Markets and Developing Economies
EO	-	Executive Order
EUR	-	Euro
FCY	-	Foreign Currency
Fed	-	Federal Reserve System
FOF	-	Flow of Funds
FOO	-	Follow-On Offerings
FOMC	-	Federal Open Market Committee
FRB	-	First Republic Bank
FSCC	-	Financial Stability Coordination Council
FSR	-	Financial Stability Report
GDP	-	Gross Domestic Product
GFC	-	Global Financial Crisis
GFI	-	Government Financial Institution
GS	-	Government Securities
G-SIB	-	Global Systemically Important Bank
HFT	-	Held-For-Trading
HTM	-	Hold-to-Maturity
IC	-	Insurance Commission
ICE BofA	-	Intercontinental Exchange Bank of America Corporation
ICR	-	Interest Coverage Ratio
ICR*	-	Computed Interest Coverage Ratio
IE	-	Interest Expense
IMF	-	International Monetary Fund
IPO	-	Initial Public Offering
LFS	-	Labor Force Survey
LSEG	-	London Stock Exchange Group
LSFs	-	Liquidity-Seeking Firms

MAV	-	Moving Average
MoM	-	Month-on-Month
MTM	-	Mark-to-Market
NCR	-	National Capital Region
NFCs	-	Non-financial Corporations
NG	-	National Government
NPL	-	Non-performing Loan
OPEC	-	Organization of the Petroleum Exporting Countries
OSRM	-	Office of Systemic Risk Management
PBS	-	Philippine Banking System
PDIC	-	Philippine Deposit Insurance Corporation
PH	-	Philippines
PHP	-	Philippine Peso
PMI	-	Purchasing Managers Index
PSA	-	Philippine Statistics Authority
PSE	-	Philippine Stock Exchange
PSEi	-	Philippine Stock Exchange Index
Q1	-	First Quarter
Q2	-	Second Quarter
Q3	-	Third Quarter
Q4	-	Fourth Quarter
RE	-	Real Estate
RRE	-	Residential Real Estate
RORO	-	Risk-On Risk-Off
S&P	-	Standard & Poor's
SB	-	Signature Bank
SBL	-	Single Borrower's Limit
SEC	-	Securities and Exchange Commission
SED	-	Signal-Expectation Divergence
SIFMA	-	Securities Industry and Financial Markets Association
SRCM	-	Systemic Risk Crisis Management
SVB	-	Silicon Valley Bank
SWS	-	Social Weather Stations
UBS	-	Union Bank of Switzerland
UK	-	United Kingdom
US	-	United States
USD	-	United States Dollar
WTI	-	West Texas Intermediate
YoY	-	Year-on-Year
YTD	-	Year-to-Date

MESSAGE FROM THE FSCC CHAIRMAN AND BSP GOVERNOR

MESSAGE FROM THE FSCC CHAIRMAN and BSP GOVERNOR

In the face of high market interest rates, the global financial markets turned optimistic in 2023. In the United States (US), capital markets shrugged off the collapse of Silicon Valley Bank and Credit Suisse. Although other parts of the world experienced their own disruptions, by and large, the global economy finished 2023 in a stronger footing than when started.

For the Philippines, we too had our share of challenges. The inflation rate spiked in January, and the BSP took to the policy rate to mitigate the rise in inflation. I think that we have reasons to cheer: growth is well above the global average, inflation is trending downwards, employment is strong, and corporate balance sheets are getting healthier.

What is arguably driving the positive outlook in the market is the fact that the recovery from the pandemic turned out to be much stronger than expected, with little evidence of scarring. To borrow from investment terminology, we believe that we are squarely in the Risk-On part of the financial cycle. There is momentum, and that is something that should be nurtured and its opportunities maximized. And yet, as the macroprudential authority, we must strike a careful balance between fueling the momentum further and taking a cautious stance against the build up of excesses.

In this edition of the Financial Stability Report (FSR), we assess the global story and compare it with what is happening locally. We look at corporate balance sheets and find that the recovery continues. Nonetheless, there will always be those situated differently, and we try to monitor how their problems can get transmitted into the broader economy. While banks have traditionally provided the bulk of the financing, we aspire for a greater role for the capital markets as a risk management strategy for the economy.

We finish this FSR with some suggested courses of action. The Risk-On situation provides a window to put in place added guardrails that may be useful for future use. Finally, we end with some reminders of caution since fluidity defines financial markets. No market is entirely reflecting positive signs, just as there is no market that is absolutely without positives. The task, however, is to guard against those risks that can disrupt the system and to better position the system against likely risks. This is not an onus exclusively for the macroprudential authority. This requires collective action, which starts with a better understanding of the pluses and minuses in the market and the possible channels of contagion. The trick is knowing which one is which and knowing how it spreads. One's challenge may be an opportunity for another at the same exact point in time.

We invite everyone to parse through the pages of the FSR and join us in navigating the Financial Stability journey.

ELI M. REMOLONA, JR.
FSCC Chairman and BSP Governor

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

2023 was the year that everyone expected … until it was not.

With inflation remaining persistently high as we crossed over from 2022, monetary authorities responded with higher policy rates. Supply chains had not yet reverted to their pre-COVID-19 state, but high interest rates were called upon to reclaim the balance between supply and demand. The higher market rates, though, were expected to slow down economies. What worried many analysts was that the speed at which policy rates were rising and the high level that they were at would choke economic activity. Refinancing debts would come at a high premium and real investments would be deferred. The adjustments in the real economy were anticipated to be abrupt. A recession was the likely scenario, more a question of when rather than if.

The big surprise was that this dreaded recession did not materialize, at least not in the world's largest economy. The US market instead found strength, with both bond and equity markets reaching highs. While their labor market remained tight, the US economy further expanded at a pace that surprised many. This positive momentum would not have been the likely expectation when we consider the geo-political conflicts as well as the difficulties in other advanced economies.

There were significant surprises in the banking market as well. Over a span of a few days in March, the collapse of four US banks – Silvergate Bank, Silicon Valley Bank (SVB), Signature Bank (SB), and First Republic Bank – was the focus in global markets. What caught everyone's attention was that these were small to mid-sized banks whose respective collapse was not driven by capital insufficiency. Rather, liquidity was more the core issue and the contagion risk from these banks required systemic interventions from US financial authorities. Europe faced a similar challenge when the Swiss authorities brokered the sale of Credit Suisse to UBS Group AG. That this was finalized practically right after the closure of the US banks only deepened global interest. Larger in size relative to the US banks which closed, the key intervention though was not to make depositors "whole." Interestingly, several central banks came together to calm global markets by coordinating US Dollar liquidity via USD swap line arrangements.

The very details of the banking crisis in March are well documented in other reports and, by design, not extensively discussed in our FSR. What we highlight, nonetheless, are key issues such as liquidity, the role of the USD, and the contagion links to the Philippines. We tie these as well to the more macro story and how the momentum may have spillover effects into the country.

Just like other jurisdictions, the Philippines did face supply-side constraints that was reflected in high inflation rates. 2023 though saw much of these issues moderate, causing inflation to fall. As inflation remained outside the desired band, the BSP kept a tight monetary policy stance. Yet, despite these seeming frictions, the country continued to expand at a strong pace, roughly twice that of the global average.

We looked into firm-level data and find that the financial statements of firms continue to improve since the unexpected impairment brought about by the pandemic. We find that liquidity pressures have abated, although there will always be so-called liquidity-seeking firms (LSFs) which are comparatively more dependent on liquidity than others.

Leverage issues cannot be too far behind liquidity. We integrate these two factors through our corporate health index, assessing Vercelli's cashflow dichotomy, and deriving network models to project several rounds of contagion. While tail risks are common for liquidity shocks, the networks allow us a better view of the channels of risks i.e., contagion from one firm to other firms or from an economic activity and to other segments of the market. This provides an important lens: the value of knowing which segments of the network to target, as warranted, in lieu of macro-wide interventions that are not sensitive to differences in conditions across firms and/or sectors.

With our firm-level tools on hand, we segue into the financial markets. The surprise growth of the US capital market and the banking surprise in the Spring put into context our own journey in 2023. The latter sets key reminders of what could trigger contagion, with the USD providing a bridge for cross-border spillovers. We find strong links via USD portfolio investments and active markets in liquidating foreign currency assets of residents while reducing their foreign currency obligations.

A key difference though is that our capital market performed differently in 2023 than the US market. The heavy reliance on loans and the active rebalancing by the banks of their balance sheet led us to ask what constraints the capital market faces. This has been a longstanding question. We differ by focusing on signaling and information requirements of a market that essentially runs off dynamic changes in perceptions.

Our search for getting a firmer hand on those perceptions is the impetus for our suggested measure of Risk-On Risk-Off (RORO) sentiment. We use the market's own trading activity to provide a daily and contemporaneous metric that is, above all, also forward looking. The changing slope of a tenor-based yield curve, complemented by changing forecasts of future corporate income, should be a useful measure of what market players are collectively anticipating.

This measure can still be tweaked in several respects. What it does tell us though is that we finished the year in Risk-On territory after shifting into that mode at the start of November.

That this arises from both expected downside risks not materializing as well as from truly positive developments in the macro-financial market offers a good balance. It also provides an opportunity for market calm which can be leveraged to strengthen, if not build, guard rails against too much euphoria and/or unexpected shocks. Some of these possible guard rails are discussed at the end of the FSR.

Markets though will always be fluid. This FSR reinforces this, suggesting that there is a window within which we can take action. Assessing systemic risks – and the actions it suggests – is a pro-active tool so that we temper excessive and unsustainable highs from a Risk-On view but also lift against extreme and unproductive lows from a Risk-Off stance.

1 MACRO ENVIRONMENT

CHAPTER 1 MACRO ENVIRONMENT

1.1. Global developments

A year of surprises, even resilience

In a year of sustained high policy rates, the well-anticipated recession did not happen. The global economy focused heavily on the actions of the US Federal Reserve (Fed). With the avowed stance of the Fed to keep interest rates high, many anticipated that a US-centered recession would eventually materialize. This narrative ran parallel to the unfolding developments in China. For an economy that is used to double-digit growth, the abandonment of its zero-COVID-19 policy and stretched difficulties in its property market threatened to limit its 2023 growth, and by extension, that of the rest of the world.

With the proverbial brakes being applied on the largest economy and with the second largest finding any wherewithal to regain growth, the concern was not just a slowdown in 2023 versus 2022. Estimates from the International Monetary Fund (IMF), for example, already consistently showed limited growth for Advanced Economies (AEs). It is because the Emerging Market and Developing Economies (EMDEs) are expected to grow at four percent over the medium-term that the global economy has held up (**Table 1.1**).

Table 1.1 Global Growth Outlook

In annual percent change

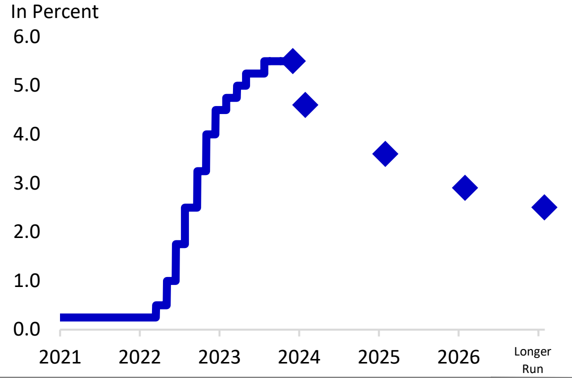
Real GDP	2022	2023	2024
World Output	3.5	3.0	2.9
Advanced Economies	2.6	1.5	1.4
United States	2.1	2.1	1.5
Euro Area	3.3	0.7	1.2
Japan	1.0	2.0	1.0
Other Advanced Economies	2.6	1.8	2.2
Emerging Market and Developing Economies	4.1	4.0	4.0
Emerging and Developing Asia	4.5	5.2	4.8
China	3.0	5.0	4.2
Philippines	7.6	5.3	5.9

Source: World Economic Outlook, October 2023.

The larger question, then, was whether the estimates are prone to sharp downward corrections. A high interest rate environment was frustrating market players who believed that authorities are overly tightening. This creates some gap between the inflation-fighting narrative of authorities and what financial markets see as unfulfilled prospects. The banking difficulties in the spring, coupled later with fresh geo-political risks, were prominent surprises that could not have engendered market confidence.

Yet, there has been no crash. The difficulties with SVB, First Republic Bank (FRB), and Credit Suisse (CS) offer great policy insights. However, their collective impact has been contained, albeit with some creative moves from authorities. The war between Israel and Hamas has not caused any attributable spike in the oil markets. The US reported a 2.5 percent growth

Figure 1.1: Federal Funds Policy Rate and Median FOMC Dot Projections



Note: Projections by Fed board members and Fed bank presidents as of December 2023.
Source: US Fed, Refinitiv

for full year 2023, well above the 1.9 percent in 2022. China, despite its well-documented difficulties still grew at 5.2 percent for the full year.

The year ends with the Fed signaling a policy pivot. The rate hikes gave way to a series of policy pauses and the last pronouncement from the Fed categorically suggests a pivot. While cautious optimism remains the underlying theme, it is nonetheless optimism. The case for an anticipated recession has faded, and talk of the promised soft landing has percolated. What was then a story of higher rates has been replaced by bets on how much and how many rate cuts can be expected from the Fed in 2024 (**Figure 1.1**).

Equities and bond markets posted a strong year, defying the higher for longer rates. An interesting point to make is how financial markets fared well despite the higher market rates. The S&P 500 climbed 24.2 percent this year, the Dow Jones rose by 13.6 percent and the Nasdaq jumped 43.4 percent.[1]

Several factors may be at play here. The performance of equities shows much more diversity than just the simple averages. Use and applications of Artificial Intelligence (AI) has boomed, and this translated to the great fortune of the so-called "Magnificent 7"[2] stocks in the US, with a rate of growth far higher than the typical stock. As inflation peaked and interest rates kept high, those in the bond market have had reason to cheer as real rates improved. This also reflects the power of expectations. Financial markets did better arguably because policy rates did not rise as high as initially expected. And as the Fed provided leeway to the pivot by repeated pauses, the markets anticipated the end of the rate hike cycle, rebalancing the yield curve towards an anticipated more bullish steepening wherein the short-term yields fall faster relative to long-term yields.

Uncertainties still at play

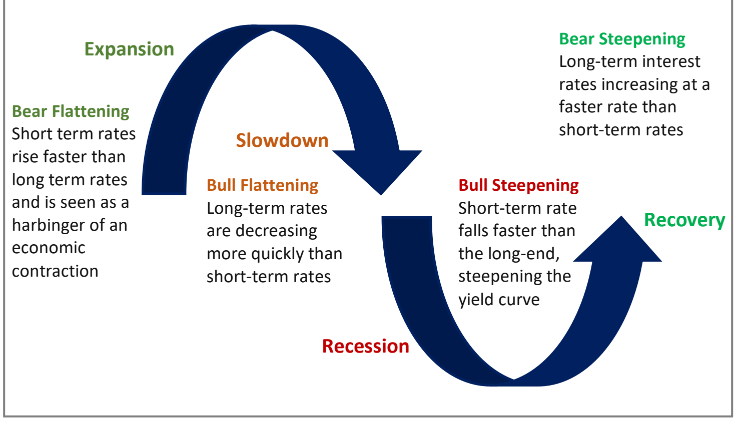
Yet, there are no guarantees and uncertainties will always prevail. In the context of a cycle, soft landings are not end states. Rather, they provide the transition between the strong upswing in the cycle and the contraction phase (**Figure 1.2**). From this perspective, markets will always be in a flux, adjusting to evolving developments. Stability, in this sense, is a concept premised on change. It is not to be avoided but managed. This is where "markets are made," with stakeholders with

[1] Data as of 28 December 2023
[2] These are the tech stocks that dominate the S&P500. These include, Alphabet (parent of Google), Amazon, Apple, Meta Platforms, Microsoft, Nvidia, and Tesla.

different endowments and different expectations openly engaged.

Risk expectations can shift. Since stability is not a static construct, the expectations of stakeholders are likewise fluid. One area where this is being tested is in the oil markets. While the onset of the surprise Israel-Hamas war did not translate to a spike, there are other underlying factors. The decision of Organization of the Petroleum Exporting Countries (OPEC) to curtail daily production is being offset by increased supply from US oil production as well as a reduction in demand from a global slowdown. The possible decline in oil prices from the latter may have its benefits to a country such as the Philippines, but the cause of the price decline would also have repercussions. Since December, oil prices have been range-bound at just above USD70 per barrel, substantially lower than around USD90 per barrel in late September (**Figure 1.3**).

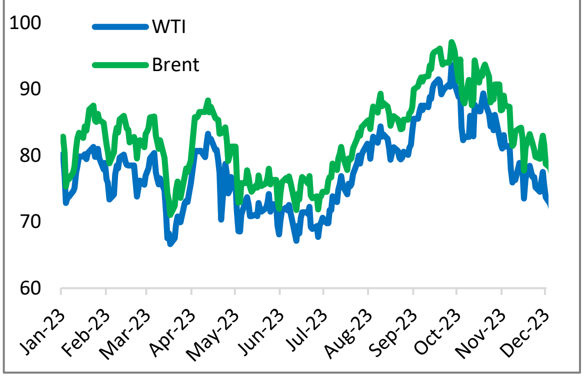
Figure 1.2: Bull-Bear Economic Cycle Schematic



Source: MSCi, Holbrook Holdings

Other supply-side factors are important. Supply chains were not as disturbed as they were at the height of COVID-19, but challenges remain. Arguably for the Philippines, rice is a central issue. Rice prices soared in 2023 due to weaker global production caused by weather related events. Specifically, the El Niño phenomenon led to both typhoons and drought, causing lower yields across different jurisdictions. With 10 percent of global rice output exported, the reluctance of producers to sell offshore to prioritize domestic demand has further contributed to elevated prices.

Figure 1.3: WTI and Brent Oil Price Trend
In USD per barrel



Source: Refinitiv

As a small open economy, external trade continues to be a transmission channel for risks. The Philippines' external trade dependency stood at 65.5 percent[3] (Q1 to Q4 2023). Although this is down by 2.6 percentage points from 2022, it remains fairly substantive. Geopolitical issues and market developments in close trading partners then have ramifications for us. This is particularly the case for products without close substitutes, such as oil and rice.

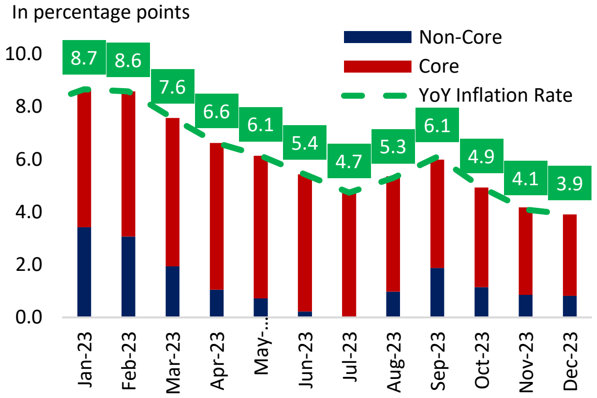
[3] The trade-to-GDP ratio (Exports + Imports divided by GDP) is a measure of openness to trade. It shows how much of an economy's output is traded internationally, both as exports and imports of goods and services. It also reflects how reliant domestic producers and consumers are on foreign markets and sources.

1.2. Domestic performance

The macroeconomy

The macro story was dominated by efforts to contain inflation. The beginning of 2023 saw a massive MoM rise of 1.7 percentage points in core inflation. Since then, headline inflation has generally decelerated, except for August and September (**Figure 1.4**). Vegetable prices have stabilized as supply constraints moderated, yet rice inflation recently surged to an all-time high of 19.6 percent year-on-year (YoY) in December 2023. Headline inflation settled at 6 percent in 2023, while the BSP expects this to further drop to 3.7 percent in 2024.

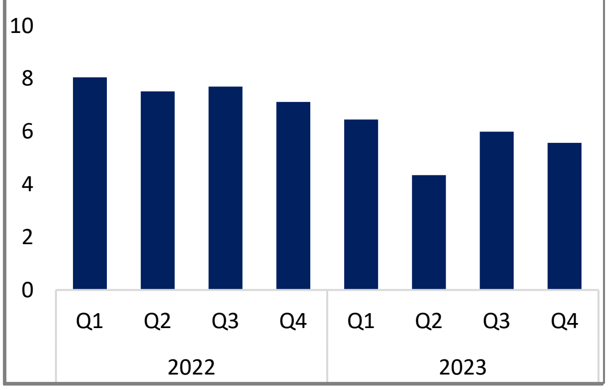
Figure 1.4: Non-Core and Core YoY Inflation Contribution
In percentage points



Source: PSA, OSRM Calculation

At the aggregate level, the higher policy rates have not curtailed growth. The Philippines continues to be among the fastest growing countries in the world, registering 5.6 percent growth in Q4 bringing full year growth to 5.6 percent (**Figure 1.5**).

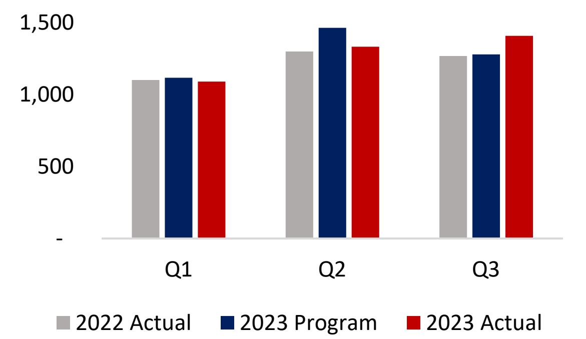
Figure 1.5: PH Real GDP Growth
In percent



Source: PSA

The underpinnings of this growth, however, are evolving. After a noticeable moderation in Q2, fiscal authorities laid out a plan to accelerate expenditures in the second half of the year. As of the third quarter, the gap between program versus actual disbursements has narrowed to just 1.1 percent compared with the 6.6 percent underspending (i.e., current operating expenditures versus program) during the first half of the year (**Figure 1.6**).

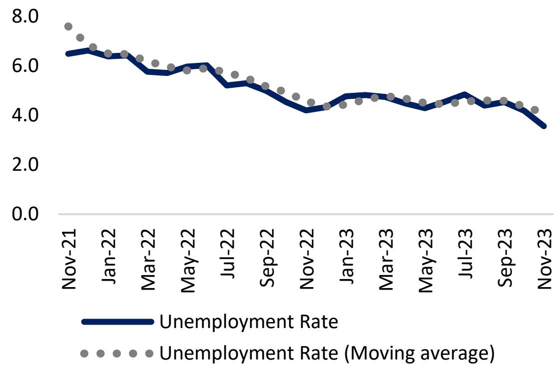
Figure 1.6: NG Disbursement Performance
In PHP billions



Source: Department of Budget and Management

The unemployment rate further dipped to 3.6 percent in November 2023 from 4.2 percent in the preceding month and the same period last year (**Figure 1.7**). This has been noted as the lowest unemployment rate since April 2005. Most of the rise in employment year-to-date (YTD) was due to the services sector with 681 thousand jobs gained for the year. At the sub-sector level, additional jobs were recorded in agriculture and forestry (414 thousand), transportation and storage (356 thousand) and accommodation and food service activities (324 thousand). We do note, however, that manufacturing lost 803 thousand jobs YTD, while other service activities (117 thousand), administrative and support service (67 thousand), public administration (55 thousand), and education (33 thousand) similarly reflected less jobs.

Figure 1.7. PH Unemployment Rates
In percent



Source: PSA

Expanding employment, however, coincides with changing patterns in household spending. Private consumption has decelerated for six consecutive quarters, and this is largely due to slower spending on food and non-alcoholic beverages. Nonetheless, leisure-related expenses on restaurants and hotels continue to post double-digit growths. This shift likely reflects pressures on purchasing power, as more saving is available to higher income groups while those in the lower income brackets bear a heavier burden on higher price levels.

Higher interest rates and the uncertainties in the market likely played a role in the deceleration in construction activity. We note that both public and private sector construction slowed compared to the previous year. Investments in durable equipment likewise eased, and inventories were drawn. As such, capital formation was unable to provide as big of a boost to growth as it did in the previous year.

Firm-level conditions

Aggregates help summarize markets. On balance, the macro numbers point to a positive picture. While we do not under-appreciate the many challenges that the local economy faced in 2023, the numbers are undeniably encouraging: the economy is growing at a fast pace, inflation has eased, fiscal balances have not ballooned, employment is steady, and there has been no major disruption in the private sector.

But risks arise from firms and individuals. Challenges, though, are best understood at the level of the market players. This is because macro numbers are averages and the actual impact varies across sectors, firms, and individuals. Growth and opportunities, for example, differ across different economic activities, just as the impact of higher market rates will depend on the extent that a sector or firm is reliant on borrowed funding.

Understanding where the vulnerabilities are – the risks – requires looking at the situation of the operating entities. Each entity is situated differently, and we can look at their financial statements for indications of their situation. Each entity faces various risks because of the specific structure and substance of their individual financial position.

The first line for firms must be liquidity. As firm operations dispense and receive cash at different points in time, having (access to) sufficient liquidity is critical (see **Box Article 1**). Our assessment validates the funding pressures that COVID-19 exerted on firm-level financials, but this pressure has abated into 2023 in the aggregate. There remain firms though that must continuously seek liquidity to meet their funding obligations in a timely manner.

BOX ARTICLE 1
Liquidity-seeking firms and the corporate health index

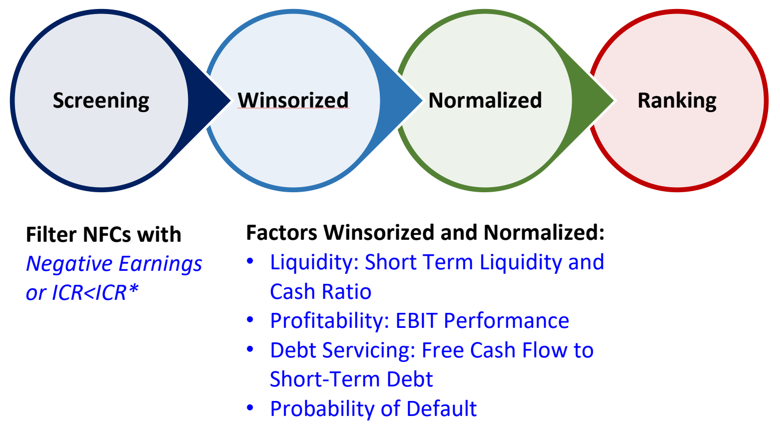
We monitor over 14,000 firms through various databases. We first screen for LSFs, defining them as those firms which have negative earnings or those whose Interest Coverage Ratio (ICR) fall below their break-even income level over at least four consecutive quarters.

Five ratios are then calculated for the LSFs. The first two are reflective of income and debt servicing, while the remaining three are liquidity-related ratios. A sixth metric, the Probability of Default, is also considered but this is calculated by and taken from a third-party source.

- **ICR** - Ratio of a firm's paying capacity to the extent of debt that is scheduled to be serviced.
- **Earnings Before Interest and Taxes (EBIT)** - Measure of the sustainability of paying capacity and the serviceability of previous debts incurred.
- **Short-Term Liquidity** – Also known as the Funding Gap, this shows the difference between Cash & Cash Equivalents and Short-Term Debt.
- **Cash Ratio** - Liquidity measure similar to the Funding Gap but expands the coverage from Short-Term Debt to Current Liabilities.
- **Unlevered Free Cash Flow to Short-Term Debt** - This further refines the Short-Term Liquidity by considering a firm's Unlevered Cash Flow, that is, the remaining Cash after Operations and Investing but before accounting for financial obligations.
- **Probability of Default** - The series refers to S&P Market Signal Probability of Default. For our purposes, we classify as a red flag a probability that is at least 10 percent.

For direct comparability across firms, the data is first winsorized using the 95th and 5th percentile as cutoffs. The indicators are normalized to have an identical range [0, 1] by subtracting the minimum value and dividing it by the range of the indicator values. The Corporate Health Index is created by applying equal weights to the indicators. A ranking of the firms provides a useful metric over time.

Figure A: Screening and Ranking LSFs



Source: OSRM, BSP

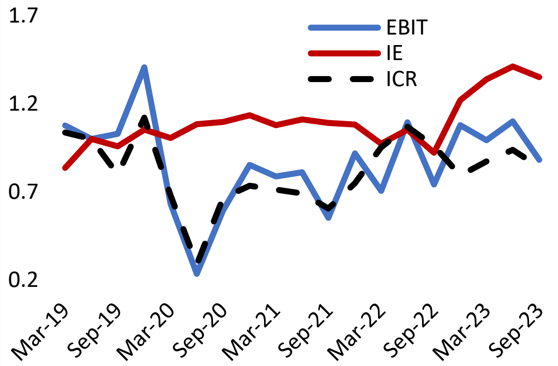
As firms seek liquidity, leverage cannot be far behind. ICRs provide a good view of those needing liquidity (**Figure 1.8**). If this liquidity cannot be generated internally i.e., through profitable operations, then the only option is to go to the market. However, some firms may face temporary ICR difficulties while others have challenges that are more persistent. This distinction, and by extension the link between liquidity and leverage, is a critical facet of risks emanating at the level of firms.

We apply Philippine data to the Vercelli model to reveal useful insights. For starters, monitoring hundreds of firms since the pandemic validates that one indeed finds movements across panels from time to time. More importantly, there are firms in the sample that would fall into distressed territory. An averaging over a rolling four-quarter window is used to determine persistence that would situate a firm in panels 5 or 6 **(Figure 1.9)**.

Distress, however, should be put into context. In the model, this simply suggests that outflows are greater than inflows. In Vercelli's world, this is either a liquidity (current period) or solvency (over longer periods) issue. Yet, firms relying on market funding to address their liquidity requirements at various points in time is not necessarily adverse. In fact, this is the link that binds leverage to liquidity, which is a hallmark of a functioning financial market.

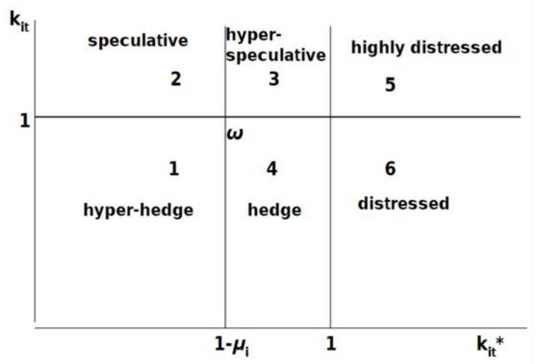
The risk though is what happens when the music stops. Access to liquidity is like the music that fuels the elegance embodied by dancers. When the music suddenly stops, the cadence is lost. This puts individuals in an awkward position, and this can have consequences for others on the dance floor. The euphemism here is that liquidity allows firms to operate and address their financial obligations. If this flow of liquidity is disrupted, problems arise for some firms and these problems can cascade to other firms. This contagion is the key focus of systemic risk authorities.

Figure 1.8: EBIT vs Interest Expense (Median)
NFCs, Indexed CQ22019 = 1



Source: S&P Capital IQ

Figure 1.9: Vercelli's Liquidity-Solvency Model



Hyman Minsky's most famous academic contribution – instability arises from aggressive behaviors during "good times" and leads into Minsky Moments[4] – came into focus after the GFC. Vercelli (2009) extends Minsky's analysis, distinguishing the extent to which firms hedge or speculate, the latter leading into distress. Since firms react continuously to changing market conditions, each firm can rotate around the panels across different periods.

Vercelli models short-term liquidity and longer-term solvency is a cashflow narrative. Since conditions change and could be temporary, he sets a buffer, μ, creating windows where firms hedge less aggressively (panel 4) or start to speculate more (panel 3). These could be the prelude to distressed situations, the worst of which is a combination of illiquidity and insolvency (panel 5).

[4] Hyman Minsky (1919–1996) was an influential American economist renowned for his insights into financial instability. Minsky's theories gained prominence for explaining the cyclical nature of economic booms and busts. The concept of a "Minsky moment" revolves around the idea that during periods of economic stability, there is a tendency for actors in the financial system to become progressively more comfortable with risk.

BOX ARTICLE 2
The risk of contagion

Financial distress arises from the structure and substance of each firm's balance sheet. In our approach, we derive this from the results of our analysis of LSFs or from the Vercelli model. However, one firm's strength may be a vulnerability to another, depending on the timing of cash flows vis-à-vis the committed financial obligations. Thus, firm-level conditions cannot simply be aggregated to form system-level conditions. We need a mechanism that can reflect differences across firms but also transmit potential vulnerabilities.

Network models provide the answer. We address this by determining the interlinkages between firms, including various financial institutions and NFCs, within a network model. We use data of suppliers and customers to define the interlinkages, and supplement where necessary with input-output sectoral information.

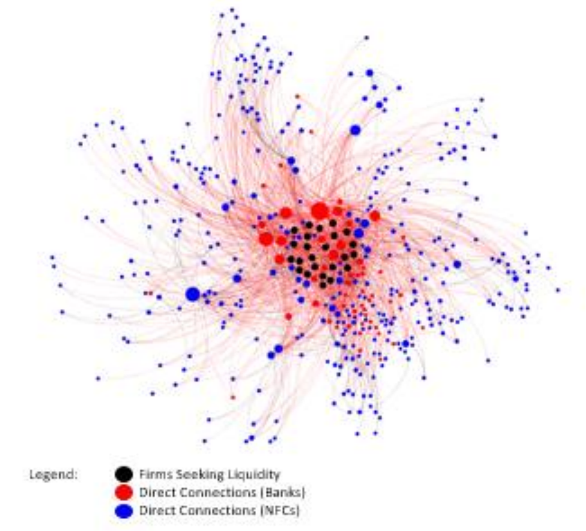
One finds that there can be several links from one entity to others. These links are path dependent, and specifically for financial transactions, are timing dependent as well. With the plurality of non-linear linkages, the final outcomes are defined once all the dependencies work themselves through, starting from initial conditions that vary from firm to firm.

Networks help depict the core and periphery relationships. **Figure B** shows an actual network. LSFs are depicted as the black dots which are then connected to either banks (red dots) or other NFCs (blue dots). In this representation, we can immediately visualize the first-round effects. Standard measures of centrality are used to assess the connections within the network.

Figure C provides a fuller representation once all the interactions between institutions are put into effect. This is much more difficult to appreciate given the granularities involved. Yet, it is this granularity that provides us a clearer picture of how vulnerabilities can be transmitted throughout the network. We can map the channels of risk for a firm, a conglomerate or an industry to other nodes in the network. Quantitative measures for the network are likewise generated.

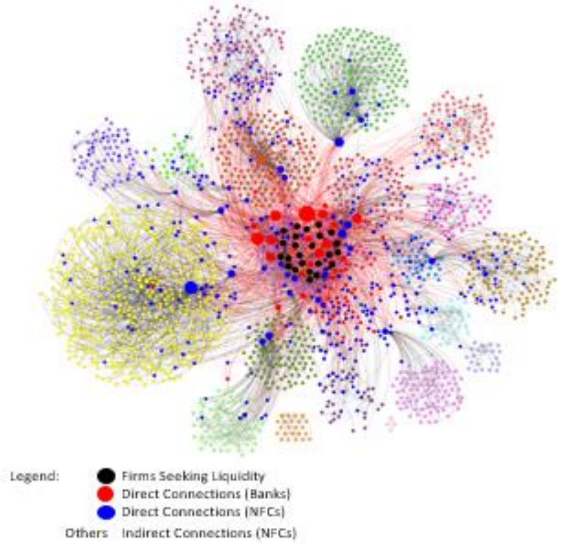
We can supplement with assessment of concentration. Another facet of this approach is to identify dependencies that may, under certain stressed conditions, become choke points. This allows for more targeted risk-sensitive macroprudential interventions, as warranted, rather than applying a blanket treatment across all firms and economic activities.

Figure B: 1st and 2nd Level Contagion Map



Source: OSRM Calculation

Figure C: Multi-Level Contagion Map



Source: OSRM Calculation

2 FINANCIAL MARKET RISKS

CHAPTER 2

FINANCIAL MARKET RISKS

2.1. The global story

Higher-for-longer dominated financial markets in 2023. The year began with questions of how much further central banks would have to raise their policy rates to tame inflation. The debate between Team Transitory and Team Permanent had all but faded, given the persistence of high inflation. With a clear part of inflation driven by supply-side issues, the central bank toolkit called for raising market rates so that the demand-side – and GDP – would rebalance with impaired supply.

Market players had long argued that financial authorities would be late to respond because official monthly data used as a reference for policy decisions would always come with some lag. Markets, on the other hand, respond to changing financial conditions daily and take firm balance sheet positions against their expectations. The effect of this is that yield curves can shift well before policy rate decisions. This was the case before the Fed officially raised its policy rate in March 2022 and this remained the state of play in late 2023 when the curve started declining despite policy rate pauses.

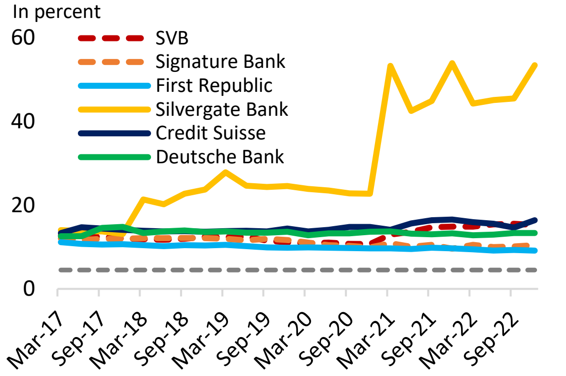
The surprise in the spring, with lessons about systemic risks. Some quarters openly argued that authorities were overly tightening the markets. The debate then – as discussed in Chapter 1 – was whether taming inflation must come at the expense of risking a recession. As that discussion lingered, the market was surprised by a string of bank closures.

What drove SB, SVB, and FRB into difficulties is already well documented. What we raise here instead are the reminders that risks from concentration, liquidity, and contagion are real. They could be triggered quickly and can have broader consequences beyond a bank. Three issues should be highlighted.

First, perceptions are key, and they can change quickly. Financial markets are defined by information that is generally not evenly accessible or known among the stakeholders. That dynamic is a field of study by itself. The incidents in the spring show that once expectations are disrupted, there is also a tendency for herd-like risk-aversion behaviors to immediately take effect. Especially when catering to a niche market, any perceived difficulty would be eventually known and could amplify to bank runs.

Second, contagion is not about the size of the balance sheet. Bank runs are not a new occurrence. What adds to the surprise is that the three banks are relatively small and yet caused notable concern. The depositors of SVB were guaranteed to keep their savings in whole, despite the usual limits of deposit insurance schemes. The joint decision of the Fed, the US Treasury, and the Federal Deposit Insurance Corporation suggests that there was a concern that the closure of SVB would have ripple effects on the rest of the banking system. That is, the misfortune of a small bank was expected to adversely affect the banking system, and this necessitated invoking a full guarantee for every depositor.

Figure 2.1: Bank CET1 Ratios

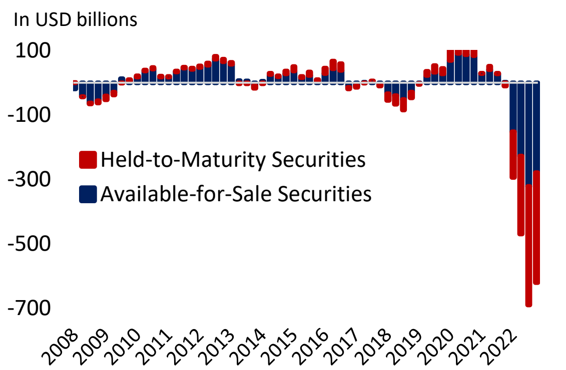


Source: S&P Market Intelligence

One should contrast this to the case of CS, which was also in the news then. The bank, designated by the Financial Stability Board as a Global Systemically Important Bank (G-SIB), had significant global interaction, including being a primary dealer and foreign exchange counterparty of the Fed. With massive withdrawals from investors, its potential failure brought fears of contagion. As the Swiss central bank engineered a deal with the Union Bank of Switzerland (UBS), there was no need for a full deposit guarantee as was the case with SVB.[5]

Third, sufficient capital is necessary but may not be sufficient to ward off systemic consequences. Each of the banks held a respectably high level of Tier 1 capital, well above the global regulatory minimum (**Figure 2.1**). When bank runs occur, liquidity – rather than solvency – is the first line of defense. Central banks serve as the Liquidity of Last Resort, but this is often couched against the bank's ability to provide underlying assets against the liquidity support. What the SVB case highlighted were the challenges that arise when a significant portion of the bank's financial assets are classified as Hold-to-Collect (**Figure 2.2**). As a generally non-tradable security, these are booked at amortized cost and not periodically marked against their current market value. Since the bank needed liquidity, there had to be a way to assess its value. Nonetheless, this still fell short, and the support of the US financial authorities was still needed to avert what was expected to be a bigger damage to the system.

Figure 2.2: Unrealized Gains (Losses) on Investment Securities



Source: Federal Deposit Insurance Corporation

[5] Some state guarantee was provided to UBS for possible losses on a clearly defined portion of the sold portfolio. See https://www.reuters.com/business/finance/ubs-take-over-credit-suisse-central-bank-2023-03-19/.

Is the higher-for-longer revaluation effect a myth? While bank closures were very much in the news, the expected mark-to-market (MTM) losses in the US capital markets did not materialize. With the Fed driving its policy rate higher, the natural expectation is for tradable assets such as equities and bonds to suffer losses. This would be particularly acute for the US market, the world's largest stock and securities markets, valued at USD45.5 trillion capitalization and USD52.9 trillion, respectively (Kolchin et al., 2023).

Instead, the S&P 500 reached near all-time highs in the US in 2023, gaining 24.2 percent. The bond markets likewise rallied in November and December, with 10-year treasury yields dropping about 100 basis points (bps). The strong performances are widely attributed to the perception that the Fed is turning dovish. It is likely that market valuation models now factor in the capital gains (and overall growth of the economy) brought about by falling rates. Markets are now seeing the first Fed rate decline in March 2024 (after a retention in January) (**Table 2.1 and 2.2**).

Table 2.1: Rate Probabilities at the January 2024 FOMC Meeting

Target Rate (BPS)	Year-end Dec 29	1 Day Dec 28	1 Week Dec 22	1 Month Nov 30
500-525	17.6%	16.5%	14.5%	4.0%
525-550 (Current)	82.4%	83.5%	85.5%	93.2%
550-575	0.0%	0.0%	0.0%	2.8%

Source: CME

Table 2.2: Rate Probabilities at the March 2024 FOMC Meeting

Target Rate (BPS)	Yearend Dec 29	1 Day Dec 28	1 Week Dec 22	1 Month Nov 30
475-500	15.1%	13.9%	12.4%	1.7%
500-525	73.4%	72.8%	75.6%	41.5%
525-550 (Current)	11.5%	13.3%	12.0%	55.2%
550-575	0.0%	0.0%	0.0%	1.6%

Source: CME

2.2. The USD as a vehicle for interconnectedness

The Philippines continues to keep abreast of developments in the US market because of possible spillovers. We see this through capital flows as well as through possible price adjustments.

Year-to-September recorded a net inflow in portfolio investments. Balance of Payments[6] data shows a net balance of USD1.2 billion coming into the country. This is the result of USD2.4 billion in net inflows versus USD1.3 billion in net outflows.

Closer inspection of the underlying data shows, however, that much of the activity is from resident institutions.[7] In particular, resident corporations and banks sold USD2.6 billion in foreign currency (FCY) denominated assets while banks paid off the FCY debts, on net, by USD1.6 billion. These dominate the investments in PH equity and investment share, long-term

[6] Source: Balance of Payments Q3 2023
https://www.bsp.gov.ph/Media_And_Research/Balance%20of%20Payments%20Report/2023/BOP_3qtr2023.pdf

[7] An institutional unit is a resident of a country, regardless of nationality, if the unit engages or intends to continue engaging in economic activities and transactions over a long period of time. See https://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf

(by the general government), and short-term (by other sectors) debt securities of non-residents amounting to a net inflow of USD1.3 billion.

The fact that institutional players – corporates and banks – are the active players is hardly a surprise. What may be of interest, however, is that residents dominate the activity. This suggests that Philippine-based institutions dynamically rebalance their portfolio as expectations of forthcoming market conditions evolve. This, plus the net activity of USD1.3 billion from non-residents, has a bearing on our capital markets.

The US remains our foremost portfolio investment investor. Data from the Consolidated Portfolio Investment Survey (CPIS) undertaken by the IMF confirms the strong influence of the USD on the local market (**Table 2.3**). Although the latest data ends in 2022, we show that the ranking of the five biggest portfolio investors in the country has not changed since 2020. Measured against the top 30 jurisdictions with portfolio investments into the country, these five economies account for a substantial 58.6 percent.

Table 2.3: Portfolio Investment Assets to PH

In USD millions

Country*	Currency	Portfolio Investment Assets			Rank		
		2020	2021	2022	2020	2021	2022
United States	USD	22,904.0	23,275.0	18,581.0	1	1	1
Luxembourg	EUR	12,342.2	11,238.0	8,782.4	2	2	2
Singapore	SGD	7,545.8	5,900.0	6,304.3	3	3	3
Ireland	EUR	5,072.8	5,253.0	4,333.6	4	4	4
Australia	AUD	5,048.7	4,837.6	3,911.9	5	5	5
Canada	CAD	2,433.9	2,506.0	3,358.8	12	11	6
Netherlands	EUR	3,170.8	3,659.4	3,220.1	9	7	7
United Kingdom	GBP	4,710.6	3,982.8	3,217.3	7	6	8
China HK	HKD	4,831.7	3,041.8	3,126.8	6	9	9
Japan	JPY	3,988.1	3,552.5	2,802.4	8	8	10
Germany	EUR	2,843.2	2,790.7	2,015.9	10	10	11
Malaysia	MYR	2,173.5	1,926.5	1,761.2	13	12	12
Norway	NOK	2,535.1	1,758.5	1,536.3	11	13	13
Kazakhstan	KZT	286.7	814.4	1,362.5	22	17	14
Switzerland	CHF	1,188.6	1,134.5	1,057.6	14	14	15
Bermuda	BMD	485.3	699.6	1,001.5	19	18	16
Denmark	DKK	972.2	1,035.3	817.8	15	15	17
Cayman Islands	KYD	725.1	531.3	612.1	16	20	18
Jersey	GBP	237.5	482.3	604.6	26	21	19
Italy	EUR	702.1	818.4	589.1	17	16	20
Sweden	SEK	429.1	438.7	491.8	20	22	21
France	EUR	608.6	652.5	397.0	18	19	22
Indonesia	IDR	3.7	1.9	299.9	46	53	23
Belarus	BYN	0.0	0.0	242.9	57	62	24
Korea	KRW	256.4	246.5	227.2	23	26	25
Finland	EUR	246.7	268.4	209.1	24	25	26
Mauritius	MUR	139.0	233.6	188.0	28	27	27
China	CNY	425.5	364.1	175.2	21	23	28
Austria	EUR	137.4	152.9	123.7	29	29	29
Thailand	THB	232.5	178.3	115.1	27	28	30

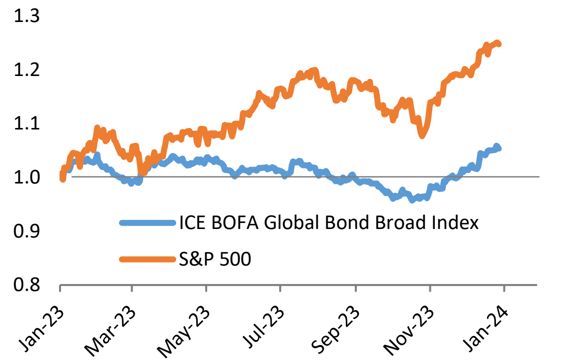
* Based on 2022 rankings

Source: IMF CPIS Data

The surprise from **Table 2.3** is that China is at a lower position and her share has been declining. This contrasts with our strong interaction with China through our importation of commodities.

We note however an interesting tidbit. That is, grouping by currency shows that portfolio investments from Euro-denominated jurisdictions compete in size against the US. This is a reminder that cross rates of global currencies matter to us and that we are influenced directly by the USD and indirectly through the EURUSD rate.

Figure 2.3: Global Bonds Equities
Indexed Jan 2023=1



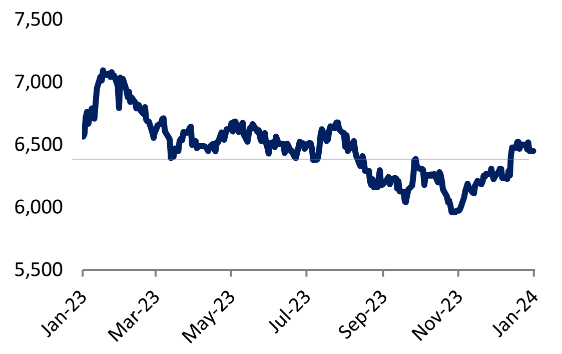
Source: Bloomberg

2.3. Capital markets

The discussion on capital flows brings up the state of our capital markets.

It was a banner year for global equities, with a strong bond market rebound at the end. In a year of high-interest rates, the S&P 500 still rose 26.4 percent (including dividends), the biggest rally since 2019. With no surprise, information technology stocks were at the forefront, rising by 56.4 percent. Hampered by high market yields for much of the year, bond indices rallied over the last two months of 2023. The US 10-year treasury yield – a benchmark for borrowing costs – fell by 99 bps, reflecting the market's increasing view that a soft landing was possible (**Figure 2.3**).

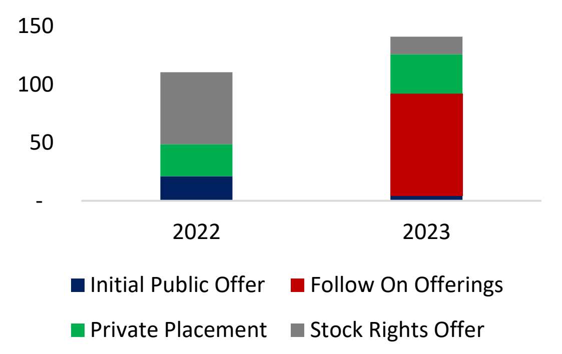
Figure 2.4: PSEi 2023
Price Index



Source: Philippine Stock Exchange (PSE)

Our capital market contrasts with the global trend. Market capitalization was at PHP13.1 trillion at the end of 2023, slightly lower than the PHP13.3 trillion the year before. The PSE index (PSEi) closed 2023 at 6,450 points, the highest it has been since August 2023 but lower than the 2022 close (**Figure 2.4**). More capital was raised in 2023 than in 2022, although the majority of these were in the form of Follow-On Offerings (FOO) and Private Placements. IPOs (Initial Public Offering) had a lower volume in 2023 than 2022 (**Figure 2.5**).

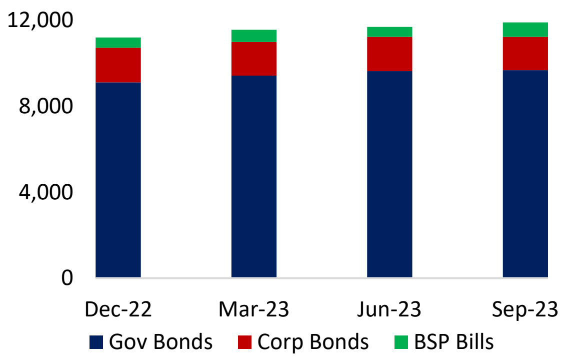
Figure 2.5: Capital Raised PSE
In PHP billions



Source: PSE

Average daily turnover is also lower in 2023 (PHP6.1 billion versus PHP7.3 billion in 2022). Although not the majority, foreign transactions are an important component of the market, accounting for around 44 percent of transactions. On balance, 2023 was still a year of net foreign selling (PHP53.7 billion) but this was lower than the previous year (PHP68.1 billion).

Figure 2.6: PH Bond Market
In PHP billions

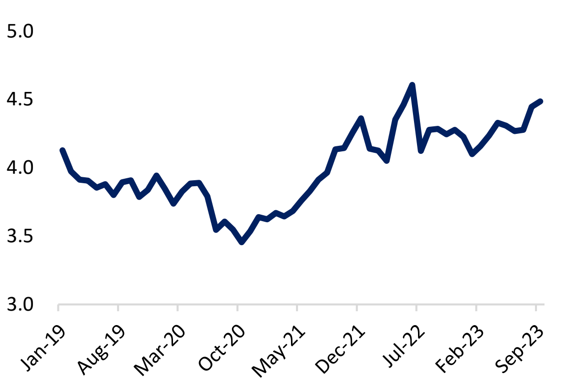


Source: AsiaBondsOnline

The fixed-income market activity was more tempered. Total bonds outstanding (as of September 2023) were at PHP11.9 trillion, higher than PHP11.2 trillion at the end of 2022. This balance is concentrated on government and BSP-issued securities rather than corporate issuances (**Figure 2.6**). Over a longer-term horizon, although corporate bonds outstanding have grown significantly over the past 15 years, this has remained relatively flat over the past five years. The latest figure for corporate bonds outstanding is PHP1.55 trillion, which is marginally lower than the PHP1.60 trillion at end-2022, and reflective of the PHP259.3 billion in maturing bonds. New issuances fell to PHP209.3 billion versus PHP508.7 billion from a year ago, with the number of issuances dropping to 16 from 30.

Do higher interest rates explain the weaker performance? There is no easy answer to why our capital market performed weaker in 2023 than in 2022. High-interest rates are the popular explanation since this would stereotypically reduce the discounted projected income flows embedded in stock prices and the fair market value of fixed-income securities. However, the record year experienced in other markets i.e., the US, weakens this case. In addition, banking data shows that loans outstanding increased by PHP528.5 billion YOY (as of November) or PHP264.1 billion Year-to-November. The loans, presumably, would have been accessible at higher rates, no different from the higher cost of funds if sourced through bonds. All these suggest that there are factors other than higher interest rates that have constrained this market.

Figure 2.7: Corporate Loans to Corporate Securities Ratio



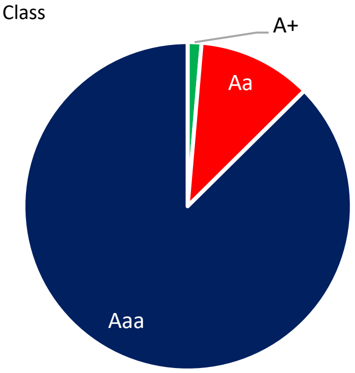
Source: AsiaBondsOnline, BSP, OSRM Calculation

Loans remain the preferred funding source by corporates. What we do know is that the balance between corporate loans and corporate securities is highly tilted to the former. Outstanding corporate loans stood at PHP6.8 trillion (June 2023) whereas corporate securities for that period stood at only PHP1.6 trillion (**Figure 2.7**). With deposits continuously rising, banks can tap a ready pool of funding sources. Also, there is no compelling evidence suggesting that the Single Borrower's Limit (SBL) constrains bank lending. Thus, it is of no surprise that corporate loans increased by PHP388.2

billion in 2023 compared to new corporate issuances over the same period amounting to PHP17.9 billion (data as of September for both 2022 and 2023). This balance has been the state of play for a prolonged period and reflects, we believe, more about the capital market than it does of the loan market.

Data suggests that the average tenor for corporate securities issuances is not too different from the average tenor of corporate loans. In 2023, this remained the case with the latest numbers pointing to 4.2 years for loans and 3.8 years for corporate securities.[8] Certainly, not all corporate funding requirements require term funding. A reasonable portion will be for short-term needs, and this tends to lower the average tenor for corporate loans. However, this is precisely the point since one would have expected the capital market to be the source of term funding. In this context, the absence of a substantial difference in average tenors is arguably more about the capital market. Even at the risk of periodic rollovers, corporations rely on banks to privately assess and act on their financial information rather than have the technical information repackaged for the investing public's appreciation.

Figure 2.8: PHP Corporate Bonds Outstanding
by Credit Class

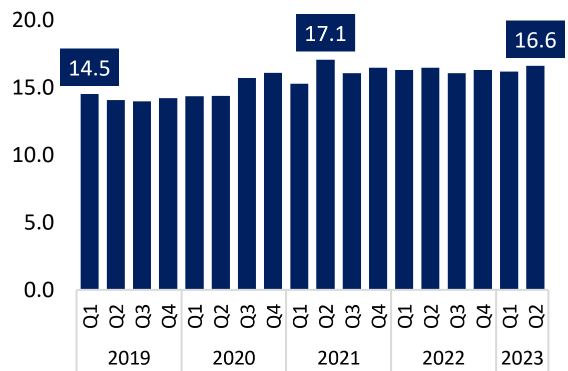


Source: Bloomberg

This premium on information is affirmed in the issuance of securities. A closer look at corporate securities shows that Philippine issuers are those that are already highly-rated (**Figure 2.8**). This suggests that these issuers can access the loan market but not every corporate account in the loan market can currently access the corporate bond market. Stated differently, "going to the market" is a ready option for institutions that are already publicly recognized and known. Startups and those with lower credit ratings, however, would find it difficult to do so.

For highly rated institutions, access to the securities market extends to the offshore market. While there was a noticeable increase as COVID-19 unfolded, we have seen some tapering in 2023 (**Figure 2.9**). Anecdotal evidence suggests that a major attraction is the ability to secure larger amounts of funding offshore than onshore. Without further granularity at the transaction level, a reasonable analysis is constrained at this point. For now, we simply highlight that the gathering and processing of information plays a critical factor in assessing offshore funding.

Figure 2.9: PH Outstanding Debt Securities
In USD billions



Source: BIS

[8] OSRM Calculations, average tenor of existing loans and securities

BOX ARTICLE 3
Some key elements of the capital market agenda

Developing the capital market has been a longstanding mantra in the Philippines. However, with loans available, it may be arguably easier to rely on banks for funding rather than the public (see **Figure 2.7**). More recently, the offshore market has become more available as we have seen a notable increase in debt from Philippine NFCs (**Figure 2.9**).

Greenspan's reminder is worth repeating. Despite what the loan market already brings to the table, there should be no doubt that having a well-functioning capital market can only be beneficial. Former Fed Chairman Greenspan famously argued (1999)[9] that a spare tire is not necessary if we are sure that none of the running tires (i.e., rapid growth, available bank credit, low NPLs) will suffer a flat. In the same remarks, he suggested that East Asia did not have a spare tire (i.e., the capital market) to mitigate the impact of the Asian Financial Crisis.

The original context may have been to provide a parallel, often alternative, funding source. However, one can argue that the broader issue may be about managing risks. For one, the heavy dependence on loans creates concentration risk. Many have argued that the banking industry is heavily regulated and is thus better insulated against the fallout of such risks. The difficulties in US Spring with SVB, SB, FRB, and CS, only remind us that tail events happen unexpectedly and even these low-probability occurrences can still cause massive dislocations.

Having access to offshore markets further adds to the case for having a capital market. As our 2023 data have shown (thus far), residents make active choices between loans versus securities and between onshore versus offshore issuances. The latter does add a layer of pressure on the USDPHP rate, particularly when forward markets are not available.

Signaling mechanisms will certainly help. Many have suggested where and how the capital market may be enhanced. A fundamental aspect is the packaging of information that stakeholders can act upon. Two points are worth highlighting briefly.

First, ratings bridge what the public ought to know about the issuer/issue and what they may have heard. Information is formalized and structured during a bond's offering period. It would be interesting to dig deeper if the needed information is more difficult to package for the general public versus having an entity that specializes in it (a bank) handle the processing as an input to a credit decision. Furthermore, just as banks continue to monitor their loan clients, the information to the public of bond issuers should also be continuously updated, and not limited to the initial issuance. This is not the current practice today.

Second, pricing across various slices of time is an essential element of this market. Issuers and investors need to define their preference between, for example, 5-year borrowing/investments as against a 7-year or 10-year. The market is guided by actual consummated transactions which get to be "discovered" and formalized into an array that matches buckets of time (tenors) and its corresponding risk pricing. In theory and practice, these tenors are round figures, just as the resulting discount factors from spot rates reflect whole numbers for tenors. Any other method is less ideal.

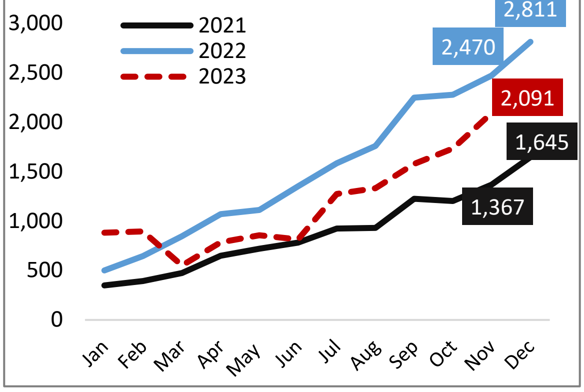
2.4. Local banking

2023 saw bank balance sheets "normalize." The defensive strategy of banks in previous years saw their cash balance and securities classified as Available-for-Sale (AFS) being reduced. The generated liquidity, from a standpoint, was invested in acquiring more securities booked as Hold-to-Maturity (HTM). This reversed in 2023 with typical sources and uses of funds performing as expected.

[9] Remarks before the World Bank Group and the IMF. Washington, D.C. September 27, 1999

Interestingly, real estate now takes up a big chunk of loans. In an environment of higher interest rates, it is to some surprise that real estate is a significant use of funds. Real Estate loans for productive activities grew significantly by 10.8 percent from PHP2.2 trillion in May 2022 to PHP2.5 trillion in November 2023. This period coincides with the policy rate increases of the BSP, which have unfazed borrowing from the availability of loans. Both loans for productive activities and residential real estate (RRE) loans have increased, highlighting generally positive sentiment in the sector. We see this as reflective of sustained demand for RRE and developers continuing to build new supply for the future despite higher interest rates. More discussion on real estate is in **Box Article 4.**

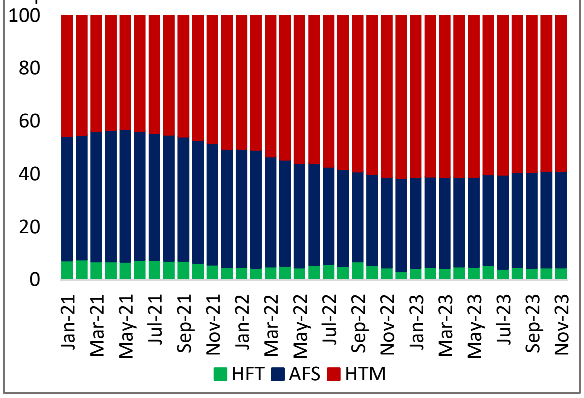
Figure 2.10: PBS Flow of Funds
Year-to-Date, In PHP billions



Source: BSP, OSRM Calculation

The pace of the flow, though, has noticeably slowed. We note, however, that the Flow of Funds (FOF) has significantly slowed in 2023 compared with 2022. The data suggests that 2023 is only 84.6 percent of the pace of the previous year (**Figure 2.10**). This is a material slowdown in funds sourcing. Furthermore, it does not appear to be driven by the higher market rates since the rise in bank deposits has also slowed.

Figure 2.11: PBS Financial Asset Allocation
In percent to total

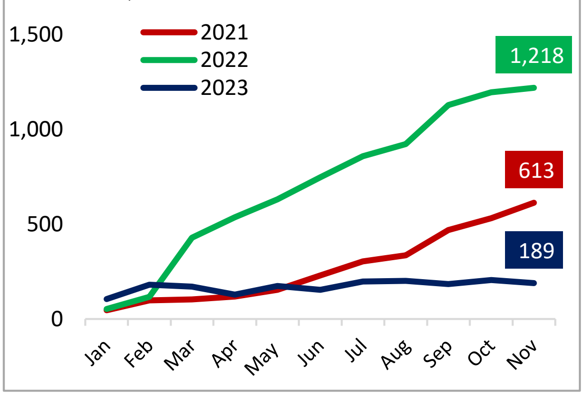


Source: BSP, OSRM Calculation

The HTM component continues to be significant. Financial assets classified as HTM continued to increase in 2023. From 45.6 percent of financial assets at the beginning of 2021, its share is now nearly 58.8 percent as of November 2023 data (**Figure 2.11**). Taken at face value, this suggests that the banks remain defensive against potential MTM losses created by the higher market yields. Invariably, however, the threat of MTM losses can be mitigated by holding the tradable security to maturity. This though comes at the expense of liquidity.

The rate of increase has, however, tapered. From around 61.2 percent at the beginning of the year, the percentage share has fallen to 58.8 percent. This drop is more evident when seen in PHP on a year-to-November basis. The increase of PHP188.9 billion in the first 11 months of 2023 is considerably a smaller amount than the PHP1,218.5 billion over the same period in 2022 (**Figure 2.12**). This is less about the FOF being smaller in 2023 than in 2022 and is arguably

Figure 2.12: HTM Year-to-November Flows
2021 to 2023, In PHP billions



Source: BSP, OSRM Calculation

BOX ARTICLE 4
Perceptions and the real estate market

The real estate (RE) sector is naturally monitored because of its role in the economy. The natural demand for housing is intricately tied to welfare concerns while the take-up of office and commercial space instinctively serves as a barometer for economic activity.

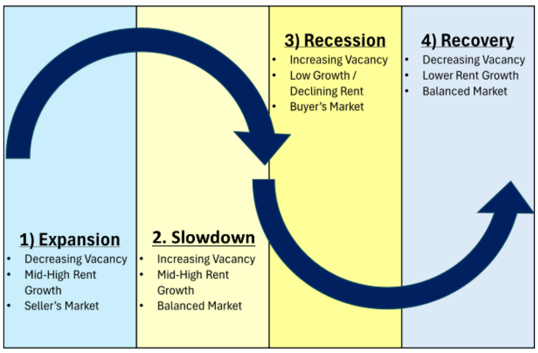
We can expect then that the pace of property activity generally aligns with the economic cycle, picking up when economic conditions are enticing and slowing when risk aversion dominates. This cyclical behavior can also be seen from the financing point of view. Buyers take on a loan or self-finance a residential property over the long-term, committing future income and liquidity for the residential asset today. Developers take time to build and will rely on borrowed funds to some extent, with the expectation that this will be paid through future sales or amortizations of buyers. For those who lease office or commercial property, this is a long-enough contract against a favorable view of revenues or sales.

The gestation period involved and the financing through time is precisely why housing prices and credit are typical elements in estimating a financial cycle (**Figure D**). While the timing and magnitude of the ups and downs are unknown beforehand, real estate decisions will have to be made. This is why perceptions are fundamental in the real estate sector. The very nature of the product and its financing dictate it.

Regulators understand the key role of RE in the economy, but nonetheless face some challenges. RE supply data may be sourced from developers or from government licensing bodies. However, the demand side is much more difficult to determine. This is often simply “inferred” by assessing price trends.

For instance, 2023 showed a steep rise in prices for RRE, while commercial real estate (CRE) showed some form of relief (**Figure E**). The rising RRE prices often invite a conclusion that demand is outstripping supply. However, we also know from the data that vacancies are rising. There is then much more to the story. Whether the rising prices reflect the higher cost of materials, the higher cost of financing by developers, an exuberant view of the future, or simple altruism does matter. Are we seeing the pricing of cost of doing business or are we pricing perceptions?

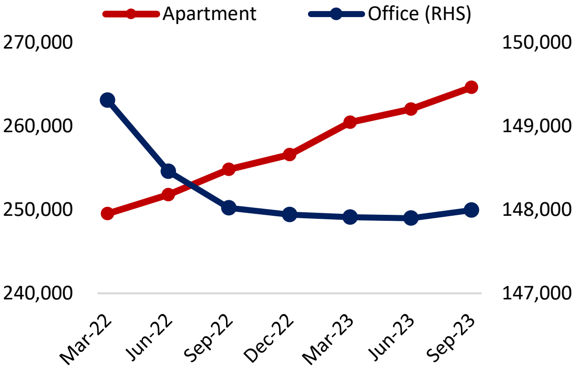
Figure D: Real Estate Cycle



Source: Adopted from Mueller, Real Estate Finance

Figure E: PH Real Estate Prices

In PHP per sqm



Source: Colliers

more about the banks' taking cautious steps to rebalance their portfolios.

Arguably, liquidity has been squeezed. This is neither an absolute critique nor should it be taken as an impending sign of vulnerability. Instead, we mean this in a relative sense. A case to be highlighted is the phenomenon during the pandemic when the sizable allocation to HTM securities buoyed profits but had a significant impact on some banks' liquidity during the reversal of interest rates, e.g., the case of SVB. While government securities (GS) are indeed High-Quality Liquid Assets, their liquidity can be further qualified depending on the RORO regime. A Risk-Off environment – when there are significant uncertainties and/or with sharp interest rate hikes – can freeze GS trading as banks would prefer safety. Yet, the difficulties may become too acute that they have to liquidate securities, even those classified as being held to their original maturity. There must be a way to assess the market value of the HTM assets during these periods.

3 PERCEPTIONS OF RISKS AND WHAT LIES AHEAD

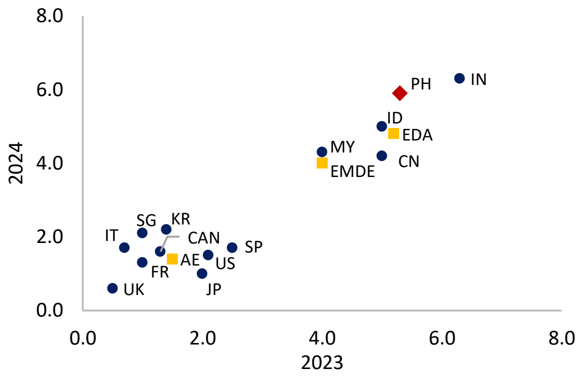
CHAPTER 3

PERCEPTIONS OF RISKS AND WHAT LIES AHEAD

3.1. Understanding systemic risks

The global – and more importantly, the local – financial market finished 2023 with a lot of surprises. Despite the dreaded combination of high inflation, high interest rates, and geo-political turbulence, the feared recession has not yet materialized, if at all. For the Philippines, in fact, inflation trended downwards in the later trimester and the BSP has indicated that it expects inflation to fall within the target range soon. GDP growth, on the other hand, is expected to remain one of the highest in the world, not only in 2023 but also into 2024 (**Figure 3.1**).

Figure 3.1: 2023 - 2024 Global Growth Outlook
In percent



Note: AE = Advanced Economies; EMDE = Emerging Markets and Developing Economies; EDA = Emerging and Developing Asia, CAN = Canada; CN = China; FR = France; IN = India; ID = Indonesia; IT = Italy; JP = Japan; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; SP = Spain; UK = United Kingdom; US = United States; VN = Vietnam.
Source: World Economic Outlook

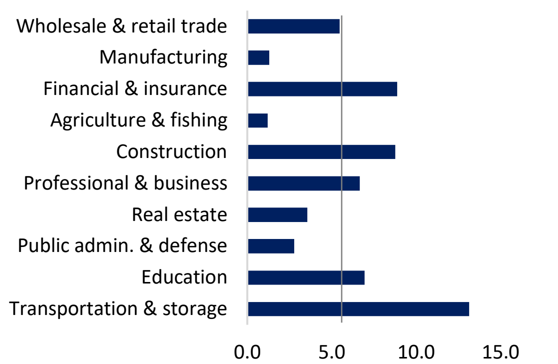
Understanding and communicating evolving systemic risks is difficult. Such risks are assumed to be "big" disruptions and when there are no "big bang" events in macrofinancial indicators, then it is often dismissed as a hyperbole.

There are many difficulties with this thinking. For one, it is extremely unlikely that all macrofinancial variables uniformly show distress at the same time. This was certainly the case in 2023. Alongside the data on growth, inflation, and interest rates, employment numbers remained strong, and many firms continued to recover closer to their pre-COVID-19 conditions. There are always competing signals and taking a collective view is a much more nuanced activity.

For another, systemic-ness is neither about the initial shock nor necessarily a one-time event. The dislocations can take time to ignite, and when they do, they can spread slowly without much fanfare. The cliff effects that we want to avoid only become evident as the end result, not the initial shock. Contagion is a definite factor, explaining how individual and independent sparks can fuse into a fire that wreaks a much larger havoc.

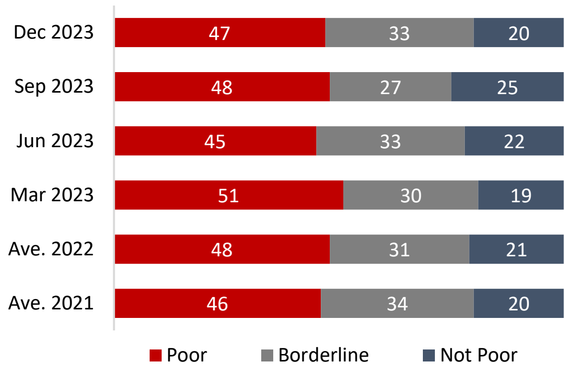
We need to take the positive vibes in stride. These positive perceptions are supported by the improving inflation numbers and the resilient growth. These provide the momentum into 2024. But as decidedly positive is the atmosphere today, we know that consumer price levels remain higher than before, affecting different constituents differently.

Figure 3.2: Real GDP Growth by Economic Activity*
In percent



** 2023 Top 10 in terms of weight total 86.9% of GDP*
Source: PSA

Figure 3.3 SWS Self-Rated Poverty
In percent



Source: Social Weather Stations Report

Many firms are expanding at a faster pace than what the GDP growth suggests, just as there will be firms still struggling with cashflows. Underpinning all these are the households, many of whom continue to repair impaired purchasing power and remain hopeful of better days ahead **(Figure 3.2 and Figure 3.3)**.

A considered view of competing data is needed to define shifting risks. A critical element in our analysis is to take a collective reading of risks. This faces two significant challenges. First, official data requires time to collate and process. Understandably, then these are announced with a lag. But with markets as fluid as they are, this is like driving using the rear-view mirror. Conditions can change quickly, and we need a more contemporaneous measure.

Second, the data will reflect both positives and negatives. These have to be weighed. However, what is important is not necessarily finding the balance of the data. Instead, what is most relevant is how stakeholders act on the news. That is, we need to establish the market's contemporaneous perception of risk which shows in the way they take risks in the market. The official data then are useful guides, but a more direct measure of risk-taking behavior is needed.

On balance, we classify the market's behavior as Risk-On. We propose a novel way of assessing risk perceptions (see **Box Article 5**). Its main advantage is that it is a contemporaneous measure and is generated daily. And since it reflects the risk-taking behaviors in the financial market, it is also forward-looking by construction. This is backtested against lagging aggregate data to assess reliability of turning points. This should provide useful clues about market direction and whether we are heading towards a "Wile E. Coyote" effect.

We borrow the terminology used in investment strategy and find that the market is squarely in Risk-On territory. What is driving this is the appreciation that the extent of negatives expected under a high-inflation-high-interest-rate environment has not (yet) materialized. This provides the impetus to be hopeful for 2024.

There are many dimensions to this Risk-On stature. The measure is found to be sensitive to major news in foreign markets, particularly from the US Fed. It would be useful, however, to better sensitize the local market to more domestic risks. This allows us to actively take hold of our path forward, particularly under stressed market conditions.

BOX ARTICLE 5
Risk-On Risk-Off

We need a way to (a) assess and (b) act upon the risks in financial markets. We seek a metric that incorporates market expectations and can guide further action. We propose two measures.

Yield market COVID-19 and moving forward in the capital markets

The yield curve is the natural candidate for a risk measure because it provides a daily reading of the relative price of term risks. Ideally, spot rates would be preferred. These are the pure price per tenor bucket and are used for discounting future cashflows into today's prices.

Rather than focus on the rates, we assess the changing slope of the yield curve between the 5-year and 2-year tenors. Our assessment depends on two factors.

First, we look at the general direction of the curve, either steepening or flattening. Second, it is important to understand what is driving this changing slope. The source of the change can either come from the shorter tenor or more so from the longer end. When combined, the interplay reflects what the market is anticipating. This is a useful feature. For example, instead of highlighting current (mostly already evident) difficulties, the more actionable insight is the market's expectation of what lies ahead. The authorities can intervene to address further gloom or nurture the forming optimism.

Table A: Yield Curve Shifts and Market Behavior

Curve Movement	Source of Change	Market Expectation
Bearish Flattening	*Short-term rates rise faster than long-term rates*	*Markets expect a policy rate increase and a resulting contraction. This is taken as a negative for the capital market.*
Bearish Steepening	*Long-term rates rise faster than short-term rates*	*Suggestive of rising inflation outlook and likely policy rate increase. Investors sell LT securities and re-enter later.*
Bullish Steepening	*Short-term rates fall faster than long-term rates*	*The central bank is anticipated to lower its policy rate to stimulate the economy.*
Bullish Flattening	*Long-term rates fall faster than short-term rates*	*Longer-term outlook is improving and investors price-in lower rates. This gives the central bank room to lower the policy rate.*

Source: MSCi

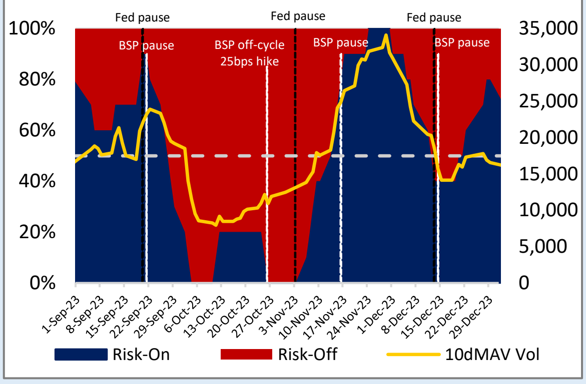
Both bullish steepening and bullish flattening are consistent with a forward-looking Risk-On. The current state may not be encouraging but there are positive expectations, nonetheless. This arises either from a policy rate loosening or from an improving general outlook.

For any given day, we calculate the share that the indicator has been Risk-On or Risk-Off over the past 10-days. We supplement this with a 10-day moving average of trading volumes, the direction of which should also reflect the relative balance between Risk-On and Risk-Off sentiments.

We find that the market finished 2023 in Risk-On territory. The switch from Risk-Off to Risk-On occurred at the start of November when the Fed announced a pause on further tightening. Backtesting shows that the measure responds more to US/global news than to domestic.

Figure F: Yield Market Risk Appetite

Percent of rolling 10-days, Volume in million securities [RHS]



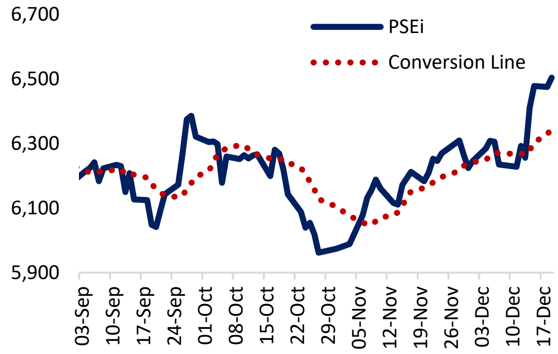
Source: OSRM Calculation, PDS

Corporate income market

We supplement the risks embedded in the dynamics of secondary market yields by looking at the transactions in the equities market. From first principles, stock market prices arise from discounting the stream of expected earnings of a listed firm. Since the yield market already accounts for the discounting aspect, the signals from the stock market price can be used as a proxy for corporate income. Specifically, we seek to know how much of the stock price movement is due to changes in income and how much is due to the discounting effect.

Transacted daily, changes in stock prices reflect the market between a firm's own income projections and investors' perception of those projected earnings. All things the same, stock prices rise if the market takes a positive view that the income projections can be exceeded.

Figure G: PSEi Movement
Index points, Moving Averages



Source: PSE, Bloomberg, OSRM Calculation

A 10-day moving average of the PSE index (PSEi) (**See Figure G**) is used to assess the general direction of the equity market. While this is a lagging indicator of market sentiment and trade activity, it does smoothen day-to-day spikes that may be due to idiosyncratic factors. This moving average is then compared against the current PSEi as a measure of risk sentiment.

We define a Risk-On situation when two conditions are met:

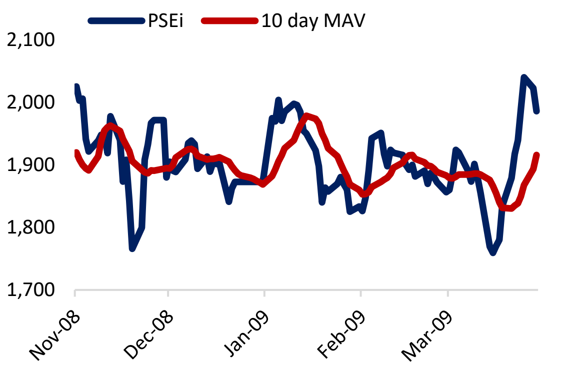
a. The current PSEi value exceeds the 10-day moving average, and
b. The 10-day moving average has direction i.e., a positive slope over its last 10 values.

The possibility of divergence

In principle, Risk-On reflects consistency between our yield and income market measures. However, there can always be situations where the results differ in direction. We refer to this as a Signal-Expectation Divergence (SED). Here, the sentiment of traders in the yield market may not be aligned with the income prospects from the equities market. There may also be cases where the real economy is at a certain state (and reflected in the equities market) but financial authorities are providing rate signals (which could transmit into the yield market) that are purposely meant to contain market highs or lift it from excessive lows.

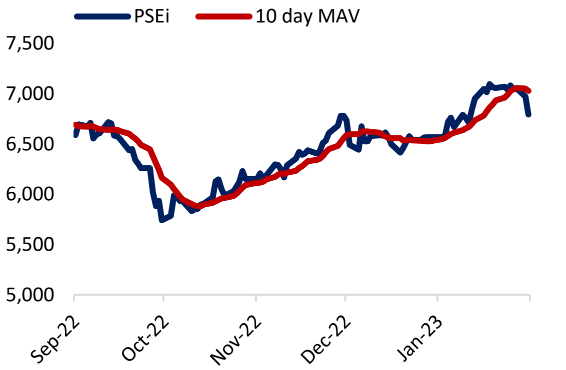
Our expectation is that the signals from secondary market yields and the expectations from the corporate income market will eventually align. The use of moving averages in both measures should be stabilizers in this regard. As long as SED is the state of play, the financial market effectively moves sideways, and the real economy has no directional traction.

Figure H. PSEi Pricing and Valuation Nov 2008-Mar 2009
Price Index, Units



Source: PSE, LSEG, OSRM Calculation

Figure I. PSEi Pricing and Valuation Sep 2022-Jan 2023
Price Index, Units



Source: PSE, LSEG, OSRM Calculation

There is also a universal perception that the rate hike cycle of central banks has ended. With rate cuts ahead, this is expected to lift markets. Already, this is the overarching narrative in the US, and certainly here at home. The debate seems to focus more on how many rate cuts and how soon.

3.2. Moving forward into 2024

As firms act and sustain this positive perception, we expect the demand for both liquidity and term funding to increase. The banking industry has enough space for this increased leverage, subject to regulatory limits. But the capital market could take an increasing role, as discussed above. Since differences matter, understanding sectoral dependencies in a network model – including current choke points – is important for the distribution of liquidity and funding.

Access to liquidity. A notable part of the defensive strategy of firms is their rebalancing of outstanding debts to shorter maturities. This limits the lock-in costs created by higher rates, but it does come at the price of increasing the demand for rollover liquidity. This will continue with the expectations of rate cuts and will escalate even more when the expectation becomes reality.

The macroprudential policy issue is determining the extent to which liquidity fuels more risk-taking today, sustaining momentum without endangering longer-term inflationary and growth prospects. Given the Risk-On stance and the positive atmosphere, now is a good time to consider added guard rails that are preventive but not obstructive. Typically, these policy tools fall under (a) bank capital instruments, (b) borrower-based measures, or (c) liquidity-related tools. For the latter two, we can consider in the local context:

- Debt-to-Earnings-of-Borrower's Test (DEBT) – this is a variant of a debt-to-income (DTI) measure that is already in place in many jurisdictions. This can be tightened or loosened as market conditions warrant, using for example, sectoral break-even ICRs.

- Countercyclical Buffer (CCyB) – similar to the DEBT, this should be loosened or tightened as market conditions warrant. Currently, this is set at zero percent and cannot be used to release funding into markets. Many jurisdictions have shifted to a non-zero rate as the norm.

Supporting firm-level requirements. Liquidity is not an issue of the aggregate amount in the system. We need to ensure that firms, households, and individuals can access it. This is an action item for financial institutions, not the regulators. LSFs, in particular, need liquidity more urgently than others, but the Risk-On state should not also compromise suitable standards of risk governance.

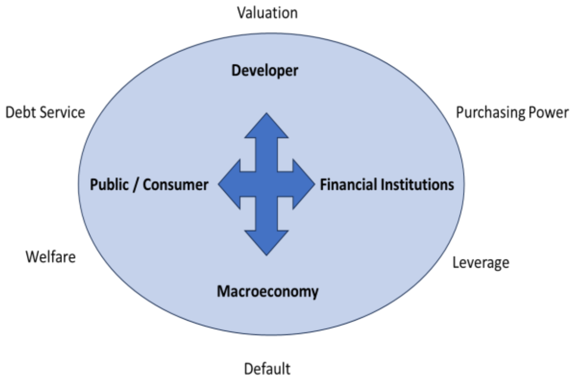
To better manage future systemic risks, sectoral and firm-level differences need to be established. As discussed in Chapter 1, the FSCC already actively monitors this. However, more granularity helps in targeting interventions. After all, one major difference between the macroprudential objective and macroeconomic policy is that the former avoids a uniform treatment of economic segments and tries to provide more targeted interventions.

In this context, sector-specific risk assessments (i.e., sectoral risk weights for computing capital adequacy of bank exposures, for example) are popularly raised. While there are benefits, it is also a signaling mechanism that could create moral hazard difficulties. Sectors with higher risk weights will invariably require higher debt pricing, a concept that may be appealing on paper but could further burden existing constraints. This requires further thinking on how risks are transparently priced and how the financial market can help ease choke points in these sectors without effectively rationing them out of the market.

Going back to real estate. Real estate will always be closely monitored given its stylized role in the boom-and-bust cycle. At present, there seems to be some surprising trends in the residential sector, with prices rising in tandem with vacancies. With the loan portfolio of banks significantly invested in real estate activities, prudence requires a second look. Are housing prices rising because of the rising cost of construction and development? Is this, instead, an indication of generational wealth planning getting ahead of the supply that has been delayed by COVID-19? Or is this a more ominous sign?

To conclude at this point is premature. To suggest that this requires closer monitoring states the obvious. To ask for more granular data simply reiterates a longstanding need.

Figure 3.4: Real Estate's Community of Interlinkages



Source: OSRM

What is clearer is that the sharper rise in residential prices in areas outside Metro Manila relative to NCR aligns with the anecdote that much of the community-type developments are being done outside Metro Manila. This can be taken as an investment into the future, with the added benefit of a "get away" from the crowded metropolis. CRE, though, appears to still be facing the scars of COVID-19. This should not be left unattended and may be an area for active discussion with market constituents.

All these notwithstanding, it is important to appreciate how real estate connects to a broader ecosystem (**Figure 3.4**). RRE borrowers match their socio-economic conditions with a view of the general economy. Developers address such a match through capital investments, funded in part through loans. That brings in the banks which typically provide the funding, while local governments and/or housing authorities provide the permits and undertake land management. When things work out, all of these are synergistic. Only when things do not happen as planned will the interlinkages be highlighted even more.

Medium-to-Long-Term funding. Banks have long been the major funding source for the economy. Nothing in the current environment will change that. But bank loans must price credit risk **and** liquidity risk because the money they lent out is itself borrowed from the public. Provisioning takes the conservative view by adjusting the size of the balance sheet, but it does not rectify the liquidity gap should a loan account become payment-impaired.

This is where we heed Greenspan's reminder that spare tires are necessary where there is that unexpected flat tire. Capital market development has been a longstanding mantra, but this segment of the market remains modest vis-à-vis bank loans. Several initiatives have already been put in place. We look forward to more initiatives and, in particular, our attention is to provide corporates from different credit backgrounds with access to this market. This will require better signaling of risk pricing:

a. Updating of issuer and issue ratings through the credit cycle.
b. Determining spot rates to ensure comparability through properly discounted future cashflows.
c. Aligning risk pricing between loans and securities to reflect structuring and information costs.

Getting ready. The momentum that we enjoy from the Risk-On stance presents many opportunities for us. We should take advantage of and sustain the positive atmosphere. At the same time, we should not get ahead of ourselves and fall into a trap of irrational exuberance. Conditions evolve and perceptions adapt to those changes.

What is needed is to be proactive rather than reactive. Just as the authorities require covered institutions to have Business Continuity Plans (BCPs) in place, so must the system. The Systemic Risk Crisis Management (SRCM) framework was approved by the FSCC for this purpose. This has to be institutionalized however with better definition of key components.

Among the elements being finalized are:

a. Defining a state of vulnerability prior to entering into a point of systemic stress. This involves calibrating dynamic thresholds for key variables.
b. Pre-identifying crisis protocols within the financial market that serve as a baseline. These should be activated by the Council at key trigger points consistent with the dynamic thresholds. These protocols are the minimum and can be extended as conditions

warrant. Having them also avoids *ad hoc* relief measures that may have unintended consequences over the longer term.

c. Invoking communication pre-set protocols is just as important. This keeps the messaging proactive and avoids being the source of further uncertainty. This cannot be instigated only under stressed conditions and must be developed under more normal times. The public needs to understand that risk is not the problem. Rather it is the uncoordinated and *ad hoc* handing of risks which is the challenge.

EPILOGUE

There is palpable momentum in the market. We should maximize the opportunities this presents but appreciate as well that this momentum is neither permanent nor absolute.

What is certain is that the Risk-On stance opens opportunities that are not infinite. Taking advantage of these opportunities then requires a good measure of self-awareness. That is, we should distinguish between the inconvenient potholes that will deter our progress and the dangerous manholes that should be totally avoided.

Macroprudential policy must lean against a possible Minsky moment. It is easy enough to maintain pessimism when the market indicators are uniformly down. But history provides enough examples of how markets can take on risks when there are no clear signs of stress, only to find out later that the risks cannot be managed. We then must heed the point of Minsky, who argued that the roots of instability are sown during periods of stability. As the positive vibes nurture risk-taking, momentum is built which begets more risk-taking. Beyond some future point that is typically unknown to market constituents, either some intervening development surprises the markets or the risks can no longer be borne by the system. This is the Minsky moment against which we must guard. After all, prudent risk management works on both sides of the coin: we should temper excessive highs and lift against extreme lows.

At this juncture, there is no evident sign of excessiveness. Having shifted to a Risk-On stance in November, many things can still play out in the economy and in the financial market.

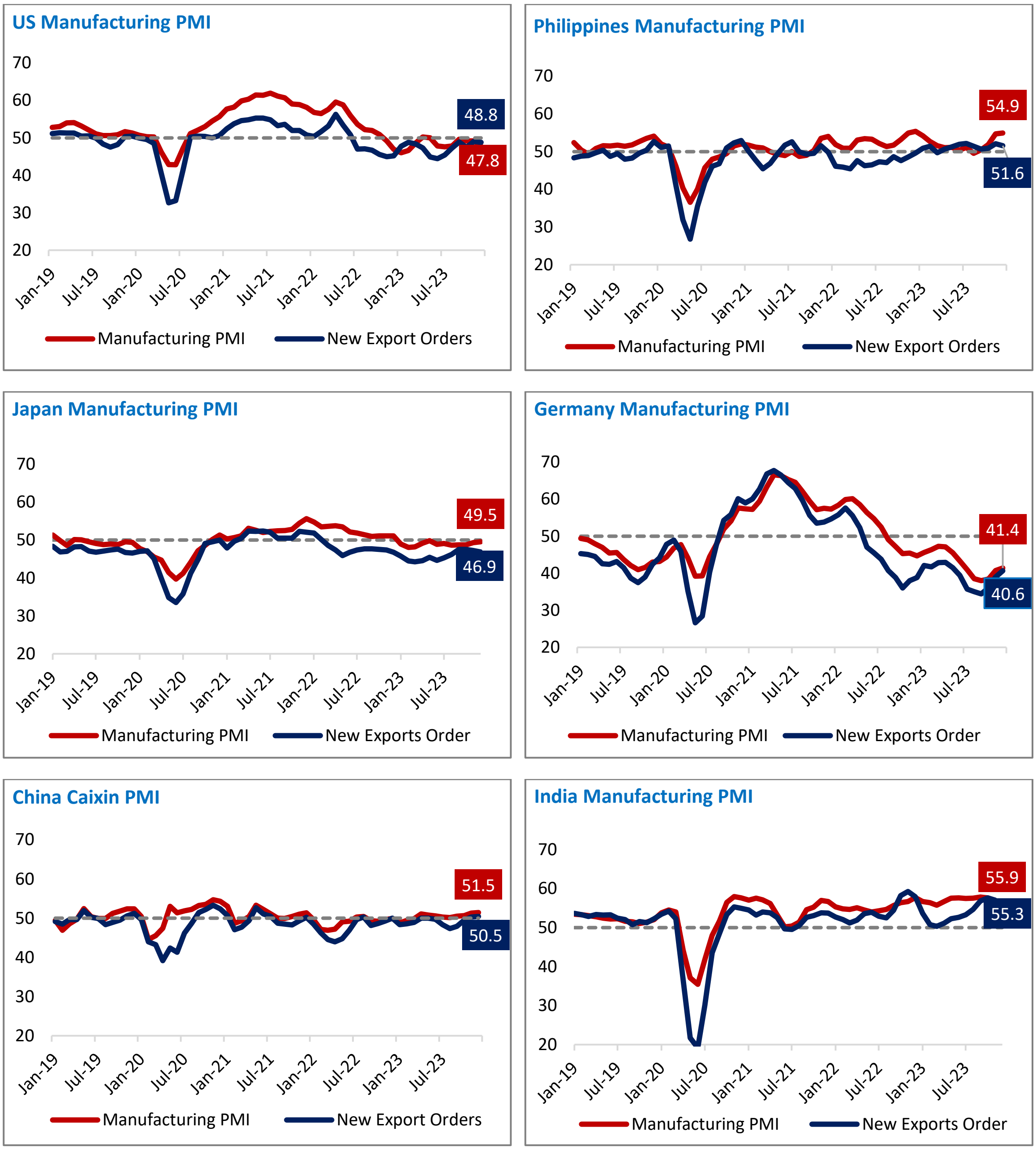
All eyes still on the Fed. Yet, the Risk-On stance is a product of perception, based on the view that a US-led recession has not materialized. Markets though are fickle and arguably, with a heightened state of interconnectedness, increasingly fickle. Things can change in timing and magnitude with fresh new economic data or if stakeholders misread the pronouncements of authorities. The Fed Chairman described the uncertainties as akin to “navigating by the stars under cloudy skies.” The December 2023 FOMC press statement acknowledges that the rate hike cycle “is likely at or near its peak.” However, the Fed also qualifies that they are looking for further assurance that inflation is irreversibly heading towards their two percent objective.

Analysts heard a resounding indication of the policy pivot. The December headline inflation in the US at 3.4 percent is higher than expected but in the broader scheme of things, this is unlikely to change the perception of many. On our part, we believe that the assurance being sought by the Fed requires that declining inflation be accompanied by a softening labor market. This is not yet the case, with employers adding a stronger-than-expected 216 thousand in non-farm payroll for the month of December.

Higher stays a bit longer. Our view then is that any expectation of an early rate cut is optimistic. It is more likely that the Fed will keep its policy rates elevated over a longer period than expected by the market. Progress has been made, and by extension, the spillover pressures are not as pronounced. But the task of calibrating the economy with policy rates is also not yet complete. This is why most central banks do not take off the table the possibility of yet another rate hike.

A further slowdown is not implausible. There are many moving parts whose outcomes are still very much undecided. Manufacturing Purchasing Manager's Index (PMI) for the six largest economies, however, provide one such downside risk. (**Figure 4.1 of PMIs and their 3-month MA**). The US, Germany, Japan, and the UK – which collectively account for 37.3 percent of global GDP[10] – are signaling a contraction. Consistent with forecasts from the IMF, it is the Asian economies that provide lift. China, for all its reported difficulties, is above the threshold of 50 while India is the clear outlier for expansionary expectations. The Philippines, for its part, is showing a general expansionary trend.

Figure 4.1: Selected Countries PMI
Diffusion Index, Not Seasonally Adjusted, 3MMA



Source: S&P Global, LSEG Datastream

[10] Based on October 2023 IMF World Economic Outlook

In a world of information and experience, market stakeholders adapt. The start of a new year is when people look ahead and offer their prognosis. We think that too many factors are still working themselves through the system. It is early days, but nonetheless, the positive vibe is undeniable. We are squarely at Risk-On territory.

But the dynamism in the market is not just because change is the norm. Instead, it is because risk behaviors adapt to the changes and adopt an adjusted risk mindset.

This seemingly obvious point is surprisingly a challenge for traditional models, metrics, and measures. The traditional quants rely on behaviors being stationary and therefore reasonably repeating themselves with enough regularity for forecasts to be made. We think that the fluidity of the markets since March 2020 makes this difficult to assume and rely upon. We talked about the scars from COVID-19, and although its full extent will not be evident for some time, the narrative has already moved on to the effects of higher-for-longer. At least, a bit longer, but up to when, we do not really know.

Change and moving forward. 2023 itself is a recent example of change and surprise. The combination of high inflation, aggressive rate hikes cum geo-political frictions did not lead to the widely expected recession. Perhaps the prognosis for this is not yet that final. Arguably, however, financial markets were "watched" more intently in 2023, with very noticeable differences in narratives.

Back in October 2021, market players in the US signaled brewing risks ahead and their yield curve started to rise. This was months ahead of the US Fed publicly stating that rising inflation needed an interest rate response. Fast forward to 2023, loud voices in the financial market were arguing that the US had tightened "too much," stifling what was developing to be a boom financial market.

The authorities stand on solid ground to base their actions on official data. Even star gazing has rhyme and reason. But market participants equally have reason to believe what they believe. They are, after all, "on the ground."

There must be a better way to manage this gap. While divergent views help polish sharp edges, they can also be the source of cliff events. This is our impetus for proposing a contemporaneously determinable but forward-looking Risk-On Risk-Off measure using high-frequency data. Although we find this measure to respond more to US market news, it still reflects the perceptions of market players themselves through their trading activity. That is, we are less focused on the accuracy of absolute market prices or rates but instead consider the expectations that underpin changes in financial prices and rates. This also reiterates the necessity for continuously improving the debt markets and their corresponding price signals.

Right now, the signal shows Risk-On. This is welcome news and should be nurtured. But with financial markets able to shift quickly, this must also be managed with deliberate care. With risks, particularly systemic risks, surprises are the last thing we desire.

All these notwithstanding, Risk-On is ultimately an indicator that liquidity is much more willingly deployable. Stakeholders are open to taking more risks, and this is reflected in the increased demand for and release of liquidity. What Risk-On cannot do is determine in which economic activities that liquidity will be used. This is inherently and remains a private sector decision.

The FSCC's responsibility as the macroprudential authority is to mold risk behaviors by providing guard rails where necessary and contravening any emerging excesses. With Risk-On, the positive vibes and the forward momentum can disguise some risks. This can be a real risk. We heed Greenspan who reminds of "irrational exuberance", and these could lead to Minsky moments. Still, this is a problem that can be pro-actively managed, and it is better than facing embedded pessimism in a Risk-Off stance.

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