Monetary Policy Report

November 2022

Foreword

The primary objective of monetary policy is to promote a low and stable rate of inflation conducive to a balanced and sustainable economic growth. The adoption in January 2002 of the inflation targeting framework for monetary policy was aimed at helping to fulfill this objective.

One of the key features of inflation targeting is greater transparency, which means greater disclosure and communication by the BSP of its policy actions and decisions. The Monetary Policy Report plays a primary part in the BSP's transparency mechanisms under inflation targeting. It is geared towards sharing with stakeholders, including market counterparties, the latest assessment of the stance of monetary policy based on an analysis of the economic and financial prospects. At the same time, the broad aim is to contribute to making monetary policy accessible to the public. The report will help enable them to better understand and monitor the BSP's commitment to the inflation target, promote the anchoring of inflation expectations as well as encourage informed debate on monetary policy issues.

The Monetary Policy Report, which replaced the quarterly publication of the Inflation Report, serves as the flagship BSP publication on monetary policy that provides the public a detailed view of the BSP's forecasts and guidance on the likely direction of monetary policy over the next two years. The report conveys to the public the overall thinking behind the BSP's decisions on monetary policy. The greater part of the report is devoted to the forward-looking discussions on inflation and the key macroeconomic variables that affect inflation, as well as the risks and uncertainty surrounding the BSP's inflation forecasts.

The government's target for annual headline inflation under the inflation targeting framework has been retained at 3.0 percent ± 1.0 percentage point (ppt) for 2022-2024 by the Development Budget Coordination Committee. The inflation target range continues to be an appropriate quantitative representation of the medium-term goal of price stability that is appropriate for the Philippines given the current structure of the economy and outlook of macroeconomic conditions over the next few years.

The Monetary Board approved this Monetary Policy Report at its meeting on 17 November 2022.

FELIPE M. MEDALLA
Governor

The Monetary Policy of the Bangko Sentral ng Pilipinas

The BSP Mandate

The BSP's main responsibility is to formulate and implement policy in the areas of money, banking and credit, with the primary objective of maintaining stable prices conducive to a balanced and sustainable economic growth and employment in the Philippines. The BSP also aims to promote and preserve monetary stability and the convertibility of the national currency.

Monetary Policy Instruments

The BSP's primary monetary policy instrument is the interest rate on its overnight reverse repurchase (RRP) facility. Other instruments to implement the desired monetary policy stance to achieve the inflation target include (a) increasing/decreasing the reserve requirement (RR); (b) conducting auctions for the term deposit facility (TDF) and BSP Securities Facility;[1] (c) adjusting the rediscount rate on loans extended to banking institutions on a short-term basis against eligible collateral of banks' borrowers; and (d) outright sales/purchases of the BSP's holdings of government securities.

Policy Target

The BSP's target for monetary policy is the average annual Consumer Price Index (CPI) (or headline) inflation rate, which is compiled and released to the public by the Philippine Statistics Authority (PSA). The policy target is set by the Development Budget Coordination Committee (DBCC)[2] in consultation with the BSP. The inflation target for 2022-2024 is 3.0 percent ± 1.0 ppt.[3]

BSP's Explanation Clauses

Explanation clauses are a prespecified set of acceptable circumstances under which an inflation-targeting central bank may fail to achieve its inflation target. These clauses reflect the fact that there are limits to the effectiveness of monetary policy and that deviations from the inflation target may sometimes occur because of factors beyond the control of the central bank. Under the inflation targeting framework of the BSP, these exemptions include inflation pressures arising from: (a) volatility in the prices of agricultural products; (b) natural calamities or events that affect a major part of the economy; (c) volatility in the prices of oil products; and (d) significant government policy changes that directly affect prices such as changes in the tax structure, incentives, and subsidies.

---

[1] The TDF was introduced under the interest rate corridor (IRC) system which was implemented on 3 June 2016. In addition, the BSP Securities Facility was introduced on 18 September 2020 with the first issuance of the BSP 28-day bills.

[2] The DBCC, created under Executive Order No. 232 dated 14 May 1970, is an inter-agency committee tasked primarily to formulate the National Government's fiscal program. It is composed of the Office of the President (OP), Department of Budget and Management (DBM), National Economic and Development Authority (NEDA), and the Department of Finance (DOF). The BSP attends the Committee meetings as a resource agency.

[3] During the DBCC meeting held on 8 July 2022, the DBCC in consultation with the BSP, decided to retain the current inflation target range at 3.0 percent ± 1.0 percentage point for 2022 – 2024.

The Monetary Board

The powers and functions of the BSP, such as the conduct of monetary policy and the supervision over the banking system, are exercised by its Monetary Board (MB), which has seven members appointed by the President of the Philippines. The Monetary Board holds eight (8) monetary policy meetings in a year to review and decide on the stance of monetary policy.

Chairman and Governor
Felipe M. Medalla

Members
Benjamin E. Diokno
Peter B. Favila
Antonio S. Abacan, Jr.
V. Bruce J. Tolentino
Anita Linda R. Aquino
Eli M. Remolona

The Advisory Committee

The Advisory Committee was established as an integral part of the institutional setting for inflation targeting. It is tasked to deliberate, discuss, and make recommendations on monetary policy to the Monetary Board. Like the Monetary Board, the Committee meets eight times a year but may also meet between regular meetings, whenever deemed necessary.

Chairman
Felipe M. Medalla
Governor

Members
Francisco G. Dakila, Jr.
Deputy Governor
Monetary and Economics Sector

Chuchi G. Fonacier
Deputy Governor
Financial Supervision Sector

Eduardo G. Bobier
Deputy Governor
Corporate Services Sector

Ma. Ramona GDT Santiago
Senior Assistant Governor
Financial Markets

Iluminada T. Sicat
Senior Assistant Governor
Monetary Policy Sub-Sector

Johnny Noe E. Ravalo
Senior Assistant Governor
Office of Systemic Risk Management

Technical Staff

Head

Dennis D. Lapid
Officer-in-Charge
Department of Economic Research

Members

Lorelei S. Fernandez
Senior Director
Financial Market

Redentor Paolo M. Alegre Jr.
Senior Director
Department of Economic Statistics

Office of Systemic Risk Management

Maria Cynthia M. Sison
Officer-in-Charge
Supervisory Policy and Research Development

Thea Josefina Natalia W. Santos
Director
Capital Markets and Trust Supervision Department

Lara Romina E. Ganapin
Director
Monetary Policy Research Group

Jasmin E. Dacio
Deputy Director
Economic and Financial Forecasting Group

DER Technical Support Staff Members
Monetary Policy Research Group
Economic and Financial Forecasting Group
Financial Markets Research Group

2022 SCHEDULE OF MONETARY POLICY MEETINGS, PUBLICATION OF THE MB HIGHLIGHTS AND MONETARY POLICY REPORT

2022	Monetary Board (MB) Meeting	MB Highlights Publication	Monetary Policy Report (MPR)
Jan		13 (Thu) (16 Dec 2021 MB meeting)	
Feb	17 (Thu) (MB Meeting No. 1)		18 (Fri) (MPR - Feb. 2022)
Mar	24 (Thu) (MB Meeting No. 2)	17 (Thu) (17 Feb 2021 MB meeting)	
Apr		21 (Thu) (24 Mar 2021 MB meeting)	
May	19 (Thu) (MB Meeting No. 3)		20 (Fri) (MPR – May 2022)
Jun	23 (Thu) (MB Meeting No. 4)	16 (Thu) (19 May 2021 MB meeting)	
Jul		21 (Thu) (23 Jun 2021 MB meeting)	
Aug	18 (Thu) (MB Meeting No. 5)		19 (Fri) (MPR – Aug. 2022)
Sep	22 (Thu) (MB Meeting No. 6)	15 (Thu) (18 Aug 2021 MB meeting)	
Oct		20 (Thu) (22 Sep 2021 MB meeting)	
Nov	17 (Thu) (MB Meeting No. 7)		18 (Fri) (MPR – Nov. 2022)
Dec	15 (Thu) (MB Meeting No. 8)	15 (Thu) (17 Nov 2021 MB meeting)	

Table of Contents

Monetary Policy Summary

At its monetary policy meeting on 17 November 2022, the BSP decided to raise the interest rate on the overnight reverse repurchase (RRP) facility by 75 basis points to 5.00 percent, effective 18 November 2022. Accordingly, the interest rates on the overnight deposit and lending facilities were raised to 4.50 percent and 5.50 percent, respectively.

Inflation is projected to remain elevated in the near term. The latest forecast path indicates that inflation is likely to peak in Q4 2022 and remain above the National Government's target range of 2-4 percent until Q2 2023. Inflation is then seen to decelerate back to within the target range by Q3 2023 and approach the low end of the target range in Q4 2023 to Q1 2024 due to negative base effects, and eventually stabilize at the midpoint of the target by Q2 2024.

The risks to the inflation outlook are still skewed to the upside, particularly for 2023, but remain broadly balanced for 2024. Major upside risks to the inflation outlook are the potential impact of higher fertilizer prices; trade restrictions and adverse global weather conditions on international food prices; increased prices of fruits and vegetables owing to domestic weather disturbances; petitions for tricycle fare hikes due to elevated oil prices; higher sugar prices; and the possible reinstatement of the full tariff rates on several imports such as pork and rice that were temporarily lowered under Executive Order (E.O.) No. 171. Meanwhile, the impact of a weaker-than-expected global output recovery is the primary downside risk to the outlook.

Inflation expectations have risen further and remain at risk of disanchoring. Private sector economists surveyed in November 2022 reported a higher mean inflation forecast for 2022 at 5.9 percent from 5.7 percent in the October 2022 survey. Similarly, the mean inflation forecast for 2023 and 2024 increased to 4.9 percent (from 4.6 percent) and 4.0 percent (from 3.8 percent), respectively. In addition, the preliminary results of the BSP's Q3 2022 Business Expectations Survey (BES) and Consumer Expectations Survey (CES) indicate that both sectors anticipate inflation to breach the upper end of the target range for 2022 and 2023. The sum of recent data therefore suggests a possible disanchoring of inflation expectations relative to the target range, particularly for 2023.

GDP growth is projected to settle within the DBCC's target range of 6.5-7.5 percent for 2022, but economic headwinds could result in slower GDP growth in 2023 and 2024. The full-year growth forecasts for 2022 and 2023 were adjusted upwards from the August 2022 Monetary Policy Report (MPR) due to the upward revisions in Q2 2022 GDP, the stronger-than-expected growth performance in Q3 2022, and the higher world GDP growth assumption for 2022. Meanwhile, the forecast for 2024 is lower, reflecting slower external demand as well as the impact of the BSP's monetary policy tightening.

Domestic economic activity has recovered above its pre-pandemic level and is projected to reach slightly above potential. Staff estimates indicate that the output gap is projected to turn positive in 2023, largely reflecting the sustained expansion in 2022. Output gap will return to broadly neutral territory in 2024 as the impact of the BSP's policy rate adjustments take hold on the economy. Improved external trade competitiveness and sustained remittances amid peso depreciation, albeit the slowdown in global growth outlook, could drive the higher domestic output gap. Meanwhile, potential output is expected to sustain its recovery given the continued reopening of the economy, improvements in labor conditions, and investment growth.

Expansion in domestic liquidity will continue to support the country's funding requirements. Domestic liquidity (M3) is projected to increase in 2023 and 2024, although at a slower rate than the previous round. The downward revision is primarily due to the lower-than-expected outturns for Q3 2022, as well as higher domestic interest rates following the BSP policy rate hikes in August and September 2022. These were partly offset by the stronger domestic growth outlook for 2022 and 2023. Moreover, based on the BSP's Q3 2022 Senior Bank Loan Officers' Survey, banks have generally maintained their loan standards which, in turn, will help sustain credit activity. Stable loan demand from businesses and consumers was also seen in Q3 2022 and in the next quarter.

In consideration of these factors, the BSP is of the view that a strong monetary action is needed to help reduce the risk of a disanchoring of inflation expectations and inflation becoming entrenched. Inflation has proven to be more persistent than previously expected. The sharp rise in core inflation also reflects second-round effects primarily from the transport fare increases. These developments suggest that inflation expectations remain at risk of rising further, especially amid indications of pent-up demand conditions following the easing of pandemic-induced restrictions.

Further monetary policy action will also help to mitigate the impact of exchange rate fluctuations on inflation expectations, even as the exchange rate pass-through to headline inflation remains manageable. Nonetheless, the BSP must also maintain enough flexibility to respond to spillovers from tighter global financing conditions.

At the same time, further monetary policy tightening may exert pressures on the domestic financial system as prior policy rate increases continue to gain traction on market interest rates. In so far as macro-financial vulnerabilities are concerned amid rapid tightening of financial conditions, macroprudential and supervisory measures currently in place are seen to mitigate the risk.

The BSP also recognizes the importance of complementary action to monetary policy tightening. Addressing high inflation over the policy horizon therefore also requires targeted measures by the National Government to alleviate supply bottlenecks and strengthen farm productivity to prevent inflation from becoming further entrenched. A firm monetary policy response in tandem with timely implementation of targeted fiscal initiatives is crucial in taming inflation and steering the economy towards a sustainable growth path.

I. Economic Outlook

1. Baseline Forecasts

The baseline inflation forecasts were revised upwards from the previous round to 5.8 percent for 2022 and 4.3 percent for 2023. Meanwhile, the inflation forecast for 2024 was slightly lower at 3.1 percent. The 2022 and 2023 inflation forecasts are higher compared to the previous forecast by 0.4 ppt and 0.3 ppt, respectively. The upward revisions are mainly driven by the higher-than-expected inflation outturns in Q3 2022, higher nowcast for Q4 2022 due to the nationwide transport fare hikes and weather-related disturbances during the quarter, higher GDP growth projections, and peso depreciation. These factors were partly offset by lower global oil and non-oil price assumptions. Meanwhile, the forecast for 2024 is lower by 0.1 ppt due to the projected impact of BSP's policy rate adjustments in August and September 2022.

Table 1. BSP Average Baseline Inflation Projections
in percent

	August 2022 Monetary Policy Report [a]	November 2022 Monetary Policy Report [b]
2022	5.4	5.8
2023	4.0	4.3
2024	3.2	3.1

Source: BSP estimates
[a] Baseline forecasts from 18 August 2022 monetary policy meeting
[b] Baseline forecasts from 17 November 2022 monetary policy meeting

Inflation is projected to remain elevated in the near term. The forecast path indicates that inflation could peak in Q4 2022 and remain above the target range until Q2 2023. Inflation is seen to decelerate back to within the target range by Q3 2023 and approach the low-end of the target range in Q4 2023 to Q1 2024 due to negative base effects, before stabilizing at the midpoint of the target by Q2 2024. The projected deceleration of the inflation path can be attributed to the easing global oil and non-oil prices and negative base effects from transport fare adjustments in 2022 as well as the impact of BSP's cumulative policy rate adjustments.

The inflation path continues to be driven by supply-side factors as price pressures from elevated global commodity prices broaden. While global non-oil price inflation has decelerated in Q3 2022, risks of renewed export restrictions, droughts in parts of China and the US, as well as the pass-through from higher fertilizer prices could pose upside risks to the outlook. Meanwhile, domestic supply conditions would likely be affected by the effects of weather disturbances.

GDP growth is projected to settle within the DBCC's target of 6.5-7.5 percent for 2022, but economic headwinds could result in slower GDP growth in 2023 and 2024. The full-year growth forecasts for 2022 and 2023 were adjusted upwards from the previous MPR due to the upward revisions in Q2 2022 GDP, the stronger-than-expected growth performance in Q3 2022, and the higher world growth assumption for 2022. Meanwhile, the forecast for 2024 is lower, reflecting the slower external demand as well as the impact of the BSP's monetary policy tightening.

Staff projections for Q4 2022 GDP growth indicate that domestic recovery is likely to remain firm. The continued improvements in the industry and services sectors due to the further easing of mobility restrictions as well as reopening of face-to-face classes are seen to drive the sustained expansion. Meanwhile, production losses caused by the recent typhoons could temper agricultural output.

Domestic economic activity has recovered above its pre-pandemic level. Domestic growth is seen to remain robust over the succeeding quarters in view of looser mobility restrictions, strong capital formation, return of domestic and foreign tourism, as well as greater MSME activities induced by the resumption of face-to-face classes. Moreover, the implementation of the Corporate Recovery and Tax Incentives for Enterprises (CREATE) Law, Financial Institutions Strategic Transfer (FIST) Act, and the second tranche in the reduction in personal income taxes are seen to further bolster the domestic outlook in 2023-2024.

The economy is projected to operate at slightly above potential. The overall balance of demand and supply conditions, as captured by the output gap or the difference between actual and potential output, provides an indication of potential inflationary pressures. Estimates from the BSP's Policy Analysis Model for the Philippines (PAMPh)[4] indicate that the output gap is projected to turn positive in 2023, reflecting largely the sustained expansion in 2022. The output gap will return to broadly neutral territory in 2024 as the impact of policy interest rate adjustments take hold on the economy. Improved external trade competitiveness and sustained remittances amid peso depreciation, notwithstanding the slowdown in global growth outlook, could drive the higher domestic output gap. Meanwhile, potential output is expected to sustain its recovery given the continued reopening of the economy, improvements in labor conditions, and investment growth.

Expansion in domestic liquidity (M3) will continue to support the country's funding requirement. M3 is projected to increase in 2023 and 2024, although at a slower rate than previous round. The downward revision is primarily due to the lower-than-expected outturns for Q3 2022, as well as higher domestic interest rates following the BSP policy rate hikes in August and September 2022. These were partly offset by the stronger domestic growth outlook for 2022 and 2023.

The exchange rate is expected to settle above the high end of the DBCC's assumptions of ₱51.00-53.00/US$1 for 2022 and ₱51.00-55.00/US$1 for 2023 and 2024.[5] The projected exchange rate path is higher than in the previous round, reflecting the continued depreciation of the peso as well as higher outlook for US interest rates, consistent with cumulative policy rate hikes by the Federal Reserve of 425 bps in 2022 and 50 bps in 2023.

---

[4] The PAMPh is a monetary policy model for a small open economy like the Philippines. It is a semi-structural gap model based on New Keynesian foundations with a general equilibrium framework and forward-looking features that allow for the assessment of the dynamic path of key macroeconomic variables in a theoretically consistent manner. The BSP is currently undergoing a multi-year technical assistance (TA) mission with the IMF's Institute for Capacity Development to further improve the structural features and forecasting performance of the PAMPh to serve as the BSP's workhorse model for medium-term forecasting and policy analysis.
[5] Based on the 182nd Development Budget coordination Committee (DBCC) Meeting on 08 July 2022.

2. Key Forecast Assumptions

External Factors

World GDP Growth. The latest global growth assumptions are based on the IMF's October 2022 WEO Update and the Global Projection Model Network's (GPMN) forecasts as of October 2022.[6] The outlook for global growth was unchanged in 2022 as the faster-than-expected expansions in China and US were offset by slower outlook in other trading partners. Meanwhile, global economic conditions are seen to slow down in 2023 with the further tightening of monetary conditions in major economies across the globe.

Table 2. World GDP Growth
in percent

	August 2022 Monetary Policy Report	November 2022 Monetary Policy Report
2022	3.2	3.2
2023	2.9	2.7
2024	3.0	3.2

Source: WEO (IMF, October 2022), WEO Update (IMF, July 2022)

In the October 2022 IMF WEO, the IMF maintained its full-year world growth projection of 3.2 percent in 2022, lower than the 6.1 percent full-year growth registered in 2021. World GDP growth is projected to further slow down to 2.7 percent for 2023, lower by 0.2 ppt from the July 2022 WEO Update. The deceleration in global economic activity could be attributed to the rapid tightening of financial conditions as central banks seek to bring down persistently high inflation, accompanied by withdrawal of fiscal support, which had previously propped up domestic demand. Moreover, continued uncertainty over energy supplies has contributed to slower real economic activity in Europe, dampening consumer and business confidence.

Dubai Crude Oil Prices. Global crude oil prices are set consistent with oil futures market data and the latest assessment by international energy agencies on the outlook for the global oil market. Developments in the domestic oil market are also assumed to broadly follow the trend in the world oil market. The Dubai crude oil assumptions in the latest round are based on the average futures path for the period 27 October to 9 November 2022.

Table 3. Dubai Crude Oil Price Assumptions
average, in US$ per barrel

	August 2022 Monetary Policy Report	November 2022 Monetary Policy Report
2022	100.8	98.9
2023	89.5	84.8
2024	83.7	77.4

Source: Bloomberg, BSP Estimates

[6] The economies in the trade-weighted world GDP include China, the Eurozone, Hong Kong, Indonesia, Japan, Korea, Malaysia, Singapore, Taiwan, Thailand, and the US. As of 2020, these countries account for 90.3 percent of total merchandise exports and 84.9 percent of total merchandise imports.

Assumptions for global crude oil prices are lower compared to the previous round. Crude oil prices are assumed to settle at US$98.90/bbl in 2022, US$84.8/bbl in 2023, and US$77.4/bbl in 2024. These assumptions are lower compared to the previous round by about US$1.9/bbl for 2022, US$4.7/bbl for 2023, and US$6.3/bbl for 2024. The decline in the latest oil price path is mainly driven by a weakening global demand following concerns about the prospect of a global recession. Moreover, the announced OPEC+ production cut of two million barrels per day is seen to have a limited impact on crude oil price, with many members already producing below quota.

To determine the impact on the inflation forecasts for 2023 and 2024 of various outturns for world oil prices, scenarios ranging from US$80.00-US$200.00 per barrel were simulated. The scenarios assume that oil prices are sustained at these levels starting December 2022. Inflation is seen to settle within the 2.0-4.0 percent target range in 2023 if Dubai crude oil price averages at around US$75 per barrel, while a higher than US$100 per barrel average may cause inflation to settle above target in 2024. It should be noted that these oil price scenarios considered only the direct effects and do not incorporate any potential second-round effects on transport fares, food prices, and wage increases among others.

Table 4. Impact of Alternative Dubai Crude Oil Price Scenarios on Inflation
in percentage points

Year	2023	2024
Baseline Inflation Forecast	4.3	3.1
$80	4.0	3.3
$90	4.4	3.6
$100	4.8	4.0
$110	5.1	4.3
$120	5.4	4.5
$130	5.6	4.8
$140	5.9	5.0
$150	6.1	5.2
$160	6.4	5.4
$170	6.6	5.6
$180	6.8	5.8
$190	6.9	5.9
$200	7.1	6.1

Source: Staff estimates

World Non-Oil Prices. The latest assumptions for global non-oil prices are lower for 2022 to 2023 but higher for 2024. In the IMF's October 2022 WEO, global non-fuel price inflation is seen to decelerate to 7.3 percent in 2022. Global non-oil price inflation peaked at 19.5 percent year-to-date in April 2022 following Russia's invasion of Ukraine but has slowed down 9.7 percent in September given the improved supply conditions and the gradual end to Russia's blockade of Ukrainian grain exports. In addition, global non-oil prices are expected to decline by 6.2 percent in 2023 and 0.7 in 2024. Latest assessment by the IMF cites risks of renewed export restrictions, droughts in part of China and the US, as well as the pass-through from higher fertilizer prices, tilting the balance of risks to the upside.

Table 5. World Non-Oil Price Inflation
in percent

	August 2022 Monetary Policy Report	November 2022 Monetary Policy Report
2022	10.1	7.3
2023	-3.5	-6.2
2024	-1.3	-0.7

Source: WEO (IMF, October 2022), WEO Update (IMF, July 2022)

Federal Funds Rate. The latest federal funds rate assumptions are based on the futures prices as of 9 November 2022. Based on the latest futures path, an additional 50-bp rate hike is seen in the December meeting, for a cumulative hike of 425 bps in 2022. The futures path also shows the US Fed extending its tightening cycle to 2023 with an additional 75-bp hike in H1 2023, before starting to ease rates by Q4 2023 with a 75-bp cut by H1 2024.

Table 6. Federal Funds Rate
end-period, in percent

	August 2022 Monetary Policy Report	November 2022 Monetary Policy Report
2022	3.5	4.2
2023	3.1	4.8
2024	2.7	4.2

Source: Bloomberg

Domestic Factors

RRP Rate and Reserve Requirement Ratio (RRR). The latest baseline forecasts assume that the RRP rate will remain at 4.25 percent over the policy horizon, while the RRR is maintained at 12.0 percent until end-2023. Negative real interest rates are seen to bolster aggregate demand until Q3 2023.

Wages. The Department of Labor and Employment (DOLE) announced on 14 May 2022 that the Regional Tripartite Wage and Productivity Boards (RTWPBs) raised the daily minimum wage of non-agricultural workers in NCR by ₱33.00 to ₱570.00. Similarly, the wage boards in all other regions have raised minimum wages by an average increase of 13.1 percent. The latest forecasts consider an increase in the minimum wage of ₱24.00 in June 2023 (4.2 percent) and ₱25.00 in June 2023 (4.2 percent) in line with historical wage increases and labor productivity growth.[7]

Fiscal Sector. The baseline inflation forecasts are consistent with government's fiscal deficit assumption of 7.6 percent for 2022, 6.1 percent for 2023, and 5.1 percent for 2024 based on the medium-term macroeconomic assumptions of the Development Budget Coordination Committee (DBCC) as of 8 July 2022. These are underpinned by infrastructure spending increases of 6.8 percent in both 2022 and 2023, and a 9.1 percent increase in 2024.

Alcoholic Drinks. The baseline forecasts reflect the impact of annual adjustments in the prices of alcoholic beverages (0.7 percent of the CPI basket) as mandated in Republic Act (R.A.) No. 11467. Higher excise taxes for fermented liquor, wine, and

[7] Based on the Philippine Statistics Authority's (PSA) Integrated Survey on Labor and Employment, 23.6 percent of total employment in establishments employing 20 or more workers are minimum wage workers.

distilled spirits will be implemented on a staggered basis from 2020 to 2024 and shall increase by 6.0 percent every year from 2025 onwards.

Tobacco Products. The President signed Republic Act 11346, increasing further the excise tax on tobacco products (0.9 percent of the CPI basket) to fund the Universal Healthcare Act. Under the law, the tax per pack of cigarettes will be raised on a staggered basis to ₱60.00 per pack in 2023 and subject to a 5.0 percent annual indexation onwards.

Table 7. Excise Tax

Year	R.A. 11346	R.A. 11467			
	Cigarettes (₱ per pack)	Fermented Liquor (₱ per liter)	Wine (₱ per liter)	Distilled Spirits Excise Tax (₱ per liter)	Distilled Spirits Ad Valorem Tax (%)
2020	50.0	35.0	50.0	42.0	22%
2021	55.0	37.0	53.0	47.0	22%
2022	60.0	39.0	56.2	52.0	22%
2023	5% Indexation	41.0	59.6	59.0	22%
2024		43.0	63.1	66.0	22%
2025		6% Indexation			22%

3. Risks to the Outlook

The latest fan chart is skewed towards the upside, reflecting the increased upside risks surrounding the inflation outlook. This is reflected in the higher probability of inflation settling above the high-end of the target band in 2022 and 2023 compared to the previous round. Using the 90 percent confidence intervals for the fan chart, estimates indicate that the probability of average annual inflation settling within the 3.0 percent ± 1.0 percentage point target range is 0.0 percent for 2022, 35.7 percent for 2023 and 53.0 percent for 2024. The probability of inflation breaching the low end of the target range is 0.0 percent for 2022, 2.4 percent for 2023, and 20.0 percent for 2024. The probability of inflation breaching the high end of the target range is 100.0 percent for 2022, 61.8 percent for 2023, and 26.9 percent for 2024.

Table 8. Probability Distribution of Inflation Forecasts
in percent

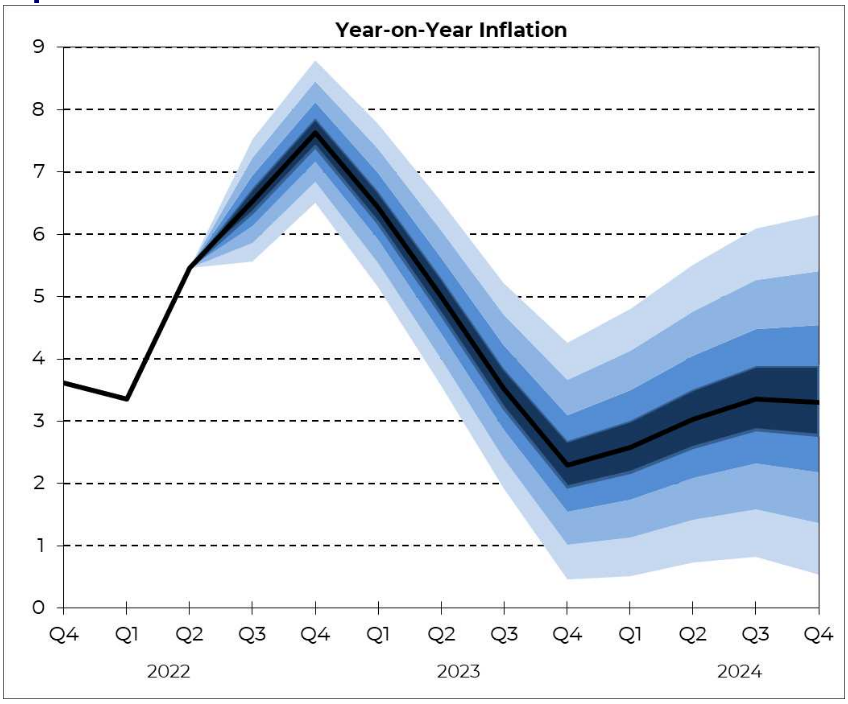
	Pr(<2%)		Pr(2-4%)		Pr(>4%)	
	Aug 2022 MPR	Nov 2022 MPR	Aug 2022 MPR	Nov 2022 MPR	Aug 2022 MPR	Nov 2022 MPR
2022	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
2023	4.3%	2.4%	43.5%	35.7%	52.2%	61.8%
2024	18.1%	20.0%	52.7%	53.0%	29.2%	26.9%

Source: BSP estimates

The fan chart shows the probability of various outcomes for inflation over the forecast horizon. The darkest band depicts the central projection, which corresponds to the BSP's baseline inflation forecast. It covers 25.0 percent of the probability distribution. Each successive pair of bands is drawn to cover a further

25.0 percent of probability, until 75.0 percent of the probability distribution is covered. Lastly, the lightest band covers the lower and upper 90.0 percent of the probability distribution. The bands widen (i.e., "fan out") as the time frame is extended, indicating increasing uncertainty associated with inflation outcomes.

Figure 1. Inflation Projection
in percent



Source: BSP estimates

The shaded area, which measures the range of uncertainty, is based on the forecast errors from the past years. In greater detail, it can be enhanced by adjusting the level of skewness of the downside and upside shocks that could affect the inflationary process over the next two years to change the balance of the probability area lying above or below the central projection.

Table 9. Inflation Projection Ranges at Various Confidence Intervals Using the Fan Chart in percent

Confidence Interval (%)	Projection Range (%)		
	2022	2023	2024
80	5.3 – 6.2	3.1 – 5.6	1.2 – 5.1
90	5.2 – 6.3	2.8 – 5.9	0.7 – 5.7

Source: BSP estimates

The risks to the inflation outlook in the coming years are seen to be strongly skewed to the upside, particularly for 2023. Nonetheless, the balance of risks to the outlook remains broadly balanced for 2024. The key upside risks are the potential impact of higher fertilizer prices; trade restrictions and adverse global weather conditions on international food prices; further adjustments in transport fares; and higher domestic sugar prices. In addition, higher food prices from further domestic weather-related disturbances and the potential reinstatement of the full tariff rates on several imports such as pork and rice that were temporarily lowered under Executive Order (E.O.) No. 171 were identified as upside risks to the inflation outlook in the latest round. Meanwhile, the impact of a weaker-than-expected global output recovery is the primary downside risk to the inflation outlook.

Table 10. Risk Matrix[8]

	Risks	Probability: August 2022 Monetary Policy Report	Probability: November 2022 Monetary Policy Report
Upside Risks	Higher global food prices	Low	Low
	Transport fare hikes	Low	Medium
	Higher sugar prices	Low	Low
	Higher prices of fruits and vegetables		Medium
	Non-extension of E.O. 171		Low
Downside Risks	Lower world GDP growth	Medium	Low

Higher world food prices from rising fertilizer prices, trade protectionism and adverse weather conditions are a major source of upside risk to inflation. While the baseline assumptions for non-oil prices were revised downwards, upside price pressures could persist. Fertilizer prices are expected to increase by around 66.1 percent in 2022 then decrease by 12.4 percent in 2023, based on the World Bank October 2022 Commodity Prices Outlook. The higher prices are driven by high input energy costs, higher freight costs, sanctions on Russia, and export restrictions from key producers Belarus, Russia, and China. This could lead to reduced harvest and food production and drive food prices upward. In its October 2022 WEO report, IMF estimates that a 10.0-percent increase in fertilizer prices could lead to about 7.0-percent increase in cereal prices after one quarter.

On the domestic front, the Philippine agricultural sector is a net importer of fertilizer, making the country vulnerable to price movements in the global fertilizer market. Different chemical fertilizer grades are imported into the country from various countries at different import prices.[9] An increase in the prices of fertilizers could lead to a significant production decline in subsequent quarters, resulting in higher domestic food prices.

Moreover, possible imposition of new export bans which may emanate from lingering uncertainties on Ukraine-Russia conflict could further exacerbate supply constraints. Most of the existing trade restrictions are about to expire by end of 2022 and concerns are mounting regarding the extension of the United Nations Black Sea Grain Initiative beyond the 18 November 2022 deadline, especially after Russia's recent albeit temporary withdrawal from the agreement.

[8] The BSP considers different scenarios that pertain to upside and downside risks to the inflation outlook, which is summarized in a risk matrix. The various scenarios are then assigned probability values. Scenarios that have more than 75 percent probability of taking place over the forecast horizon are incorporated in the baseline. The estimated impact of each scenario is then multiplied by the assigned probabilities. The sum of the weighted impact for each year will indicate whether the risks to the outlook are balanced, on the upside, or on the downside.

[9] The primary sources of our fertilizer imports from 2017-2021 are China (34.3%), Indonesia (17.8%), Malaysia (12.1%), Qatar (8.9%), Canada (5.9%), and South Korea (3.6%). Data sourced from International Trade Centre's TradeMap.

Following adverse weather conditions, international prices of agricultural commodities (food, beverage, and raw materials) are expected to increase by about 13.0 percent in 2022, then ease by 4.5 percent in 2023 before stabilizing in 2024, based on World Bank assumptions. Recent extreme heat waves and droughts were experienced in the US, Europe, and China. Additionally, the persisting La Niña conditions have caused heavy rainfall and flooding in Australia and southeast Asia, while droughts prevailed in key commodity producing countries in Africa, South America, Central and Southern Asia, and the US. La Niña conditions could persist until Q1 2023, adding further rainfall and flooding to already saturated areas.

The IMF's October 2022 WEO shows that a shock to global agricultural harvests could lead to a 20.0 ppt increase in global cereals prices. Equivalently, this corresponds to an increase in global food and non-oil prices by 2.5 ppts and 1.2 ppts, respectively, compared to the baseline scenario. A low probability is assigned to the risk of higher global food prices above the baseline assumption.

Additional transport fare adjustments are also upside risks to the outlook. Tricycle fares could increase following the recent approval of fare adjustments for jeepneys, buses, taxis, and transport network vehicle services (TNVS). Tricycle fare hikes have been approved by several LGUs in their respective jurisdictions, which could prompt further tricycle fare increases in other regions.

The risk scenario assumes a fare increase of ₱2.00 (20.0 percent) based on recent adjustments already implemented in several LGUs. Tricycle fares account for 1.2 percent of the CPI basket. A medium probability is assigned to this risk.

Shortage in domestic sugar supply adds to food price pressures. The Department of Agriculture – Sugar Regulatory Administration (DA-SRA) has issued on 1 September 2022 Sugar Order No. 2 series of 2022-2023 or the Sugar Import Program which aims to stabilize domestic sugar supply and prices. The program covers 150,000 MT of refined sugar allocated equally between industrial users and consumers. It may be noted that the program requires that the imports arrive in the country no later than 15 November 2022. As of 30 October 2022, around 120,000 MT of sugar imports have arrived.

Nevertheless, SRA data as of 4 November 2022 show that average price of refined sugar in Metro Manila remain elevated. The alternative scenario assumes that the current elevated sugar price level is sustained over the next 12 months. While sugar accounts only for 0.46 percent of the 2018-based CPI basket, movements in sugar prices could affect prices of other commodities that uses sugar as input.

Based on the Philippine Statistics Authority's (PSA) Input-Output (I-O) Table,[10] the commodities and industries most sensitive to the changes in the price of sugar are soft drinks and juices, chocolate and sugar confectionary, bakery products and alcoholic beverages. Commodities that use sugar as the primary input are equivalent to around 4.3 percent of CPI basket. In addition, an increase in the price of sugar is estimated to indirectly spillover to the price of other goods and services such as restaurants and other food products based on the interlinkages in the I-O Table. A low probability is assigned to this risk.

[10] Based on the 2018 Input-Output (I-O) Accounts of the Philippines published by the PSA last 6 December 2021.

Adverse weather conditions on the domestic front could further push food prices upward. Inflation of fruits and vegetables in October 2022 accelerated due to supply disruptions caused by recent weather-related calamities. In this scenario, month-on-month (m-o-m) increases of 0.4 percent for fruits and 12.3 percent for vegetables are assumed from November 2022 to January 2023, based on the observed price changes in October, before stabilizing in the succeeding months. A medium probability is assigned to this risk given PAGASA's expectation of three to five tropical cyclones to enter the Philippine area of responsibility for the remainder of 2022.

Non-extension of Executive Order No. 171 could push prices of certain commodities upward. EO 171 which has allowed lower tariff imposed on pork, rice, corn, and coal to help temper inflation will expire by the end of 2022. Without an extension, pork tariffs will be reversed from 15 percent to 30 percent for in-quota and from 25 percent to 40 percent for out-quota, increasing the landed cost of pork by 12.0 to 13.0 percent based on BSP staff estimates. Meanwhile, the reversion of corn tariffs from 5 percent to 35 percent for in-quota and from 15 percent to 50 percent for out-quota could increase the landed cost of corn by 29.0 to 30.0 percent. A low probability is assigned to the risk of non-extension as public hearings are already being held with key stakeholders.

Meanwhile, further slowdown in global economic activity is the primary downside risk to the outlook. World GDP growth is assumed to be lower by 0.6 ppt for 2022 and 0.9 ppt for 2023 based on the IMF's alternative scenario to global growth, incorporating sanctions on Russia which could cause a sharp decline in European gas imports, persistently higher inflation expectations, and further tightening in global financial conditions. A low probability is assigned to this risk.

Box Article No. 1: Monetary Policy Developments

At its monetary policy meeting on 22 September 2022, the BSP raised the interest rate on the overnight reverse repurchase (RRP) facility by 50 basis points (bps) to 4.25 percent, effective 23 September 2022. Accordingly, the interest rates on the overnight deposit and lending facilities likewise increased to 3.75 percent and 4.75 percent, respectively. This came after the BSP raised the policy rate by 50 bps in August.

The baseline inflation forecasts presented during the 22 September 2022 MB policy meeting were revised upwards from the August 2022 MPR to 5.6 percent for 2022 and 4.1 percent in 2023, which are above the government's target range of 3.0 percent ± 1.0 ppt for both years. Meanwhile, the inflation forecast for 2024 was projected to settle within the target band at 3.0 percent. The upward adjustment in the forecasts for 2022 and 2023 was mainly driven by the higher nowcast for September, depreciation of the peso, and the approved nationwide transport fare hikes in October. Meanwhile, the lower forecast for 2024 can be attributed to lower assumptions for global crude oil and non-oil prices as well as the impact of the BSP's cumulative policy rate hikes.

BSP Average Baseline Inflation Projections
in percent

	August 2022 Monetary Policy Meeting [a]	September 2022 Monetary Policy Meeting
2022	5.4	5.6
2023	4.0	4.1
2024	3.2	3.0

Source: BSP estimates
[a] Published in the Monetary Policy Report-August 2022

In raising the policy interest rate anew in September, the BSP noted that price pressures continued to broaden. The rise in core inflation indicated emerging demand-side pressures on inflation. Moreover, second-round effects continued to manifest, with inflation expectations remaining elevated in September following the approved minimum wage and transport fare increases. Nonetheless, inflation expectations remained broadly anchored over the medium term.

Given elevated uncertainty and the predominance of upside risks to the inflation environment, the BSP recognized the need for follow-through action to anchor inflation expectations and prevent price pressures from becoming further entrenched. The domestic economy could accommodate a reasonable tightening of the monetary policy stance, with demand generally holding firm owing to improved employment outturns and ample liquidity and credit.

At the same time, the BSP also continues to urge the National Government to implement timely non-monetary interventions to mitigate the impact of persistent supply-side pressures on food and other commodity prices.

The BSP reiterates its commitment to take all necessary actions to steer inflation towards a target-consistent path over the medium term, consistent with its primary mandate to promote price and financial stability.

II. Current Developments

Overview of current developments

Headline inflation continues to accelerate in October 2022. Inflation recorded its highest rate since December 2008 at 7.7 percent in October 2022, a further increase from 6.9 percent a month ago. This brought the year-to-date average to 5.4 percent, higher than the National Government's target range of 2.0-4.0 percent for 2022. The faster price increases in food, due to supply disruptions given weather disturbances, drove the October inflation higher although non-food inflation likewise remained elevated.

Core inflation reflects second-round effects. The official core inflation rose to 5.9 percent in October from 5.0 percent a month ago. The uptick largely reflected the second-round impact of fare increases for various public utility vehicles.

Global crude oil prices remain volatile on worries of supply shortage amid weaker global growth prospects. Dubai crude oil prices have generally declined over the period July-October 2022 due mainly to concerns of a weaker global growth outlook with the tightening of monetary settings in major central banks. Nevertheless, forecasts suggest a balanced supply-demand dynamics in 2023 amid expectations of a decline in oil consumption following the lower global growth prospects.

Inflation expectations are above target in 2022 and 2023 but ease to the upper end of target in 2024. The November 2022 round of survey on private sector economists' inflation expectations were higher compared to the month-ago survey results. Average inflation forecasts for 2022 was at 5.9 percent from 5.7 percent, as that for 2023 was at 4.9 percent from 4.6 percent. For 2024, the average forecast for inflation was at the upper bound of the target range at 4.0 percent from 3.8 percent.

Domestic economy expands strongly in Q3 2022. Real GDP grew by 7.6 percent in Q3 2022, slightly higher than the recorded expansions of 7.5 percent a quarter ago and 7.0 percent a year ago. Under the expenditure approach, household consumption, government spending and investments grew by 8.0 percent, 0.8 percent, and 21.7 percent, respectively. Using the production approach, service, industry and agriculture sectors expanded by 9.1 percent, 5.8 percent, and 2.2 percent, respectively.

Other demand indicators reflect a slight moderation. The manufacturing sector's preliminary average capacity utilization rate marginally improved to 71.5 percent in September 2022 from 71.4 percent (revised) a month ago. Similarly, the preliminary composite PMI in September 2022 remained slightly within expansion territory at 50.3 index points but was lower than the month-ago PMI of 53.6 index points.

Labor market conditions generally improve. The unemployment rate for September 2022 improved to 5.0 percent from 5.3 percent a month ago and 8.9 percent a year ago. Moreover, the unemployment rate in September was slightly lower than the pre-pandemic rate of 5.3 percent. Meanwhile, there are no wage adjustments expected for the rest of 2022 following the sweep of increases in minimum wage in May and June.

Domestic financial market begins to reflect relatively tighter conditions. Preliminary data showed that domestic liquidity moderated to 5.0 percent in September 2022 from 6.7 percent a month ago. Nonetheless, bank lending remained brisk, expanding by 13.4 percent in September from 12.2 percent a month ago. Meanwhile, the Bureau of the Treasury rejected tenders for Treasury bills and bonds as market participants priced in their expectations of further policy rate hikes. Consequently, yields in the secondary market for government securities generally increased.

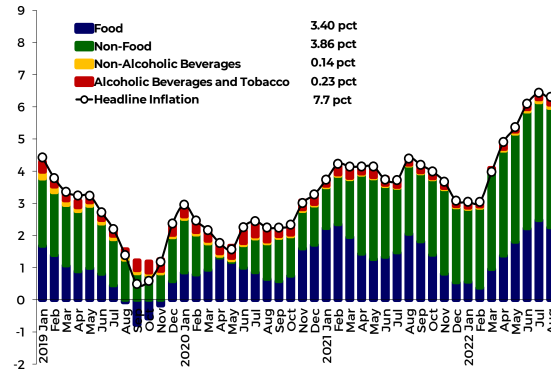
Outlook for global growth becomes more subdued amid tightening financial conditions. Global economic activity contracted in October 2022 amid a slight slowdown in key economies. The JP Morgan All-Industry Output Index fell to 49.0 in October from 49.6 a month ago as elevated inflation, restrictive financial conditions, prolonged geopolitical risks, and heightened market volatility weighed on private demand. Meanwhile, in October 2022, the International Monetary Fund maintained their global growth forecast at 3.2 percent but downgraded further the 2023 growth projection by 0.2 percentage point to 2.7 percent. The 2023 growth downgrade was due to waning pandemic-related fiscal support and restrictive financial conditions.

1. Prices

Headline inflation. Year-on-year (y-o-y) headline inflation increased further to 7.7 percent in October 2022 from 6.9 percent a month ago and 4.0 percent a year ago, the highest recorded inflation since December 2008. The resulting year-to-date (y-t-d) average inflation of 5.4 percent is above the National Government's (NG) average inflation target range of 2.0–4.0 percent for the year. On a m-o-m seasonally adjusted basis, inflation went up to 1.0 percent in October from 0.6 percent a month ago.

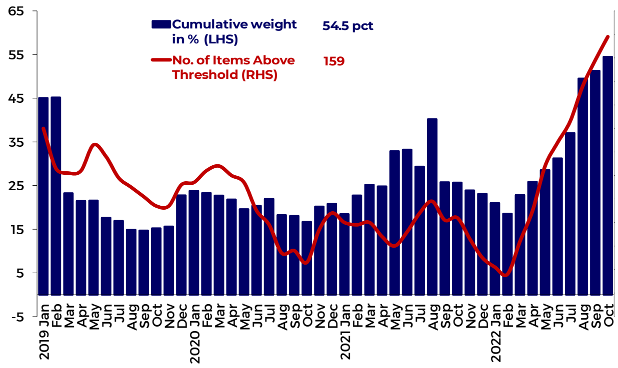
Preliminary estimates show that, out of 315 CPI items, the number of items with inflation rates above the threshold of 4.0 percent increased further to 159 items in October from 149 items in the previous month.[11] These 159 items accounted for about 54.5 percent of the total CPI weight. By contrast, the number of CPI items below target declined further to 80 in October 2022 from 89 in the previous month. These 80 items accounted for around 10.5 percent of the total CPI weight. The remaining 76 CPI items, which accounted for around 35.0 percent of the total CPI weight, were within threshold.

Figure 2. Headline Inflation (2018=100); in percent



Source: Philipine Statistical Authority (PSA), BSP

Figure 3. CPI Items with Inflation Rates Above Threshold (2018=100)



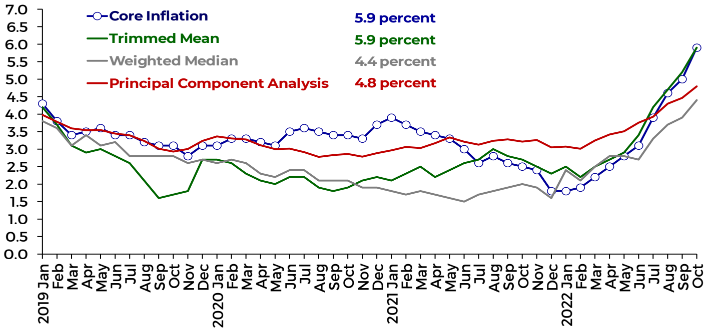
Source: PSA, BSP staff estimates

Core inflation. The official core inflation rose to 5.9 percent in October 2022 from 5.0 percent a month ago, reflecting second-round effects from the approval of the fare increases for different public utility vehicles (PUVs). At the same time, higher inflation for the heavily weighted restaurants and accommodation services also contributed to the rise in core inflation.

Similarly, other alternative core inflation measures such as, the trimmed mean and the weighted median rose to 5.9 percent and 4.4 percent, respectively in October 2022 from 5.2 percent and 3.9 percent a month ago. Core inflation using the principal component analysis also exceeded the target at 4.8 percent in October 2022 from 4.5 percent in the previous month.

[11] Data are preliminary based on BSP staff calculations using the 6-digit classification ("item" level). There are 315 items under the 6-digit level. In the 2012-based CPI, the staff used the 5-digit CPI (sub-classes) level data, which had 239 items.

Figure 4. Estimates of Core Inflation Measures
year-on-year; in percent



Note: Core inflation excludes ten (10) volatile food and energy CPI items from the headline CPI equivalent to around 29.6 percent of total basket. This includes (1) cereals (rice and corn); (2) meat, fresh, chilled and frozen; (3) fish, live, fresh, chilled and frozen; (4) dates, figs, and tropical fruits; (5) other vegetables, fresh and chilled; (6) fruit-bearing vegetables; (7) electricity; (8) liquefied hydrocarbons; (9) diesel; and (10) gasoline.

Sources: PSA and BSP staff calculations using 5-digit disaggregation for the BSP-computed core inflation, trimmed mean, and weighted median.

Food inflation. The further rise in inflation was due primarily to the higher inflation of food and non-alcoholic beverages, which reached 9.4 percent in October from 7.4 percent in the previous month. Faster price increases for vegetables could be attributed to supply disruptions given weather disturbances during the month.

Non-food inflation. Non-food inflation remained at 6.4 percent, unchanged from the previous month's rate. Transport inflation slowed down in October following domestic petroleum price rollbacks, which more than offset the increases in fares for jeepneys, buses, taxi, and TNVS.

Table 11. Inflation rates for Selected Food Items (2018=100)
year-on-year; in percent

Commodity	Oct 2021	Sep 2022	Oct 2022
Food and Non-Alcoholic Beverages	**3.7**	**7.4**	**9.4**
Food	4.0	7.7	9.8
Cereals and Cereal Products	0.8	5.4	5.6
Cereals	0.4	3.8	4.0
Rice	-0.4	2.4	2.5
Corn	14.6	26.2	27.4
Flour, Bread and Other Bakery Products, Pasta Products, and Other Cereals	2.1	9.0	9.8
Meat and Other Parts of Slaughtered Land Animals	8.4	9.0	11.5
Fish and Other Seafood	7.4	9.1	9.4
Milk, Other Dairy Products, and Eggs	0.4	7.6	8.7
Oils and Fats	6.5	20.1	20.4
Fruits and Nuts	-4.2	3.8	4.9
Vegetables Tubers, Cooking Bananas and Pulses	10.1	3.5	16.0
Sugar, Confectionery and Desserts	1.7	30.2	34.4
Ready-Made Food and Other Food Products, N.E.C.	0.8	6.7	8.1
Non-Alcoholic Beverages	1.1	4.1	4.7
Alcoholic Beverages and Tobacco	**8.7**	**9.8**	**10.4**

Source of Basic Data: PSA, BSP

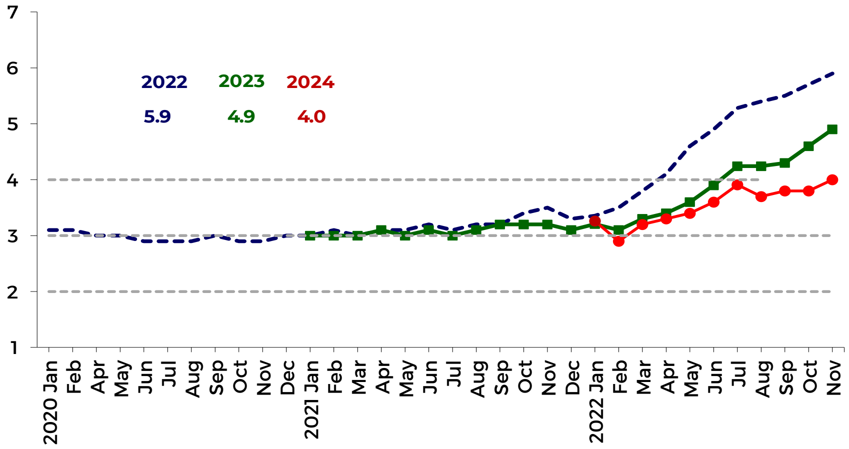
Table 12. Inflation Rates for Selected Non-Food Items (2018=100)
year-on-year, in percent

Commodity	Oct 2021	Sep 2022	Oct 2022
Non-Food	**3.9**	**6.4**	**6.4**
Clothing and Footwear	1.9	2.9	3.1
Housing, Water, Electricity, Gas and Other Fuels	4.3	7.3	7.4
Electricty, Gas, and Other Fuels	11.4	16.7	16.1
Furnishings, Household Equipment & Routine Household Maintenance	2.1	3.5	3.8
Health	3.7	2.4	2.6
Transport	7.6	14.5	12.5
Passenger Transport Services	0.8	8.4	10.7
Information and Communication	0.6	0.5	0.5
Recreation, Sport and Culture	1.6	2.7	3.0
Education Services	0.7	3.5	3.4
Restaurant and Accommodation Services	3.8	4.6	5.7
Financial Services	43.3	0.0	0.0
Personal Care and Miscellaneous Goods and Services	2.1	3.4	3.7

Source of Basic Data: PSA, BSP

Private sector economists' inflation forecasts. Results of the BSP's survey of private sector economists for November 2022 showed higher mean inflation forecast for 2022 at 5.9 percent from 5.7 percent in the October 2022 survey.[12] Similarly, the mean inflation forecasts for 2023 and 2024 increased to 4.9 percent from 4.6 percent, and 4.0 percent from 3.8 percent, respectively.

Figure 5. BSP Private Sector Economists' Survey
mean forecast for full year; in percent



*Based on forecasts provided by 22 respondents. The survey was conducted from 4-10 November 2022.
Source: BSP

Analysts expect inflation to breach the upper end of the government's target range in 2022 as price pressures have become broad-based. Risks to the inflation outlook tilted to the upside due to lingering inflationary pressures brought on by weather disturbances, global supply chain disruptions, COVID-19 pandemic, weaker peso against the US dollar, and second-round effects. Meanwhile, inflation is expected to remain beyond the target range in 2023 and decelerate towards the upper end of the band in 2024.

Analysts anticipate the BSP to further tighten monetary policy settings and increase the RRP rate by a range of 75-150 bps in the remainder of the year, with most of them expecting a 75-bp rate hike in November and 50 bps in December. However, they noted that the magnitude will still largely depend on the US Fed's policy action. For 2023, most analysts expect a follow-through policy rate hike by about 25-75 bps, while a reversal is anticipated in 2024 ranging from 25-150 bps.

[12] There were 22 respondents in the BSP's survey of private sector economists in November 2022. The survey was conducted from 4 to 10 November 2022.

Table 13. Private Sector Forecasts for Inflation
annual percentage change; November 2022

	2022		2023		2024
	Q4	FY	Q1	FY	FY
1) Al-Amanah Islamic Bank	7.90	8.40	8.50	8.00	8.00
2) Asia ING	7.00	5.70	7.20	5.40	4.00
3) Bangkok Bank	7.50	5.70	4.50	3.80	3.50
4) Bank of Commerce	7.63	5.74	-	-	-
5) Barclays	7.60	5.70	5.75	4.20	3.30
6) Citibank	7.10	5.60	6.20	4.40	2.80
7) CTBC Bank	7.50	5.73	6.10	4.00	3.50
8) Deutsche Bank	-	5.40	-	4.50	-
9) Eastwest Bank	7.80	5.80	6.00	4.50	3.50
10) Global Source	-	5.80	-	-	-
11) Korea Exchange Bank	7.90	8.00	8.20	8.50	8.80
12) Land Bank of the Phils	7.40	5.70	6.60	4.40	3.20
13) Maybank	7.80	5.75	5.00	4.00	3.50
14) Maybank Investment Banking (	7.60	5.70	6.90	4.30	3.00
15) Metrobank	7.90	5.80	-	4.00 - 6.00	-
16) Mizuho	7.90	6.00	6.50	6.00	5.00
17) RCBC	7.80	5.80	7.10	4.00 - 4.50	3.00 - 3.50
18) Robinsons Bank	7.40	5.70	6.30	4.40	3.80
19) Philippine Equity Partners	6.80	5.50	5.80	4.30	3.00
20) Security Bank	7.90	5.80	7.10	4.50	3.50
21) Standard Chartered	7.20	5.60	-	4.10	3.10
22) Union Bank of the Phils.	7.70	5.70	6.80	4.70	3.30
Median Forecast	7.6	5.7	6.5	4.4	3.5
Mean Forecast	7.6	5.9	6.5	4.9	4.0
High	7.9	8.4	8.5	8.5	8.8
Low	6.8	5.4	4.5	3.8	2.8
Number of Observations	20	22	17	20	18
Government Target	**3.0±1.01**	**3.0±1.01**	**3.0±1.01**	**3.0±1.01**	**3.0±1.00**

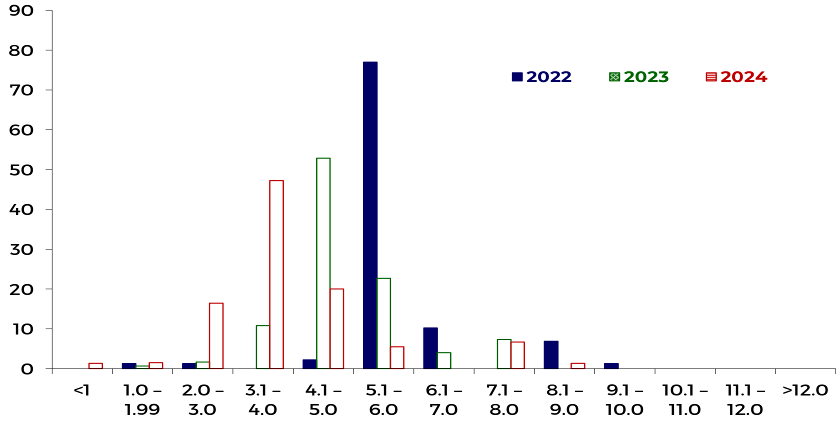
Source: BSP

The upside risks to inflation include (a) high prices of selected food commodities and oil amid supply chain disruptions brought on by weather disturbances, the ongoing Black Sea conflict, and COVID-19 related risks; (b) depreciation of the peso against the US dollar; (c) second-round effects, particularly higher transport fares and wages; and (d) holiday spending.

Meanwhile, the downside risks to inflation are seen to emanate mainly from expectations of more policy rate hikes by the BSP. Other possible downside risks cited by a few analysts are the recent recovery of the peso against the US dollar, as well as expectations of a global demand slowdown given an impending recession in the US and continued lockdowns in China.

Based on the probability distribution of the forecasts provided by 16 out of 22 respondents, analysts assigned a probability of 1.3 percent (from 2.6 percent) that average inflation for 2022 will settle within the 2-4 percent range and 97.5 percent (from 97.3 percent) that inflation will exceed 4.0 percent. Meanwhile, the probability that inflation will fall within the target band in 2023 and 2024 declined to 12.5 percent (from 28.9 percent) and 63.6 percent (from 68.9 percent), respectively.

Figure 6. Probability Distribution for Analysts' Inflation Forecasts* (2022-2024)

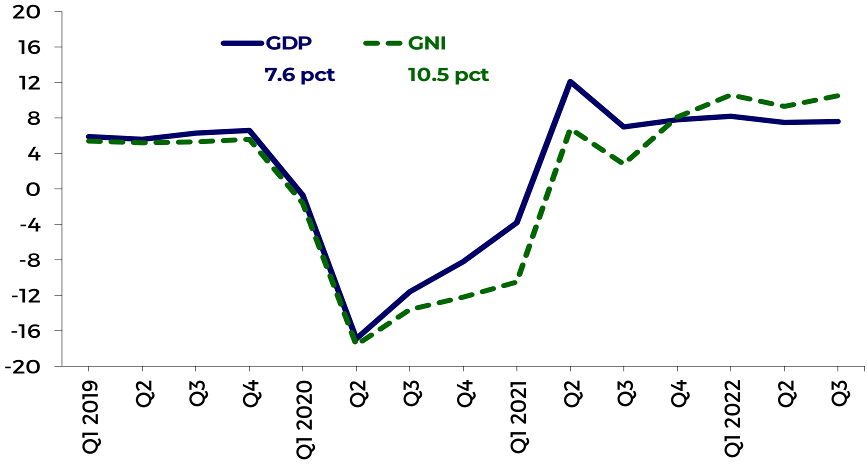


*Probability distributions were averages of those provided by 16 out of 22 respondents.
Source: November 2022 BSP Survey

2. Demand Conditions

Real gross domestic product (GDP) expanded by 7.6 percent y-o-y in Q3 2022, slightly higher than 7.5 percent (revised) a quarter ago and 7.0 percent a year ago. The Q3 output growth was driven by robust domestic demand as well as strong export performance despite inflationary pressures. On a seasonally adjusted basis, q-o-q GDP grew by 2.9 percent, a reversal from the 0.1-percent contraction in the previous quarter.

Figure 7. Gross Domestic Product and Gross National Income at constant 2018 prices; year-on-year growth in percent

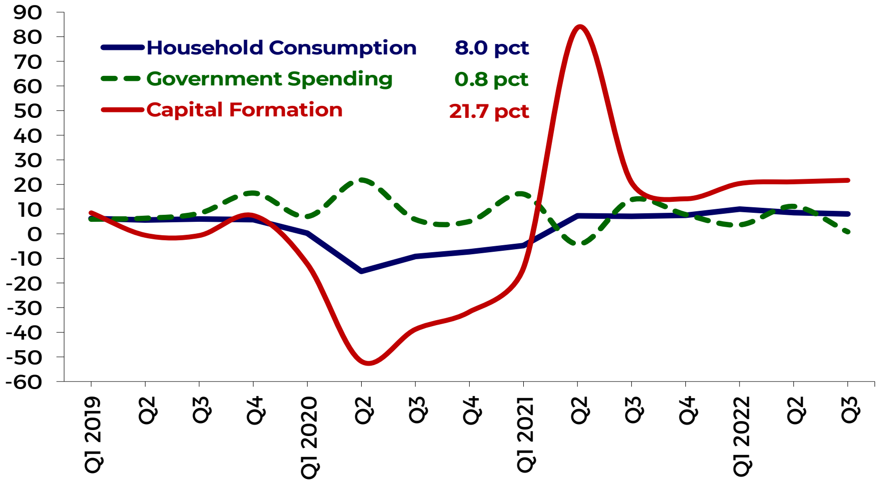


Source: PSA

The gross national income (GNI) increased by 10.5 percent y-o-y in Q3 2022, higher than 9.3 percent a quarter ago and 2.8 percent a year ago. Net primary income rose by 94.6 percent, a significant increase from 65.3 percent a quarter ago and a reversal from the double-digit decline of 52.4 percent a year ago.

Aggregate demand. Under the expenditure approach, household spending, government spending, investments (or capital formation), and net exports contributed 5.9 percentage points (ppts), 0.1 ppt, 4.5 ppts, and -2.8 ppts, respectively, to total GDP growth in Q3 2022.

Figure 8. Gross Domestic Product by Expenditure Shares
at constant 2018 prices; growth rate in percent



Source: PSA

Household expenditures, which accounted for 73.6 percent of GDP, expanded by 8.0 percent y-o-y. This was slower than 8.6 percent a quarter ago albeit faster than 7.1 percent a year ago. The slight deceleration could be attributed to the decline in spending on alcoholic beverages and tobacco as well as clothing and footwear.

Meanwhile, government expenditures slowed down significantly to 0.8 percent from 11.1 percent a quarter ago and 13.8 percent a year ago.

Capital formation (or investments) grew by 21.7 percent y-o-y, faster than the quarter- and year-ago expansions of 21.1 percent and 20.8 percent, respectively. The brisk growth could be attributed to the registered increase in fixed capital investments from construction activities, durable equipment, and intellectual property products.

Overall exports accelerated by 13.1 percent from 4.4 percent a quarter ago and 9.1 percent a year ago. This was driven by the notable growth in exports of services supported by upsurge in travel, miscellaneous services, transport, telecommunications, computer and information services and business services. Similarly, merchandise exports expanded, particularly, components/devices (semiconductors), ignition wiring sets, control instrumentation, coconut oil, and communication/radar.

Meanwhile, overall imports also increased by 17.3 percent from 13.8 percent a quarter ago. This was driven by imports of services particularly, miscellaneous services, travel, business services, transport, and insurance. Merchandise imports likewise expanded due to higher prices in imports of mineral fuels, lubricants, lubricants, and related materials.

Table 14. Gross Domestic Product by Expenditure Shares
at constant 2018 prices; growth rate in percent

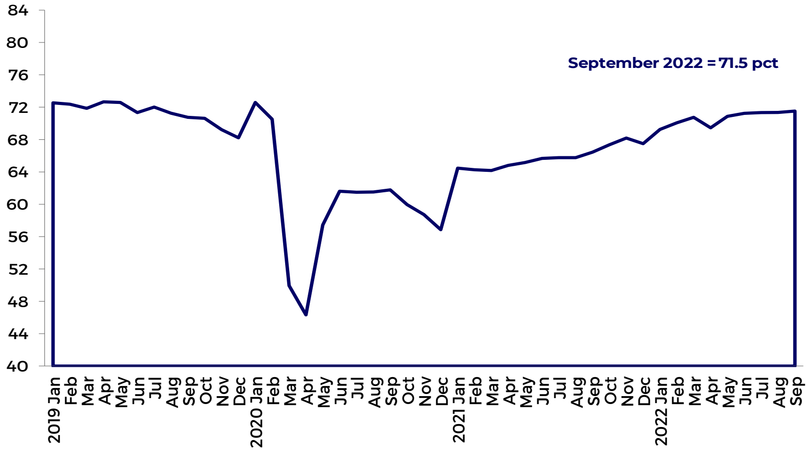
BY EXPENDITURE ITEM	2021	2022	
	Q3	Q2	Q3
Household Final Consumption Expenditure	7.1	8.6	8.0
Government Final Consumption Expenditure	13.8	11.1	0.8
Gross Capital Formation	20.8	21.1	21.7
Gross Fixed Capital Formation	16.0	13.6	10.1
Exports of Goods and Services	9.1	4.4	13.1
Imports of Goods and Services	12.7	13.8	17.3

Source: PSA

Other demand indicators

Capacity utilization. The manufacturing sector's preliminary average capacity utilization rate marginally improved to 71.5 percent in September 2022 from 71.4 percent (revised) a month ago, based on the Philippine Statistics Authority's (PSA) Monthly Integrated Survey of Selected Industries (MISSI).

Figure 9. Monthly Average of Capacity Utilization for Manufacturing (2018=100); in percent



Source: PSA

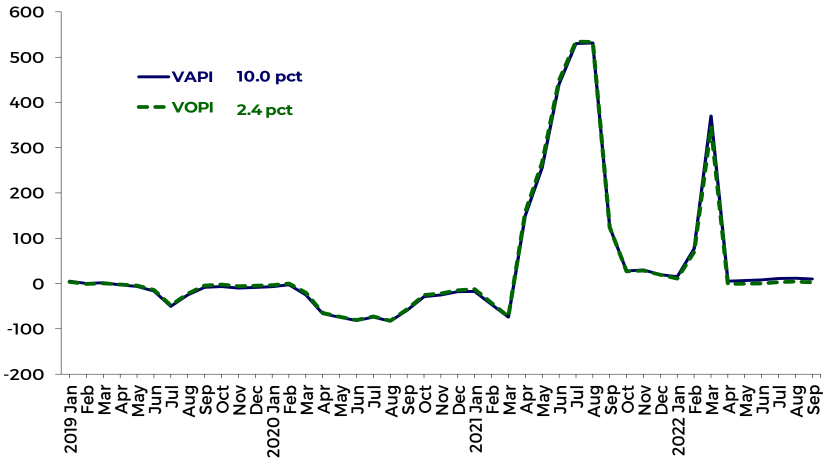
Of the 675 respondent-establishments surveyed by the PSA, those that operated at or above 80.0 percent capacity in September 2022 stood at 44.0 percent, a slight decline from 45.8 percent a month ago. Similarly, the response rate in September was at 71.1 percent (preliminary), lower than 72.9 (preliminary) percent a month ago.

Average capacity utilization increased slightly in September 2022 as improving demand conditions in anticipation of the holiday season underpinned production in the manufacturing sector. Of the 22 major industries, three industries operated at or above 80.0 percent capacity, while 17 industries operated at 60 to 79 percent capacity range. The remaining two industries operated at less than 60 percent capacity.

The average capacity utilization of the top five subsectors with the biggest share to manufacturing GVA generally decreased in September 2022. This includes subsectors manufacturing chemicals and chemical products; coke and refined petroleum products; and computer, electronic and optical products. Meanwhile, beverages and food products increased.

Volume and value of production. Preliminary results of the MISSI showed that factory output – as measured by the volume of production index (VoPI) – grew by 2.4 percent y-o-y in September 2022, slower than 4.4 percent (revised) a month ago. Of the 22 subsectors, 13 posted y-o-y expansions while the remaining nine subsectors recorded contractions.

Figure 10. Volume and Value Indices of Manufacturing Production
2018=100; year-on-year in percent



Source: PSA

Similarly, the value of production index (VaPI) grew by 10.0 percent in September 2022, slower than 11.8 percent a month ago. Of the 22 subsectors, 15 posted y-o-y increases while the remaining seven subsectors recorded declines.

Table 15. Growth in Volume of Production Index by Industry Division (2018=100)
year-on-year; in percent

	GAINERS	Sep-22
1.)	Machinery and Equipment Except Electrical	90.0
2.)	Wood, Bamboo,Cane, Rattan Articles and Related Products	77.6
3.)	Chemical and Chemical Products	30.1
4.)	Fabricated Metal Products, except Machinery and Equipment	21.7
5.)	Other Manufacturing and Repair and Installation of Machinery and Equipment	18.6
6.)	Paper and Paper Products	16.7
7.)	Transport Equipment	14.5
8.)	Textiles	11.6
9.)	Computer, Electronic and Optical Products	10.9
10.)	Leather and Related Products, Including Footwear	10.3
11.)	Basic Pharmaceutical Products and Pharmaceutical Preparations	8.2
12.)	Food Products	7.6
13.)	Wearing Apparel	5.4
	LOSERS	**Sep-22**
1.)	Electrical Equipment	-54.7
2.)	Basic Metals	-34.2
3.)	Furniture	-11.5
4.)	Beverages	-6.8
5.)	Printing and Reproduction of Recorded Media	-6.5
6.)	Rubber and Plastic Products	-4.9
7.)	Tobacco Products	-3.0
8.)	Coke and Refined Petroluem Products	-2.8
9.)	Other Non-Metallic Mineral Products	-0.3

Source: PSA

Table 16. Growth in Value of Production Index by Industry Division (2018=100)
year-on-year; in percent

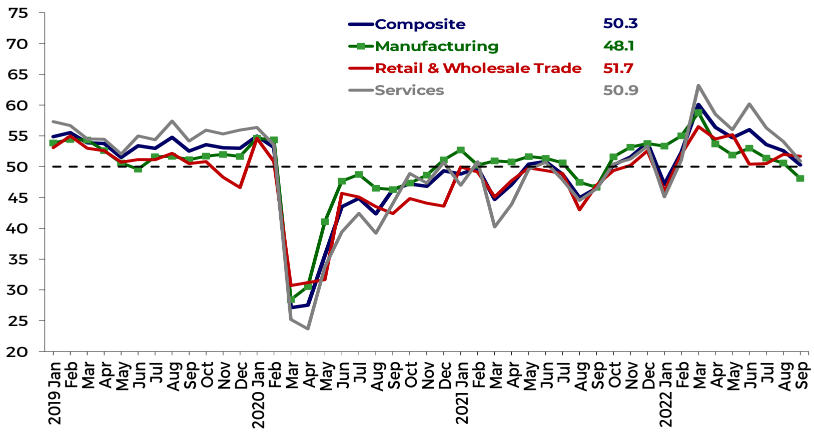
	GAINERS	Sep-22
1.)	Machinery and Equipment Except Electrical	86.3
2.)	Wood, Bamboo,Cane, Rattan Articles and Related Products	76.6
3.)	Chemical and Chemical Products	38.7
4.)	Fabricated Metal Products, except Machinery and Equipment	26.1
5.)	Computer, Electronic and Optical Products	22.3
6.)	Paper and Paper Products	21.9
7.)	Other Manufacturing and Repair and Installation of Machinery and Equipment	21.6
8.)	Transport Equipment	19.5
9.)	Food Products	17.0
10.)	Textiles	16.2
11.)	Coke and Refined Petroluem Products	12.0
12.)	Leather and Related Products, Including Footwear	11.2
13.)	Basic Pharmaceutical Products and Pharmaceutical Preparations	9.3
14.)	Other Non-Metallic Mineral Products	7.8
15.)	Wearing Apparel	6.1
	LOSERS	**Sep-22**
1.)	Electrical Equipment	-53.5
2.)	Basic Metals	-32.3
3.)	Furniture	-9.9
4.)	Printing and Reproduction of Recorded Media	-7.1
5.)	Beverages	-1.3
6.)	Rubber and Plastic Products	-0.3
7.)	Tobacco Products	-0.1

Source: PSA

Purchasing managers' index.[13] The preliminary composite PMI in September 2022 decreased further by 2.3 index points to 50.3, a slower expansion from 52.6 (revised) a month ago.[14] This may be attributed to the contraction of the manufacturing sector as well as the slower expansion of the services, and retail and wholesale sectors. Looking ahead, business managers expect economic conditions for all sectors to improve in October 2022.

[13] Data based on the monthly PMI report of the Philippine Institute for Supply Management (PISM).
[14] The actual formula used to calculate the PMI assigns weights to each common element and then multiplies them by 1.0 for improvement, 0.5 for no change, and 0 for deterioration. As a result, an index above 50 indicates economic expansion, and an index below 50 implies a contraction. PMI surveys are conducted on the last week of the month.

Figure 11. Purchasing Managers' Index
diffusion Index



Source: Philippine Institute of Supply Management (PISM)

The manufacturing PMI declined by 2.5 index points to 48.1, implying a contraction in September 2022 from a near-neutral growth of 50.6 index points a month ago. The lackluster performance was due to the faster m-o-m contractions recorded across all sub-indices. Global headwinds and persistent inflationary pressures dampened the sector. Nonetheless, prospects are assessed to be favorable for the manufacturing sector in the month ahead with the holiday season approaching.

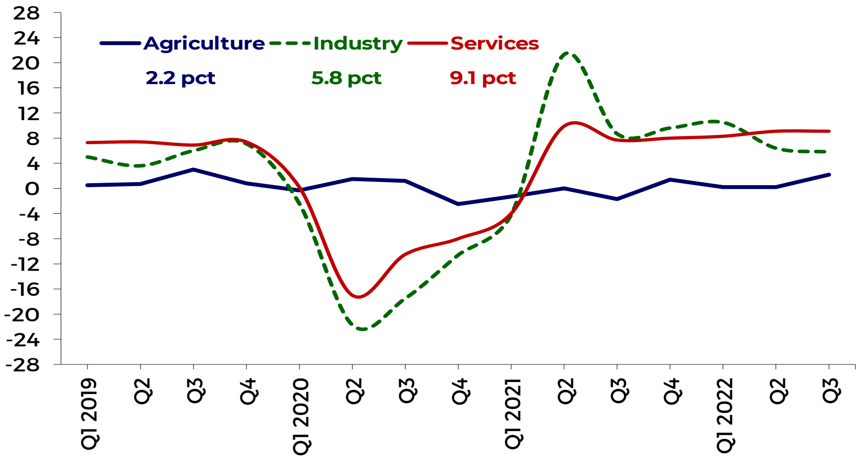
The services PMI also fell by 3.2 index points to 50.9 in September 2022 from 54.1 a month ago, albeit remaining within expansionary threshold. The sector's slower expansion may be attributed to weaker demand. Nonetheless, hiring activity in the services sector expanded faster in September as service managers are expecting business activities to improve in October 2022.

Similarly, the retail and wholesale sector's PMI marginally decreased m-o-m by 0.3 index point to 51.7 in September 2022. Looking ahead, retail and wholesale firms anticipate business conditions to improve.

3. Supply Conditions

Aggregate supply. On the production side of the economy, the agriculture, industry, and services sectors contributed 0.2 ppt, 1.6 ppts and 5.8 ppts, respectively, to total GDP growth in Q3 2022.

Figure 12. Gross Domestic Product by Industrial Origin at constant 2018 prices



Source: PSA

The agriculture sector grew by 2.2 percent y-o-y, an improvement from 0.2 percent a quarter ago and a turnaround from the 1.7-percent contraction a year ago. This was due mainly to the higher output for poultry and egg production as well as livestock, support activities to agriculture, forestry, and fishing, other animal production, corn, and palay.

Meanwhile, the industry sector moderated at 5.8 percent growth from 6.4 percent a quarter ago and 8.7 percent a year ago. Nevertheless, continued expansion was seen in construction, manufacturing of chemical and chemical products, food products, coke and refined petroleum products, machinery and equipment except electrical, and wood, bamboo, cane, rattan articles and related products. Improvements were also observed in electricity, steam, water, and waste management, and mining and quarrying.

The services sector expanded by 9.1 percent, unchanged from a quarter ago but higher than 7.7 percent a year ago. Growth was driven by the strong performance in wholesale and retail trade, repair of motor vehicles and motorcycles, retail trade, financial and insurance activities, and transportation and storage.

Table 17. Gross Domestic Product by Industrial Origin at constant 2018 prices; growth rate in percent

BY INDUSTRIAL ORIGIN	2021	2022	
	Q3	Q2	Q3
Agriculture, Forestry, and Fishing	-1.7	0.2	2.2
Industry Sector	8.7	6.4	5.8
Mining and Quarrying	4.0	-6.6	9.1
Manufacturing	7.0	2.2	3.6
Electricity, Steam, Water and Waste Management	3.0	5.1	3.9
Construction	18.0	19.5	12.2
Service Sector	7.7	9.1	9.1
Wholesale and Retail Trade and Repair of Motor Vehicles and Motorcycles	6.5	9.7	9.1
Transportation and Storage	15.5	27.4	24.3
Accomodation and Food Service Activities	12.4	30.8	40.6
Information and Communcation	8.6	10.6	7.8
Financial and Insurance Activities	3.9	3.7	7.7
Real Estate and Ownership of Dwellings	3.9	4.4	3.1
Professional and Business Services	10.6	7.8	9.3
Public Administration and Defense; Compulsory Social Security	5.4	9.1	0.7
Education	13.6	5.5	5.2
Human Heath and Social Work Activities	16.1	1.7	5.9
Other Services	19.6	40.0	38.3

Source: PSA

Oil market developments. Dubai crude oil prices have been, on average, decreasing for four consecutive months (July-October 2022). The decline in crude oil prices could be traced to concerns over weaker global economic outlook given monetary policy tightening of major central banks and China's zero-tolerance policy against COVID-19. However, early figures for November 2022 show crude oil prices increasing amid signs of tightening supply given sanctions against Russia.

Forecasts suggest that global oil supply-demand dynamics would be broadly balanced in 2023.[15] The US Energy Information Administration (EIA) expects oil consumption to decline in 2023 amid lower GDP forecast from Oxford Economics. At the same time, oil production is also forecasted to decline considering OPEC+ crude oil output cut of 2 million barrels per day and lower forecast for US crude oil production. Nevertheless, these forecasts remain highly uncertain given possibility of supply disruptions and slower-than-forecasted economic growth, which could lead to weaker demand.

On the domestic front, pump prices decreased compared to the previous week, but still registered increases compared to month- and year-ago levels. On a y-t-d basis, there is still a net price increase, with prices of gasoline,[16] kerosene, and diesel prices remaining significantly higher compared to end-2021 levels.

[15] US EIA Short-Term Energy Outlook (October 2022).

[16] Disparity between DOE data and market data: The base prices for oil were determined when the oil industry was deregulated in 1998. The DOE regularly updates the base prices to account for any price adjustments announced by the big three oil companies. Thus, if the big three companies increase their prices of unleaded gasoline by ₱1, this amount will be added to the base price of unleaded gasoline. Similarly, when they reduce their prices of unleaded gasoline by ₱1, this amount is subtracted from the base price. However, there are some instances when some gasoline stations do not immediately implement such adjustments. Consequently, the average prices reported by the DOE may be different from actual market prices.

Developments in the agriculture sector. The Agriculture, Forestry, and Fishing (AFF) posted a growth of 2.2 percent in Q3 2022, an improvement from the modest 0.2-percent expansion recorded a quarter ago and the 1.7-percent contraction a year ago.[17] The acceleration in the AFF output was due to the increased *palay*, corn, sugarcane, livestock, and poultry production, outweighing the decline in the output for fishing and aquaculture.

Crop production, accounting for 53.9 percent of the total value of production in agriculture and fisheries, increased by 1.8 percent, up from the negative quarter- and year-ago outturns. This can be attributed to the higher value of production for *palay*, corn, sugarcane, abaca, tomato, ampalaya, and cacao, among others.

Similarly, livestock and poultry production expanded by 4.0 percent and 6.4 percent, respectively. This can be attributed largely to higher production of hogs, dairy, carabao, chicken, chicken eggs, and duck eggs. The growth of the livestock sector is the highest since the African Swine Fever (ASF) outbreak, indicating that the recovery in the livestock sector may be underway as swine repopulation efforts gain traction.

By contrast, the fisheries sector, which contributed 15.3 percent of total value of production in agriculture and fisheries, recorded a y-o-y contraction of 4.2 percent. This was due to significant decreases in the production of seafood varieties such as milkfish, tilapia, and roundscad or *galunggong*, among others.

Global food prices. In September 2022, international prices of Asian rice varieties increased amid strong demand for Thai and Vietnam rice, and export policy changes in India.

- The price of Thai 5% broken rice averaged US$436.80 per ton in September 2022, higher than the August level of US$431.30 per ton driven by the strong demand overseas, particularly in South Asia and Middle East.

- Similarly, the price of Vietnam 5% broken rice increased to US$395.40 per ton in September 2022 from the previous month's level amid expectations of increased demand as buyers shift to alternative sources for rice following export policy changes in India.

- The price of India 5% broken rice also surged to US$376.40 per ton month-on-month in September 2022 following the imposition of taxes on rice exports beginning 9 September 2022.

The FAO Food Price Index (FPI) dropped for the sixth consecutive month in September 2022 to 136.3 points from 137.9 points in August, albeit still higher than the year-ago level of 129.2 points. The m-o-m decline was attributed to the significant drop in the price of vegetable oil as well as moderate decreases in the prices of sugar, meat, and dairy products due mainly to ample export supplies and subdued global demand which outweighed the gains in cereal prices.

- The cereal price index rose in September on concerns over dry crop conditions for wheat in Argentina and the US, demand uptick in Europe, and

[17] Based on the Q3 2022 National Accounts report published by the Philippine Statistics Authority on 10 November 2022.

heightened uncertainty over the continuation of grain shipments from Ukraine. International rice prices also rebounded largely due to export policy changes in India.

- Meanwhile, the vegetable oil price index decreased, reflecting lower prices of palm, soy, sunflower, and rapeseed oils on the back of ample crop supplies.

- The sugar price index likewise fell on expectations of favorable yield prospects and lower ethanol prices in Brazil, as well as due to the weakening of the Brazilian real against the US dollar.

- The dairy price index was also weighed down by the weakness of the euro against the US dollar, dwindling demand due to market uncertainties, and bleak global economic growth prospects.

- The meat price index declined on favorable supply conditions for beef, particularly in Brazil, as well as slow import demand for poultry products.

Box Article No. 2: Non-Monetary Measures to Alleviate Supply-Side Pressures to Inflation

Prices of key food items such as rice, meat, fish, corn, and sugar rose mainly due to supply constraints and spillover effects of the Russia-Ukraine conflict leading to persistent global supply chain disruptions and soaring prices of fuel, feeds, and fertilizers. Likewise, the country's vulnerability to natural calamities and animal diseases continue to weigh on agricultural production.

In October 2022, headline inflation rose to 7.7 percent from 6.9 percent in September, bringing the year-to-date average inflation to 5.4 percent which is above the national government's target range of 2.0-4.0 percent. Core inflation, which excludes selected volatile food and energy items to depict underlying demand-side price pressures, surged to 5.9 percent in October from 5.0 percent (revised) in the previous month.

Most food items (vegetable, fish, sugar, meat, etc.) posted higher inflation readings during the month due to the adverse effects of seasonal weather conditions on domestic supply. While transport fare hikes took effect, transport inflation fell due to the sizable rollbacks in petroleum prices.

Measures to manage inflation

The BSP's monetary policy actions, through its control of short-term interest rates, can only affect demand by influencing investment and consumption decisions. Supply-side shocks are seen to be best addressed through timely non-monetary interventions by the National Government (NG) to ease domestic supply constraints and help avoid second-round effects on prices. These measures complement monetary actions in preventing inflation expectations from becoming more entrenched.

Government Agency	Program	Target groups
Department of Transportation (DOTr)	Fuel subsidy program ('Pantawid Pasada Program')	Public utility vehicles (UV Express, mini-buses, buses, shuttle services, taxis, tricycles, TNVS)[a]
Department of Agriculture (DA)	Fuel discount program	Farmers and fisherfolk who own agricultural or fishery machinery, either individually or through organizations
Department of Social Welfare and Development (DSWD)	Targeted Cash Transfer (TCT)	Six (6) million beneficiaries from the poorest 50 percent of the country's population[b]
		Four (4) million beneficiaries for non-4Ps beneficiary identified by the DSWD[c]
DOTr-LTFRB	Libreng Sakay	Extension of the Service Contracting of Public Utility Vehicle (PUV) Program until end-December 2022 to provide free rides to commuters along EDSA Carousel Route[d]

In the short run, policymakers need to provide adequate support to the most vulnerable sectors of the economy to help offset rising living costs. Fiscal support through fuel subsidies to the transport sector and fuel discount vouchers to farmers and fisherfolk is being implemented to dampen the impact of elevated food and energy prices on vulnerable groups. The timely provision of social protection benefits to the target beneficiaries will help temper price pressures on basic commodities and prevent any shift in inflation expectations.

Time-bound measures to ensure adequate and affordable domestic food supply through timely importation of key food items could be sustained to abate further supply-side pressures on inflation. Temporary lowering of tariff rates, increasing import volumes, and expanding import sources for key commodities were among the immediate interventions implemented by the NG to augment domestic supply and stabilize prices. Among these interventions are the following:

- For rice, Executive Order (E.O.) No. 171 approved on 21 May 2022 extended the temporary reduction in the most-favoured nation (MFN) tariff rate on rice imports at 35.0 percent until December 2022. This aims to capitalize on the gains from E.O. No. 135 in terms of boosting supply from more diversified and cheaper import sources for rice.

- For pork, E.O. No. 171 likewise extended the lower MFN tariff rates on pork imports until December 2022. Tariff rates are currently at 15.0 percent for in-quota and 25.0 percent out-quota. To complement this measure, the government encourages concerned groups to accelerate release of imported pork from cold storages to improve supply in the market and help induce price reduction.

- For corn, MFN tariff rates were also lowered to 5.0 percent in-quota and 15.0 percent out-quota until December 2022 in order to mitigate further corn price increases as a result of global supply disruptions and rising fuel and fertilizer prices. This is also to boost ongoing hog repopulation efforts as corn is used as raw material in the production of animal feeds.

- For fish, the government continues to address supply shortfall by modernizing the sector through improvement in the design and expansion of the use of Fish Aggregating Devices in strategic fishing areas; provision of pond aeration to fish farms, and establishment of cold chain facilities in island municipalities to reduce post-harvest losses.

- For sugar, the Sugar Regulatory Administration (SRA) Board issued Sugar Order No. 2 on 13 September 2022 allowing the importation of refined sugar not exceeding 150,000 MT for crop year 2022-2023, to stabilize domestic sugar supply and prices at reasonable levels.

Moreover, non-tariff barriers tend to add friction costs and hamper the flow of certain agricultural goods into the country. Some non-tariff measures (NTMs) in the agriculture sector in the form of administrative and procedural compliance could have the unintended consequence of raising food prices, reducing food security, and making consumers worse off.

Trade barriers, over and above any applicable quantitative restrictions, tariffs, as well as food safety regulations, should be looked into by the appropriate oversight agencies/inter-agency committees (i.e., the Anti-Red Tape Authority, and the Technical Committee on Non-Tariff Measures under the Committee on Tariff and Related Matters). A deliberate review and reform by the relevant authorities of some documentary and procedural requirements acting as NTMs are needed to improve national food security and consumer welfare.

More permanent solution of enhancing food productivity

Aside from short-term measures to alleviate domestic food supply, the more permanent solution is to improve domestic production of agricultural commodities to ensure food security in the long run. Rising input costs such as fuel, fertilizers, wheat, and animal feeds are pressing issues faced by the country's agriculture sector. Lower crop yields can be expected due to less fertilizer application. Farmers adjust to higher fertilizer prices by substituting toward less effective types of fertilizers, which in turn can adversely affect/reduce agricultural productivity. Skyrocketing prices of animal feeds also make the recovery in the domestic livestock industry more challenging. The food supply situation could also suffer from the ill effects of export bans and managed prices by our traditional sources of agricultural food imports.

Given the foregoing considerations, the government through the DA continues to pursue the following measures that aim to enhance domestic production:

- For rice, the DA reported that the Philippine Integrated Rice Program (PIRP), which features three components, namely: 1) the Rice Competitiveness Enhancement Fund (RCEF); 2) National Rice Program (NRP) that includes hybrid promotion; and 3) Rice Resiliency Project (RRP) that grants fertilizer subsidies to inbred and hybrid rice farmers, led to a substantial increase in both the hectarage and average yield per hectare of both hybrid and inbred rice. An expanded fertilizer discount program is also being implemented by the DA, which provides rice farmers registered under the Registry System for Basic Sectors in Agriculture (RSBSA) a price discount in their fertilizer purchases. This is in addition to the promotion of a balanced fertilization strategy, which involves the use of a combination of inorganic and organic fertilizers, and bio-stimulants from the DA.

- For livestock and poultry, apart from continued efforts to accelerate the revival of the industry from the ill effects of transboundary diseases such as the African Swine Fever (ASF) and avian influenza (AI), the DA should strengthen local feeds production and encourage use of substitutes to imported animal feeds to cushion the impact of higher international prices of raw materials used in feeds. Moreover, the passage of the Livestock Development and Competitiveness bill, which aims to modernize the domestic livestock and poultry value chains and provide for funds similar to the RCEF in rice, should be pursued.

- For fish, innovation in the fishery sector is being prioritized through the promotion of urban aquaculture and unconventional production systems such as tanks, dams, small water impounding ponds, small farm reservoirs (SFR), and natural ground level or elevated fishponds, as well as enhancing aquaculture through the use of green energy.

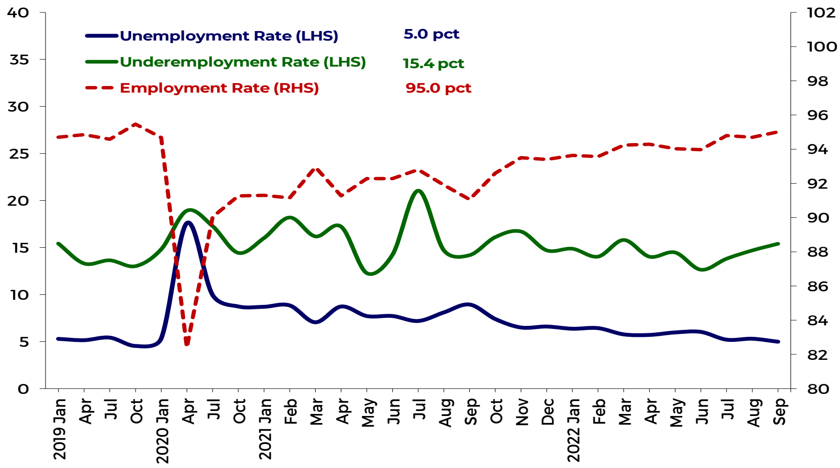
Overall, the BSP strongly supports the NG's implementation of non-monetary measures to beef up local supply of major food items and temper rising food prices in the short and medium term, as well as its initiatives to ramp up production and promote domestic food security over the long-term.

Sources:
a/ https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/2102-dbm-releases-p3-0-billion-for-fuel-subsidy-and-discount-programs
b/ https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/2272-dbm-releases-p6-2-billion-for-targeted-cash-aid
c/ https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/2312-dbm-approves-p4-1-billion-special-allotment-to-aid-4-m-beneficiaries
d/ https://www.dbm.gov.ph/index.php/secretary-s-corner/press-releases/list-of-press-releases/2323-dbm-releases-p1-4b-funding-for-the-extended-dotr-ltfrb-libreng-sakay-at-the-edsa-busway

4. Labor Market Conditions[18]

The unemployment rate in September 2022 improved to 5.0 percent from 5.3 percent a month ago and 8.9 percent a year ago. Moreover, the unemployment rate in September was slightly lower than the pre-pandemic rate of 5.3 percent.

Figure 13. Labor Market Indicators
in percent



Source: PSA

Similarly, the employment rate in September 2022 increased to 95.0 percent from 94.7 percent a month ago and 91.1 percent a year ago. The employment rate during the review month was also higher than the pre-pandemic employment rate of 94.7 percent.

However, the underemployment rate in September 2022 was higher at 15.4 percent from 14.7 percent a month ago and 14.2 percent a year ago. It was also higher than 14.8 percent in the pre-pandemic period.

5. Monetary Operations

As of 28 October 2022, total outstanding amount absorbed in the BSP liquidity facilities stood at about ₱1.276 trillion, higher than the total placements recorded in the pre-pandemic end-December 2019 level at ₱854 billion. The bulk of the BSP's monetary operations to absorb excess liquidity had been conducted through the BSP Securities facility (BSP-SF), comprising about 35.2 percent (or about ₱449.3 billion). Placements in the term deposit facility (TDF), overnight reverse repurchase (RRP) facility, and overnight deposit facility (ODF) made up about 28.1 percent (₱358.8 billion), 23.9 percent (₱305.0 billion), and 12.7 percent (₱162.5 billion), respectively, of the total amount of liquidity absorbed by the BSP.

As of 2 November 2022, the weighted average interest rate (WAIR) for the 7-day TDF increased to 4.9569 percent, settling higher by 14.23 basis points (bps) from the rate fetched during the 26-October 2022 TDF auction. The WAIR for the 14-day TDF likewise rose by 15.23 bps to 5.0567 percent from the previous auction. As of

[18] No update on wage developments.

the latest data in November 2022,[19] average weekly bid-to-cover ratios for the 7-day and 14-day term deposits stood at 0.66x (from 0.94x in October 2022) and 0.73x (from 1.02x in October 2022), respectively.[20]

For the issuance of BSP Bills (BSPB), the resulting WAIR for the 28-day BSPB rose to 5.2174 percent on 28 October 2022 from 4.5301 percent fetched during the BSPB auction on 30 September 2022. In October 2022, average weekly bid-to-cover ratio for 28-day BSPB stood at 1.14x (from 1.42x in September 2022).

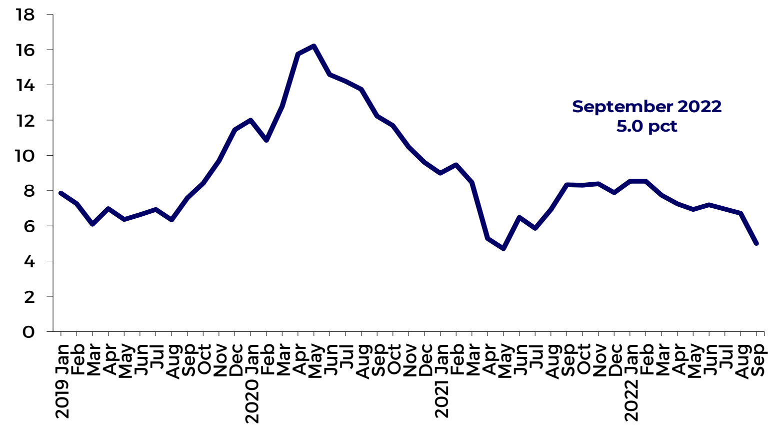
The auction results for the TDF and BSP bills during the review period reflect the complete pass-through of the BSP's 22-September policy rate hike along with renewed expectations of further tightening in the global financial market. Nonetheless, liquidity in the financial system remains ample.

For the daily RRP auctions, the average bid-to-cover ratio in October 2022[21] was recorded at 2.07x, lower than the bid-to-cover ratio in September 2022 at 2.66x.

6. Financial Conditions

Domestic liquidity. Preliminary data show that domestic liquidity (M3) grew by 5.0 percent y-o-y to about ₱15.4 trillion in September from the 6.7-percent (revised) growth in August. On a m-o-m seasonally adjusted basis, M3 decreased by 0.2 percent.

Figure 14. Domestic Liquidity
year-on-year growth rate; in percent



Source: BSP

Domestic claims rose by 10.8 percent y-o-y in September from 11.4 percent (revised) in the previous month, due to the improvement in bank lending to the private sector. Claims on the private sector grew by 10.1 percent in September from 8.9 percent in August with the sustained expansion in bank lending to non-financial private corporations and households. Meanwhile, net claims on the central government rose by 15.3 percent in September from 21.2 percent in August owing to the sustained borrowing by the National Government.

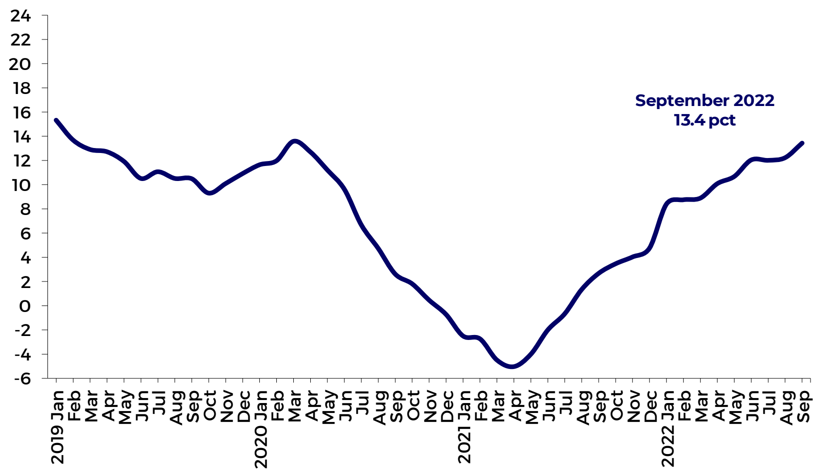
[19] Latest data is as of 2 November 2022.
[20] The 28-day TDF has not been offered starting the 14 October 2020 TDF auction, reflecting the full migration of auction volumes to the 28-day BSP Bills.
[21] Data for RRP auction is as of 28 October 2022.

Net foreign assets (NFA) in peso terms fell by 1.7 percent in September following the 0.8-percent contraction in August. The NFA of banks declined mainly on account of higher bills payable. Meanwhile, the BSP's NFA position was broadly steady y-o-y.

On the liabilities side, the growth in M3 was driven mainly by increases in transferable and time deposits, which contributed 2.8 percentage points (ppt) and 1.8 ppts, respectively. The growth in transferable deposits and time deposits were largely attributed to other resident sectors.[22]

Bank lending. Preliminary data show that outstanding loans of universal and commercial banks (U/KBs), net of reverse repurchase (RRP) placements with the BSP, expanded by 13.4 percent y-o-y in September, faster than the 12.2-percent increase in August. On a m-o-m seasonally adjusted basis, outstanding universal and commercial bank loans, net of RRPs, increased by 1.7 percent.

Figure 15. Loans Outstanding of Commercial Banks
year-on-year growth rate; in percent



Source: BSP

Outstanding loans to residents, net of RRPs, rose by 13.0 percent in September following an expansion of 12.1 percent in August. Outstanding loans for production activities went up by 12.3 percent in September from an 11.5-percent expansion in the previous month, due mainly to the rise in lending to key sectors such as real estate activities (16.3 percent); manufacturing (16.2 percent); information and communication (25.5 percent); and wholesale and retail trade, repair of motor vehicles and motorcycles (10.8 percent).

Likewise, consumer loans to residents grew by 20.5 percent in September from 18.3 percent in August, driven mainly by the year-on-year increase in credit card loans, motor vehicle loans, and salary-based general purpose consumption loans. Outstanding loans to non-residents[23] also increased by 26.6 percent in September after a 16.3-percent expansion in the previous month.

[22] Other resident sectors refer to household sectors.
[23] Outstanding loans to non-residents include loans by UKB's foreign currency deposit units (FCDUs) to non-residents.

Credit Standards

Results of the Q3 2022 Senior Bank Loan Officers' Survey (SLOS)[24,25] indicated that a larger proportion of respondents maintained their overall lending standards for loans to businesses and households based on the modal approach.[26] Meanwhile, results from the diffusion index (DI) method[27,28] presented mixed trends as credit standards for firms generally reflected a net tightening while loan standards for households revealed a net easing.

Lending to enterprises. The Q3 2022 modal-based results showed that majority of the bank respondents (77.1 percent) specified broadly unchanged credit standards for loans to enterprises. On the other hand, the DI approach indicated a net tightening of overall credit standards across all borrower firm sizes. Participating banks also reported that the overall tightening of credit standards was driven by the following factors: the deterioration of borrowers' profiles, reduced risk tolerance, a more uncertain economic outlook, and stricter financial system regulations.

Table 18. General Credit Standards for Loans to Enterprises (Overall)

	2020				2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Tightened Considerably	2.8	20.4	20.5	14.6	10.6	8.0	4.2	4.2	10.0	6.5	10.4
Tightened Somewhat	30.6	49.0	27.3	17.1	14.9	20.0	20.8	14.6	16.0	13.0	8.3
Remained Basically Unchanged	**66.7**	**24.5**	**45.5**	**63.4**	**66.0**	**70.0**	**70.8**	**75.0**	**72.0**	**76.1**	**77.1**
Eased Somewhat	0.0	6.1	6.8	4.9	8.5	2.0	4.2	6.3	2.0	4.3	4.2
Eased Considerably	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Diffusion Index for Credit Standards	**33.3**	**63.3**	**40.9**	**26.8**	**17.0**	**26.0**	**20.8**	**12.5**	**24.0**	**15.2**	**14.6**
Number of Banks Responding	**36**	**49**	**44**	**41**	**47**	**50**	**48**	**48**	**50**	**46**	**48**

Note: A positive diffusion index for credit standards indicates that more banks have tightened their credit standards compared to those that eased ("net tightening"), whereas a negative diffusion index for credit standards indicates that more banks have eased their credit standards compared to those that tightened ("net easing").
Source: BSP

[24] The BSP has been conducting the SLOS since 2009 to gain a better understanding of banks' lending behavior, which is an important indicator of the strength of credit activity in the country. The survey also helps the BSP assess the robustness of credit demand, prevailing conditions in asset markets, and the overall strength of bank lending as a transmission channel of monetary policy. The survey consists of questions on loan officers' perceptions relating to the overall credit standards of their respective banks, as well as to factors affecting the supply of and demand for loans to both enterprises and households. This is similar to the surveys of bank lending standards conducted by other central banks, such as the US Federal Reserve, the European Central Bank, the Bank of England, the Bank of Canada, and the Bank of Japan, among others.
[25] The analysis of the results of the SLOS focuses on the quarter-on-quarter changes in the perception of respondent banks. Starting with the Q3 2018 survey round, the BSP expanded the coverage of the survey to include new foreign commercial banks and large thrift banks. Prior to Q3 2018, the survey covered only universal and commercial banks.
[26] In the modal approach, the results of the survey are analyzed by looking at the option with the highest share of responses.
27 In the DI approach, a positive DI for credit standards indicates that the proportion of respondent banks that have tightened their credit standards exceeds those that eased ("net tightening"), whereas a negative DI for credit standards indicates that more respondent banks have eased their credit standards compared to those that tightened ("net easing").
[28] During the Q1 2010 to Q4 2012 survey rounds, the BSP used the DI approach in the analysis of survey results. Beginning in Q1 2013, the BSP used both the modal DI approaches in assessing the results of the survey.

Looking ahead to Q4 2022, a larger number of the surveyed banks anticipate generally unchanged credit standards for businesses. By contrast, the DI-based results reflected expectations of a net tightening of lending standards due to the following factors: decline in tolerance for risk, deterioration in borrowers' profiles, and less optimistic economic outlook.

Lending to households. The latest survey shows that most of the respondent banks (64.9 percent) retained their credit standards for loans extended to households. However, a net easing of overall credit standards for consumer loans was observed based on the DI approach, which was attributed by respondents to an increased tolerance for risk, improvement in borrowers' profiles and profitability of banks' portfolios, as well as less uncertain economic prospects.

Table 19. General Credit Standards for Loans to Households (Overall)

	2020				2021				2022		
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Tightened Considerably	0.0	39.4	16.7	3.7	9.4	5.7	5.6	2.9	2.5	5.4	5.4
Tightened Somewhat	21.7	21.2	30.0	11.1	9.4	20.0	11.1	8.6	12.5	5.4	10.8
Remained Basically Unchanged	**69.6**	**33.3**	**50.0**	**77.8**	**75.0**	**68.6**	**69.4**	**65.7**	**62.5**	**73.0**	**64.9**
Eased Somewhat	8.7	6.1	3.3	7.4	6.3	5.7	13.9	17.1	17.5	13.5	18.9
Eased Considerably	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	5.0	2.7	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Diffusion Index for Credit Standards	**13.0**	**54.5**	**43.3**	**7.4**	**12.5**	**20.0**	**2.8**	**-11.4**	**-7.5**	**-5.4**	**-2.7**
Number of Banks Responding	**23**	**33**	**30**	**27**	**32**	**35**	**36**	**35**	**40**	**37**	**37**

Note: A positive diffusion index for credit standards indicates that more banks have tightened their credit standards compared to those that eased ("net tightening"), whereas a negative diffusion index for credit standards indicates that more banks have eased their credit standards compared to those that tightened ("net easing").
Source: BSP

Over the next quarter, the modal approach pointed to a higher percentage of bank respondents anticipating generally unchanged loan standards. Meanwhile, the DI-based results continue to present bank respondents' expectations of net easing in overall credit standards for households driven by improvement in borrowers' profiles and profitability of banks' portfolios, as well as increased risk tolerance.

Loan demand. Results for Q3 2022 SLOS indicated broadly steady credit demand from both firms and consumers, based on the modal approach. Meanwhile, results from the DI method point to a net rise in overall loan demand from across all firm classifications and main categories of household loans (namely housing loans, credit card loans, and personal/salary loans). The general net increase in credit demand from enterprises were reportedly due to improvement in customers' economic outlook and increase in customer inventory and accounts receivable financing needs. Similarly, the overall net rise in consumer loan demand was associated with higher household consumption, lower income prospects, and banks' more attractive financing terms.

Over the next quarter, nearly half of the surveyed banks responded with expectations of generally unchanged loan demand from businesses (49.0 percent) while a higher proportion of respondents anticipate steady demand for credit from consumers (65.8 percent). Based on the DI method, banks expect a net increase in overall demand for loans from businesses in Q4 2022 due to the anticipated improvement in customers' economic prospects as well as increased customer inventory and accounts receivable financing needs.

Commercial real estate loans. The latest survey results showed that a larger proportion of bank participants (73.5 percent) responded with unchanged overall loan standards for commercial real estate loans (CRELs). Meanwhile, the DI-based approach showed a net tightening of credit standards for CRELs in Q3 2022 for the 27th consecutive quarter mainly driven by decline in risk tolerance, deterioration in borrowers' profiles, and more pessimistic economic expectations.

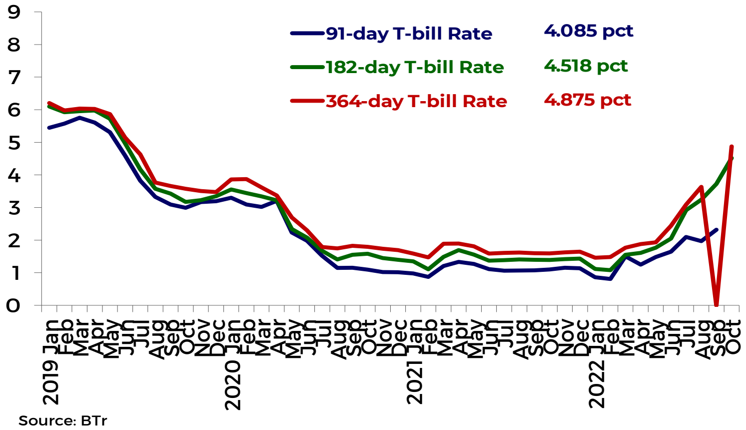
Over the next quarter, the modal results showed that majority of respondents continue to expect unchanged lending standards for CRELs while the DI-based approach pointed to respondents' anticipations of net tighter loan standards for CRELs.

Residential real estate loans. On housing loans extended to households in Q3 2022, most of the surveyed banks (71.9 percent) responded with generally unchanged credit standards as indicated by the modal approach. Similar to the previous survey, the DI-based results pointed to a net easing of credit standards for residential real estate loans which was attributed to increased risk tolerance, less uncertain economic prospects, and an improvement in borrowers' profiles and profitability of banks' portfolios.

For Q4 2022, a larger proportion of respondent banks expect lending standards for housing loans to be maintained, while DI-based values showed an outlook of net easing of housing loan standards.

Primary GS market and rates. During the 2 November 2022 T-bill auction, the Bureau of the Treasury (BTr) rejected all bids for the 91-day, 182-day and 364-day T-bills as the market asked for higher yields on expectation of further policy rate hikes from the US Fed and the BSP. Total tenders for all maturities reached about ₱16.085 billion, or around 1.1 times the ₱15.0-billion total amount offered by the BTr.

Figure 16. Treasury Bill Rates in percent



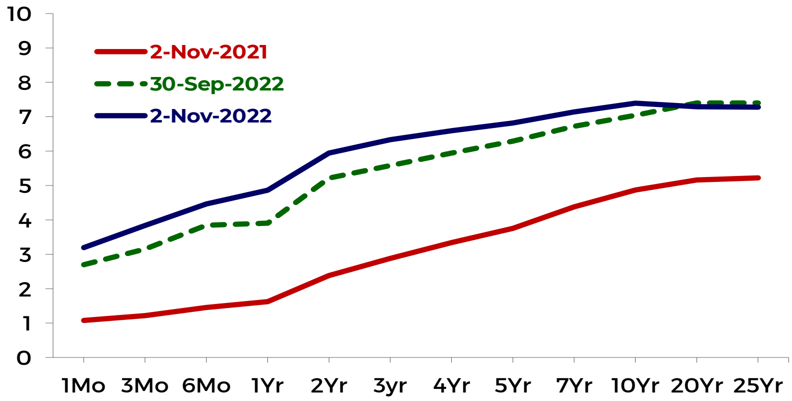
Source: BTr

Had the BTr fully awarded all bids for the 91-day, 182-day and 364-day T-bills, the average rates would have gone up by 245 basis points (bps) to 4.768 percent, 132.6 bps to 5.284 percent, and 201.6 bps to 5.798 percent, respectively, from the rates fetched during the last successful award of the tenor.[29]

Similarly, on 2 November 2022, the BTr rejected all bids for the newly issued 3-year T-bonds even as total tenders reached ₱36.336 billion or around 1.0 times the offered amount of ₱35.0 billion.

Secondary market GS yield curve. On 2 November 2022, secondary market GS yields generally increased, particularly in the short-end and middle of the yield curve, relative to end-September 2022 following the result of the bond auction. The rise in yields could also be attributed to selling activity as market players trimmed their positions following the release of BTr's borrowing program for November 2022.[30] Consequently, the positive spreads of secondary market rates over the BSP overnight RRP rate on 2 November 2022 were wider relative to end-September 2022 levels.

Figure 17. Yields of Government Securities in the Secondary Market in percent



Source: Bloomberg

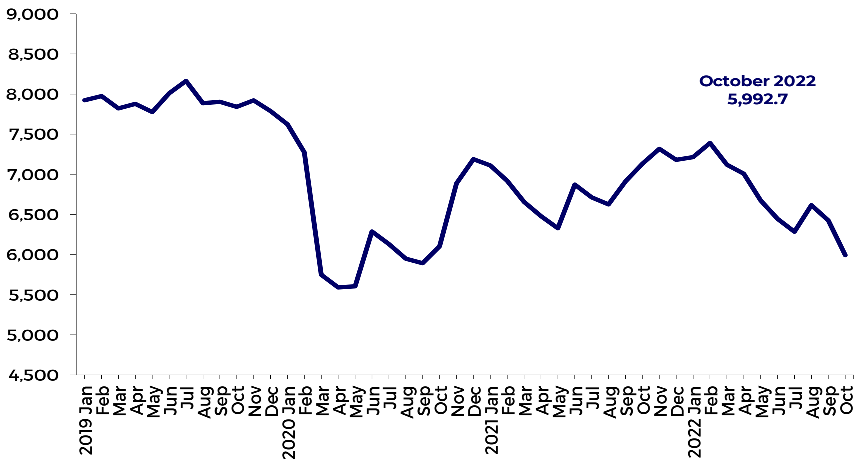
As of 2 Novembers 2022, the spreads between the 10-year and 1-year GS rates and the 10-year and 5-year GS rates were narrower at 252.9 bps (from 313.7 bps as of end-September 2022) and at 57.8 bps (from 74.9 bps as of end-September 2022), respectively, due mainly to the larger increase in the 1-year and 5-year GS rates relative to the rise in 10-year GS rate.

Stock market. In October 2022, the Philippine Stock Exchange Index (PSEi) averaged 5,992.7 index points, lower by 6.7 percent compared to its September average of 6,424.2 index points. The benchmark index declined amid continued concerns over the aggressive tightening of the US Federal Reserve; high domestic and global inflation; and the depreciation of the peso. Additionally, the PSEi was weighed down by the announcement of the Organization of the Petroleum Exporting Countries (OPEC) to cut oil supply to 2 million barrels per day in

[29] Last successful awards for the 91-day, 182-day and 364-day T-bills were on 5 September, 26 September, and 22 August 2022, respectively.
[30] BTr's borrowing schedule for November 2022 includes five ₱15 billion Tbill auctions (₱5 billion-₱5 billion-₱5 billion mix for the 91-, 182- , 364- day tenors), and four ₱35 billion Tbond auctions (three-, five-, 12- and 20-year tenors).

November, the largest since the onset of the COVID-19 pandemic.[31] On a year-to-date (YTD) basis, the PSEi dropped by 13.6 percent to close at 6,153.4 index points on 28 October 2022 from its end-December 2021 closing level of 7,122.6 index points.

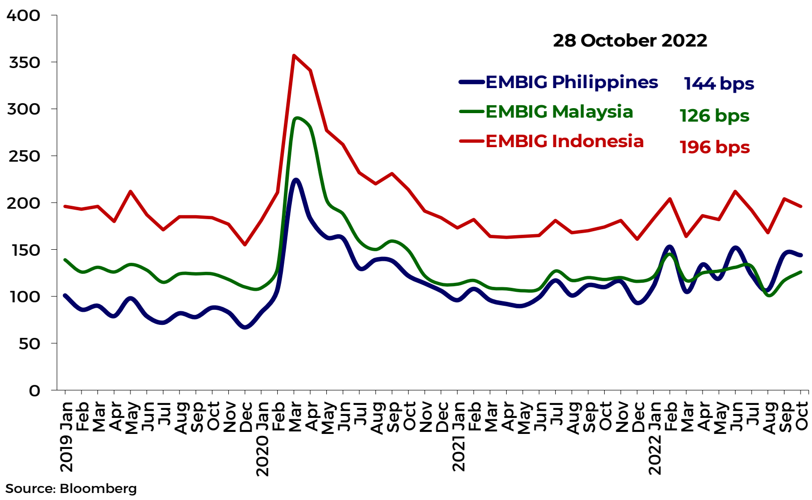
Figure 18. Philippine Stock Exchange Index
index points



Source: Philippine Stock Exchange, BSP

Sovereign bond and credit default swap spreads. Debt spreads have widened amid expectations of more aggressive monetary tightening by the US Fed, compounded by global recession fears and geopolitical concerns. The continued rise in domestic prices and the persistent weakening of the peso likewise contributed to the expansion of the country's debt spreads. As of 28 October 2022, the Emerging Market Bond Index Global (EMBIG) Philippines spread, the extra yield investors demand to hold Philippine sovereign debt relative to US Treasuries, stood at 144 basis points (bps). This was marginally lower than the end-September 2022 level of 145 bps. Similarly, the country's 5-year sovereign credit default swap (CDS) decreased to 124 bps from 149 bps during the same period.

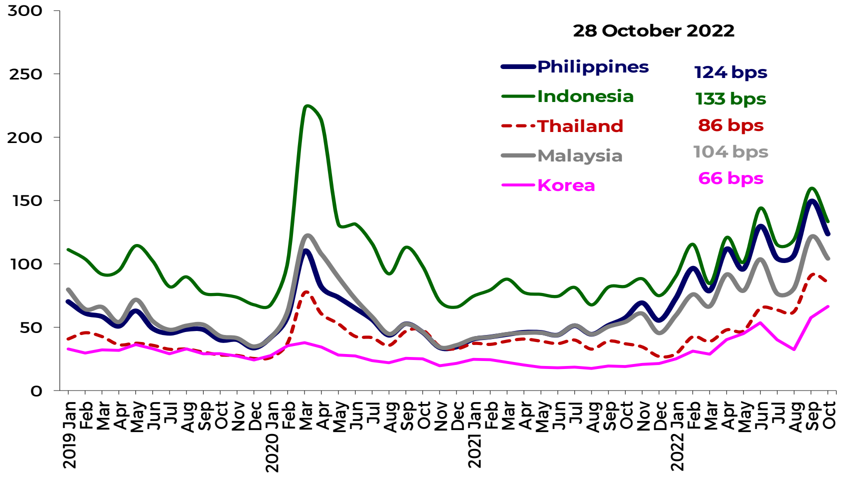
Figure 19. EMBIG Spreads of Selected ASEAN Countries
in basis points



Source: Bloomberg

[31] Source: Bloomberg report dated 5 October 2022

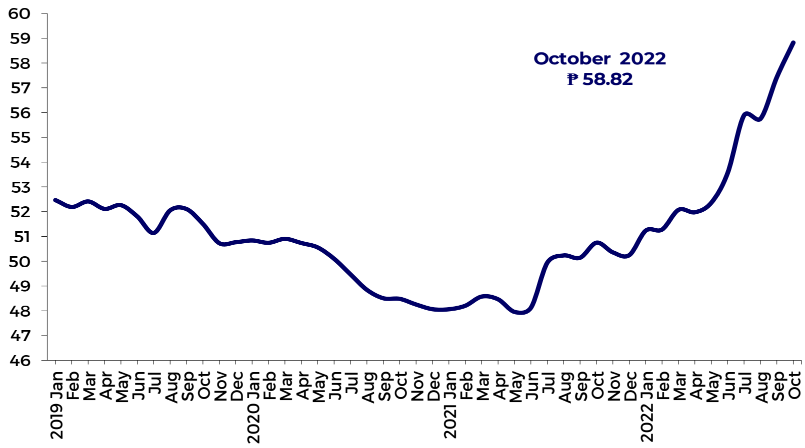
Figure 20. Five-Year CDS Spreads of Selected ASEAN Countries
in basis points



Source: Bloomberg

Exchange rate. In October 2022, the peso averaged ₱58.82/US$1, depreciating by 2.36 percent from the ₱57.43/US$1 average in September. The peso depreciated following hawkish comments from US Federal Reserve (US Fed) officials, hinting that the US Fed may need to continue raising interest rate aggressively during its two remaining meetings for the year to curb rising inflation. Meanwhile, on the domestic front, negative market sentiment over the country's wider-than-expected balance of payments (BOP) deficit in September likewise added pressure on the peso.[32] On a year-to-date basis, the peso depreciated against the US dollar by 12.03 percent to close at ₱57.97/US$1 on 28 October 2022 from the end-December 2021 closing rate of ₱51.00/US$.[33] The Philippine peso depreciated along with the other Asian currencies, with the Japanese yen remaining the most depreciated currency in the region followed by the South Korean won.

Figure 21. Peso-Dollar Rate
PHp/US$



Source: Reference Exchange Rate Bulletin, Treasury Department, BSP

[32] Data from the BSP showed that the $2.3-billion BOP deficit in September was higher than the $572.0 million deficit in August. This was also wider than the $412.0 million deficit seen in September 2021 and is the largest monthly deficit level since the $2.7 billion deficit recorded in September 2018. Meanwhile, in the first nine months of the year, the country's BoP deficit widened to $7.8 billion from the $665.0 million deficit posted in the same period last year.
[33] Based on the last done deal transaction in the afternoon.

On a real trade-weighted basis, the peso gained external price competitiveness in September 2022 (y-o-y) against the basket of currencies of all trading partners (TPI) and trading partners in developing (TPI-D) countries. This was indicated by the decrease in the real effective exchange rate (REER) index of the peso by 1.39 percent and 0.45 percent against the TPI and TPI-D, respectively, due mainly to the peso's nominal depreciation which more than offset the impact of widening inflation differential. Meanwhile, against the basket of currencies of trading partners in advanced (TPI-A) countries, the REER index of the peso increased by 1.43 percent.[34,35]

---

[34] The Trading Partners Index (TPI) measures the nominal and real effective exchange rates of the peso across the currencies of 14 major trading partners of the Philippines which include US, Euro Area, Japan, Australia, China, Singapore, South Korea, Hong Kong, Malaysia, Taiwan, Indonesia, Saudi Arabia, United Arab Emirates, and Thailand. The TPI-Advanced (TPI-A) measures the effective exchange rates of the peso across currencies of trading partners in advanced countries comprising of the US, Japan, Euro Area and Australia. The TPI-Developing (TPI-D) measures the effective exchange rates of the peso across 10 currencies of partner developing countries which includes China, Singapore, South Korea, Hong Kong, Malaysia, Taiwan, Indonesia, Saudi Arabia, United Arab Emirates, and Thailand.
[35] The REER index represents the Nominal Effective Exchange Rate (NEER) index of the peso, adjusted for inflation rate differentials with the countries whose currencies comprise the NEER index basket. A decrease in the REER index indicates some gain in the external price competitiveness of the peso, while a significant increase indicates the opposite. The NEER index, meanwhile, represents the weighted average exchange rate of the peso vis-à-vis a basket of foreign currencies.

Box Article No. 3: An Updated Estimate of the Exchange Rate Pass-Through to Domestic Prices in the Philippines

A weaker peso is often a favorable development for sectors whose earnings are in foreign currency, like the US dollar. In the Philippines, these mainly include exporters, overseas Filipino workers, and tourism-related businesses that cater largely to international visitors. However, a weaker peso can also make imported goods and services more expensive, cross-border loans servicing costs higher, and payment of foreign exchange (FX) obligations more difficult to fulfill on time. Whether a weaker peso should be a cause for concern for monetary policymakers depends ultimately on the degree of its pass-through to consumer prices.

The decline of exchange rate pass-through (ERPT) to prices upon adoption of the inflation targeting (IT) regime has been documented in both advanced and emerging economies (Gagnon & Ihrig, 2004; Hakura & Choudhri, 2001). In the Philippines, Guinigundo (2017) estimated that in the short run, a ₱1 depreciation leads to a 0.27-percentage point (ppt) increase in quarter-on-quarter (q-o-q) inflation during pre-IT period, while it leads to only a 0.04 ppt increase during the IT period.

This article provides an update to the ERPT estimates reported in Guinigundo (2017). The sample period runs from 1990Q1 to 2022Q2 to cover quarters prior to the BSP's implementation of the IT framework in 2002, as well as periods of significant financial market volatility, such as the Asian Financial Crisis (AFC), Global Financial Crisis (GFC), Taper Tantrum, and the COVID-19 pandemic.

The updated estimates in *Table A* confirms the previous finding of a lower ERPT upon the BSP's adoption of the IT framework. In the short-run, a ₱1-depreciation results in a 0.35 ppt increase in q-o-q inflation during the pre-IT period, on average. In contrast, the average impact of a ₱1-depreciation leads to a 0.08 ppt increase during the IT period. Similarly, long-run ERPT declined to 0.12 ppt in the IT period. The decline in the updated estimate of the long-run ERPT reflects weaker estimates of inflation persistence.

Table A. BSP estimates of exchange rate pass-through

	Pre-IT period 1990Q1 to 2001Q4		IT period 2002Q1 to 2022Q1	
	Short-run	Long-run	Short-run	Long-run
Guinigundo (2017)	0.269	0.547	0.037	0.393
Updated model	0.347	0.534	0.076	0.116

Source: Guinigundo (2017), BSP-DER staff estimates

To update the estimate of the pass-through of changes in the exchange rate to domestic prices, an autoregressive distributive lag (ARDL) model as shown in equation (1) was employed. Short-run ERPT in the model is defined as the sum of the statistically significant coefficients of exchange rate changes.

$$\Delta \ln cpi_t^{PH} = c + \sum_{j=1}^{6} \beta_{1,j} \Delta \ln cpi_{t-j}^{PH} + \sum_{k=0}^{2} \beta_{2,k} \Delta \ln exrate_{t-k} + \sum_{l=0}^{2} \beta_{3,l} \Delta intrate_{t-l} + \beta_4 \Delta \ln cpi_t^{WLD} + \beta_5 ygap_t + \varepsilon_t \quad (1)$$

The dependent variable used in the model is the q-o-q seasonally adjusted inflation, based on the 2018 consumer price index (CPI) series. Meanwhile, quarterly movements in the peso-dollar rate, expressed in percentage terms, is used as the independent variable. Data on world inflation[a] and domestic output gap[b] are included to control for foreign prices and domestic demand conditions, respectively. As an additional control, the reverse repurchase (RRP) rate and weighted monetary policy operations rate (WMOR) are included in the pre-IT period and IT period, respectively, to capture BSP's monetary policy stance.

Evidence of a weaker pass-through during the IT regime are shown in *Table B*, with the impact of one percent peso depreciation on inflation declining to 0.04 ppt in the IT period from 0.11 ppt during the pre-IT period.[c] Meanwhile, the implied inflation persistence is broadly steady during the covered period, reducing its influence on the long-run ERPT.[d] Among the control variables, world inflation has the largest impact on domestic inflation, with a marked rise in the IT period. The higher sensitivity aligns with the country's growing reliance on food and energy imports, as well as its greater participation in global value chains. Both the output gap and interest rate coefficients point to the expected relationship with domestic inflation but are only significant during the IT period.

Table B. Estimated coefficients of the quarterly model

	Pre-IT period 1990Q1 to 2001Q4		IT period 2002Q1 to 2022Q1	
Short-run ERPT	0.112	***	0.036	*
Inflation persistence	0.350	***	0.353	**
World inflation	0.431	*	1.052	***
Output gap	0.031		0.075	**
RRP rate/WMOR	(0.002)		(0.454)	**

Optimal number of lags to be included in the model is determined based on the Akaike Information Criterion; Estimated using heteroskedasticity- and autocorrelation-consistent standard errors; values in parenthesis are negative; ***p<0.01, **p<0.05, *p<0.10

While the findings still point to a declining ERPT since the BSP's adoption of the IT framework, said period has seen its fair share of low and high inflationary episodes. Volatile and persistent inflation occurred in the first seven years of the IT implementation up to the GFC, mostly driven by supply-side factors such as higher oil and rice prices in the world market. Inflation rates then remained within target post-GFC as the peso strengthened due to foreign exchange inflows. This, however, changed after the Taper Tantrum as the peso began to depreciate and inflation became more persistent, particularly in 2018, coinciding with global oil and food price surges. As the economy recovers from the COVID-19 pandemic, persistent high inflation owing to supply-side factors as well as the depreciating peso due to the US Fed's aggressive rate hikes warrant a closer look at the evolution of the ERPT during the recent period.

A monthly model was also estimated to allow for sufficient observations to investigate three subperiods: pre-GFC, post-GFC/pre-Taper Tantrum, and post-Taper Tantrum. Energy and non-energy price indices published by the World Bank are used as proxies for world inflation, while output gap estimates are converted from a quarterly to a monthly frequency using the cubic spline method. The ERPT for the monthly model is estimated by regressing the ARDL model shown in equation (2).

$$\pi_t^{mom} = \alpha + \sum_{j=1}^{J} \beta_{1,j}\pi_{t-j}^{mom} + \sum_{k=0}^{K} \beta_{2,k}\Delta exrate_{t-k} + \sum_{l=0}^{L} \beta_{3,l}\pi_{t-l}^{energy} + \sum_{m=0}^{M} \beta_{4,m}\pi_{t-m}^{non-energy} + \sum_{n=0}^{N} \beta_{5,n} ygap_{t-n} + \sum_{o=0}^{O} \Delta intrate_{t-o} + \varepsilon_t \tag{2}$$

Consistent with the results of the quarterly model, *Table C* shows a significant reduction in the ERPT after the implementation of the IT framework. Focusing on the IT subperiods, pre-GFC ERPT estimate is at 0.125 ppt, higher by 0.045 ppt compared to the full IT period average. Nonetheless, this declined post-GFC until the run-up to the Taper Tantrum in 2013. The lags of inflation are also notably negative, capturing the within-target band inflation during that period, in contrast with the observed persistence of inflation in the other periods. However, for the period after the Taper Tantrum, the ERPT increased by around twice the value recorded post-GFC, coinciding with higher estimate of inflation persistence.

Table C. Estimates using the monthly model of exchange-rate pass through

	Pre-IT period	IT period			
	1990M1-2001M12	Full 2002M1-2022M6	Pre-GFC 2002M1-2008M8	Pre-TT 2009M7-2013M4	Post-TT 2013M10-2022M6
Lag specification[a]	4,7,10,3,1,4	7,5,2,8,6,12	6,5,6,3,6,5	2,6,0,4,5,2	6,4,2,3,6,3
Short-run ERPT	0.256 ***	0.080 ***	0.125 **	0.082 *	0.169 ***
Persistence	0.427 ***	0.440 ***	0.421 **	(0.239) *	0.558 ***
Energy	not significant	0.014 ***	0.016 *	not significant	0.023 ***
Non-energy	not significant	0.023 **	0.033 **	0.087 ***	not significant
Output gap	(0.039) *	(0.785) *	not significant	3.319	(0.842) *
RRP rate/WMOR	not significant	not significant	not significant	(0.735) *	(0.569) ***

a Number of lags included, as specified in equation (2); optimal number of lags is determined based on adjusted R-squared; estimated using heteroskedasticity- and autocorrelation-consistent standard errors; values in parenthesis are negative; ***p<0.01, **p<0.05, *p<0.10

Given these findings, it shows that the magnitude of the pass-through varies across different periods. Although a significant decline in estimated pass-through is observed during the IT period, further analysis of subperiods within the IT timeframe suggests that the lower inflation environment have accommodated the weaker pass-through in line with findings of Taylor (2000). Notably, the lower ERPT coinciding with generally low inflation seen after GFC and before Taper Tantrum drove the overall decline in ERPT during the IT period. One possible explanation is that during low periods of inflation, some firms would rather absorb the costs of the depreciating currency and avoid incurring additional costs when they change their prices. If the menu cost theory of price setting is expected to hold, it then becomes crucial to control for nonlinearities when estimating pass-through especially during periods of high exchange rate volatility (Jašová, Moessner, & Takáts, 2016). In addition, Delloro et. al. (2017) found evidence that depreciation episodes tend to have a stronger effect than appreciation, which may partly explain the higher pass-through post-Taper Tantrum. Hence, accounting for the possible nonlinear and asymmetric of ERPT may be necessary when estimating pass-through especially during periods of heightened FX volatility and inflation persistence.

End notes:
a/ World inflation is derived as the quarter-on-quarter percent change of GDP-weighted average CPI of all countries with less than 50 percent year-on-year inflation. The country-level CPI data was sourced from the World Bank database while the weights are based on each country's GDP (PPP) share of world GDP from the April 2022 World Economic Outlook.
b/ Potential GDP was estimated using the one-sided Hodrick-Prescott (HP) filter.
c/ The estimates of the ERPT in Table 2 are different from those in Table 1 due to the log transformation of the exchange rate variable. Comparable values are calculated in Table 1 to show the impact of a ₱1-depreciation.

d/ The long-run ERPT is calculated by dividing the short-run ERPT by 1 minus the coefficients of the lags of inflation i.e., inflation persistence.

References

Delloro, V., Glindro, E., & Alarcon, S. J. (2017). *Asymmetric Exchange Rate Pass-through: Evidence from the Philippines.* SEACEN Working Papers WP19/2017. South East Asian Central Banks Research and Training Centre.

Gagnon, J., & Ihrig, J. (2004). Monetary policy and exchange rate pass-through. *International Journal of Finance & Economics, 9*(4), 315-338.

Guinigundo, D. (2017). Implementing a Flexible Inflation Targeting Regime in the Philippines. In *Philippine Central Banking: A Strategic Journey to Stability* (pp. 18-61). Bangko Sentral ng Pilipinas.

Hakura, D., & Choudhri, E. (2001). *Exchange Rate Pass-Through to Domestic Prices: Does the Inflationary Environment Matter?* IMF Working Paper WP/01/194. International Monetary Fund.

Jašová, M., Moessner, R., & Takáts, E. (2016). *Exchange rate pass-through: What has changed since the crisis?* BIS Working Papers No 583. Bank for International Settlements.

Taylor, J. (2000). Low inflation, pass-through, and the pricing power of firms. *European Economic Review, 44*(7), 1389-1408.

Box Article No. 4: Impact of a Tightening Financial Environment on the Philippine Corporate Sector

Global financial conditions have tightened as central banks both in advanced economies (AEs) and emerging market economies (EMEs) accelerate monetary policy normalization to keep inflation from becoming further entrenched. The adjustments in policy rates drove periodic narrowing of interest rate differentials between AEs and EMEs, which resulted in volatile capital flows, rise in interest rates and depreciation of currencies, reinforced by safe-haven trade towards the US dollar and other US asset classes. This developed alongside a multitude of economic risks facing financial systems including the continuing deterioration of the global growth outlook, and the protracted geopolitical risks.

In an environment of rising interest rate and weakening domestic currencies, a closer monitoring of the financial health of corporates (i.e., in terms of profitability, solvency, debt servicing capacity, and leveraging activities) is warranted. Firms from sectors that were hardest hit by the pandemic and have accumulated substantial foreign currency debt may experience difficulty in sustaining operations and paying debt obligations. A depreciation of the peso could likewise affect corporate recovery especially among sectors with firms appearing to have no natural hedge[a] against foreign exchange (FX) risks. Moreover, firms with low interest coverage ratios (ICRs)[b] are more likely to experience liquidity and solvency issues, which could lead to default or even reduction in investment and employment, posing risks to financial stability as well as to economic growth, at large.

Profitability, liquidity, and leveraging conditions

Data of listed non-financial corporates (NFCs) with disclosures as of Q2 2022[c] **suggest a general improvement in the profitability and adequacy to service immediate debt payments.**

In terms of **profitability**, NFCs in the industrial, property, and services sectors exhibited recovery in earnings, benefitting mostly from the easing of quarantine restrictions. However, there are indications that the rising interest rate environment, the elevated global inflation, and the depreciation of the peso are already exacting their toll on the profitability of firms. For instance, some holding firms are attributing the decline in net income from higher prices of fuel products and raw materials for the production of food, beer and non-alcoholic beverages. A declining profitability is likewise observed in some mining firms, mainly due to increases in energy cost, higher interest expense on outstanding loans, and foreign currency loss due to the depreciation of the peso.

In terms of **liquidity**, most sectors (i.e., holding firms, industrial, mining, and property sectors) reported current ratios (CR)[d] at above 1x, which is reflective of the adequacy of firms' current assets to cover short-term liabilities. Likewise, ICR of most firms across all the sectors are generally above the 2x threshold being used by the International Monetary Fund (IMF). This provides evidence that most firms have sufficient earnings to cover immediate debt payments.

In terms of **leverage,** most firms in the holdings, industrial, mining, property, and services sectors reported increased borrowings[e] as of Q2 2022, which are mostly due to higher loan availments to fund operating requirements, capital expenditure, and investment acquisitions. While leveraging activities are on the rise, it may be argued that the vulnerability of the corporate sector in terms of debt accumulation would have to be assessed through the persistence of rising leverage on a much longer horizon. It is important to note that the recent increase in leveraging activities in Q1 and Q2 2022 is a consequence of the reopening of the domestic economy, which have influenced their business expansion plans, driving the increase in leveraging activities.

Sensitivity to interest rate and foreign exchange movements

Given the tightening financial environment, the BSP conducts a stress-test scenario analysis on quarterly performance of firms to assess the potential spillover of interest rate and foreign exchange movements to the Philippine corporate sector. This is done by estimating the impact of a decline in corporate sector earnings; depreciation of the FX rate; and rise in interest rates on the ICR of firms, which measures the debt-servicing capacity of the corporate sector.[f] Based on the results of the stress-test exercise, the tightening financial environment will result in more firms having difficulty in servicing immediate debt payments as more firms in the industrial, services, holdings, property, and financial sectors would incur ICRs below the IMF threshold. However, debt-at-risk appears to be manageable as these firms hold a relatively low share of debt against the total debt of listed firms included in the stress testing exercise.

Assessing further the sensitivity of corporates to FX rate movements, data on bond issuances reveal limited FX risk exposure of the corporate sector as most bonds issued in 2021 and in the first three quarters of 2022 are denominated in local currency.[g] For both 2021 and 2022, most of the bonds issued are from the holdings, property and banking sectors, majority of which are in the medium (3 to 5 years) to long-term (more than 5 years) maturities.

Nonetheless, the BSP remains cognizant of the inherent risk of vulnerable firms pose on financial stability, especially on a system-wide perspective. In this respect, the BSP looks into the exposure of these firms to the Philippine banking system in order to arrest brewing systemic risks in the financial system. In the Philippines, the corporate sector surveillance is being strengthened through the BSP's Corporate Financial Trends Survey (CFTS), a statistical initiative of the BSP which aims to establish granular data on NFCs' sources and uses of funds, profitability and liquidity, and leveraging conditions. The aforementioned survey is currently being expanded to include micro-, small-, and medium-enterprises (MSMEs), which shall provide a broader view of the corporate sector and will enable better statistics on the BSP's corporate surveillance analysis.

The BSP is also prepared to utilize and prescribe appropriate policy responses in managing risks in the corporate sector, develop frameworks for prudential supervision, and provide support to the affected sectors, whenever necessary, to the extent that the BSP's monetary and financial policy mandates would allow.

End notes:
a/ Firms with natural hedge are those with reported revenue and assets in foreign currency.
b/ Interest Coverage Ratio (ICR) is computed by dividing the Earnings before Interest and Taxes (EBIT) account by the Interest Expense (IE) account.

c/ These include financial statements of 249 Philippine Stock Exchange (PSE) listed firms, sourced from PSE Edge and Thomson Reuters, as of 21 October 2022.
d/ Current Ratio (CR) is computed by dividing the Current Assets account by Current Liabilities account
e/ This include both loan availments from banks and issuance of debt securities.
f/ The following assumptions were used for the ICR stress-test exercise:

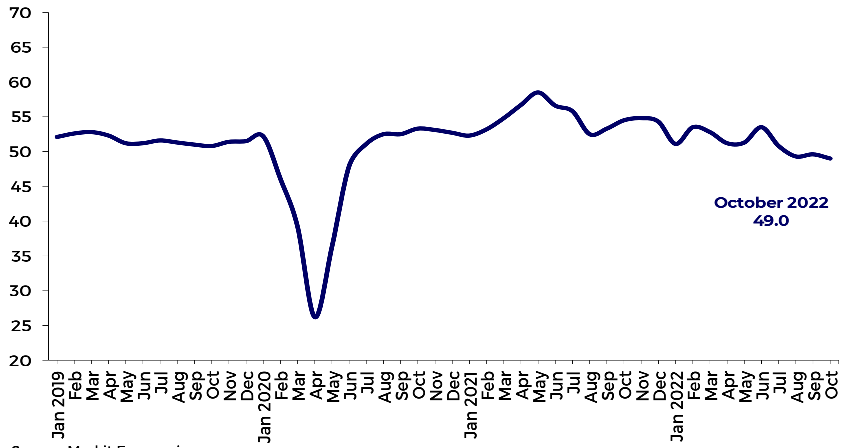
- FX shock representing the maximum depreciation for 2022 that would affect the foreign currency portion of Interest Expense.
- Interest rate shock representing the year-to-date increase in the BSP's policy rate plus additional margins that banks may require.
- EBIT (Earnings before interest and taxes) shock representing a decline in corporate profitability.

g/ Information is based on the "Sources and Uses of Corporate Funds" Table being maintained by the BSP's Department of Economic Statistics.

7. External Developments

Global economic activity contracted in October as factory output and service revenues declined amid the decrease in economic activity in major economies such as the United States, China, Euro Area and United Kingdom, among others.

Figure 22. JP Morgan Global All-Industry Output Index
index points



Source: Markit Economics

The JP Morgan All-Industry Output Index fell to 49.0 in October from 49.6 a month ago.[36] The pace of decline was the steepest since June 2020 as elevated inflation, restrictive financial conditions, prolonged geopolitical risks, and heightened market volatility weighed on private demand. Nonetheless, the global economy's rate of contraction was partly offset by the faster expansions in Japan, India, and Brazil.

In the October 2022 World Economic Outlook (WEO) report, the International Monetary Fund (IMF) downgraded further its full-year economic growth projection for 2023 by 0.2 percentage point (ppt) to 2.7 percent. Meanwhile, the growth forecast for 2022 was retained at 3.2 percent. The lower 2023 growth forecast was due to waning pandemic-related fiscal support and restrictive financial conditions further weakened the global economy's recovery momentum. In addition, households and firms have been facing financing difficulties as central banks rapidly tighten monetary policy settings to influence price expectations and prevent the further de-anchoring of inflation expectations.

For advanced economies (AE), the IMF reduced its baseline growth projections for 2022 and 2023 by 0.1 ppt and 0.3 ppt, respectively, amid deteriorating economic prospects in the US and European economies following the rapid tightening of financial conditions due to increased inflationary pressures and unanchored inflation expectations. The normalization of fiscal policy has likewise cooled demand in most AE as waning pandemic-related cash transfers and elevated prices decreased real household income.

[36] JP Morgan Global Composite PMI, http://www.markiteconomics.com/. A diffusion index is calculated for each survey variable. The index is the sum of the percentage of 'higher' responses and half the percentage of 'unchanged' responses. The indices vary between 0 and 100, with a reading above 50 indicating an overall increase compared to the previous month, and below 50 an overall decrease.

In contrast, the growth estimate for emerging markets and developing economies (EMDE) was raised owing to the improved economic outlook for Latin America and the Caribbean as well as the smaller-than-expected contraction in emerging and developing Europe. Meanwhile, the growth projection for emerging and developing Asia was reduced for 2022 and 2023, which reflects the pared-down growth estimates for India and ASEAN-5 in view of less favorable external conditions as well as the lower growth forecast for China amid prolonged COVID-related quarantine restrictions and a worsening property market crisis.

On balance, risks to the global growth outlook remain firmly tilted toward the downside. The IMF cited the following downside risks to the baseline global growth forecasts: (1) monetary policy mistakes; (2) divergent monetary policy paths and dollar strength; (3) inflationary forces persisting for longer; (4) widespread debt distress in vulnerable emerging market economies; (5) sustained increase in energy prices due to reduced supply from Europe; (6) resurgence of global health scares; (7) worsening of China's real estate crisis; and (8) limited international cooperation in view of a fragmented global economy.

Policy Actions by Other Central Banks. Four out of the 15 central banks regularly monitored by the BSP have raised their respective policy rates thus far in November. These central banks include the Reserve Bank of Australia, Federal Reserve, Bank Negara Malaysia, and Bank of England.

Table 20. Summary of Monetary Policy Decisions by Other Central Banks

Central Bank	Monetary Policy Decision
Reserve Bank of Australia (RBA)	+25 bps to 2.85 percent (1 November 2022)
US Federal Reserve (US Fed)	+75 bps to 3.75-4.00 percent (2 November 2022)
Bank of England (BOE)	+75 bps to 3.00 percent (2 November 2022)
Bank Negara Malaysia (BNM)	+25 bps to 2.75 percent (3 November 2022)

Meanwhile, aside from the BSP, five more central banks are scheduled to meet in November, namely, Bank Indonesia (17th), Reserve Bank of New Zealand (23rd), Bank of Korea (24th), Bank of Thailand (30th), and People's Bank of China (TBA).

The *BSP Monetary Policy Report* is published four (4) times a year by the Bangko Sentral ng Pilipinas. The report is available as a complete document in pdf format, together with other general information about inflation targeting and the monetary policy of the BSP, on the BSP's website:

https://www.bsp.gov.ph/SitePages/PriceStability/PriceStability.aspx

If you wish to receive an electronic copy of the latest BSP Monetary Policy Report, please send an e-mail to bspmail@bsp.gov.ph.

The BSP also welcomes feedback from readers on the contents of the Monetary Policy Report as well as suggestions on how to improve the presentation. Please send comments and suggestions to the following addresses:

By post: BSP Monetary Policy Report
c/o Department of Economic Research
Bangko Sentral ng Pilipinas
A. Mabini Street, Malate, Manila
Philippines 1004

By e-mail: bspmail@bsp.gov.ph