

1. *What are interest rates?*

Generally, interest rates are prices. They are the price paid for the use of money for a period of time and are expressed as a percentage of the total outstanding balance that is either fixed or variable. There are two ways by which interest rates can be defined: first, from the point of view of a borrower, it is the cost of borrowing money (borrowing rate); and second, from a lender's point of view, it is the fee charged for lending money (lending rate).

2. *How are interest rates classified?*

The interest rates charged on borrowed funds are generally classified according to the tenor or the maturity period: short-term (less than one year); medium-term (more than one year but less than five years); and long-term (more than five years).

Interest rates differ, depending on the type of instruments (e.g., traditional deposit instruments like savings deposit, time deposit, and some demand or current accounts, and investment instruments like bonds, securities) and on the tenor of investment.

3. *What are real interest rates?*

Real interest rates are interest rates adjusted for the expected erosion of purchasing power resulting from inflation. Real interest rates are what matter to households' consumption and firms' investment decisions, which collectively constitute aggregate demand. Demand for goods and services cannot be directly controlled by nominal interest rate. Instead, demand is also affected by expected inflation.

Being the main supplier of bank reserves, a central bank can only set the short-run nominal policy rate, which serves as the benchmark for market interest rates. A central bank cannot set the real interest rates because it cannot set inflation expectations. One may therefore wonder how an adjustment in short-run nominal interest rate can affect consumption and investment decisions, which are carried out over a longer horizon. The answer lies in the fact that central bank's policy action can influence not only the market rates but also inflation expectations. Thus, by signaling its policy intent through nominal policy rate adjustment, the central bank can affect the real return on funds faced by households and firms.

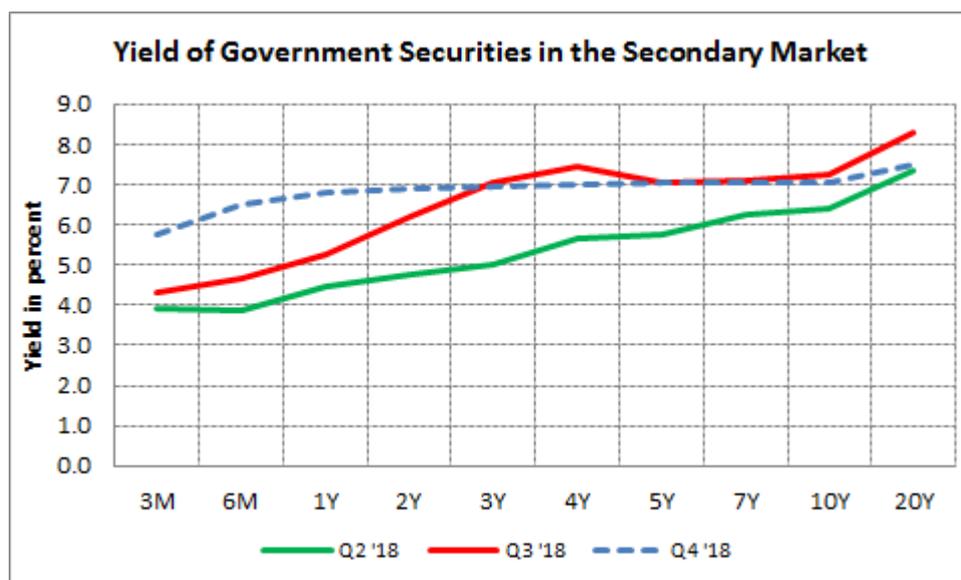
For example, a ₱1,000,000 investment with nominal 10 percent annual return will give the investor at the end of the year ₱1,100,000, i.e., $1,000,000(1+.10)$. With 5 percent annual inflation, the real value of the investment is ₱1,047,617, i.e., $1,100,000/(1+0.05)$. The real return is therefore 4.8 percent. This is given by $r = (i-\pi)/(1+\pi)$ (where r is real interest rate, i is nominal interest rate and π is inflation rate). At low rates of inflation, this can be approximated by $r=i-\pi$.

4. What is the yield curve?

The yield curve is what economists use to capture the overall movement of interest rates (which is also known as “yields” in Wall Street parlance). Plot the day’s yield for various maturities of Treasury bills (T-bills) and bonds on a graph and you have the day’s yield curve. As can be seen from the chart under the secondary market, the line begins on the left with the 3-month T-bills and ends on the right with the 20-year T-bonds.

Government Treasury bills and bonds are issued through yield auctions of new issues to generate cash for the National Government (NG). This is referred to as the primary auction market. Secondary trading, on the other hand, is carried out in over-the-counter (OTC) market. In the secondary market, the most recently auctioned Treasury issue is considered current or on-the-run. Current issues are more actively traded and more liquid, hence, they typically trade at lower yields.

As of end-December 2018, the secondary market yield for government securities (GS) with maturities of 3 months to 2 years rose relative to the end-September 2018 levels, as market players invested their excess liquidity and serviced their clients’ requirements. Debt paper yields were higher by a range of 69 bps (2-year GS) to 186 bps (6-month GS) when compared to end-September 2018 levels. Meanwhile, yields for GS with tenors of 3 years and above declined by a range of 5 bps (7-year GS) to 81 bps (20-year GS).



Source: Bloomberg/PDEX

5. *How are interest rates determined?*

Today, the level of interest rates is determined by the interaction of the supply and demand for funds in the money market. Interest rates, prior to their full liberalization in 1983, were fixed by the Bangko Sentral ng Pilipinas (BSP). In 1981, the then Central Bank of the Philippines deregulated all bank rates except short-term lending rates. In 1983, the deregulation of bank rates was completed with the removal of the remaining ceilings on short-term lending rates.

6. *What is the BSP's policy on interest rates? Does the BSP regulate the interest rate charged by banks, lending investors and pawnshops?*

Since 1983, the BSP has followed a market-oriented interest rate policy. That is, it allows the market to set its own rates. Thus, the BSP does not regulate the interest rate charged by banks, lending investors and pawnshops. However, for transparency purposes, the BSP requires that the interest rates applied must be duly indicated on the pawn ticket in case of pawnshops, the promissory note in the case of lending investors, and loan agreements in the case of bank loans. The Monetary Board only sets rates for the BSP's overnight borrowing and lending facility to influence the timing, cost and availability of money and credit, for the purpose of stabilizing the price level.

7. *Can the BSP intervene so that banks will not charge very high lending rates?*

The BSP's past experience with rate-setting made apparent the limitations of an administratively fixed interest rate. For this reason, the BSP shifted to a market-oriented interest rate policy in 1983. The re-imposition of rate ceilings or limits on the spread between the T-bill rate and lending rate will only introduce distortions in the credit market, including: a) the pricing of credit outside of the fundamental issue of risk; b) the exclusion of certain segments of the economy from the market; c) the need to also regulate other banking products and services; and d) the increased burden on bank supervision.

After the Asian crisis, however, the Banker's Association of the Philippines (BAP) decided to implement a gentleman's agreement to maintain a cap on the spread of bank lending rate of up to a maximum of five (5) percent over the 91-day T-bill rate in the secondary market. A review of the spread between the average monthly bank lending rate charged by commercial banks (both high- and low-end) and the 91-day T-bill rate showed that banks are generally in compliance with the 500-basis point cap.

8. *Can the BSP set interest rate levels?*

Yes, by law, the BSP can effectively set interest rates. Under the Usury Law (Act No. 2655, as amended by P.D. 116), the Monetary Board can prescribe the maximum interest rates for loans made by banks, pawnshops, finance companies and similar credit institutions, and to change such rates whenever warranted by prevailing economic conditions. Moreover, the BSP charter (R.A. No. 7653) allows the Monetary

Board to take appropriate remedial measures whenever abnormal movements in monetary aggregates, in credit or in prices endanger the stability of the Philippine economy. Nevertheless, since 1983, the BSP has followed a market-oriented interest rate policy.

9. *What factors influence the rise and fall in interest rates?*

Interest rate movements in the Philippines are affected generally by the price level or inflation rate, fiscal policy stance, and intermediation cost which could impact the demand and supply for money.

- ***Inflation rate.*** The BSP's policy direction to achieve its mandate of maintaining price stability has a marked influence on the interest rate level. When there is too much liquidity in the system, there is more pressure for inflation to rise. To curb inflationary pressures arising from excess liquidity in the system, the BSP will have to increase its key policy rates, i.e., overnight borrowing rate or reverse repurchase rate (RRP) and overnight lending rate or repurchase rate (RP). By increasing its key policy rates, the BSP is sending a signal to the market that the general level of interest rates will be on an uptrend. In mirroring the movement of the BSP's policy rates, the benchmark 91-day T-bill rate also sets the direction for other rates, specifically, bank lending rates.
- ***Fiscal policy stance.*** The fiscal policy stance may also influence the direction of interest rates. A government that incurs a fiscal deficit needs to finance its existing budgetary requirements by borrowing from the domestic market or from abroad. The higher is the fiscal deficit, the stronger the demand to borrow to finance the gap. This exerts upward pressure on domestic interest rates, particularly if the government borrows from a relatively less liquid domestic market.
- ***Intermediation cost.*** Financial institutions incur costs in extending their services. Interest rates will tend to be high when intermediation cost is high. Included in the intermediation costs are administrative costs and the BSP's reserve requirements.

Other factors that could influence the interest rates include the maturity period of the financial instrument and the perception of risks associated with the instrument. Those with longer-term maturity and with higher probability of incurring loss carry higher interest rates. The lack of intermediation could also affect interest rate movement. For instance, with their larger holdings of non-performing assets (NPAs), banks are more cautious in their lending activities. This would tend to induce an increase in interest rates.

10. *What is an interest rate corridor (IRC) and how does it promote more stable interest rates?*

An IRC is a system for guiding money market rates towards central bank (CB) target/policy rate. It consists of a rate at which the CB lends reserves to banks and a rate at which it takes deposits from them, with the CB policy/target rate set in the middle.

The IRC system consists of the following instruments: standing liquidity facilities, namely, the overnight lending facility (OLF) and the overnight deposit facility (ODF); the overnight reverse repurchase (RRP) facility; and a term deposit auction facility (TDF). The interest rates for the standing liquidity facilities form the upper and lower bounds of the corridor, while the overnight RRP rate is currently set in the middle of the corridor. The repurchase (RP) and Special Deposit Account (SDA) windows were replaced by standing OLF and ODF, respectively. Meanwhile, the RRP facility was modified to a purely overnight RRP. In addition, the TDF serves as the main tool for absorbing liquidity.

The key benefit of the adoption of an IRC system in the Philippines is the strengthening of monetary policy transmission by ensuring that money market interest rates move within a reasonable range around the BSP's policy rate. Upon the implementation of the IRC, the BSP narrowed the width of the corridor from 350 basis points to 100 basis points (± 50 basis points). This narrower corridor will help limit potential interest rate volatility.

The new IRC system is also seen to confer other benefits over time. It is expected to promote greater interbank market activity by encouraging banks to undertake their day-to-day liquidity management more actively as BSP monetary operations gradually exert a stronger influence on short-term liquidity conditions. Moreover, the offering of the TDF is expected to promote the establishment of benchmarks for short-term interest rates. Increased activity and better pricing in money market rates, in turn, are seen to help add depth to money markets and help develop the domestic capital market. Over time, the implementation of the IRC system will also allow possible adjustments in reserve requirements in line with international norms.

11. *Why are interest rates not the same in all banks?*

The cost of doing business varies from bank to bank and this is reflected in the different lending rates charged by the banks.

12. *What interest rates are monitored by the BSP?*

Interest rates monitored by the BSP include:¹

¹ Data on interest rates are available at the BSP website through this link: www.bsp.gov.ph/statistics.online.asp

- **Overnight Lending Facility (OLF) Rate** - the interest rate on the standing overnight lending (i.e. Repurchase) facility at which the BSP lends reserves to commercial banks.
- **Overnight Deposit Facility (ODF) Rate** - the interest rate on the overnight/term deposit (i.e. Special Deposit Account) facilities at which the BSP takes deposits from commercial banks.
- **Term Deposit Facility (TDF) Rate** - the interest rate on the term deposit (i.e. 7-day and 28-days term deposits auctioned using variable-rate with multiple price tenders) facilities at which the BSP takes deposits from commercial banks.
- **Overnight Reverse Repurchase (RRP) Facility Rate** – the interest rate on the RRP facility at which overnight RRP agreements are offered to banks. The offering involves a fixed-rate and full-allotment method where individual bidders are awarded a portion of the total offer depending on their bid size.
- **Treasury bill (T-bill) Rate** - the rate on short-term debt instruments issued by the NG for the purpose of generating funds needed to finance outstanding obligations. T-bills come in maturities of 91, 182 and 364 days. Auction is usually held on Mondays at the Bureau of the Treasury.
- **Interbank Call Loan Rate** - the rate on loans among banks for periods not exceeding 24 hours primarily for the purpose of covering reserve deficiencies.
- **Philippine Interbank Offered Rate (PHIBOR)** - represents the simple average of the interest rate offers submitted by participating banks on a daily basis, under the auspices of the BAP. The participants consist of 20 local and foreign banks, which post their bid and offer rates between 10:30 – 11:30 A.M. on an electronic monitor where lending rates in pesos are determined. The rates given by the banks are used as their dealing rates or the rates at which they will be able to borrow from or lend to the market during the day. Launched by the BAP on 1 February 1996, PHIBOR serves as an indicator of the banking system's level of liquidity.²
- **Philippine Interbank Reference Rate (PHIREF)** - the implied interest rate on the peso derived from all done USD/PHP swap and forward transactions. The rate is a firm price, not an indicative quote, transacted among financial institutions. The PHIREF rate is estimated through a “fixing” arrangement wherein an average rate is calculated from rates contributed by a panel of banks.

² Effective 15 April 2013, the Bankers Association of the Philippines has stopped the setting and publication of PHIBOR rates.

- **Philippine Dealing System Treasury Reference Rates (PDST)** - published rates by the Philippine Dealing and Exchange Corporation (PDEx), a dealing market for the trading of fixed income securities in the Philippines, i.e., government and corporate bonds, and treasury bills. The PDEx posts the following reference rates: the PDST Fixing (PDST-F)³, PDST Reference Rate AM (PDST-R1), and PDST Reference Rate PM (PDST-R2).⁴

The PDST-F aims to support the repricing of earlier-issued debt securities and derivative contracts or other interest-rate sensitive instruments that use contributed bid rates for a reference rate. The PDST-R1 and PDST-R2 are intended to become the source of reference rates for the repricing of loans, securities, derivative transactions and other interest rate sensitive instruments to be issued. The PDST-R1 and R-2 are also intended to become the bases for market valuation of government securities and other peso-denominated fixed income securities.

- **Time Deposit Rate** - the weighted average interest rate charged on interest-bearing deposits with fixed-maturity dates and evidenced by certificates issued by banks.
- **Savings Deposit Rate** - the rate charged on all interest-bearing deposits of banks, which can be withdrawn anytime. It is derived as the ratio of interest expense on peso deposits of sample banks to the total outstanding level of these deposits.
- **Bank Average Lending Rate** - the weighted average interest rate charged by commercial banks on loans granted during a given period of time. Monthly data are computed as the ratio of actual interest income of sample banks on their peso-denominated loans to the total outstanding level of these loans.
- **Lending Rate** - refers to the range (high and low) of lending rates reported by commercial banks on a daily basis. The low end refers to the prime lending rate.

13. **Why is there a gap between the banks' savings deposit rate and lending rate?**

The gap reflects the interest rates charged on loans, covering not only the cost of funds (marginal cost), but also intermediation and other overhead costs, as well as the spread or profit margin. The spread represents the risk premium assigned to a particular loan

³ Pursuant to the Bankers' Association of the Philippines (BAP) memorandum dated 8 January 2015, publication of the PDST-F ceased on 1 April 2015.

⁴ The PDST-F is the calculated average of the best 60 percent of firm BID rates posted by designated market-making banks for the original 12 benchmark tenors at 11:16 AM daily. PDST-R1 is derived from the weighted average yields of done transactions or best firm bid rates as the case maybe for the 12 benchmark tenors at 11:16 AM daily. PDST-R2 is calculated from the weighted average yields of done transactions or best firm bid rates as the case maybe for the 12 benchmark tenors as of 4:15 PM daily. The 12 benchmark tenors are 1-month, 3-month, 6-month, 1-year, 2 year, 3-year, 4-year, 5-year, 7-year, 10-year, 20-year, and 25-year.

exposure — the higher the risk, the higher the spread. It should also be noted that the data on lending rates reflect the average interest rate level and hence, provide only a broad indication of loan tenors and risk exposures.

In Q4 2018, the interest rates on savings and time deposits (all maturities) averaged 1.135 percent and 4.061 percent, respectively. Bank lending rates (all maturities), meanwhile, averaged 6.758 percent during the same period. These translated to a gap ranging 2.697-5.623 percent between the lending and deposit rates.

14. *What implications do interest rate levels have on the economy?*

During normal times, a low-interest rate environment, which reflects competitive conditions as well as the actual cost of funds, should impact positively on a bank's financial performance. Low interest rates encourage borrowing to finance economic activity. This speeds up economic growth, improving the borrowers' ability to repay loans, which, in turn, should affect favorably the bank's earnings. Thus, banks gain from low interest rates in two ways: the increased demand for bank loans, and the reduction in non-performing loans. The stock market similarly prospers due to prospects of high corporate profits.

The experience of many countries shows that high interest rates tend to reduce borrowing for investment activity, ultimately leading to slower economic growth. Slower economic growth, in turn, reduces corporate profits and, hence, the ability to repay loans, which impacts negatively on banks' balance sheets. High interest rates also tend to encourage investors to pull out their funds from the stock market and invest them instead in fixed-income securities.

An emerging economy that is expected to grow robustly will naturally see higher interest rates to temper inflationary pressures.

Too low an interest rate can also have serious repercussions. Having very low interest rate for a long time can lead to sharp and sustained increases in asset prices beyond what can be supported by long-term economic fundamentals. Such asset price increases spawn expectations of higher short-term trading profits more than the assets' future earning capacity.

There is also the so called zero lower bound, that is, nominal interest rate cannot go below zero. A zero nominal interest rate would mean that the real interest is negative, which is a mirror image of too low aggregate demand. With negative real rates, households will opt not to deposit their cash in the banks because the real return is eroded. Investors will also postpone planned investment because returns are negative. Hence, economic activity is stalled and recession sets in. Under this scenario, interest rates are of no help to the economy.

15. *How would you describe interest rate developments since the mid-1990s?*

T-bill rates have generally been declining since mid-1998 (Table 1 and Chart 1). The decline in yields continued until it reached its lowest in 2002, when rates began to inch up anew until 2004. T-bill rates eased in 2005 and 2006, reflecting decelerating inflation, improving fiscal performance, and ample liquidity in the financial system. In addition, average lending rates mirrored the movement in the yields of government securities. This decline in interest rates was accompanied by a flattening of the yield curve, which suggests an easing in monetary conditions and relatively well-contained inflation expectations.

The downtrend in T-bill rates continued until April 2007. However, beginning May, T-bill rates began to rise on account of the uncertainty brought about by the local elections. Rates continued to increase gradually until September due to worries over the impact of the US subprime mortgage market troubles on local markets, despite continued benign inflation. In December, average domestic interest rates eased following the Government's announcement of a record-budget surplus in November. These rates remained low compared to year-ago levels but were higher relative to the rates posted at the start of 2007.

In 2008, T-bill rates trekked a general uptrend as a result of higher inflation due mainly to rising commodity prices and later in the year, due to the higher risk premium demanded by the market players in reaction to the global financial turmoil.

Beginning 2009, short-term interest rates started to ease following the six rate cuts in the BSP's key policy rates since December 2008. In 2010 and 2011 primary interest rates declined further as a result of the BSP's previous monetary policy decisions.

In 2012, domestic interest rates in the primary market started to increase on the back of cautious market sentiment amid the continuing debt crisis in the euro area. The rising T-bill rates also reflected investors' preference for longer-dated government papers given expectations of a manageable inflation outlook over the policy horizon. In 2013, domestic interest rates in the primary market declined significantly due to strong demand for government securities on the back of the country's strong macroeconomic fundamentals and ample liquidity in the financial system.

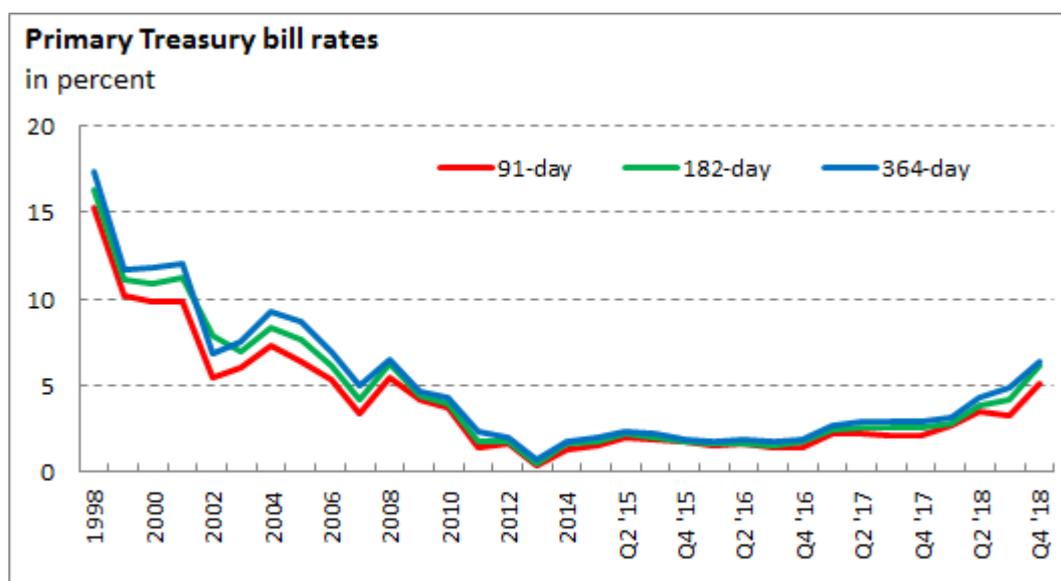
In 2014, the average T-bill rates in the primary market edged higher as investors sought higher yields on expectations of an increase in interest rates as the US Federal Reserve's monthly bond-buying program ended in October 2014. In 2015, Treasury bill rates in the primary market rose across tenors even as domestic inflation remained subdued throughout the year. In 2016, T-bill rates declined reflecting strong investor preference for short-dated tenors amid concerns over slowing economic growth in Asia and the continued expectation of a US Fed rate hike in the coming months. In 2017, T-bills increased due to geopolitical concerns overseas and heightened uncertainty on the direction of US fiscal and monetary policy.

In Q4 2018, the average 91-, 182-, and 364-day T-bill rates in the primary market increased to 5.105 percent, 6.110 percent, and 6.357 percent from 3.283 percent, 4.190 percent, and 4.895 percent, respectively, in line with recent policy rate hikes by the BSP.

Table 1

Primary Treasury bill rates (in percent)											
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	
91-day	15.266	10.197	9.861	9.860	5.433	6.028	7.340	6.358	5.351	3.406	
182-day	16.291	11.136	10.842	11.184	7.827	6.953	8.321	7.671	6.149	4.184	
364-day	17.397	11.704	11.800	11.981	6.822	7.489	9.218	8.683	6.955	4.917	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Q4 2018
91-day	5.389	4.186	3.728	1.371	1.583	0.315	1.244	1.772	1.500	2.147	5.051
182-day	6.193	4.395	3.965	1.692	1.759	0.484	1.605	1.924	1.583	2.502	6.110
364-day	6.492	4.591	4.257	2.264	1.965	0.720	1.788	2.077	1.761	2.879	6.357

Chart 1



Source: Bureau of Treasury