COMPETITION COMMISSION OF PAKISTAN

ENQUIRY REPORT

(Under Section 37(1) of the Competition Act, 2010)

IN THE MATTER OF POSSIBLE ANTICOMPETITIVE ACTIVITIES BY PRIMARY DEALERS IN T-BILL AUCTIONS

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Dated: 12th February, 2024

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1. Background

1. The Competition Commission of Pakistan ('the Commission') took notice of various concerns raised regarding collusive activities by Primary Dealers (various commercial banks and DFIs) ('PDs') in auctions of Market Treasury Bills ('MTBs' or 'T-bills') through which the Government of Pakistan ('GoP') raises revenue.

2. These concerns were more apparent after the T-bills auction on 15 December 2021, i.e., the possibility of collusive behaviour by PDs resulting in higher T-Bill yields payable by the GoP. An article in The News noted:

   "Top official sources confirmed to The News ... that Prime Minister's Adviser on Finance and Revenue Shaukat Tarin and Governor State Bank of Pakistan Dr Reza Baqir had publicly warned the commercial banks that they will take stern action if they continued exploiting the situation for offering Treasury Bills (T-bills) at higher rates....

3. Under the IMF's Extended Fund Facility (2019-2022) agreement, the GoP no longer had the option of borrowing from the State Bank of Pakistan ('SBP'), making it dependant on commercial banks for meeting its domestic debt requirements. Cognisant of this, "The bankers knew that under the IMF agreement, the government could not borrow from the SBP, so they had assumed the driving seat and dictated the government to invest in T-bills at higher rates and only in three months maturity."[1]

4. In its December 2021 Monetary Policy Statement, the SBP stated:
   Since the last meeting, despite a moderation in consumer loans, overall credit growth has remained supportive of growth. Meanwhile, across all tenors, secondary market yields, benchmark rates and cut-off rates in the government's auctions have risen significantly. The MPC noted that this increase appeared unwarranted[2].

5. An article in Dawn notes:
   In its monetary policy statement on Dec 14, the SBP had called the significant rise in secondary market yields unwarranted. But the yields stayed at the same elevated level in the subsequent auction of treasury bills on Dec 15. In fact, yields on the same instruments in the secondary market further rose by 20-30 basis points following the Dec 15 auction. Banks tried to extract maximum benefit for themselves. The government had to borrow in the last auction to meet its rollover target[3].

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[1] The News, *Three major markets of Pak economy under pressure: PSX, money market, and exchange rate, are not reciprocating positively to PTI government's economic narrative*, 17 December 2021, online at https://www.thenews.com.pk/print/917378-three-major-markets-of-pak-economy-under-pressure
[2] State Bank of Pakistan, *Monetary Policy Statement, 14 December 2021*, online at https://www.sbp.org.pk/m_policy/2021/MPS-Dec-2021-Eng.pdf
[3] Dawn, *Rare SBP move causes money market rates to decline*, 18 December 2021, online at https://www.dawn.com/news/1664454/rare-sbp-move-causes-money-market-rates-to-decline

(to 8.75% from previous level of 7.25%) and then again on 15 December 2021 to 9.75%. The auction yields in the two T-Bill auctions in December 2021 saw a considerable jump to 10.6% to 10.70% following the interest rate increase. Although the GoP and the SBP tried to calm the markets by repeatedly announcing there would be no further hikes in the interest rate, the auction yields did not fall. To assure the markets that the policy rate will not see an upward revision soon, the SBP even conducted an open market operation (OMO) for a 63-day period, which was a rare move since OMOs are usually for a 7-day period. For the 17 November 2021 auction, PDs quoted higher rates and limited their participation mostly in the 3-month tenor; bids for 6 and 12-month tenors were quoted at such high rates that the government rejected them outright. The DG (Debt) provided details of the bids placed by the Primary Dealers for the T-Bill auctions between January 2020 and December 2021 (via email of 19 January 2022).

8. To gain further insight the following information was solicited from the 13 PDs on 4 January 2022 (via letter):
    a. Competitive bids submitted and winning bids for the period January 2020 to December 2021;
    b. factors placed under consideration when submitting bids;

All Primary Dealers shared the required information. Observations from the analysis conducted on their bidding data is presented in the paragraphs below.

9. At that time the government's total domestic debt (30 June 2021) was PKR 26.9 trillion. Of this, PKR 6.68 trillion (25%) was from T-Bills (floating debt). The government issues T-bills, in accordance with the Public Debt Act 1944, in denominations of PKR 5,000 and in tenors of 3, 6, and 12 months. T-bills are issued at a discount from par value (face value) i.e., a bill of PKR 5,000 will be sold for PKR 4,800. The face value of the instrument is redeemed upon maturity. The longer the maturity, the higher the interest rate the instrument will pay. The T-bill yield is thus the interest the GoP pays on the instrument. Generally, when demand for T-bills is low, the yield increases to compensate.

10. Scheduled banks, DFIs, Investment Banks and listed brokerage houses are eligible to become PDs of Government securities. Only PDs can submit bids in auctions for MTBs. Every financial year, the SBP designates PDs, who meet the requisite eligibility criteria, for participation in auctions for various government securities. PDs appointed by SBP for FY2021-22 are[4]:

    1. Habib Bank Limited
    2. Allied Bank Limited
    3. Bank Al-Falah Limited
    4. JS Bank Limited
    5. National Bank of Pakistan
    6. MCB Bank Limited
    7. United Bank Limited
    8. Pak Oman Investment Company Limited
    9. Faysal Bank limited

[4] For the year 2022-23, Allied Bank is no longer a PD.

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19-May-21	7	7.35	7.34	7.46	0.35	0.34	0.46
2-Jun-21	7	7.35	7.34	7.49	0.35	0.34	0.49
16-Jun-21	7	7.33	7.31	7.49	0.33	0.31	0.49
30-Jun-21	7	7.31	7.3	7.45	0.31	0.3	0.45
14-Jul-21	7	7.26	7.24	7.45	0.26	0.24	0.45
28-Jul-21	7	7.24	7.23	7.4	0.24	0.23	0.4
11-Aug-21	7	7.24	7.23	7.4	0.24	0.23	0.4
25-Aug-21	7	7.23	7.23	7.41	0.23	0.23	0.41
8-Sep-21	7	7.23	7.21	7.39	0.23	0.21	0.39
22-Sep-21	7.25	7.64	7.57	7.69	0.39	0.32	0.44
6-Oct-21	7.25	7.85	7.7	7.81	0.6	0.45	0.56
20-Oct-21	7.25	8.25	8.17	8.08	1	0.92	0.83
3-Nov-21	7.25	8.5	8.38	8.35	1.25	1.13	1.1
17-Nov-21	7.25	8.5	8.5	8.75	1.25	1.25	1.5
1-Dec-21	8.75	10.79	10.39	9.98	2.04	1.64	1.23
15-Dec-21	9.75	10.78	10.66	10.74	1.03	0.91	0.99
31-Dec-21	9.75	10.59	10.38	10.42	0.84	0.63	0.67

Between January 2021 and September 2021, when the policy rate remains unchanged at 7%, the average difference between WA yields for 3-month tenor MTBs and policy rate is 27 bps which is in line with the difference pointed out by the MoF. However, this difference widens as the economy enters a rising interest rate environment after the policy rate is increased by 25 bps to 7.25%. As further policy rate increases are announced from September to December 2021, the gap between WA yields and the policy rate continues to increase reaching a high of 164 bps for the auction held on 01.12.2021. The difference only narrows after the SBP conducted an open market operation (OMO) of a 63-day duration to assure the markets that the policy rate will not be raised further.[Figure 1].

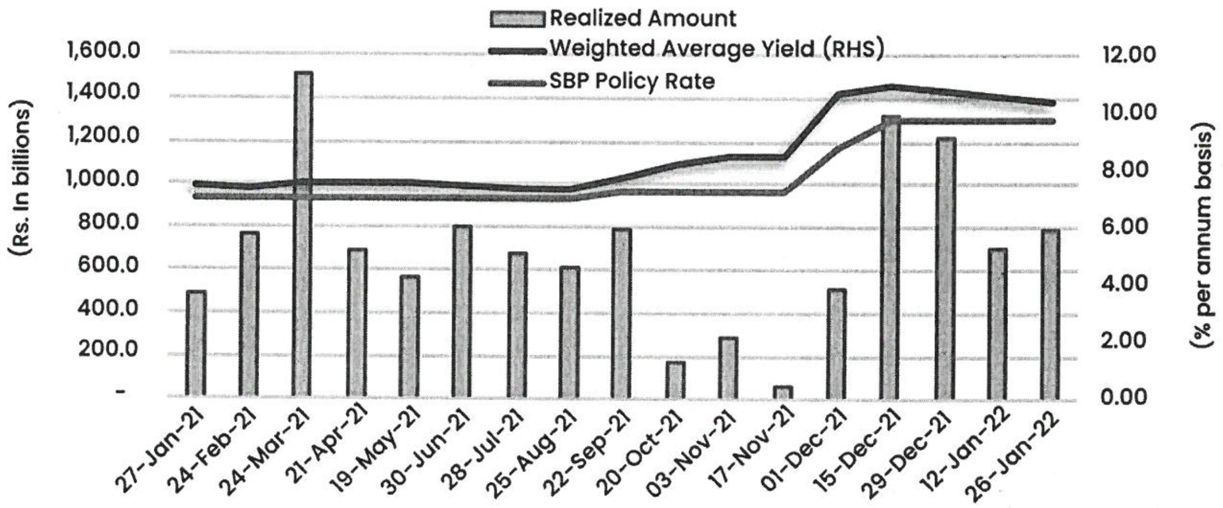

Figure 1: MTBs Acceptance (Auction + Non-Competitive Bids) Jan 2021-Jan 2022

13. One possible explanation for the rise in MTB yields, in the period under review, is that the SBP raised the interest rate twice in two months, sending a signal to the market to expect further and more frequent rate increases in the future. However, even if

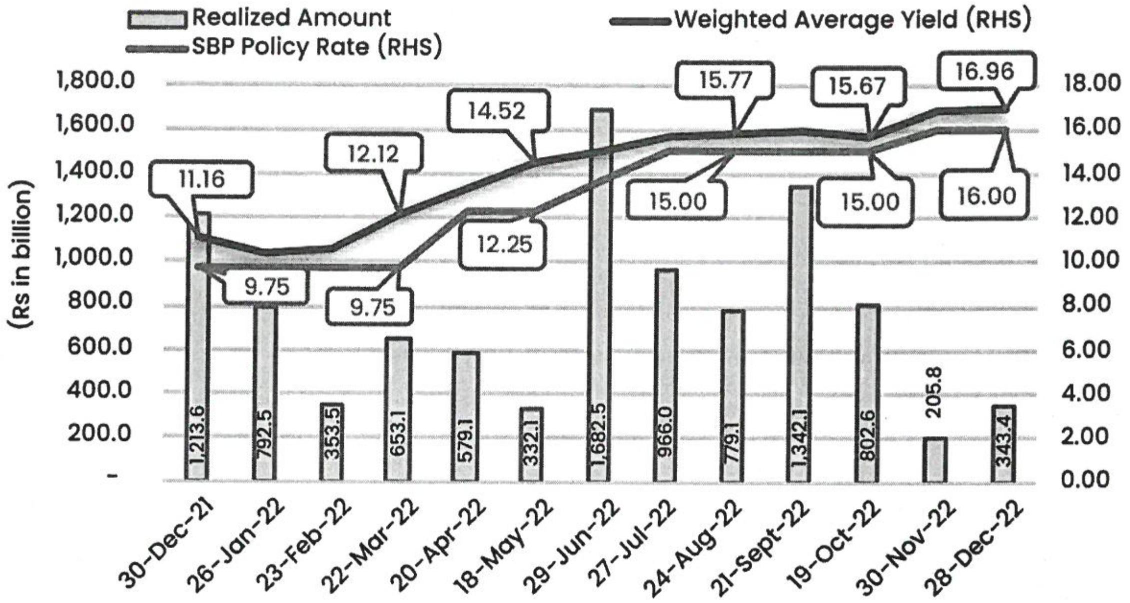

Figure 3: MTBs Acceptance (Auction + Non-Competitive Bids) Dec 2021-Dec 2022

1.2 Analysis of Primary Bidding Data

19. Bidding patterns were analysed in order to detect whether there was any *prima facie* evidence of collusive bidding by the participants. MoF provided bank wise consolidated bidding data for the two year period January 2020 to December 2021 vide email dated 19th January 2022. The same was also requested from the PDs vide letters dated 04th January 2022. All PDs complied with the request for data with PDs providing information on various dates and the complete PD-wise data was available as of 21st January 2022.

20. It is important to note that bids are submitted by PDs electronically to the SBP through the Bloomberg terminal in the following format:

Bid Amount Face Value (Rs. Million)	Bid Price Per Rs. 100 (upto four decimal points
10,000	97.5715

21. Each PD normally places multiple bids at different discount rates or sometimes a PD will just bid a single amount. Since suspicions of collusive activities have been raised around the time, SBP started increasing its policy rate i.e. 22.09.2021, bidding patterns for the auction immediately preceding this point onwards were examined and the analysis is presented in further detail below.

1.2.1 MTB Auction Dated 08th September 2021

30	MCB BANK LIMITED	360.000	98.3637
31	CITIGROUP GLOBAL MARKETS LIMITED	2,000.000	98.3634
32	JS BANK LTD	800.000	98.3633
33	UNITED BANK LTD	50.000	98.3633
34	BANK OF PUNJAB, THE	500.000	98.3631
35	FAYSAL BANK LIMITED	2,000.000	98.3623

23. PD wise share in the bids shows that the largest participator in this auction was MCB placing 51% of the total amount, followed by Bank Alfalah with 12% of the total amount.

BANK	Bid size (Rs. Million)	Share in total Bid	Avg yield
NBP	2,000.000	3%	7.2001%
Alfalah	7,623.500	12%	7.1902%
United Bank	100.000	0%	7.2252%
Habib	5,477.100	9%	7.2100%
MCB	**33,111.000**	**51%**	**7.2181%**
Citigroup	5,500.000	9%	7.2215%
Faysal	2,200.000	3%	7.2149%
Bank of Punjab	500.000	1%	7.2311%
JS Bank	1,410.500	2%	7.2129%
ICBC	1,000.000	2%	7.2100%
Standard Chartered	5,371.175	8%	7.1902%
Allied Bank	Nil		
Pak Oman	Nil		
Total	**64,293.275**	**100%**	

24. If we look at the bids placed by the PDs in some instances there is a similarity whereby bids are placed with a difference of 0.011 decimal points or multiples of the number 11 as shown in the table below, MCB (the PD with maximum of winning bids) places six bids in total (which are placed in descending order of the bid price per Rs. 100). The difference between the first bid and the second is 0.0033 points whereas between the second and third is 0.0011 points. It is at these points where the majority of the bid is placed in terms of value.

	MCB	
Face Value Rs in Mln	Bid Price per Rs.100	Diff
2,041.000	98.3700	
15,000.000	98.3667	**0.0033**
15,000.000	98.3656	**0.0011**
350.000	98.3656	
360.000	98.3643	0.0013

50000	98.2790	0.0020
50000	98.2768	**0.0022**
50000	98.2746	**0.0022**
50000	98.2724	**0.0022**

This bidding pattern is emulated by MCB, Alfalah, JS Bank and ICBC (Refer to Annex A2).

1.2.3 MTB Auction Dated 15th December 2021

29. This auction took place during the time the SBP hiked the policy rate from 8.75 to 9.75%. The total amount of accepted bids for the 3 month tenor MTBs is Rs. 804,801.940 million. NBP is the largest participant in this auction with a share of 26% of all successful bids and is followed by HBL (16%), Alfalah (14%) UBL (14%) and SCB (14%).

Bank	Bid Size	Share
NBP	205,871.060	26%
Alfalah	114100.025	14%
United Bank	110,000.000	14%
Habib	130,481.900	16%
MCB	30,000.000	4%
Citigroup	17,000.000	2%
Faysal	10,429.430	1%
Bank of Punjab	6,000.000	1%
JS Bank	1,504.000	0%
ICBC	5,000.000	1%
Standard Chartered	110,949.925	14%
Allied Bank	48,400.000	6%
Pak Oman	15,065.600	2%
Total	804,801.940	

30. For this bid it is observed that the difference in bids submitted by NBP is in multiples of 11. This pattern of NBP is also observed in the bids submitted by Alfalah. (Annex A3)

1.2.4 MTB Auction Dated 29th December, 2021

31. The total amount raised from 3 months MTBs was Rs. 650,131.500 million. Like in the previous auction NBP is the largest bidder with 36% of all allocated bids followed by UBL (28%) and Alfalah (9%).

Bank	Bid Size (Rs. Million)	Share	Avg yield
NBP	235,300	36%	10.3657%

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34. MTB auctions could be amenable to collusive activities due to the following factors:
   a. Limited number of players i.e. PDs.
   b. Auction schedule with bids submitted in writing in advance by the parties.
   c. Situation whereby the government could not borrow from SBP and had to rely on PDs for debt financing.
   d. Repeated auctions at regular intervals.
   e. Undifferentiated products offered by the banks.

35. The MoF vide their letter (copy enclosed) dated Jan 17, 2022 titled '*Decision taken of the meeting of the Economic Coordination Committee of Cabinet (459/45/2021)*' wherein the following decision of the ECC was conveyed to the Commission.
"The ECC also directed the Finance Division and SECP to jointly develop a framework/ strategy for reducing the borrowing cost of funds by the public sector companies from the Commercial banks'. In this regard Competition Commission of Pakistan may also be consulted for taking appropriate measures to avert possibility of cartelization by the commercial banks for offering of loans to public sector companies at higher borrowing cost".

36. Based on the foregoing, the Commission in its second emergent meeting for the year 2022 held on 25th January 2022 pursuant to the provision of Section 37(1) of the Act authorized an enquiry into 'The matter of possible anticompetitive activities by the Primary Dealers in the T Bill Auctions by the Government of Pakistan' to ascertain whether there was any prima facie contraventions of Section 4 of the Act by Primary Dealers. The ToRs assigned to the Enquiry Committee are as follows:
   a. Whether there has been collusive bidding by the Primary Dealers in the auction of MTB auctions by the Government of Pakistan.
   b. To review the complete process of bidding and the factors influencing its pattern.
   c. Also to inquire into factors that may have contributed to quoting/charging of higher rates than before.
   d. The period for review of the bids and Primary Dealers activity is from July 2018 onwards.

37. The following officers were appointed to the enquiry committee and powers under Section 33 and 36 were delegated to it for purpose of the said enquiry: (a) Ahmed Qadir, then DG (Policy) now DG (IS&T), (b) Noman Laiq, then DG (C&TA) now DG (Internal Audit); and (c) Maliha Quddus Sr. JD (C&TA) The Enquiry Committee was further reconstituted on 27-11-2023 and the new Enquiry Committee is as follows:

   a. Maliha Quddus Sr. JD (C&TA)
   b. Aqsa Suleman AD (C&TA)
   (Hereinafter referred to as the 'Enquiry Committee')

1.3 Correspondence and Information gathering

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d. Submission of common bids by PDs in auctions held from 08.09.2021 to 31.12.2021;

e. For 3 m papers spacing out of bids in 0.0011 decimal points and multiples of 11. Specifically in auction held on 08.09.2021to 31.12.2021. Explanations and reasons for the pattern;

f. Reasons for low participation in 6m and 12 m bills;

Information gathered from these statements will be referenced in subsequent sections of this enquiry report. (Transcripts of statements are attached as Annex B2)

43. Based on the Section 33 interviews, PDs were also asked to provide the following further information:

  a. Copies of actual competitive bids submitted (successful and unsuccessful bids) for each MTB auction conducted from January 2020 to December 2021, specifically identifying the pass-through bids.
  b. Investment over and above the SLR requirement as of 31 December 2020 and 31 December 2021.
  c. Weighted average cost of funds for the period September-December 2021?
  d. Pool rate for the period September-December 2021?
  e. Copies of audited (or unaudited) financial statements for the year 2021.

44. Based on the information obtained from PDs regarding the Financial Markets Association of Pakistan ('FMAP') and its role in determining PKRV in the secondary market, the enquiry committee summoned office bearers of FMAP (President and General Secretary) to gather the following information:

  a. How is PKRV determined?
  b. Who are the brokers involved?
  c. What is the selection criteria for brokers?
  d. What is the role of FMAP in determining PKRV?
  e. Does FMAP issue any advice or guidance to its member PDs regarding participation in t bills or other government securities?

45. Information gathered from these statements will be referenced in subsequent sections of this enquiry report. Further information was also requested from FMAP which was provided vide letter dated 04.07.2022:

  a. Does FMAP give licenses or provide accreditation to money market brokers?
  b. What is the broker selection and evaluation criteria?
  c. What are the elements/parameters contained in FMAP's annual survey of brokerage houses? Who are the respondents for the survey? What is the process of compiling the results and evaluation of this survey?
  d. Process of determining PKRV. Whose input is sought and who has access to that platform?
  e. Does FMAP determine the brokerage fee for money market transactions? If yes, what is the quantum of this fee and how was it decided? Provide any

vi. Whether there has been collusive bidding by the PDs in the auction of T bills by the Government of Pakistan (from January 2018 onwards in *prima facie* violation of Section 4(2)(e) of the Act.

3. Sector Review:

3.1 History

49. A program of domestic financial sector liberalization was launched in 1990–1991, whereby, the establishment of private banks was permitted. Additionally, in the area of public debt management, a major step was the initiation of a regular series of auctions of government securities, i.e. starting in February-March 1991, the government began auctioning 6-month bills. At a technical level, the new securities were registered in an electronic book entry system to facilitate trading. The SBP, which acted as the government agent in running the auctions, designated PDs from among the commercial banks and other financial institutions, who would bid at the auctions for domestic securities either on their own behalf or on behalf of clients, and who would subsequently trade in securities with each other and distribute them at a retail level. Since 1991, these market-based instruments have become the major form of domestic government debt. By 1993, treasury bonds and bills constituted one half of domestic federal government debt outstanding, excluding that to the SBP. The typical pattern of bidding behaviour was established relatively quickly, after about five or six auctions, whereas the secondary market became active over the first year of the auctions.

3.2 Profile of Public Debt

50. Fiscal Responsibility and Debt Limitation ('FRDL') Act 2005 defines "Total Public Debt" as debt owed by Government (including Federal Government and Provincial Governments) serviced out of consolidated fund and debts owed to the IMF[6]. Section 3(3)(b) of FRDL sets a target for the debt to GDP ratio of 60% however, the current debt levels have exceeded this target as the total debt to GDP ratio at the end of June 2023 stood at 74.3% of GDP compared with 73.9% at the end of June 2022 and 71.4% at the end of June 2021[7]. Total public debt comprises of external and domestic debt. As of June 2023, total public debt was Rs. 62,880 billion out of which Rs. 38,809 billion was domestic debt and Rs. 24,071 billion external debt (refer to table below for details).

Table 2: Total Public Debt (Rs. In billion)

	Jun-20	**Jun-21**	**Jun-22**	**Jun-23**
Domestic Debt	23,283	26,265	31,085	38,809
External Debt	13,116	13,601	18,157	24,071
Total Public Debt	36,399	39,866	49,242	62,880
Total Debt of the Government[8]	33,235	35,669	44,361	57,778
(In percent of GDP)				
Domestic Debt	49	47	46.7	45.8
External Debt	27.6	24.4	27.3	28.4

[6] Chapter 9 Public Debt, Pg 168, Pakistan Economic Survey 2022-23 https://www.finance.gov.pk/survey/chapter_22/PES09-PUBLIC.pdf

[7] Table 1: Pakistan's Total Public Debt Summary (end of period), Annual Debt Review & Public Debt Bulletin FY2022-23.

[8] "Total debt of the Government' means the debt of the government (including the Federal and Provincial governments) serviced out of the consolidated fund and debts owed to the IMF less accumulated deposits of the Federal and Provincial Governments with the banking system.

53. Approximately 55% of the T bills are held with scheduled banks with the remaining 45% being held by non-bank entities such as corporates, insurance companies and funds[11].
54. Government securities including T bills are also actively traded in the secondary market. According to the SBP's Master Circular on Auction of Government Securities (Market Treasury Bills and Pakistan Investment Bonds) Domestic MMD Circular No. 06 of 2018, PDs are obligated to quote two-way prices to other PDs/PPDs/SPDs, non-PDs and institutional investors. The most actively traded securities in the market are usually on-the-run securities which are defined by the SBP as the last two issues in the market. PDs are obligated by the SBP to quote maximum bid/ask spreads which in the case of T bills is set at 15bps. Trades can take place between a PD and non-PD bank in the interbank market directly through the Bloomberg portal. As per the abovementioned Master Circular Rule 10, *"PDs and PPDs shall be responsible for displaying the prices of Government securities on Refinitiv/Bloomberg, websites, branches and PSX (if the PD/PPD is a market maker on PSX). Quoting obligations must be strictly adhered to and all PDs must ensure that their Bloomberg dealing terminals are open and active during the dealing timings (as stipulated by SBP from time to time) on all working days. SBP will strictly monitor the PDs activity and quoting obligations"*. Trades in the secondary market can take place either directly between PDs and other PDs or Non-PD banks directly through the Bloomberg Terminal or indirectly through money market brokers.
55. In terms of trading volumes the most actively traded government securities are T bills with total traded volumes Rs. 20.948 billion (July to March 2021-22). Trading volumes of T bills increased compared to the same period in the preceding year, whereas, that of PIBs declined from Rs. 10.9 billion to Rs.9.354 billion. This can be attributed to the fact that due to a rising interest rate scenario investors refrained from locking in funds at a lower rate[12].

56. **Summary of sector review:**
    a. Total debt to GDP ratio at the end of June 2023 stood at 74.3% of GDP compared with 73.9% at the end of June 2022. Domestic debt accounted for 45.8% of GDP and external debt accounted for 28.4% of GDP.
    b. Domestic debt comprises of three main categories: (i) permanent debt (medium and long-term); (ii) floating debt (short-term comprising of T bills); and (iii) unfunded debt (primarily made up of various instruments available under National Savings Schemes).
    c. Floating debt which exclusively includes T bills of various tenors, constitutes 24% (Rs. 9,335 billion) of total domestic debt.
    d. Approximately 55% of the T bills are held with scheduled banks followed by non-bank entities such as corporates, insurance companies and funds which have a combined holding of 45%.

4. Relevant Market

57. For the purpose of defining relevant market under this enquiry, we refer to the definition provided under Section 2(1)(k) of the Act.

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[11] Calculations based on figures from Annex III: Investor wise holdings of Government Domestic Securities (Face Value), Annual Debt Review & Public Debt Bulletin (FY2022-23)

[12] Table 9.6 Secondary Market Outright Trading Volume (Rs.billion), Economic Survey of Pakistan

		3yr, 5yr, 10yr,15yr, 20yr and 30 yr.	
Interest Payment	Issued at a discount. Interest is the difference between the Face Value and Realised Value.	Coupon payments are paid at a fixed rate of face value of PIBs on semi-annual basis	The coupon will be paid and reset semi-annually. Coupon rate on the floating rate PIBs will be equal to the benchmark rate plus/minus a margin decided in the auction. Benchmark rate would be the weighted average yield of the3 or 6-month MTBs as determined in the latest successful auction held prior to the floating rate PIB's auction and/or the start of the coupon period.
Denomination	Issued in multiples of Rs. 5,000	Rs. 100,000 and multiples thereof	Rs. 100,000 and multiples thereof
Auction Schedule	Fortnightly	Quarterly	Coupon reset and coupon payment quarterly for a certain category. Coupon reset and coupon payment semi-annually for another category.

62. These securities have distinct product characteristics and in order to manage risk, the GoP based on its debt strategy keeps a mix of all three in its debt portfolio. On the investor side, the main buyers of these securities are banks (PD and non-PD), DFIs, insurance companies, mutual funds and corporates who also manage their securities' portfolio keeping considerations of risk into account. Between June 2021 and June 2022[15] investors increased their holdings of government securities by 21% (from Rs. 22,503 bn to Rs. 27,201 bn). Holdings of PIBs increased by 21% (from Rs. 14,662 bn to Rs. 17,688 bn) and holdings of T-bills increased by only 3% (from Rs. 6,974 bn to Rs. 7,210 bn)[16] whereas Ijara Sukuk saw a large increase of 243% in line with increasing demand from Islamic banking sector. It is interesting to note that scheduled banks while increasing their holdings of PIBs by 54%, decreased their holdings of T-bills by 5% in the same period. One of the reasons for this could be that the GoP under its debt management strategy wants to lengthen the ATM of its debt therefore, it reduced its reliance on T-bills. In a rising interest rate environment, investors will try to invest in shorter term tenor securities in order to reduce their refinance risk however,

[15] Period under review.

[16] Annex-III, Public Debt Bulletin & Annual Debt Review (2021-22)

and obligations of the PDs. The said Circular also lays down the selection process for PDs.

69. The SBP Act was amended in 2021 and now clearly states the powers and responsibilities of the SBP with regards to T-Bills, specifically in Sections 17 & 18, respectively. The same is evident from a bare perusal of Section 17 which clearly confers the power onto the State Bank to transact the sales and purchases of bills of exchange, including treasury bills, whereas, Section 17 (3) (b) unequivocally authorizes the State Bank to act as the Federal Government's, Provincial Government's or any Local Authority's, Agent, as the case may be, in transactions pertaining to bills of exchange and securities. Furthermore, Section 18 (1) (a) authorizes the State Bank to operate in financial markets by buying, selling and conducting of repurchase agreements of government securities.

70. To regulate the T-bill market specifically, the SBP Act authorizes the State Bank under Section 9A (a) to determine its general internal policies and rules to better perform its functions. Section 9D mandates the formation of a Monetary Policy Committee of the Bank, which shall formulate the monetary policy, including various key interest rates pursuant to Section 9E. Section 9F mandates the formation of an Executive Committee to look after the management and administrative affairs of the State Bank. It is imperative to mention here that Section 9C (3) of the SBP Act prohibits the State Bank from purchasing securities issued by the Federal Government on the primary market.

5.1 Obligations of PDs

71. The obligations of PDs as contained in the DMMD Circular No.07 of 2021 define the 'rules of engagement' for T bill auctions and therefore, warrant a brief discussion below:
    a. Active Participation in Auctions: Each PD, PPD and SPD must actively participate in all auctions of marketable government securities.
    b. Segregation of Own and Customers' Securities: PDs, PPDs and SPDs shall segregate the Government securities of its customers from its own securities. In case of listed brokerage house, they shall maintain a firewall between their brokerage and PD business.
    c. Minimum Required Participation: Each PD shall ensure participation in auctions by placing bids amounting to at least 5% of the pre-auction target on each auction basis, subject to the following: a. the requirement shall be applicable for all securities - MTBs, Fixed rate PIBs and Floating Rate PIBs. b. For MTBs and 3 and 5 years Fixed rate PIBs, the requirement shall be applicable on each tenor-based targets. The performance of PDs on this obligation would be evaluated by SBP on a quarterly basis and any shortfall from the target shall require explanation by the PD; and may have an impact on renewal of the PD status.
    d. Quoting Two-Way Prices of Government Securities (Market Making Obligation): It shall be compulsory to quote two-way prices to other PDs/PPDs/SPDs, Non-PDs, and institutional investors etc. (as per the instructions on Bid-Ask Spreads and marketable lot sizes contained in Rules 7 to 9). Further, PDs and PPDs who act as market makers on PSX trading platform shall quote prices of Government Securities on PSX as well. While

According to Friedman, more bidders would be induced to bid directly in auctions because the fear of being awarded securities at too high a price is eliminated. Friedman's original argument regarding multiple-price auctions and the need for specialized knowledge also focused on the strong incentive for collusion among bidders. Reinhart (March 1992) and Chari and Weber (1992) also argue that uniform-price auctions will reduce market manipulation and the likelihood of a squeeze[17].

Summary:

73. Based on the foregoing the main regulations are summarized below:

a. The procedure and means for the regulation of T-Bills market are laid out in the Public Debt Act in 1944.
b. SBP is the main regulatory authority for T-bills market in Pakistan empowered under the SBP Act, 1956. SBP acts as an agent of the GoP for managing domestic public debt, the same is also responsible for conducting auctions of T-Bills and managing certain public debt data. In order to perform its obligations, SBP issues various circulars from time to time.
c. SBP's DMMD Circular No. 07 of 2021 is a Master Circular on the role, responsibilities and obligations of the PDs.
d. In terms of comparison with international jurisdictions the US follows the uniform price auctions format and India has recently moved towards the same as opposed to the multi-price auction model used in Pakistan. The preference for a uniform price auction model is increasing as, based on the US experience, it reduces the overall yields and incentives for market manipulation.

6. Review of the bidding process and discussion on the factors influencing T bill yields

74. The bidding process is reviewed to try to understand how bids are submitted and whether there are any gaps which may facilitate collusion. SBPs circulars discussed in detail above stipulate the auction system, procedure for participation by respective bidders etc. The auctions of T-bills are conducted through *"Bloomberg auction module"*, therefore, all participants are expected to maintain a high-speed internet connection, as well as a back-up internet connection. Non-competitive Bids (NCBs) for T-bills must be submitted at DMMD counter or via Fax/Electronic mode etc. only, as per formats available at SBP-website. For participation in competitive auctions, the PDs submit their competitive bids, in terms of price (up to four decimal points). Annexure A of DMMD Circular no. 06 Dated March 15, 2018 provides a specimen for submission of bids which have to be submitted in the following format:

[17] https://home.treasury.gov/system/files/136/archive-documents/upas.pdf

market and SBP OMOs. Primarily, PDs purchase t bills and other government securities for two purposes: (i) for the banking book and (ii) for the trading book. The banking book investments are generally for the longer term and consist of highly liquid instruments which are required for regulatory purposes and to strengthen the bank's balance sheet against unexpected events in the market. The banking book investment is also used to deploy the bank's surplus liquidity into remunerative instruments. Investments made for the trading book are shorter in term and through this book the bank aims to fulfill its role as a primary dealer by ensuring that the bank purchases securities in auctions and then distributes these instruments to the wider investor base[18]. The main internal considerations that drive the bidding strategy for the PD/banks in t bill auctions are as follows:

a. Available liquidity: whether surplus funds are available for investment with the bank or would the bank have to borrow funds to invest.
b. Maturities: upcoming maturities of the bank. If in the current auction T bills held with the bank are maturing then the bank would have to purchase more securities to meet its regulatory requirements.
c. Banks have Statutory Liquid Reserve (SLR) requirements placed by SBP which means a certain percentage of deposits have to be kept in the form of cash and highly liquid government securities. PDs requiring MTBs for its SLR will typically place bids at a lower yields so as to increase the probability of winning.
d. Auction target adherence: To meet the minimum 5% participation criteria set for PDs by SBP.
e. Relative yields available in other asset classes, such as what rates other businesses in the bank can deploy the liquidity at in the market (loans, advances, running finance, overdrafts, credit cards, personal loans, agri credit, etc.)

6.1.2 Exogenous factors

82. The exogenous factors pertain to the macroeconomic factors that are beyond the control of the PD/bank. These factors are enumerated below and it may be noted that although they are identified separately they are all inter-related and cannot be considered in isolation:

a. Monetary Policy: current policy rate, expected future policy rate, forward guidance by SBP and prevalent OMO rate. The monetary policy stance and the policy rates are dependent upon macroeconomic variables which inter alia include:
    i. Inflation, CPI, WPI, SPI, core inflation and inflation projection.
    ii. Balance of Payment: Current Account and financial account;
    iii. Country's fiscal position: budget deficit/surplus, primary deficit/surplus, taxation measures, government's expenses
b. Overall market liquidity factors and availability of SBP repo/OMO as a funding source if investment is to be funded from market sources or SBP OMO.
c. Auction targets set by the government: current target, previous targets, previous auction cut offs.

[18] HBL response dated 11.01.2022

market with an agreement to sell it back at a specified amount on a specified date. For example, SBP buying a 3m tenor T bill for X amount and agreeing to pay the seller Y amount after Z number of days. The duration for OMOs is normally for 7 days rollover however, SBP conducted OMOs for longer durations starting from December 2021 which will be discussed in the subsequent paragraphs. It is important to note here that banks use the funds injected via OMOs to lend this money to the GoP through MTB auctions earning an interest spread through these activities.

6.1.4 Auction targets set by the GoP

87. T bill auctions take place on a fortnightly basis and the SBP publishes the auction calendar for the next three months (on a rolling basis) on its website. The auction calendar includes auction date, settlement date, the auction target and maturing amount which is the amount of T bills whose maturity falls due on that auction. The maturities falling due and auction targets on an upcoming auction are also factored in by PDs when planning bidding strategies. If the government requires more funds then it will borrow more which will cause the supply of government securities to increase and consequently, the yields will also increase. The supply of government securities on the other hand, depends on the government's fiscal position. A large fiscal deficit would mean the government would have to borrow more and therefore, the supply of securities and hence yields would rise.

6.1.5 Secondary market yields (PKRV)

88. T bills are highly liquid instruments and are actively traded in the secondary market with outright trading volumes (of 3m, 6m and 12m) in FY2021-22 of PKR 20.948 trillion[22]. Revaluation rates are calculated by the FMAP which takes average of the last bid and offer rates of the trading day, for each tenor, from 08 selected money market brokers. The top and bottom outliers are removed and an average rate is calculated to arrive at PKRV. PKRV is currently calculated and published for 09 different tenors of T bills starting from 01 week to 12 m. The enquiry committee interviewed the 08 money market brokers who submit rates to FMAP for the calculation of PKRV and was informed that not every scrip is actively traded as mainly the on the run or latest issued securities exhibit higher trading volumes.

89. Under Prudential Regulation number 8 (R8) banks are required, by SBP, to revalue their investments in government securities and forex positions on a daily basis. SBP requires that all banks revalue government securities on PKRV given by FMAP. PKRV is an important number for SBP as the OMO, reverse repo transaction will be revalued based on it. PKRV also serves as an important indicator for PDs when submitting bids for T bill auctions. T bill auctions are held fortnightly whereas the secondary market trades daily, therefore, the previous day's closing PKRV is an important indicator as to what the market is thinking.

[22] Table 9.6: Secondary Market Outright Trading Volume Chapter 9: Public Debt, Economic Survey of Pakistan https://www.finance.gov.pk/survey/chapter_22/PES09-PUBLIC.pdf

the current account, the MPC noted that it would be prudent for monetary policy to begin to normalize through a gradual reduction in the degree of accommodation. This would help ensure that inflation does not become entrenched at a high level and financial conditions remain orderly, thereby supporting sustainable growth". (Para 2 Monetary Policy Statement 27th July 2021).

95. The language of this statement seemed to suggest that the SBP was now in a phase where the accommodation provided to the market, through various stimulus plans would be rolled back indicating that the interest rate cycle may change shortly. This may explain why bids in the T bill auctions held around this time for 12 m tenors were rejected by the GoP (auctions dated 30.06.2021, 14.07.2021 and 28.07.2021 due to higher yields demanded by the market). A look at the bids for example, from the auction immediately following the above cited MPC meeting shows that only 11 bids were received for the 12 m paper and barring one bid by NBP at 7.7% all the other bids were either at 8% or above (policy rate at this time remained at 7%). The 3 m and 6m tenor papers however, did not witness upward movements.

7.2 September to December 2021

96. In its next MPC meeting, on 22.09.2021, however, SBP raised the policy rate by 25bps to 7.25% which was the first rate hike since June 2020. The MPC Statement from this meeting cites post-pandemic recovery of domestic demand coupled with higher international commodity prices leading to a deteriorating current account deficit position as the primary reasons for increase in rates. Interestingly, the MPC notes that while year on year inflation figures have declined since June (2021) it expects the above cited factors to lead to higher inflation numbers in the future. The relevant excerpts are reproduced below:

"At its meeting on 20th September 2021, the Monetary Policy Committee (MPC) decided to raise the policy rate by 25 basis points to 7.25 percent. Since its last meeting in July, the MPC noted that the pace of the economic recovery has exceeded expectations. This robust recovery in domestic demand, coupled with higher international commodity prices, is leading to a strong pick-up in imports and a rise in the current account deficit. While year-on-year inflation has declined since June, rising demand pressures together with higher imported inflation could begin to manifest in inflation readings later in the fiscal year".

(Para 1 Monetary Policy Statement, 20 September 2021)[23]

97. The MPC also hinted that it would gradually taper off the Covid-era stimulus packages and stuck to its goal of achieving mildly positive interest rates:

> *"Looking ahead, in the absence of unforeseen circumstances, the MPC expects monetary policy to remain accommodative in the near term, with possible further gradual tapering of stimulus to achieve mildly positive real interest rates over time. The pace of this possible further gradual tapering*

[23] https://www.sbp.org.pk/m_policy/2021/MPS-Sep-2021-Eng.pdf

102. In its meeting on 19.11.2021 the MPC decided to increase the policy rate by 150bps to 8.75%. The MPC statement also noted that inflationary pressures had increased considerably since its last MPC meeting with headline inflation rising from 8.4 % (y/y) in August to 9 % in September and further to 9.2 % in October. It further cautioned that upward pressure on global commodity prices and adjustments in energy prices posed upside risks to the average inflation forecast of 7-9% in FY22 as well as adverse effects on the Current Account deficit[28].

103. As per interviews with treasurers of PDs, the market had anticipated an upward adjustment in policy rates however, the 150 bps hike was unanticipated because the SBP had repeatedly said in its MPC statements that any rate adjustment would be carried out in a piecemeal manner and in the instant matter the SBP had made a hike of 150bps in a single round.

104. Furthermore, the MPC following its meeting on 19.11.2021 reiterated its goal of achieving mildly positive interest rates:

> *"As a result of these developments, the balance of risks has shifted away from growth and toward inflation and the current account faster than expected. Accordingly, the MPC was of the view that there is now a need to proceed faster to normalize monetary policy to counter inflationary pressures and preserve stability with growth. Today's rate increase is a material move in this direction. Looking ahead, the MPC re-iterated that the end goal of mildly positive real interest rates remains unchanged and, given today's move, expects to take measured steps to that end". Paragraph 3, Monetary Policy Statement 19 November 2021.*

105. As per interview u/s 33 with the treasurer of a PD bank, the SBP mentioning mildly positive interest rates meant that a further policy rate increase was on the cards: "One thing I would like to add is the SBP often talks about real interest rates. In the November MPC Statement they mentioned that: 'The MPC reiterated that the end goal of mildly positive real interest rates remained unchanged'. What does this mean? If inflation is at 10% and policy rate is at 9% that is a negative real interest rate. When SBP talks about mildly positive real interest rates it means that the policy rate should be higher than the inflation rate. And with an increasing inflation rate obviously it indicates that the trend of policy rate would be higher. So there were a lot of risks in the 3rd and 4th quarter of 2021 that interest rates would increase quite sharply"[29].

106. Another development on 19.11.2021 was the announcement by the SBP, via a press release, that in line with international best practices it was increasing the frequency of MPC meetings from 6 to 8 times a year. It also released a schedule of the next 5 MPC

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[28] Para 10, MPC Statement 19.11.2021 https://www.sbp.org.pk/m_policy/2021/MPS-Nov-2021-Eng.pdf
[29] Statement by HBL treasurer

110. After assurances by the SBP that it will take a pause with respect to rate hikes yields did come down slightly in the market after 14.12.2021. To give further reassurance to the market on 17.12.2021 the SBP conducted two OMOs in which it injected Rs1.085 trillion and Rs689.35 billion into the market for 7 days and 63 days at 9.82% and 9.90%, respectively. The 63 day OMO was a rare move as normally OMOs are conducted for 07 days. This was done to assure the markets that the policy rate will not go up any time soon and banks' repricing risks would be reduced for 2 months at least. This move helped bring yields down slightly.

111. Another reason for higher yields, coming towards December 2021, was the increase in the GoP's borrowing requirements. In the calendar year 2021, the GoP conducted 26 auctions of T bills of 3m, 6m and 12m tenors on a fortnightly basis. The GoP issued T bills with a face value of Rs. 18.36 trillion and realised value of Rs. 17.82 trillion paying interest amounting to Rs. 0.522 trillion (Rs. 532 billion). Out of the total amount raised almost half was through the auction of 3 m tenor t bills followed by 6m (44%) and only 2% was accounted for by the 12m tenor[33].

112. In the previous calendar year 2020, the GoP conducted 26 fortnightly auctions of T bills worth Rs. 9.89 trillion with a face value of Rs. 9.52 and paying an interest of Rs. 0.37 trillion (Rs. 372 billion). Even for this calendar year it can be seen that the market showed the most interest in the 3m tenor which accounted for 66% of the total amount raised. Comparing 2021 and 2020 it is noticed that the GoP almost doubled the amount of debt raised through T bills in 2021 as compared to 2020.

113. In December 2021 the GoPs borrowing requirements were higher as compared to the previous months and the corresponding period the previous year. As the table below shows the government had maturities worth PKR 1.5 trillion in the auction on 15.12.2021 and aimed to lift securities worth PKR 1.4 trillion. Therefore, a rise in the supply of securities would cause its yields to rise.

Table No 4				(All Amount in Rs. Billions)	
Auction Date	**Maturing amount**	**Target**	**Auction Date**	**Maturing amount**	**Target**
9-Sep-20	493.7	350	8-Sep-21	604	550
23-Sep-20	603.9	450	22-Sep-21	895	800
7-Oct-20	790.8	600	6-Oct-21	834	750
21-Oct-20	484.7	350	20-Oct-21	582	600
4-Nov-20	368	300	3-Nov-21	468	500
18-Nov-20	375	300	17-Nov-21	527	600
2-Dec-20	429	350	1-Dec-21	676	600
16-Dec-20	407	300	**15-Dec-21**	**1502**	**1400**
30-Dec-20	640	550	**29-Dec-21**	**1115**	**1200**
13-Jan-21	532	450	12-Jan-22	683	600
27-Jan-21	161	150	26-Jan-22	513	550

Source: Compiled from auction calendars (SBP)

33 Calculations made from SBP historical data on Market Treasury Bills.

Table: 5						
Realised Gain/loss on Federal Government Securities				**Investment (Carrying Value)**		
(Rs. (000)	**2021**	**2020**	**Change%**	**2021**	**2020**	**Change%**
MCB	383,592	3,438,217	-89%	325,058,065	598,726,428	-46%
NBP	1,065,169	5,346,600	-80%	811,893,893	626,248,789	30%
HBL	1,638,977	8,138,237	-80%	385,983,805	621,059,448	-38%
Alfalah	1,282,868	2,875,349	-55%	125,129,591	202,014,066	-38%
JS Bank	134,277	1,456,079	-91%	137,819,892	151,163,383	-9%
UBL	1,241,594	-404,609	-407%	531,740,225	345,133,808	54%
SCB	1,765,660	3,302,349	-47%	280,245,669	166,345,317	68%
BOP	1,213,864	8,069,228	-85%	125,198,372	329,511,245	-62%
Allied Bank	1,220,817	1,965,437	-38%	454,821,055	360,899,650	26%
Faysal Bank	310,579	1,176,657	-74%	73,182,357	134,009,670	-45%
Citibank	87,454	1,027,782	-91%	64,564,608	61,589,389	5%
Pak Oman	117,145	461,951	-75%	49,771,155	21,621,323	130%
Average			(101%)			6%

Source: Respective Financial Statements of PDs. (Jan to December)

7.3 January to July 2022

118. The first MPC meeting of the new year held on 24.01.2022 kept the policy rate unchanged at 9.75 percent. The MPC was of the opinion that its tightening measures introduced in the previous year were showing the desired effect of demand moderation and the MPC expected the inflation outlook to remain stable in the near term[36]. The market's reaction vis a vis the 3m T bill auction rates for January 2022 reflect this and there is a drop in the 3 m weighted average yields in the auctions held in January 2022 as compared to the yield levels in December 2021.

Table 6	
Auction Date	**3 m WA Yield**
15-Dec-21	10.6589%
29-Dec-21	10.3873%
12-Jan-22	10.3730%
26-Jan-22	10.2030%
09-Feb-22	10.2640%

36 Paragraphs 1 and 2 Monetary Policy Statement, 24th January 2022.

22[38]. The war in Ukraine also caused sky rocketing international LNG prices as European countries previously importing gas from Russia looked towards the Gulf to secure supplies. This resulted in countries like Pakistan being priced out of the market as they could not secure contracts at reasonable rates. All these factors worsened the inflation outlook with CPI rising steadily throughout most of 2022 as compared to the previous year. As shown in the table below, average inflation in December 2021 was 12.3% however, 2022 saw a steady rise in inflation numbers with the highest inflation recorded in June 2022 rising to a 14-year high of 21.3% driven by various factors including a reversal of energy subsidies and domestic political uncertainty.

Table 7: CPI National (Percentage) (Base year 2015-16)			
Period	**YoY**	**Period**	**YoY**
June-21	9.7	Jan-22	13.0
July-21	8.4	Feb-22	12.2
Aug-21	8.4	Mar-22	12.7
Sept-21	9.0	Apr-22	13.4
Oct-21	9.2	May-22	13.8
Nov-21	11.5	June-22	21.3
Dec-21	12.3	July-22	24.9

Source: SBP Monetary Policy Information Compendium

122. The Pak Rupee also came under pressure in 2022. In January 2022 the PKR-USD exchange rate was Rs. 176 but began to decline steadily to Rs. 180 by mid-March. By 20th May the rate had further dropped to Rs. 200 and reached a low of Rs. 240 on 01st August 2022.

123. All these macroeconomic fundamentals were factored into by the SBP in setting the policy rate. Whereas, the MPC meetings held on 24.01.2022 and 08.03.2022 had kept the policy rate unchanged at 9.75 percent, the SBP continued to raise the policy rate in its subsequent meetings. The MPC meeting originally scheduled for late April 2022 was moved forward and an emergency MPC meeting was held on 07.04.2022. In this emergency meeting, the MPC increased the policy rate by 250 bps to 12.25 percent. At its next meeting, held on 23.05.2022, MPC raised the policy rate by a further 150 bps to 13.75 percent. At its meeting on 07.07.2022 the rate was further increased by 125 bps to 15 percent. The Monetary Policy Statements from the period noted that the inflationary pressures would continue throughout FY23 and it foresaw the inflationary pressures easing in FY24 subject to the trajectory of global commodity prices:

"Headline inflation rose significantly from 13.8 percent (y/y) in May to 21.3 percent in June, the highest since 2008. The increase was broad-based—with energy, food and core inflation all rising significantly—and more than 80 percent of the items in the CPI basket experiencing inflation of above 6 percent. Strong domestic demand and second-round effects of supply shocks are reflected in the rise of core inflation to 11.5 percent in urban areas and 13.5 percent in rural areas. At the same time, measures of both short and long term inflation expectations continue to tick up. Despite the dampening effect of fiscal and monetary tightening on demand-pull inflation, inflation is likely to remain elevated around current levels

[38] State of Industry Report, 2022. NEPRA.

a. The auction is susceptible to collusion because the features of the market i.e. fewer number of players, regular auctions make it possible and it is in the interest of PDs drive yields upwards;
b. Yields had shot up in the period;
c. Identification of some instances where PDs had submitted identical bids;
d. Some instances were identified where some PDs had set up their bids in such a manner that the difference between the bid prices was 0.0011 or in multiples of 11 i.e. 22, 44, 66). The assumption being that there might be some sort of signaling mechanism whereby they structure their bids according to a set pattern.

126. The enquiry committee discusses each of these factors in light of the available information. The reasons for why there was an increase in yields during the period under question have been discussed at length in the previous section and therefore, the remaining issues are discussed in detail below:

Do features of the market make it susceptible to collusion?

127. Contrary to the observation made in the working paper that the T bill market is susceptible to collusion because of the limited number of players (i.e. the PDs) it is observed that in fact the number of potential participants in the auction is potentially large due to pass through bids. Annex B of DMMD Circular No.7 of 2021, is the right to entertain pass through bids:

> *"2. Right to submit pass-through bids: PDs, PPDs and SPDs shall be allowed to entertain Pass-through bids, but such volumes shall not be counted towards their secondary market performance. However, PDs, PPDs and SPDs have to submit detail of accepted pass-through bids to the State Bank of Pakistan after every auction of Government securities within one day of settlement of respective auction via email.."*

128. Pass through bids are usually submitted by: non-PD commercial banks, DFIs, mutual funds, pension funds, insurance companies and corporate clients. The amount of pass through bids counts towards the minimum participation criteria for PDs (i.e. 5% of pre-auction target). PDs may charge a nominal fees for pass throughs. Interviews with PDs suggest that it is the client's discretion as to what rates it wants to submit its bids at. It is pertinent to mention here that as per auction data analysed approximately 46% of all successful bids, on average, were pass throughs.

129. Where the client is a non-PD commercial bank or a DFI or mutual fund it will likely have its own research and calculations regarding the rates at which they want to place bids and PDs do not give any advice regarding the same. Clients give instructions and the PDs input those into the Bloomberg system on their behalf. Other PDs noted that while there is a discussion with the client regarding the interest rate and inflation outlook etc. they do not advise the client on what level to bid. One PD noted pass through bids are inputted into Bloomberg only after it was entered its own bids so as to

134. A further explanation of common bids is the way bids are submitted to SBP i.e bids are submitted in terms of bid price upto four decimal places. The bid price is converted, by SBP, into bid yield per annum based on the following formula:

{(Face Value – Realized Value)/Realized value x 365/84} x 100

Weighted Average yield is also calculated based on the following formula:

(Face Value Bid_1 x Bid_1 yield)+ (Face Value Bid_2 x Bid_2 yield)/ Face Value Bid_1 + Face Value Bid_2)

135. PDs interviewed stated that when they are submitting bids or making their calculations and estimations they are thinking in terms of yield whereas, the bids are submitted in terms of price. Once the bids are received by the SBP it sorts them from highest price to lowest price (i.e. lowest to highest yield) and arranges them under the following headings:

3-M

Date: 21-Sep-22

627th Auction Of 3-Month Government Of Pakistan Market Treasury Bill

Settlement Date : 22-Sep-22 Maturity Date : 15-Dec-2022 84 Days Bill

Rs in Million

Bid No.	Bid Amount Face Value	Bid Price Per Rs. 100	Running Total	Bid Yield Per Annum	Weighted Average Yield per Annum	Amount of Discount	Amount Realized	Discount Amount Cumulative	Amount Realized Cumulative
1	68.000	96.5021	68.000	15.7501%	15.7501%	2.379	65.621	2.379	65.621
2	20,000.000	96.4700	20,068.000	15.9000%	15.8995%	706.000	19,294.000	708.379	19,359.621
3	20,000.000	96.4678	40,068.000	15.9102%	15.9048%	706.440	19,293.560	1,414.819	38,653.181
4	20,000.000	96.4673	60,068.000	15.9126%	15.9074%	706.540	19,293.460	2,121.359	57,946.641

136. The amount of the PD's funds available for investment in primary auctions depends primarily on the availability of liquidity and the amount of risk the bank is willing to take on. These decisions are taken by a committee comprising of various group heads of the PD including the treasurer. Although governance structures, or their nomenclatures, may vary across PDs but generally, commercial banks have an Asset and Liability Committee (ALCO) comprising all group heads of banks which decides the amount to be deployed in primary auctions. PDs also have to take into consideration their own internal cost of funds as determined by ALCO. The internal cost of funds also known as the pool rate is the rate at which the liability department (if the PD is a bank) lends to the treasury. If the treasury earns a yield at over and above this rate it will make a gain and for anything below it will make a loss. The pool rate varies from PD to PD. The treasury performance is also evaluated by the same forum.

137. The treasurer (the designation may vary for some banks or if the PD is a development finance institution) then makes decisions on how to deploy the amount approved by the ALCO. PDs informed the enquiry committee that although there is no hard and fast rule on how to place bids however, all agreed that the bids are staggered out. One PD described it as follows: *"Amount to be bid is like a stair case. Not all amount is bid at one rate"*[39]. Spreading out the bid is done to manage the risk of the PD. Since these are multi-price auctions, each PD gets the yield that it bids at. An unknown factor for the PDs is where the cut off will be. A treasurer summed it up as follows:

[39] Pak-Oman

Auction Target (Rs.Mln)	150,000	200,000	200,000
Bid Amount FV (Rs. Mln)	137,803.275	365,125	111,000
Allocated Amount FV (Rs. Mln)	64,293	253,125	1,000.000
Bid Weighted Avg.	7.2898%	7.4932%	8.2424%
Cut off yield	7.2347%	7.4900%	7.60%
Previous cut off yield 25.08.2021	7.2347%	7.4389%	BR
Allocation W.A yield	7.2103%	7.4305%	7.6000%
Previous allocation W.A yield 25.08.2021	7.2293%	7.4293%	BR
PKRV 07.08.2021	7.2400%	7.42%	7.61%

142. The GoP went in with a target of Rs. 150 billion for 3m bills and received bids for an amount of Rs, 137.8 billion which the market was willing to supply at a yield of 7.2898% p.a. An amount of Rs. 64.2 billion was accepted at a weighted average yield of 7.2103% (which was lower than the previous auction WA yield of 7.2293%). The highest yield paid i.e. the cut off was 7.2347%. In terms of similarity of bids some instances are noted below. The table shows that none of the bids belonged to the PDs and all the other similar bids were pass throughs from clients. Similar observations were also made of the other instances with identical bids and are placed at Annex D1. It is also observed that for this auction 77% of all successful bids were pass through.

Table 10:

Name of Bidders (Allocated bids only)	Bid Amount Face Value (Rs. Mln)	Bid Price Per Rs.100	Bid Yield Per Annum	P.T/Own
MCB	2,041	98.3700	7.2001%	P.T
NBP	2,000	98.3700	7.2001%	P.T
ICBC	300	98.3700	7.2001%	P.T
HBL	250	98.3700	7.2001%	P.T
FAYSAL BANK	100	98.3700	7.2001%	P.T
JS BANK	50	98.3700	7.2001%	P.T
JS BANK	33	98.3700	7.2001%	P.T

P.T = Pass through
Source: P.T bids from PDs and bidding data from MoF

143. In a working paper presented to the Commission a few instances for the 3 m paper were identified where the difference between the bids placed by a PD was of 11 decimal points or multiples thereof. For the current auction the enquiry committee mapped whether the bids were pass throughs or the PDs proprietary bids and the results are noted below. As the table below shows, the difference between the first and second bid

Table 13:				
Name of Bidders (Allocated bids only)	**Bid Amount Face Value (Rs. Mln)**	**Bid Price Per Rs.100**	**Bid Yield Per Annum**	**P.T/Own**
UBL	7,500.000	98.3033	7.4998%	N/A
Alfalah	4,804.310	98.3033	7.4998%	P.T
HBL	4,052.300	98.3033	7.4998%	P.T
SCB	4,052.300	98.3033	7.4998%	P.T
Alfalah	1,000.000	98.3033	7.4998%	P.T
NBP	500.000	98.3033	7.4998%	P.T
Alfalah	300.000	98.3033	7.4998%	P.T

146. For the 3 m paper, NBP submitted 13 total winning bids worth Rs.500 billion (i.e. 73% of total winning amount). Out of these bids only 2 were pass throughs worth Rs. 0.7 billion. It is observed that majority of NBPs bids are submitted with a difference of 0.0022 decimal points (multiple of 11). As per the practice of PDs, their internal calculations are made in terms of yield which are then converted to bid price per Rs.100. It is observed from the bidding data that out of total winning bids of 13, two are pass throughs and the remaining are NBP's own bids. NBP's own bids are submitted with a difference of 0.0022 in face value. If however, the corresponding yield is observed, a 0.0022 change in face value/Rs. 100 amounts to a change of approximately 1 bps in yield (a 0.0011 change in face value/Rs. 100 to half a basis point in terms of yield). Other instances are noted in **Annex D2**.

Table 14:				
		NBP		
Face Value Rs in Mln	**Bid Price per Rs.100**	**Diff**	**Bid Yield Per Annum**	**P.T/Own**
500	98.3033		7.4998%	P.T
25000	98.2944	0.0089	7.5398%	Own
50000	98.2921	0.0023	7.5502%	Own
25000	98.2901	0.0020	7.559----2%	Own
50000	98.2879	0.0022	7.5691%	Own
50000	98.2857	0.0022	7.5790%	Own
50000	98.2835	0.0022	7.5889%	Own
50000	98.2812	0.0023	7.5992%	Own
250	98.2810	0.0002	7.6001%	P.T
50000	98.2790	0.0020	7.6091%	Own
50000	98.2768	0.0022	7.6190%	Own
50000	98.2746	0.0022	7.6289%	Own
50000	98.2724	0.0022	7.6388%	Own

MTB Auction Dated 06th October 2021

Name of Bidders (Allocated bids only)	Bid Amount Face Value(Rs. Mln)	Bid Price Per Rs.100	Bid Yield Per Annum	P.T/Own
Bank of Punjab	5,000.000	97.6406	10.4999%	Own
JS Bank	5,000.000	97.6406	10.4999%	P.T
JS Bank	2,000.000	97.6406	10.4999%	P.T
Pak Oman Investment	1,500.700	97.6406	10.4999%	P.T
SCB	300.000	97.6406	10.4999%	P.T
Faysal bank	50.000	97.6406	10.4999%	P.T
JS Bank	15.000	97.6406	10.4999%	P.T
CDC	5.000	97.6406	10.4999%	N/A

MTB Auction Dated 15th December 2021

150. This auction took place immediately after the SBP hiked the policy rate by 100 bps from 8.75 to 9.75% on 14.12.2021. It is at this auction that the GoP had maturities of Rs1,502 billion and a target of Rs. 1,400 billion. Both these factors caused the yields to rise in this auctions (as discussed in detail above). For the 3 m paper the auction target was set for Rs. 600 billion against which bids of Rs.1,420 billion were received and eventually the GoP exceeded its targets and lifted Rs. 804 billion worth of paper at a WA yield of 10.6589% which was slightly below the secondary market yield of 10.67%. For the 6 m paper against a target of Rs.600 billion, bids of Rs. 584.2 billion were received out of which the GoP accepted Rs.384.5 billion at a weighted average of 11.3789%. The GoP maintained the previous auction cut off of 11.5001% for this tenure. For the 12 m paper against a target of Rs. 200 billion, bids of Rs.207.55 billion were received and only Rs. 95.2 billion were accepted at a WA yield of 11.4356%. For this tenure too, the previous auction cut off of 11.5143% were maintained.

Table 18:			
15.12.2021	**3M**	**6M**	**12M**
Auction Target (Rs. Mn)	600,000	600,000	200,000
Bid Amount FV (Rs. Mn)	1,420,342	584,250	207,550
Allocated Amount FV(Rs. Mn)	804,802	384,500	95,200
Bid Weighted Avg.	10.8522%	11.6241%	11.8245%
Cut off yield	10.7849%	11.5001%	11.5143%
Previous cut off yield 01.12.2021	10.7890%	11.5001%	11.5143%
Allocation W.A yield	10.6589%	11.3789%	11.4356%
Previous allocation W.A yield 01.12.2021	10.3912%	11.0587%	11.3511%
PKRV 14.12.2021	10.67%	11.26%	11.5%

151. For the 3 m paper following instances of similar bids quoted were identified as the table shows all four bids are pass through bids on behalf of clients. (Other instances are placed at Annex D5). It is noted that 27% of all the bids submitted were pass through bids.

10.6589%. The cut off yield for the 3 m tenors i.e. 10.5902% are also below the previous auction cut offs of 10.7849%.

Table 20			
29.12.2021	**3M**	**6M**	**12M**
Auction Target (Rs. Mln)	500,000	500,000	200,000
Bid Amount FV (Rs. Mln)	982,978	609,861	276,030
Allocated Amount FV(Rs. Mln)	650,132	385,965	109,530
Bid Weighted Avg.	10.5363%	11.4633%	11.7477%
Cut off yield	10.5902%	11.4501%	11.5100%
Previous cut off yield 15.12.2021	10.7849%	11.5001%	11.5143%
Allocation W.A yield	10.3878%	11.3228%	11.4796%
Previous allocation W.A yield 15.12.2021	10.6589%	11.3789%	11.4356%
PKRV 28.12.2021	10.22%	10.92%	11.31%

154. In the 3 m paper, 5 different PDs submitted similar bids and an analysis of the same shows that Citigroup has submitted its own bid, Allied Bank's pass through information is unavailable whereas the other PDs have submitted pass through bids. (Other instances have been placed at Annex D6). It is observed that 54% of all successful bids were pass through bids.

Table 21:				
Name of Bidders (Allocated bids only)	**Bid Amount Face Value(Rs. Mln)**	**Bid Price Per Rs.100**	**Bid Yield Per Annum**	**P.T/Own**
Allied Bank	5,000.000	97.6406	10.4999%	N/A
Pak Oman Investment	5,000.000	97.6406	10.4999%	P.T
Citibank	2,000.000	97.6406	10.4999%	Own
MCB	1,000.000	97.6406	10.4999%	P.T
Alfalah	200.000	97.6406	10.4999%	P.T
Alfalah	147.000	97.6406	10.4999%	P.T

155. NBP submitted total bids worth Rs.240.5 billion for the 3 m paper out of which it was allocated Rs. 235.3 billion. Out of 19 winning bids, 6 were pass throughs whereas the remaining 13 were the bank's own bids. In terms of pattern identified in some instances the difference in bids is in multiples of 11 however, in most instances the difference in 2 bids equals 0.0022 which may show that the bank is bidding within a very narrow band. If pass through bids are excluded the W.A of NBPs bids is 10.3050% which is below the W.A. yield of the auction i.e. 10.3878%. Therefore, it can be said that NBP's bids were below what the market had bid in the auction.

Table 22: NBP				
FV	**Bid Price per Rs.100**	**Diff**	**Bid Yield Per Annum**	**P.T/Own**
10,000.000	97.6977		10.2398%	Own

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158. The enquiry was initiated after concerns were raised through various quarters regarding a spike in t bill yields. A preliminary analysis showed that from January to September 2021, the average difference between WA yields and policy rate, for 3m t bills, was 27 bps. This difference widened to an average of 90 bps in the period September to December 2021. Concerns were raised that PDs may have colluded to exploit the situation whereby the GoP could no longer borrow from the SBP and had to rely on domestic sources (including t bills) to finance its deficit. An analysis of bidding data for t bill auctions in this period showed that there could be possible common bids and a common bidding pattern which needed to be examined further to determine whether there was an prima facie violation of Section 4(2)(e) of the Act by PDs.

159. Based on the ToRs assigned by the Commission, the enquiry committee pursued the following lines of enquiry:

a. Provide an overview of the sector to contextualize any possible violations of Section 4 of the Act.
b. To identify the relevant market in terms of Section 2(1)(k) of the Act.
c. To review the regulatory framework governing the auction of T bills.
d. To review the bidding process and discuss factors influencing T bill yields.
e. To inquire into the factors that may have contributed to quoting/charging of higher rates than before in T bill auctions by PDs. (September 2021 onwards).
f. Whether there has been collusive bidding by the PDs in the auction of T bills by the Government of Pakistan (from January 2018 onwards in *prima facie* violation of Section 4(2)(e) of the Act.

160. **Sector overview:** Based on the findings of paragraphs 49 to 56 above:

a. Total debt to GDP ratio at the end of June 2023 stood at 74.3% of GDP compared with 73.9% at the end of June 2022. Domestic debt accounted for 45.8% of GDP and external debt accounted for 28.4% of GDP.
b. Domestic debt comprises of three main categories: (i) permanent debt (medium and long-term); (ii) floating debt (short-term comprising of T bills); and (iii) unfunded debt (primarily made up of various instruments available under National Savings Schemes).
c. Floating debt which exclusively includes T bills of various tenors, constitutes 24% (Rs. 9,335 billion) of total domestic debt.
d. Approximately 55% of the T bills are held with scheduled banks followed by non-bank entities such as corporates, insurance companies and funds which have a combined holding of 45%.

161. **Relevant Market:** Based on the findings of paragraphs 57-65 above, it appears that the scope of this enquiry relates to possible collusion between primary dealers in auction of T bills of various tenors and because there is a difference between T-bills and other government issued securities in terms of product features (mainly tenor) the relevant market is the primary market for 3m, 6m and 12m T-bills issued by the GoP in Pakistan.

and the IMF Programme under which the GoP could no longer borrow directly from the SBP.

166. **Whether there has been collusive bidding by PDs in the auction of Market Treasury Bills by the Government of Pakistan (from January 2018 to July 2022) in *prima facie* violation of Section 4(2)(e) of the Act:** Based on the findings of paragraphs 125-157 above, there appear to be no indications of possible collusion by PDs in the t bill auctions for the period examined. This is based on the fact that pass through bids are also factored in which have a bearing on the overall auction yields making collusion difficult to achieve. After examining the instances of common bids and difference of 11 decimal points it is noted that most of the bids are clustered at or around the same level due to information symmetry with regards to PKRV, the last auction cut offs, inflation expectations and the policy rate. When common bids were examined it was observed that most were pass through bids from clients of PDs. There also appears to be no signaling mechanism since PDs place/plan their bids in terms of yield which is then converted into Rs./100. and for a 3m bill, a 0.0022 change in face value/Rs. 100 amounts to a change of approximately 1 bps in yield. A 0.0044 change in face value/Rs. 100 to 2 bps in terms of yield and 0.0066 to 3 bps and so on. PDs bids are staggered out to ensure maximum chance of winning therefore, in some instances this pattern appears because the PD is spreading out its bid.

167. Therefore, based on the above, no *prima facie* violation of Section 4(2)(e) is made out in the instant matter.

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