Benefits and Costs of Monetary Tightening

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It is well-known that monetary tightening makes the borrowers miserable as interest rates go up making loans costly. So much so that even many experts seem to forget that it has benefits also. This over-emphasis on costs is, perhaps, embedded in human nature. Observe any child who is about to be pricked with a needle (injecting a medicine) and tries hard to avoid getting shot. Fortunately, child's elders are wise and hold firmly to get through the process. Cost for the child is the (very) short-term pain. Benefit is of the long-term nature for child's health.

Monetary tightening, in this respect, is no different than pricking an economic or financial bubble. Short to medium-term pain is endured for gaining long-term economic health. Elders of our economy, unfortunately, seem to behave usually like a child and try to avoid taking the shot until economic sickness leads to the depletion of liquid reserves and loss of growth electrodes. Even then, it is seldom our own hand, which provides a firm support. Many politicians, media-experts and economic pundits then start a familiar (intellectual-sounding) rigmarole of lost sovereignty, double-digit inflation, high unemployment, unbearable debt burden and interest expenses, obliquely imply that the child was right, and the shot should not have been taken. This seems to be, unfortunately, our collective mind-set that still constrains us to eradicate polio and remain under-developed even when we celebrate our nation's seventy-fifth year of independence.

Let us now dwell on something unfamiliar to many. How to measure the benefits and costs of monetary tightening. While the real benefit of an appropriate tightening is in reducing inflation and the temperature of overheating economy, saving precious reserves from depletion, and put the economy on a trajectory of sustainable growth, the adjustment path also entails costs to borrowers and benefits to depositors. How much additional money the borrowers lose and how much the depositors gain depends on the number of borrowers (with borrowed amount) and depositors (with deposited amount) and the intensity of tightening. There were about 62.9 million deposit accounts and 3.9 million loan accounts in our commercial banks as on end-June 2021 according to the SBP Statistical Bulletin of March 2022 (see Tables 1 and 2.)

A noteworthy aspect of this data is the large number of deposit accounts compared to the loan accounts. The number of deposit accounts is over sixteen times more than the number of loan accounts. The number of borrowers and depositors would be less than the number of accounts as a depositor is likely to have more than one account, and similar would be for borrowers who may have taken more than one loan. Actual number of borrowers and depositors is not available, but what matters for our analysis is the number of accounts, and more importantly the amount of rupees in these accounts. Total amount of outstanding deposits was about Rs19.1 trillion and total amount of loans Rs8.7 trillion. This includes the loans to Public Sector Enterprises, but excludes the credit extended by the commercial banks through their investments in government securities (T-bills, PIBs, etc.). This also excludes government borrowing through national saving schemes. Government borrowing from SBP are also not captured in this data.

Government borrowing from commercial banks through T-bills was Rs6.2 trillion and PIBs Rs6.0 trillion. Its borrowing from SBP was Rs6 trillion. Borrowing through national saving schemes and prize bonds was Rs3.9 trillion. As a result of monetary tightening, additional interest cost to government, of course, increased by various amounts depending on the rise in T-bill, PIB and NSS rates. We can safely exclude borrowing from SBP in this benefit-cost analysis as any additional interest paid to government returns to it through transfer of SBP profits. Remember that the NSS rates are not linked to SBP policy rate, and this borrowing could also be excluded from this exercise as the interest expense of the government directly benefits individual savers of these schemes. We, nevertheless, account for this cost also by these schemes lead to financial disintermediation and the government could borrow all this amount through banks at lower interest cost.

From June 2021 to January 2022, SBP policy rate increased by 2.75 percentage points (from 7.0 to 9.75 percent.) Six-month T-bill rates increased by 3.07 percentage points (from 7.56 to 10.63,) ten-year PIB rates by 2.06 percentage points (from 8.01 to 10.93,) and special savings certificate rates by 2.0 percentage points (from 8 to 10.) This means that the additional borrowing cost is likely to rise (given the outstanding borrowing in previous paragraph) by Rs190+124 = 78 i.e., Rs392 billion in FY22. Let us now capture the interest cost of other borrowers including private sector and the PSEs. The weighted average lending rates on outstanding loans increased by 1.34 percentage points (8 to 9.34.) imposing an additional interest cost of Rs117 billion (1.34% of 8.7 trillion.) Total interest cost to borrowers, therefore, becomes Rs509 billion.

While almost everyone knows that our government is the largest borrower, few would know that it is also the biggest depositor (together with PSEs) in commercial banks. Of total deposits, about Rs4.1 trillion belonged to the government and PSEs! They also earn interest on these deposits along with other depositors. The weighted average return on deposits increased by 1.56 percentage points (3.56 to 5.12.) This means that all depositors are likely to earn Rs298 billion on deposits of Rs19.1 trillion outstanding on end-June 2021. Therefore, the interest cost of monetary tightening is Rs209 billion (509 minus 298.) This is the nominal cost with which monetary tightening will have its benefits on our economy cited in third paragraph above.

There is also another benefit of tightening embedded in the size distribution of depositors and borrowers shown in Tables 1 and 2. An overwhelming number of accounts of depositors (94.6%) are of small size (less than Rs5 lac) with a share of 31.2% in total deposits. This reveals that most depositors belong to the strata of relatively lower income compared to the smaller number of borrowers (16.7%) who have taken loans of higher than Rs 5 lac, constituting 95.8% of total borrowed amount. Monetary tightening, therefore, transfers a part of resources of relatively rich borrowers to relatively poor depositors. While it is difficult to quantify this benefit of income distribution getting a little better, it is impossible to deny it. Since our country is still in early stages of development with access to borrowing mostly confined to relatively rich, monetary tightening will continue to benefit depositors of relatively lower income strata and this is not the approached used by the economists to compare the welfare effects of monetary tightening. A proper evaluation of monetary tightening will require an estimable general equilibrium model consisting of well-behaved utility functions of economic agents, aggregate demand and supply functions, reaction functions of central bank etc. which will tell that interest rate increase leads to increase in economic welfare when output is close to potential¹. Even many economists are not familiar with this theoretically and empirically sound approach for policy evaluations. Our objective was modest; to capture the transition costs-benefits of monetary tightening in the ultimate benefit of reduction in inflation and to show that medium to long-term benefit is much higher than the transition costs of tightening.

As already stated, one crucial assumption was that economic growth exceeded its potential (or very close to it) before tightening. Another, and much more important, assumption implicit is that the exchange rate is fully aligned with fundamentals of our economy i.e., the foreign exchange reserves of the central bank are increasing (at best) or not declining (at worst.) Any decline in SBP reserves will nullify the benefits of tightening. This erosion arithmetic is very simple. At the current exchange rate of Rs179 to USD, a decline of $1 billion will erode Rs179 billion from the net benefits estimated above. One may note that SBP foreign exchange reserves have declined from a peak of $20.1 billion on 27 August 2021 to $16.2 billion on 4 March 2022. This is a decline of about $4 billion. It seems that the one-year pecuniary benefits of interest rate increase have been almost completely nullified by reserves depletion, which is a clear sign of misaligned exchange rate. It seems that our economy is again fast approaching a balance of payments crisis as our political elders (from all sides) are fiercely engaged with themselves in the benefits of power as we are close to celebrating 82nd anniversary of Pakistan Resolution.

Table 1

Scheduled Banks' Deposits by Size of Account and Category of Savers As on 30th June 2021(P)

Amount in Million Rs and Number of Accounts in Units

Rs. Deposit Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	285,710	8,635	32,258,618	1,318,524	4,622,702	137,534	37,167,030	1,464,693
1 Lac to 5 Lac	81,644	18,111	20,037,630	3,993,028	2,197,252	489,262	22,316,526	4,500,402
5 Lac and over	91,295	4,048,309	2,388,604	3,723,944	920,636	5,397,692	3,400,535	13,169,945
	458,649	4,075,055	54,684,852	9,035,497	7,740,590	6,024,487	62,884,091	19,135,039

Shares of No. of Accounts and Amounts in Totals of each Deposit Size Category

Rs. Deposit Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	0.8%	0.6%	86.8%	90.0%	12.4%	9.4%	100.0%	100.0%
1 Lac to 5 Lac	0.4%	0.4%	89.8%	88.7%	9.8%	10.9%	100.0%	100.0%
5 Lac and over	2.7%	30.7%	70.2%	28.3%	27.1%	41.0%	100.0%	100.0%

Shares of each Deposit Size Category in Totals of No. of Accounts and Amounts

Rs. Deposit Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	62.3%	0.2%	59.0%	14.6%	59.7%	2.3%	59.1%	7.7%
1 Lac to 5 Lac	17.8%	0.4%	36.6%	44.2%	28.4%	8.1%	35.5%	23.5%
5 Lac and over	19.9%	99.3%	4.4%	41.2%	11.9%	89.6%	5.4%	68.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SBP (Summarized from Table 3.4 of Statistical Bulletin March 2022)

Table 2

Scheduled Banks' Advances by Size of Accounts and Borrowers As on 30th June 2021(Provisional)

Amount in Million Rs and Number of Accounts in Units

Rs. Loan Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	53	3	1,476,444	44,448	360,087	16,880	1,836,584	61,331
1 Lac to 5 Lac	109	33	599,770	142,293	815,495	164,846	1,415,374	307,172
5 Lac and over	1,044	2,099,723	406,908	699,120	242,003	5,523,476	649,955	8,322,319
	1,206	2,099,759	2,483,122	885,860	1,417,585	5,705,203	3,901,913	8,690,822

Shares of No. of Accounts and Amounts in Totals of each Loan Size Category

Rs. Loan Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	0.0%	0.0%	80.4%	72.5%	19.6%	27.5%	100.0%	100.0%
1 Lac to 5 Lac	0.0%	0.0%	42.4%	46.3%	57.6%	53.7%	100.0%	100.0%
5 Lac and over	0.2%	25.2%	62.6%	8.4%	37.2%	66.4%	100.0%	100.0%

Shares of each Loan Size Category in Totals of No. of Accounts and Amounts

Rs. Loan Size	Govt + PSE		Personal		Business + Org		Total	
	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount	No. of Accounts	Amount
up to 1 Lac	4.4%	0.0%	59.5%	5.0%	25.4%	0.2%	47.1%	0.7%
Lac to 5 Lac	9.0%	0.0%	24.2%	16.1%	57.5%	2.9%	36.3%	3.5%
5 Lac and over	86.6%	100.0%	16.4%	78.9%	17.1%	96.8%	16.7%	95.8%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: SBP (Summarized from Table 3.9 of Statistical Bulletin March 2022)

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References

[1]Muhammad Nadim Hanif and Javed Iqbal (November 2016.) Assessing Monetary Policy Effectiveness in Rich Data Environment. SBP Working Paper Series No. 80.

[2]A good model was published in SBP Research Bulletin Volume 11, Number 1, 2015. Shahzad Ahmad and Farooq Pasha. A Pragmatic Model for Monetary Policy Analysis I: The Case of Pakistan.