ECOWRAP

MONETARY POLICY & RESULTANT RATE TRANSMISSION IN INDIAN FINANCIAL MARKETS ARE ASYMMETRIC:THE RATE HIKE CYCLE PARADOXICALLY RESULTING IN A PRICING BONANZA FOR CERTAIN BORROWERS?

Issue No. 24, FY24
Date: 04 Sep 2023

"*Financial markets are vital to the functioning of every modern economy. From a macroeconomic policy perspective, besides the crucial role of price discovery for a host of financial assets, they enable risk and maturity transformations, incentivise the efficient allocation of resources, generate returns for capital and bring borrowers and lenders, and savers and investors together. They also nurture a synaptic continuum across various market segments that deal in various financial assets.* ***Overarchingly, the information content in financial markets is priceless for regulators like the Reserve Bank***". Michael Patra, DG, RBI (November 2022)

Words of wisdom indeed. The role of monetary policy in enabling better policy transmission to financial markets has always been the endeavor of any central bank and RBI is no exception. While, it has been observed that the transmission from a rate change is instantaneous in money market, it is not so in the bank lending and the G-sec market given the market idiosyncrasies. **Also, the transmission is supposed to have a positive relationship.**

With liquidity in the system currently in a deficit mode, the question that we pose underpins whether such liquidity tightening impulse is fully and adequately reflected in the money market rates? We however, move beyond this rhetoric to find out whether over a sufficiently long period of RBI rate cycle, **the resultant transmission in the money market , bank credit market and G-sec market moves in the same direction: i.e. a rate hike / cut begets a tighter / lower money market rates.**

Our starting point of analysis is the spread between AAA corporate bond and 10-year risk free G-sec rates, which was around 120 bps during March/April'2020 but has declined significantly since then. This trend has continued even as the rate cycle changed direction since April'2022 and is now even significantly less than half of the average spread at pre pandemic level i.e. in FY20. This indicates that risk pricing of the paper which was lower during low demand and high liquidity has not moved up commensurately even though the credit demand has picked up and liquidity dried up, reflecting inadequate risk premium. **Does this reflect a new found peculiarity of asymmetric transmission from monetary policy to rate transmission in Indian money markets, G-sec market and even bank credit market? We test this hypothesis of rate transmission by using an autoregressive distributed lag model (ARDL) for the 65 month ended August 2023. The data series thus constitutes both periods of rate hikes and rate cuts by RBI.**

The results are as follows

- A 1% increase in repo rate has resulted into only 2 to 3 bps increase in 10 year AAA corporate bond spread, 3 to 4 bps increase in 5 year AAA corporate bond spread, but there has been around 31 bps decrease in spread of 3 year AAA corporate bond**, signifying that 3 year AAA corporate bonds are not priced with adequate risk premium and they could have been at least be priced at 26-43 bp higher rate. Could this be a result of better bargaining power of corporates or exuberant risk pricing? The jury is out though and an area of further research.**
- A 1% increase in repo rate increases CP weighted yield by 120 bp increase for up to 31 day tenor, by 147 basis points in 31 days to 91 days, 178 basis points in 92 days to 180 days and surprisingly lower at 151% in 181 days to 365 days tenor. **Our further estimates suggest that 180-365 days CPs are priced exuberantly and are under priced by up to 90 bps.**
- As far as bank credit is concerned, market sources pointing short tenor working capital loans of less than one year are given even with more finer rates in the range of 7-7.5% or even less. It is to be noted that 10-Yr G Sec is currently trading around 7.18%, while 91 Day T Bill at around 6.85% and 182 Day T Bill at around 7.04%. **The pricing for a corporate paper should generally be higher by at least 50-100 bps, to cover the risk premium, over Government paper depending upon rating, tenor etc.**
- **Overall, our estimates reveal that at an annualized rate, some borrowers might have been able to save up to Rs 5000 crores because of lower CP rates largesse even if inadvertently ingrained in broader markets psychology.** This has resulted in better financial service ratio. For example, the interest coverage ratio of listed entities, ex BFSI, improved by 60 bps in Q1FY24 as compared to Q1FY23 reflecting lower input cost including finance cost.

Clearly, monetary policy has asymmetric transmission in Indian financial markets. Future conduct of monetary policy may look into this aspect , but the end result could be monetary policy signaling is now dictated more by fuzzy market peculiarities!

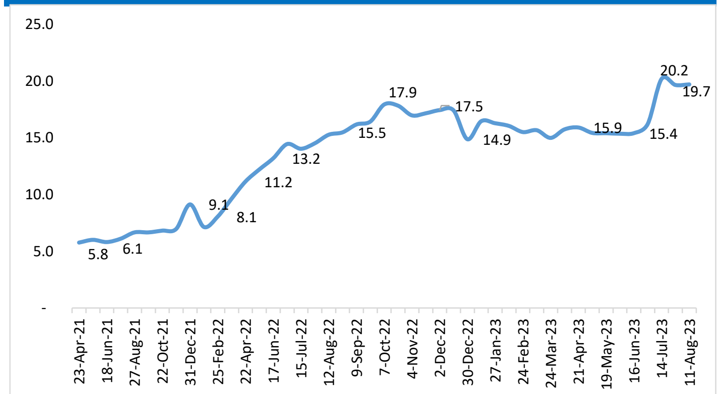
CREDIT GROWTH MOMENTUM IS CONTINUING WITH SUSTAINABLE DEMAND ACROSS SEGMENT

- In FY23, ASCBs reported robust credit growth of around 15%, to cross Rs 136 lakh crore. Credit growth was reported across sectors including, Industry, Services and Personal segment. In FY24, up to 11th August 2023, ASCB reported credit growth of 19.7% (14.7% without the HDFC merger) as compared to 15.3% last year.
- While personal segment and service sector reported growth of around 31% (18.4% excluding HDFC merger) and 23% respectively, Industry reported growth of 5.8%, as per the latest sectoral deployment numbers as of July'2023. Industry credit growth was driven by Micro & Small and Medium Enterprises, which grew by around 10% (YoY), while large Industry grew by 4.3% during the same period. Further, the good part is that within Industry, credit growth is reported across the board and is not limited to few industries/sectors.

LIQUIDITY SCENARIO

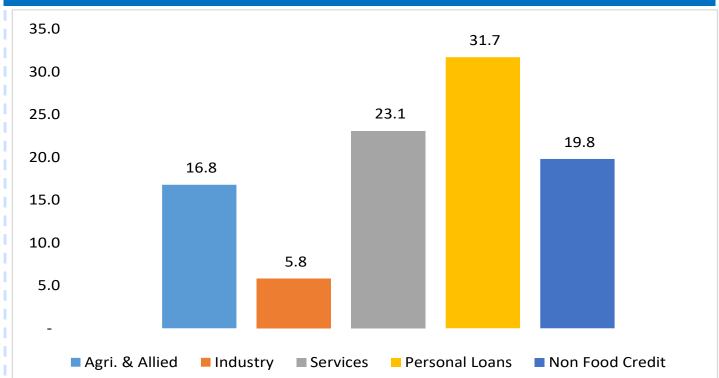
- RBI has been actively managing liquidity in the system. During the pandemic efforts were made to keep the liquidity in the surplus mode. The net durable liquidity increased from Rs 8 lakh crore in Apr'21 to Rs 12 lakh crore by early Oct'21. Thereafter it continued to moderate gradually falling to average of Rs 10 lakh crore surplus in FY22 and further to Rs 4 lakh crore in FY23 and Rs 0.9 lakh crore in FY24 (till 18 May'23).
- However, the announcement of withdrawal of Rs 2000 notes by the RBI again led to increase in liquidity with average durable liquidity of Rs 3.7 lakh crore by 10 Aug'23.Accordingly, the RBI in its Aug'23 monetary policy decided to impound on additional liquidity of around Rs 1 lakh crore through incremental CRR of 10%, which in turn led to moderate reduction in durable liquidity to Rs 3.6 lakh crore by end-Aug though the system liquidity which was around Rs 2 lakh crore by 10 aug'23 reduced to Rs 12,919 crore by end-Aug.
- **With liquidity in the system currently in a deficit mode, the question that we pose in the current context whether such liquidity tightening impulse is fully and adequately reflected in the money market rates? We however, move beyond this rhetoric to find out whether over a sufficiently long period of RBI rate cycle, the resultant transmission in the money market , bank credit market and G-sec market moves in the same direction: i.e. a rate hike / cut begets a tighter / lower money market rates.**

ASCB Credit and Deposit growth (YoY) %



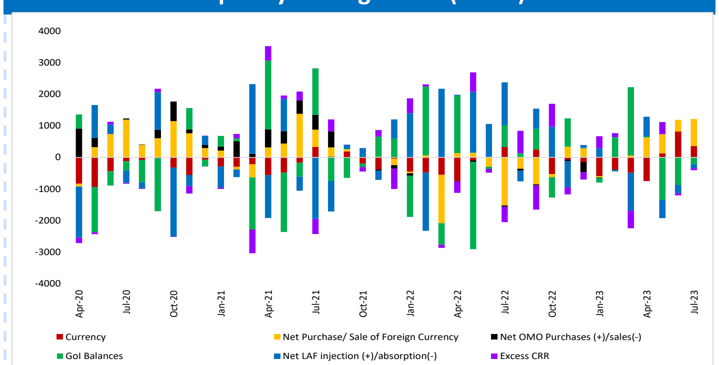
Source: RBI; SBI Research

Sector wise credit growth as of July'2023 (YoY) %



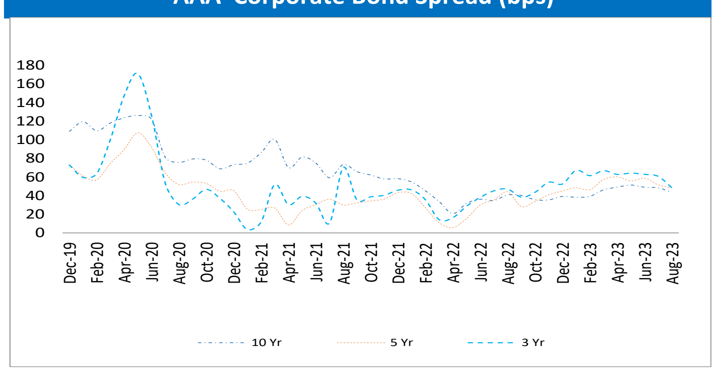
Source: RBI; SBI Research

Liquidity Management (Rs bn)



Source: RBI; SBI Research

AAA Corporate Bond Spread (bps)

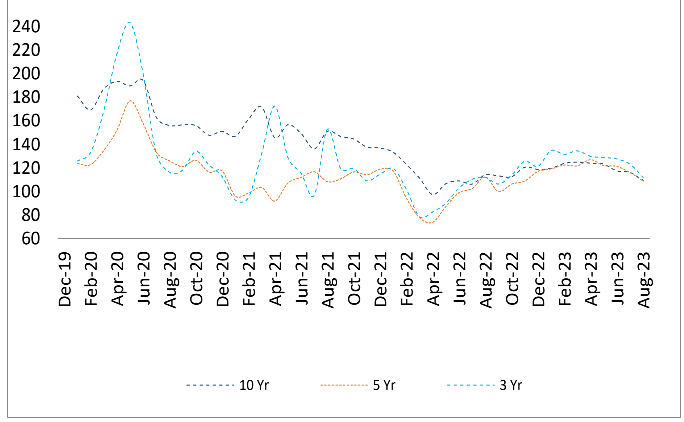


Source: RBI; SBI Research

MONETARY POLICY & RATE TRANSMISSION: RESULTS FROM AN ARDL MODEL

- Our starting point of analysis is the spread between AAA corporate bond and 10-year risk free G-sec rates, which was around 120 bps during March/April'2020 has declined significantly since then. This trend has continued even as the rate cycle changed direction since Apr'22 and is now even significantly less than half of the average spread at pre pandemic level i.e. in FY20. **For example, the average spread of a AAA 10-year paper that was 117 bps in pre pandemic levels over similar tenor G-Sec is now only 44 bps. Moreover, the spread of a three-year paper declined by ~20 bps since Mar'23.**
- This indicates that risk pricing of the paper which was lower during low demand and high liquidity has not moved up commensurately even though the credit demand has picked up and liquidity dried up, reflecting inadequate risk premium. **Does this reflect a new found peculiarity of asymmetric transmission from monetary policy to rate transmission in Indian money markets, G-sec market and even bank credit market? We test this hypothesis of rate transmission by using an auto-regressive distributed lag model (ARDL) for the 65 month ended August 2023. The data series this constitutes both periods of rate hikes and rate cuts by RBI. We leave out G-sec market from our analysis as the money market spreads are estimated using the risk free G-sec rates.**
- The results are summarized in the table alongside. On the basis of our time series analysis using ARDL model, for the period of Apr 2018 to Aug 2023, we found that impact of repo rate increase has been uneven on the corporate bond spreads.
- We use the dependent variable as 10 year, 5 year and 3 year credit spread for a AAA rated paper and independent variables as lagged credit spread and repo rate. We repeat same exercise for a AA rated paper for similar durations and similar independent variables.
- **The results show that an 1% increase in repo rate has resulted into only 2 to 3 bps increase in 10 year AAA corporate bond spread, 3 to 4 bps increase in 5 year AAA spread, but there has been around 31 bps decrease in spread of 3 year AAA corporate bond, signifying that 3 year AAA corporate bonds are not priced with adequate risk premium and they could have at least be priced at 30-40 bp higher rate. This could be a result of better bargaining power of corporates or exuberant risk pricing? The jury is out though and an area of further research.**
- Impact has also been further uneven on AAA and AA corporate bond spread.

AA Corporate Bond Spread (bps)



Source: RBI; SBI Research

ARDL Model			
AAA Corporate Bond Spread			
Time: Apr 2018 to Aug 2023			
Dependent variable: 10 year Corporate Bond Spread			
Explanatory Variables	Coefficient	Std error	P value
10 year Corporate Bond Spread (-1)	0.96	0.039	0.000***
Repo Rate	2.42	1.25	0.057*
constant	-9.91	7.27	0.179
Dependent variable: 5 year Corporate Bond Spread			
5 year Corporate Bond Spread (-1)	0.89	0.047	0.000***
Repo Rate	3.48	1.53	0.027**
constant	-11.64	7.15	0.109
Dependent variable: 3 year Corporate Bond Spread			
3 year Corporate Bond Spread (-1)	0.615	0.09	0.000***
Repo Rate	-31.53	13.46	0.023**
constant	-21.12	12.41	0.094*
Source: SBI Research; ***,**, * significant at 1%, 5%, and 10% respectively			

ARDL Model			
AA Corporate Bond Spread			
Time: Apr 2018 to Aug 2023			
Dependent variable: 10 year Corporate Bond Spread			
Explanatory Variables	Coefficient	Std error	P value
10 year Corporate Bond Spread (-1)	0.96	0.046	0.000***
Repo Rate	1.91	1.22	0.121
constant	-4.85	10.12	0.633
Dependent variable: 5 year Corporate Bond Spread			
5 year Corporate Bond Spread (-1)	0.875	0.055	0.000***
Repo Rate	3.1	1.52	0.047**
constant	-0.006	8.68	0.999
Dependent variable: 3 year Corporate Bond Spread			
3 year Corporate Bond Spread (-1)	0.84	0.123	0.000***
Repo Rate	-40.15	13.08	0.003***
constant	37.96	14.53	0.012*
Source: SBI Research; ***,**, * significant at 1%, 5%, and 10% respectively			

- **Thus for the AA corporate bond, situation is similar but relatively even more under priced than AAA corporate bonds.** 1% increase in repo rate has resulted into 2 bps increase in AA corporate bond spread, 3 bps increase in 5 year AA corporate bond spread, but around 40 bps decrease in 3 year spread.
- **We estimate that 3 year AA corporate bonds premiums are also not priced with adequate risk premiums and they could have at least be priced at 40-50 bp higher rate.**

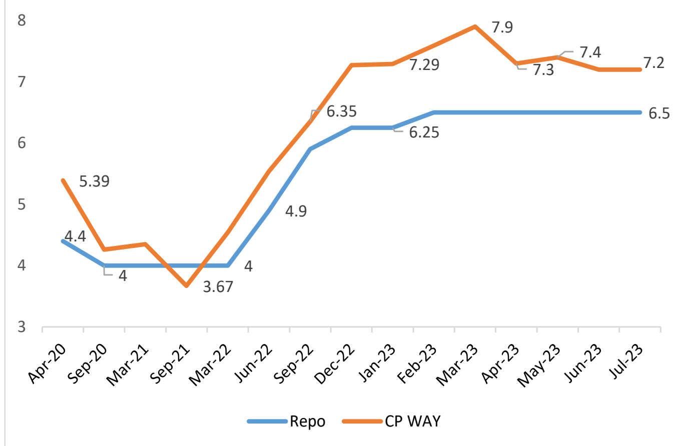
RESULTS FOR THE COMMERCIAL PAPER SEGMENT

- In Commercial Paper (CP) market too, Weighted Average Yield (WAY), which increased by around 300 bps during March'2022 to March'2023, has started declining since April'23. With WAY moving southwards, the primary issuances of the short-term paper have started increasing with Rs 4.72 lakh crore issuances in first four month (April-July) of FY24 as compared to Rs 4.39 lakh crore in the same period previous year.
- The WAY has declined by 70 bps since April'2023 to 7.20% in July'2023 as compared to 7.9% in March'2023, even though the policy rate has remained constant during the same period and the demand is robust and liquidity has tightened.
- Using a similar technique and using 31 day, 91 day, 180 day & 365 day estimated CP weighted yield on lagged and repo rate throws up similar results.
- **An 1% increase in repo rate increases CP weighted yield by 120 bp increase for up to 31 day tenor, by 147 basis points in 31D to 91 days, 178 basis points in 92 days to 180 days and surprisingly lower at 151% in 181 days to 365 days tenor. Our further estimates suggest that 180-365 days CPs are priced exuberantly and are under priced by around 50–60 bps.**
- **The analysis suggest that in shorter tenor paper the risk pricing is inadequate and might reflect exuberant pricing / better bargaining strength to the extent of 50 -60 bps**

EXTENT OF UNDERPRICING IN BOND MARKET

- **We have conservatively estimated underpricing using impact of repo rate, and trading inter-tenor spread between instruments. It has been found that 10 year and 5 year AAA Corporate bonds yields are lower by at least 35 basis points than what it could have been given the current liquidity, risk premium in the market. In the same way 10 year and 5 year AA Corporate bonds yields are lower by 43 basis points than what risk and liquidity considerations could command.**
- **3 year AAA and AA Corporate Bonds are found to be lower by at least 26 and 40 bps respectively.**

Commercial Paper WAY visa-vis Repo Rate



Source: RBI; SBI Research

ARDL Model			
CP weighted yield			
Time: Apr 2020 to July 2023			
Dependent variable: 31 day CP weighted yield			
Explanatory Variables	Coefficient	Std error	P value
31 day CP weighted yield (-1)	0.026	0.164	0.871
Repo Rate	120.8	0.211	0.000***
constant	-0.816	0.408	0.054*
Dependent variable: 91 day CP weighted yield			
91 day CP weighted yield (-1)	0.552	0.162	0.002***
Repo Rate	147.0	0.323	0.000***
constant	-0.594	0.367	0.116
Dependent variable: 180 day CP weighted yield			
180 day CP weighted yield (-1)	0.26	0.178	0.155
Repo Rate	178	0.515	0.002***
constant	-0.74	0.378	0.059*
Dependent variable: 365 day CP weighted yield			
365 day CP weighted yield (-1)	0.44	0.183	0.022**
Repo Rate	151	0.467	0.003***
constant	-0.22	0.335	0.516
Source: SBI Research; ***,**, * significant at 1%, 5%, and 10% respectively			

Exuberant Pricing in Corporate Bond and CPs			
Instrument	Current Yield	Estimated yield	Exuberant Pricing
10 year AAA Corporate Bond	7.67	8.01	0.34
10 year AA Corporate Bond	8.32	8.75	0.42
5 year AAA Corporate Bond	7.69	8.04	0.35
5 year AA Corporate Bond	8.30	8.73	0.43
3 year AAA Corporate Bond	7.72	7.98	0.26
3 year AA Corporate Bond	8.33	8.73	0.40
31 day CP	7.30	6.90	-0.40
91 day CP	7.10	7.20	0.10
180 day CP	8.10	8.10	0.00
365 day CP	7.70	8.60	0.90
Source: SBI Research			

EXTENT OF UNDERPRICING IN CP MARKET

- In the same manner, for 31 day CP, we have estimated 6.9 % as the yield that risk pricing commands. With 18.7% transactions in last 6 months (Feb-July) below 6.9% yield, this has led to a gain of around Rs 11 crores to Issuers in terms of cost saving.
- For 91 day CP, we estimate 7.2% as yield 25.6% transactions in last 6 months (Feb-July) are still below 7.2% yield. This has led to a gain of around Rs 440 crores to Issuers.
- For 180 day CP, we estimate 8.1% as yield which is same as current yield of 8.1% but 35.2% transactions in last 6 months (Feb-July) are still below 8.1% yield. This has led to a gain of around Rs 138 crores to issuers.
- For 365 day CP, we have estimated 8.6% as yield which is higher than current yield of 7.7% and 65.6%transactions in last 6 months (Feb-July) are below 8.6% yield. This has led to a gain of around Rs 632 crores to Issuers.
- **Overall, our estimates reveal that at an annualized rate, the corporates have been able to save up to Rs 5000 crores because of lower CP rates. This has resulted in a much better debt service ratio.**

BANK CREDIT MARKET

- Recent RBI data on bank group wise weighted average lending rates (WALR) on fresh rupee loan, also suggest decline in WALR by upto 17 bps since March'2023.
- Market sources pointing short tenor working capital loans of less than one year are given even with more finer rates in the range of 7-7.5% or even less. It is to be noted that 10-Yr G Sec is currently trading around 7.18%, while 91 Day T Bill at around 6.85% and 182 Day T Bill at around 7.04%. The pricing for a corporate paper should generally higher by at least 50-100 bps, to cover the risk premium, over Government paper depending upon rating, tenor etc.

INTERST COVERAGE IMPROVED

- Corporate results, for Q1FY24, ex BFSI represented by more than 3000 listed entities shows, almost flat topline. However, PBIDT and PAT grew by around 22% and 33% respectively as compared to Q1FY23.
- Further, it is pertinent to mention that corporate margin, which was under pressure for last few quarters, shown sign of improvement since Q4FY23. EBIDTA margin, on aggregate basis of more than 3000 companies, improved by 274 bps to 15.81% in Q1FY24 as compared to 13.07% in Q4FY23 and 12.60% in Q1FY23 contributed by low input prices.
- It is important to note**, the interest coverage ratio of listed entities, ex BFSI, improved by 60 bps in Q1FY24 as compared to Q1FY23 reflecting lower input cost including finance cost.**

Opportunity Gain in CP market in 6 months

Instrument	Estimated Yield	% Issues below estimated yield	Potential gain by issuers (in Rs Crore)
31 day CP	6.9	18.7	11
91 day CP	7.2	25.6	440
180 day CP	8.1	35.2	138
365 day CP	8.6	65.6	632
Total Gain			1220-3100

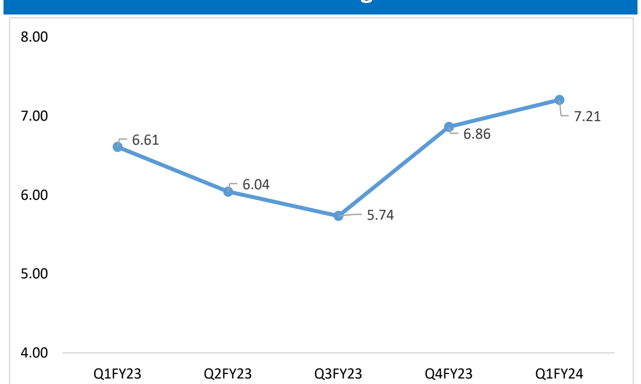
Source: SBI Research, in last six months CP issuances

Transmission of Policy Rate

Interest Rate	Apr-22	Latest	Change (in bps)
Repo Rate	4.00	6.50	250
Wt Avg. Lending Rate (WALR) on O/S Rupee Loans	8.72	9.82	110
WALR on Fresh Rupee Loans	7.51	9.44	193
Wt Avg. Domestic Term Deposits (WADTDR) on O/S Deposits	5.03	6.55	152
WADTDR on Fresh Rupee Term Deposits	4.03	6.35	232
ASCB-MCLR (1 Year)	7.25	8.60	135

Source: RBI, SBI Research

Interest Coverage Ratio



Source: RBI; SBI Research; Cline

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