

US Rates Watch

CP monitor: shortened maturity at yearend

Supply: higher outstanding in Dec

Supply: Through the month of December, CP outstanding has overall increased driven by ABCP and corporates CP (Exhibit 4, Exhibit 5). ABCP O/S in particular saw notable increase of \$17bn, which is c.2-sigma above average compared to its history since 2020. Tier-2 O/S also picked up. This likely reflects issuers increased funding needs approaching year-end and means more collateral in the system going into the new year.

As of end November, Canada led the issuance in both financial CP and ABCP (Exhibit 24, Exhibit 25). While US had the largest supply in non-financial CP (Exhibit 26).

Bank CD issuance moderated near the end of 2023, which is reflected in the moderation in CD rates cheapening, according to FDIC and Bloomberg (Exhibit 7, Exhibit 8). We have argued ongoing CP and CD issuance raises the risk of a cheapening vs OIS, especially if prime fund WAM does not continue extending.

Demand: MMFs largest buyers in Q3 '23

Demand: MMF were the largest CP buyers in Q3 '23, according to Fed data (Exhibit 21). Q3 also saw increased CP demand from other financial corporations. MMF retail funds continued to attract inflows due to low yielding deposit alternatives. Prime MMF reduced WAMs to c.40 days at the end of year (Exhibit 10). If prime MMF WAM stabilize around current levels, there could be greater cheapening potential amidst continued term CP & CD issuance.

Rates: trading in-line with other front-end levels

<u>Rates</u>: Overall fin and non-fin CP rates trade in-line with other money market rates. We see risks that continued aggressive bank CD issuance and funding competition could cheapen rates further (Exhibit 7, Exhibit 11).

Maturity: shortened maturity leading into year-end

Maturity distribution: Maturity extension of non-asset backed tier-1 CP declined in December to c.65 days from c.73 days at its peak (Exhibit 14). Maturity distribution of total CPs also declined leading into year-end (Exhibit 15). As we argued in Follow the money, the reduction in maturity distribution is likely driven by Fed cuts getting priced in and issuers fearing weaker demand for tenors including those cuts.

CP maturing in the next 3 months remains primarily in financials (Exhibit 17). Countrywise, the amount of CP maturing is mostly seen in Canada, US, and France (Exhibit 19).

Bottom line: CP outstanding overall increased in December driven by ABCP and corporates CP. CP issuers reduced maturity extension near year-end likely reflects concerns over weaker demand around the turn and from lower rates with Fed cut pricing.

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CP = commercial paper

CD = certificate of deposit

MMF = money market mutual funds

WAM = weighted-average maturity

O/S = outstanding

ABCP = asset backed commercial paper

OIS = overnight index swap

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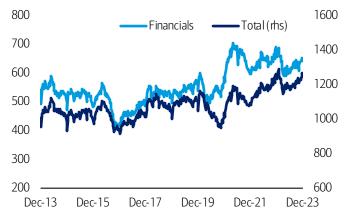
Refer to important disclosures on page 8 to 9.

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Commercial paper outstanding

Exhibit 1: Financial CP vs total CP outstanding (\$bn)

Financials O/S has recovered since March bank stress & stable towards the end of 2023



Source: BofA Global Research, Haver

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Exhibit 2: Nonfin CP vs ABCP outstanding (\$bn)

ABCP saw notable increase in December, while nonfin CP issuance also picked up

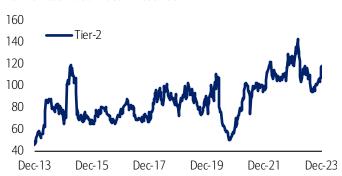


Source: BofA Global Research, Haver

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Exhibit 3: Tier-2 CP outstanding (NSA, \$bn)

Tier-2 CP issuance climbed in December



Source: BofA Global Research, Haver

Source: BofA Global Research, Haver

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Exhibit 4: CP outstanding as of 12/27/2023 (NSA, \$bn)

MoM total O/S increased by \$27bn, ABCP saw a > c.2-sigma increase

	Z-score since			Z-score	
	O/S	ΔΜοΜ	2020	ΔΥοΥ	since 2001
Financials	642	1	-0.10	-15	-0.29
ABCP	331	17	1.94	26	0.40
Corporates	278	10	0.64	5	0.06
Total (rhs)	1253	27	0.74	18	0.18

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Exhibit 5: Domestic vs foreign issuers in Fin & Corp CP (NSA, \$bn)

Further breakdown shows MoM domestic corporate saw large increase

			Z-score		Z-score
	O/S	ΔΜοΜ	since 2020	ΔΥοΥ	since 2001
Fin - domestic	265	-1	-0.21	25	0.65
Fin - foreign	376	2	0.00	-40	-1.50
Corp - domestic	228	19	1.44	18	0.46
Corp - foreign	51	-9	-1.18	-12	-1.53

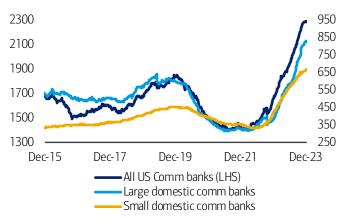
Source: BofA Global Research, Haver



CD activity

Exhibit 6: US Commercial bank large time deposits as a proxy for CD activity (\$bn)

CD activity saw significant increase since last year

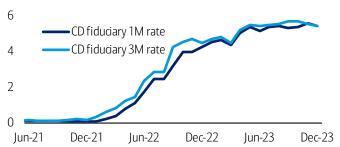


Source: BofA Global Research, Bloomberg

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Exhibit 8: US CD fiduciary 1M & 3M rates (monthly, %)

CD fiduciary rates have cheapened despite levels show signs of moderation recently

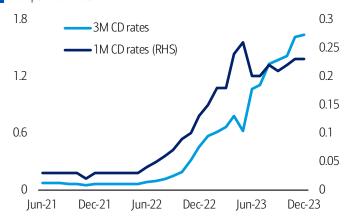


Source: BofA Global Research, Bloomberg; Note: see Appendix for pricing methodology

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Exhibit 7: US FDIC 1M & 3M CD rates (monthly, %)

CD rates has cheapened with aggressive bank CD issuance $\&\,funding\,$ competition since 2H '22



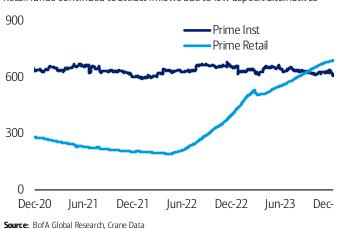
Source: BofA Global Research, Bloomberg; Note: see Appendix for pricing methodology

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MMF AUM & WAM

Exhibit 9: MMF AUM (\$bn)

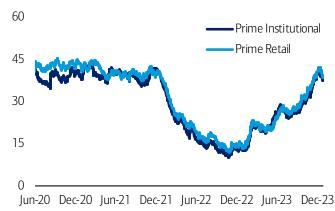
Retail funds continued to attract inflows due to low deposit alternatives



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Exhibit 10: MMF WAM (days)

Prime institutional & retail funds have both been extending WAM

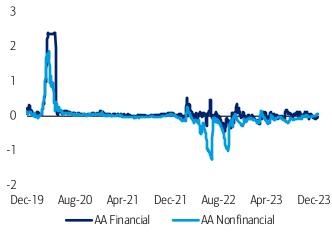


Source: BofA Global Research, Crane Data

CP rates & spreads to OIS

Exhibit 11: 3m AA fin & AA non-fin CP spreads to OIS (5D MA, %)

Fin & non-fin CP rates trade in-line with other money market rates



Source: BofA Global Research, Bloomberg

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Exhibit 12: 1-month CP rates levels %, spreads to OIS (5d MA, bp), and z-scores

Z-scores of 1m CP spreads to OIS reflect relatively stable valuations

	Levels as of 01/02/2024	5D MA spreads	Z-score of spreads (5d MA) since 2020
AA Fin	5.34	0.3	-0.1
AA Nonfin	5.3	-3.7	-0.1
A2 P2 Nonfin	5.49	15.3	-0.3
AA Asset backed	5.37	2.9	-0.6

Source: BofA Global Research, Bloomberg

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Exhibit 13: 3-month CP rates levels %, spreads to OIS (5d MA, bp), and z-scores

Z-scores of 3m CP spreads to OIS reflect relatively stable valuations

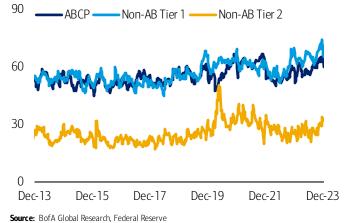
	Levels as of 01/02/2024	5D MA spreads	Z-score of spreads (5d MA) since 2020
AA Fin	5.27	-4	-0.4
AA Nonfin	5.36	5	0.2
A2 P2 Nonfin	5.6	29	-0.1
AA Asset backed	5.39	2	-0.8
Source: BofA Global Res	search, Bloomberg		

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CP maturity distribution

Exhibit 14: Avg maturity distribution of CP O/S by category (days)

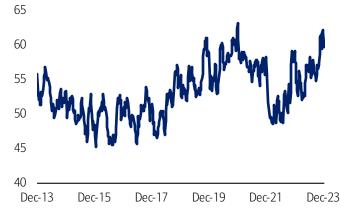
Avg maturity for non-asset backed tier 1 issuers declined in December



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Exhibit 15: Avg maturity distribution of total CP outstanding (days)

Maturity extension for total CP increased in November to c. 62 days, the highest level since Dec $\dot{}20$

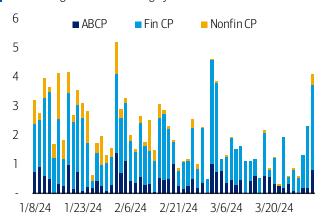


Source: BofA Global Research, Federal Reserve



Exhibit 16: CP maturing in the next 3 months (\$bn)

CP maturing in the next 3m largely concentrated in financial CP

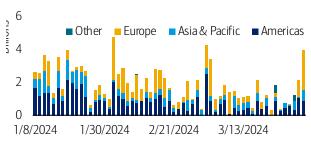


Source: BofA Global Research, Crane

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Exhibit 18: CP maturing by region (\$bn)

Amount of CP maturing mostly seen in Americas & Europe

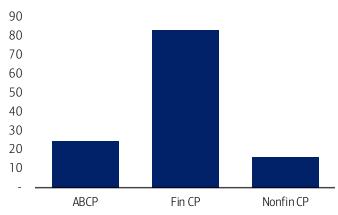


Source: BofA Global Research, Crane Data

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Exhibit 17: Total CP maturing in the next 3 months by category (\$bn, as of 01/02/2024)

CP maturing in the next 3m largely concentrated in financial CP

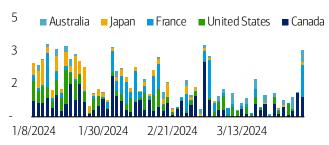


Source: BofA Global Research, Crane

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Exhibit 19: Top 5 CP maturing by country (\$bn)

Country-wise the amount of CP maturing are mostly seen in Canada, France & US



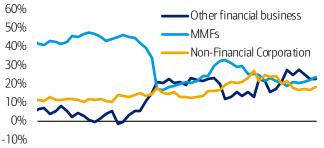
Source: BofA Global Research, Crane Data



CP holders

Exhibit 20: Top 3 holders CP holdings over time

Money market mutual funds saw the most CP demand in Q3 '23



Jun-11 Mar-13 Dec-14 Sep-16 Jun-18 Mar-20 Dec-21 Sep-23

Source: BofA Global Research, Federal Reserve

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Exhibit 21: CP holders as of end Q3 2023 (% total)

	\$bn	% Total
MMFs	293	24%
Other Financial Business	281	23%
NonFinancial Corporation	228	19%
Foreign Institutions	170	14%
Other	129	10%
State & Local Govt	88	7%
Mutual Funds	41	3%
Total	1231	100%

Money market mutual funds were the largest CP buyers in Q3 '23

Source: BofA Global Research, Federal Reserve

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Foreign CP

Exhibit 22: Foreign fin CP outstanding & large time deposits (NSA, Sbn)

Foreign fin CP & large time deposits have stabilized recently



Source: BofA Global Research, Haver

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CP issuers

Exhibit 23: Total CP top 5 issuers by country (as of 11/30/2023)

Canada was the largest issuer in terms of total CP

	\$bn	% Total
Canada	73	24%
United States	47	15%
France	44	14%
Japan	23	7%
United Kingdom	22	7%

Source: BofA Global Research, Crane

Source: BofA Global Research, Crane

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Exhibit 24: ABCP top 5 issuers by country

France has the largest issuance in ABCP

	\$bn	% Total
Canada	14.73	23.4%
France	14.56	23.1%
United States	14.18	22.5%
United Kingdom	10.11	16.1%
Japan	6.87	10.9%

Source: BofA Global Research, Crane

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Exhibit 25: Fin CP top 5 issuers by country

Canada leads the largest issuance in financial CP

	\$bn	% Total
Canada	52.0	25.1%
France	20.3	9.8%
United States	20.1	9.7%
Australia	19.1	9.2%
Sweden	17.5	8.5%
Australia	19.1	9.2%

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Exhibit 26: Nonfin CP top 5 issuers by country

US leads the largest issuance in non-financial CP

\$bn	% Total
13	32%
9	22%
6	15%
3	8%
3	7%
	13 9 6 3

Source: BofA Global Research, Crane



Appendix

US CD fiduciary rates

The source for 1-month & 3-month CD fiduciary rates (BBG tickers: USFCDA CMPN Curncy & USFCDC CMPN Curncy) is the Bloomberg Composite Rate (CMP), which is a "best market" calculation. According to Bloomberg, "at any given point in time, the composite bid rate is equal to the highest bid rate of all of the currently active, contributed, bank indications. The composite ask rate is equal to the lowest ask rate offered by these same active, contributed, bank indications. For rates to be accepted into the composite, they must come from data contributors who have been "privileged" to send data to the composite, and the pricing must be considered valid and current."

US FDIC CD rates

The source for 1-month & 3-month FDIC CD rates (BBG tickers: USNTN1MO Index & USNTN3MO Index) comes directly from FDIC (www.fdic.gov/resources/bankers/national-rates/previous-rates.html). The latest update from FDIC indicates "The Final Rule redefined the "national rate" as the average of rates paid by all insured depository institutions and credit unions for which data is available, with rates weighted by each institution's share of domestic deposits. The "national rate cap" is calculated as the higher of: (1) the national rate plus 75 basis points; or (2) 120 percent of the current yield on similar maturity U.S. Department of the Treasury (U.S. Treasury) obligations plus 75 basis points. The national rate cap for non-maturity deposits is the higher of the national rate plus 75 basis points or the federal funds rate plus 75 basis points."



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