

EEMEA Strategy Viewpoint

ASW spreads to tighten in Czechia, fair valuation in other countries

US data support EM risk – let's not forget ASW spreads

The market is in receiving mode for both swaps and bonds. We expect almost 20% return from unhedged bond positions in EEMEA in 2024 on aggregate ([GEMs Viewpoint: Year Ahead 2024: Global soft landing = EM take-off 19 November 2023](#)). In this Viewpoint, we analyse the fiscal situation in the four most liquid bond markets in EEMEA: South Africa, Poland, Czechia and Israel. We provide our forecasts for fiscal deficits and local bond supply, as well as data on bond holdings by various market participants. We also look at ASW spreads and compare them to the supply outlook and other fundamentals.

S. Africa: ASW spreads should remain wide

In South Africa, ASW spreads look fairly valued relative to post-COVID history as the fiscal outlook remains weak. We expect borrowing requirements to stay roughly the same in 2024 as in 2023, as a percentage of GDP.

Poland: ASW spreads to stay wide, pay front end

In Poland, fiscal policy will remain loose despite a new, fiscally conservative government coming to power, due to more elections in 2024-25. Both gross and net borrowing requirements are likely to be higher next year compared to 2023. Moreover, Poland will have pre-financed only about 10% of its borrowing requirements for 2024, while the last two years' average was over 40%. Loose fiscal in Poland should also support our 1y payer as a spread to a Eurozone 1y swap (current: 1.91, open: 1.5, target: 2, stop: 1.75). For more details, please see [EM Alpha: The market is still too dovish – pay 1y in Poland as a spread to 1y euro 01 November 2023](#).

Czechia: we like FRA flattener; ASW to tighten slightly

Czechia is the only country in this report that will see fiscal policy tightening next year. This is evident in a significant fall in both gross and net borrowing requirements in 2024 compared to this year. The above should be positive for receivers in the front-end of the curve and for marginal tightening of ASW spreads. We continue to like an FRA flattener trade, whereby we pay FRA 3x6 and receive FRA 12x15. We entered the trade at -2.4 (current: -2.67, target: -3.1, stop: -2). For the original trading idea, please see [EM Alpha: Go long PLNCZK + FRA flattener in Czechia 07 November 2023](#).

Israel: ASW spreads wide but conflict-dependent

In Israel, the fiscal outlook depends significantly on the course of the conflict. We believe that an end to the conflict could cause ASW spreads to tighten as they look wide relative to recent history.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.

BofA Securities does and seeks to do business with issuers covered in its research reports. As a result, investors should be aware that the firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Refer to important disclosures on page 11 to 13. Analyst Certification on page 10. 12630633

Timestamp: 21 November 2023 09:21AM EST

21 November 2023

EEMEA Strategy
EEMEA

Mikhail Liluashvili
EEMEA Local Markets Strategist
MLI (UK)
+44 20 7996 1142
mikhail.liluashvili@bofa.com

Mai Doan
CEE Economist
MLI (UK)
+44 20 7995 9597
mai.doan@bofa.com

Tatonga Rusike
Sub-Saharan Africa Economist
MLI (UK)
+44 20 7996 8446
tatonga.rusike@bofa.com

Zumrut Imamoglu
Turkey & Israel Economist
MLI (UK)
+44 7749 727 494
zumrut.imamoglu@bofa.com

David Hauner, CFA >>
Global EM FI/FX Strategist
MLI (UK)
+44 20 7996 1241
david.hauner@bofa.com

EEMEA FI Strategy & Economics
MLI (UK)

GEMs FI Strategy & Economics
BofAS

See Team Page for List of Analysts

For a list of open trade recommendations and trade recommendations closed in the last 12 months, see [Global Emerging Markets Weekly: End-year rally – or end-year run? 10 November 2023](#)

Abbreviations

EEMEA is Emerging Europe, Middle East and Africa

ASW is asset swap

SA is South Africa

SAGBs are South Africa's government bonds

POLGB is Poland's government bonds

FX is foreign exchange

NBP is National Bank of Poland

FRA is forward rate agreement

Tight fiscal only in Czechia in 2024

Poland has managed to finance all of its borrowing requirements for this year and has started to pre-finance its borrowing for 2024. However, the pre-financing amount is lower than the average of the last two years (>40%). Both gross and net borrowing requirements will increase substantially next year, by over 60% (Exhibit 1).

More than 50% of total borrowing requirements for 2023 have been covered in South Africa and the requirements (including Eskom debt) are the same in 2024 as in 2023.

Czechia is the only country which will see tightening of its fiscal policy in 2024, which is reflected in a significant drop in both net and gross borrowing requirements next year relative to 2023. This should lead to some tightening of ASW spreads and be supportive for the cutting cycle. In Israel, the fiscal policy outlook will depend significantly on the course of the conflict.

Exhibit 1: Czechia is the only country that is likely to see significantly tighter fiscal policy next year

Fiscal is likely to remain loose in both South Africa and Poland. Fiscal in Israel depends on the course of the conflict

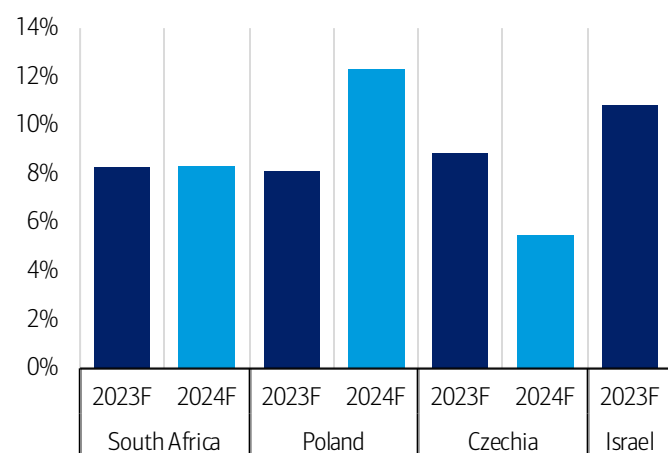
(local currency bn unless otherwise stated)	South Africa		Poland		Czechia		Israel
	2023F	2024F	2023F	2024F	2023F	2024F	2023F
GROSS BORROWING REQUIREMENT	584	626	281	461	669	428	201
% GDP	8.3%	8.3%	8.1%	12.3%	8.9%	5.5%	10.8%
Net financing requirement	429	455	143	266	316	254	75
% GDP	6.1%	6.0%	4.1%	7.1%	4.2%	3.2%	4.0%
Domestic currency redemption	107	132	114	145	201	149	101
Foreign currency redemption	49	40	29	32	3	25	25
Others (Poland: including Covid bonds)	-	-	-	18	150	-	-
FINANCING PROGRESS	323	57	305	44	481	8	113
Domestic currency borrowing (Poland: including Covid bonds)	221	0	150	0	481	0	79
Foreign currency borrowing	10	0	39	0	0	0	19
o/w Eurobonds	0	0	38	0	0	0	0
Excess/pre-finance from T-1	93	57	116	44	0	8	6
Financial asset and liquidity management	-	-	-	-	-	-	8
Coverage of gross borrowing requirement	55%	10%	108%	10%	72%	2%	56%

Note: Net financing requirement includes budget deficit plus other items. Eskom financing of ZAR78 billion included in net financing requirement. SA fiscal year is April to March. Financing progress reflects April data only. SA not accessing Eurobond market in 2023. **Source:** FinMin, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 2: Gross borrowing requirement as % of GDP

In 2024 Poland will issue more than in 2023 as % of GDP

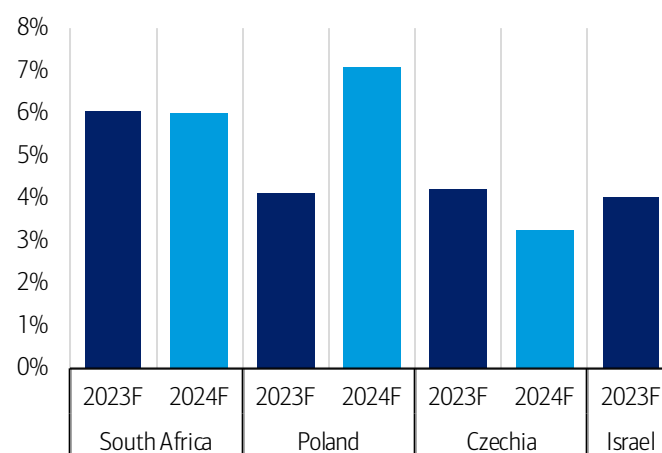


Source: BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 3: Net financing requirement as % of GDP

South Africa's borrowing requirements should stay elevated in 2024



Source: BofA Global Research

BofA GLOBAL RESEARCH

South Africa

Sceptical it can get a grip on near-term spending

We are bearish on the fiscal outlook on higher expenditure risks. We estimate that the government will overshoot its new expenditure baseline by around R22 billion in 23/24 fiscal year. Half-year spending has reached R1.036 trillion, growing 9% year on year. To reach its revised target of R2.045 trillion, the government will need to implement negative expenditure growth or headline nominal reductions for the remainder of the fiscal year.

Until monthly spending starts to fall relative to the previous year, we are sceptical of the government plan. Overall, we estimate a 2023/24 main budget deficit of -5% of GDP, excluding Eskom (government -4.7% of GDP) and our all-in deficit of -6% of GDP. Our medium-term deficit forecast remains around 5% of GDP in 2024, moderating to only 4.1% in 2025. There are upcoming elections in May 2024. Spending growth is estimated at only 4% in 2024, which may not fully accommodate expenditure pressures from the higher wage bill, social grants, and higher debt service costs.

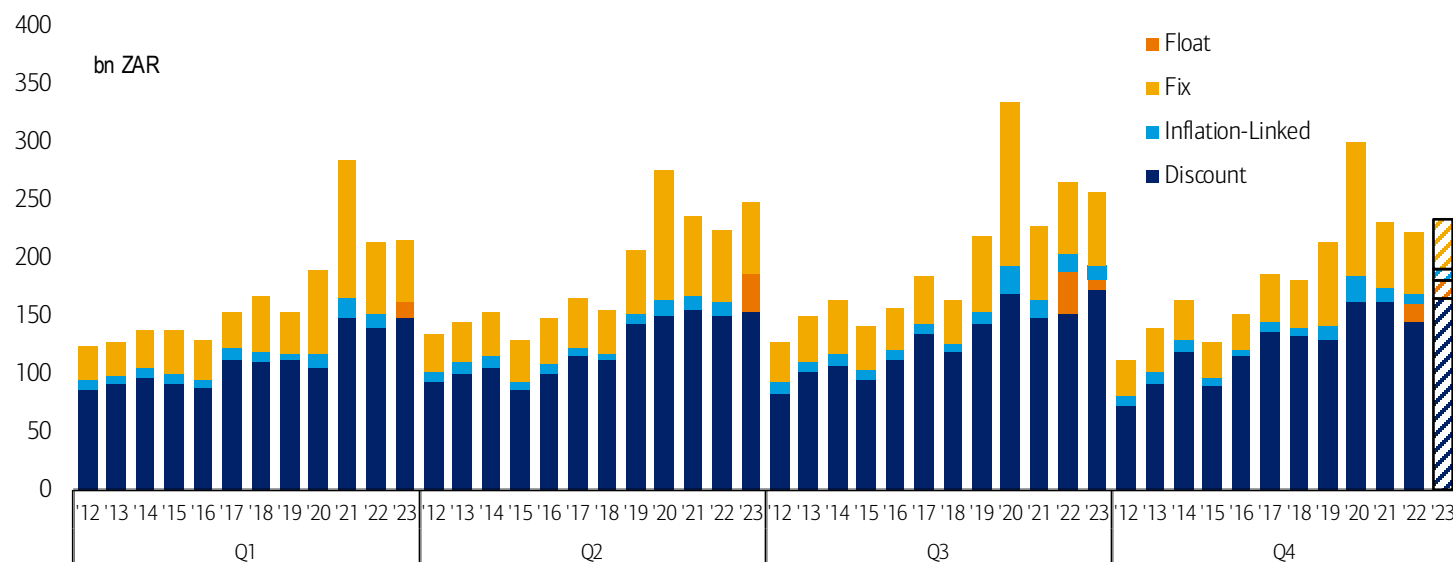
Financing of the deficit relies on the local debt market, largely the issuance of long-term loans. To cover increasing funding gaps, the National Treasury is likely to use other long-term instruments (excluding fixed rate issuance) such as floating rate notes or the current sukuk issuance, as it seeks to raise R20 billion. Short-term and external borrowing will remain largely unchanged.

Demand for bonds remains strong but has weakened somewhat recently with the bid-to-cover ratio falling to around 150% (Exhibit 5). At the same time, average maturity at auctions has also fallen (Exhibit 6).

ASW spreads look broadly fairly valued relative to post-COVID history given that the fiscal outlook for South Africa remains weak (Exhibit 7 and Exhibit 8). We need a significant improvement in the fiscal picture in South Africa for ASW spreads to tighten meaningfully, in our view.

Exhibit 4: Issuance profile in South Africa (in notional amounts of bn ZAR - all government debt securities)

Fiscal is going to be weak

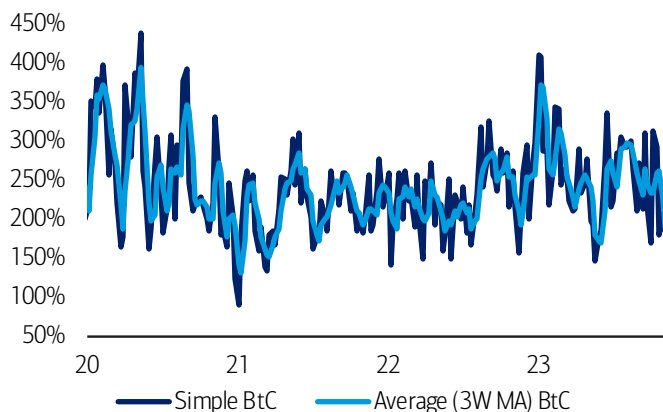


Note: Data in Q3 to Q4 of 2023 are forecasts. Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 5: Bid-to-Cover for bonds and bills

Demand for South African debt has fallen recently

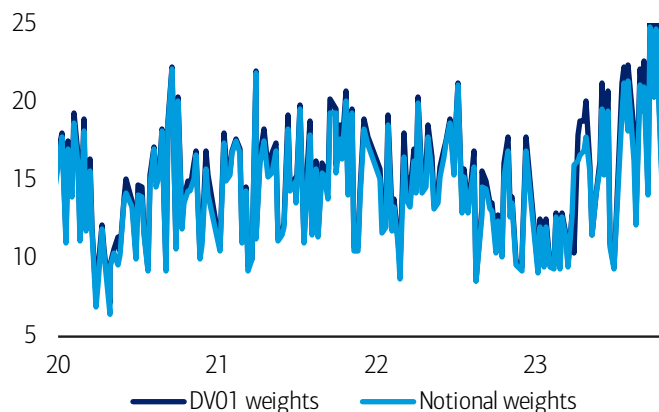


Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 6: Av. Maturity at auction Fixed rate bonds

Average maturities have fallen to around 10Y

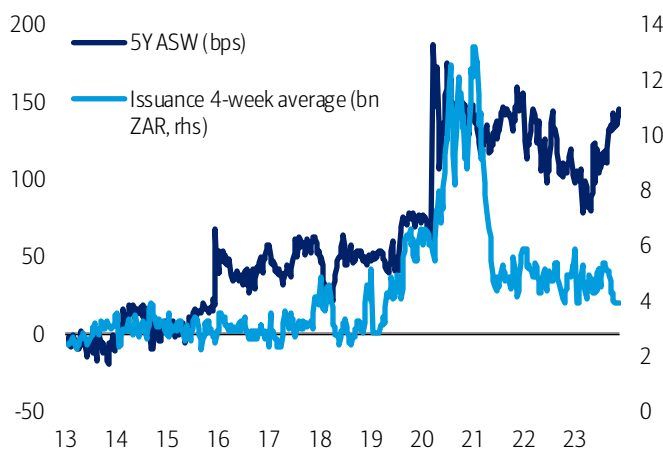


Source: BofA Global Research, Bloomberg, National authorities

BofA GLOBAL RESEARCH

Exhibit 7: ZAR 5Y ASW and SAGB supply

5y ASW spread should remain wide

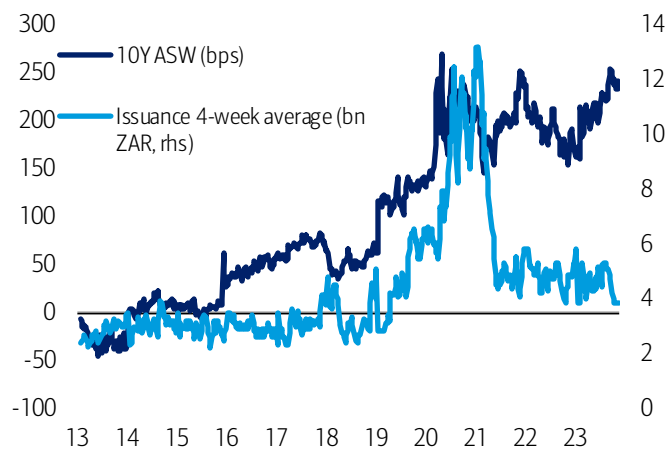


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 8: ZAR 10Y ASW and SAGB supply

We think ASW spreads in South Africa should remain wide

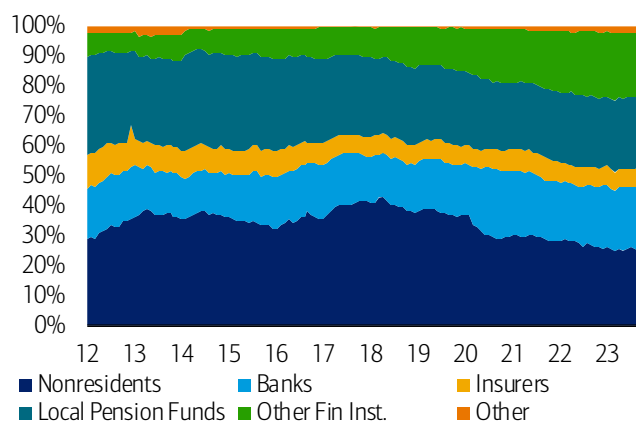


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 9: Breakdown of total bond ownership by type of institution

The share of non-residents in SAGBs is falling

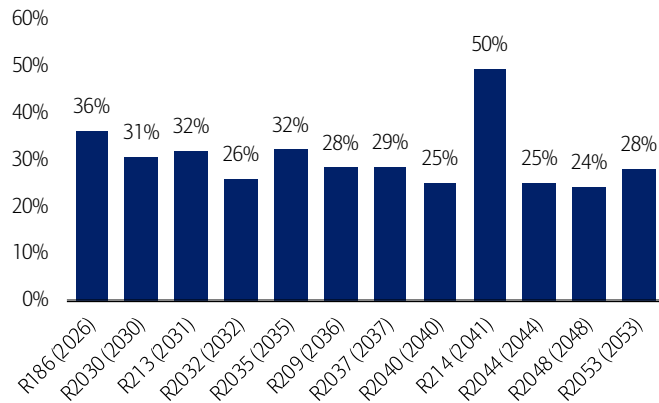


Source: Haver, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 10: FH share of individual SAGBs

2041 bond has the highest foreign participation



Source: Haver, BofA Global Research

BofA GLOBAL RESEARCH

Poland

Fiscal to remain loose, but bias for tighter ASW spreads

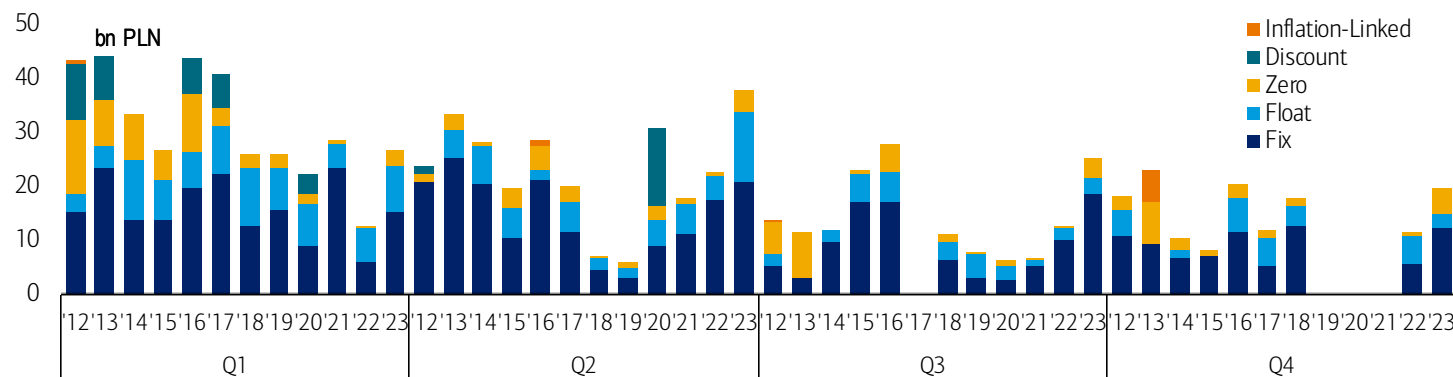
The surprising opposition win in the parliamentary elections is unlikely to bring a tighter fiscal stance next year given three elections in the next one and a half years. We expect the general government deficit to widen to -6% of GDP from c.-5% in 2023, with the state government's gross borrowing requirement likely rising by c.60%. ASW spreads should remain wider than the historical average to reflect that. As a result, we have recently closed our ASW tightener trade in Poland ([EM Alpha: Close ASW tightener in Poland: fiscal to stay loose 16 November 2023](#)).

The financing picture for Poland next year looks less favourable than in previous years, with only c.10% likely pre-financed in 2023. Loose fiscal also means that the NBP is likely to cut the policy rate by less than market pricing. We pay a 1y swap in Poland and receive 1y in the Eurozone (current: 1.91, open: 1.5, target: 2, stop: 1.75). For more details, please see [EM Alpha: The market is still too dovish – pay 1y in Poland as a spread to 1y euro 01 November 2023](#).

The bid-to-cover ratio has dropped recently, indicating weakening for POLGBs, most likely related to a sell-off in US rates (Exhibit 12). Similarly, the average maturity of bonds in primary auctions has dropped as well (Exhibit 13). The share of non-resident investors has been declining in recent years as real money investors underweight POLGBs, but with the new government in power this is likely to change.

Exhibit 11: Issuance profile in Poland (in notional amounts of bn PLN - all government debt securities)

Poland has pre-financed less than usual for 2024 and has met all its borrowing requirements for 2023

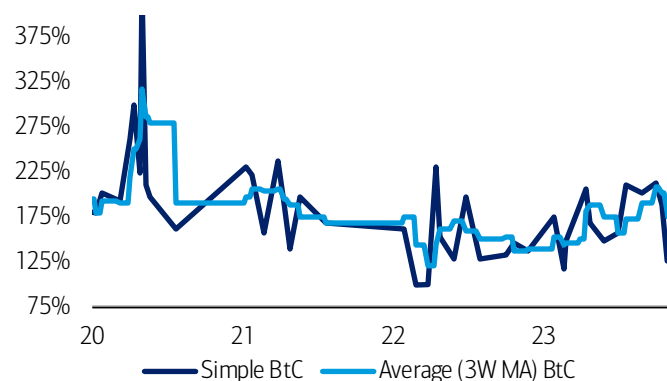


Source: BoFA Global Research, National authorities

BoFA GLOBAL RESEARCH

Exhibit 12: Bid-to-Cover for bonds and bills

Still strong demand at auctions

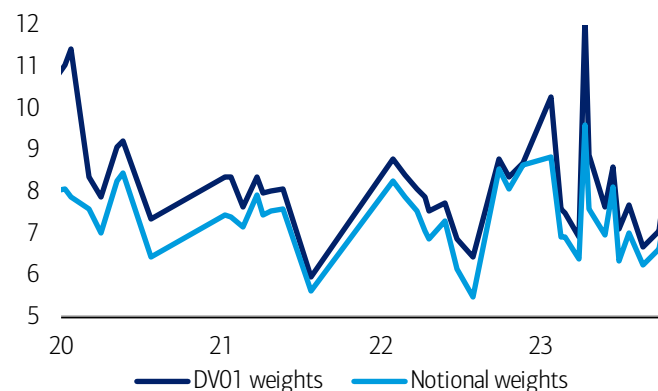


Source: BoFA Global Research, National authorities

BoFA GLOBAL RESEARCH

Exhibit 13: Av. maturity at auction fixed rate bonds

Average maturities back to around 7Y

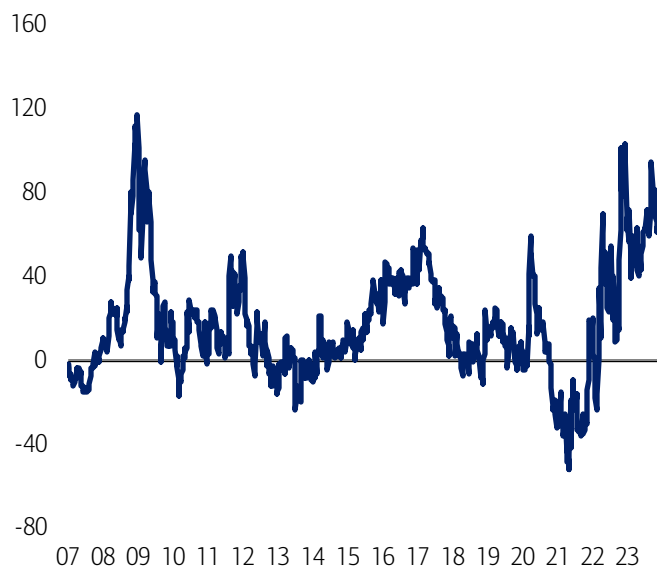


Source: BoFA Global Research, Bloomberg, National authorities

BoFA GLOBAL RESEARCH

Exhibit 14: PLN 5Y ASW since 2007

ASW spreads should remain wide as fiscal remains loose



Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 15: PLN 10Y ASW since 2007

ASW spreads should remain wide as fiscal remains loose

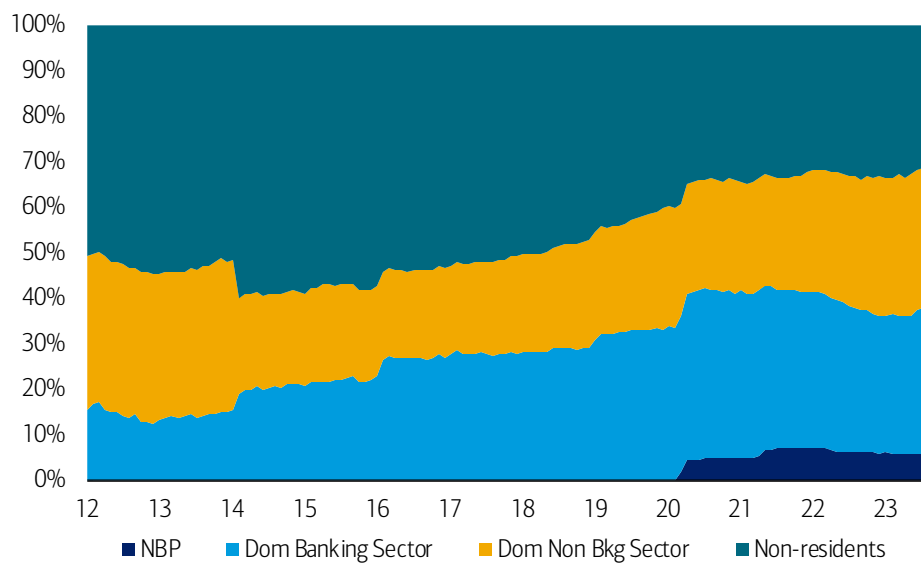


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 16: Polish local debt split by holder

Polish banks hold a significant share of the POLGB market



Source: Haver, BofA Global Research

BofA GLOBAL RESEARCH

Czechia

Decent fiscal, marginally wide ASW spreads

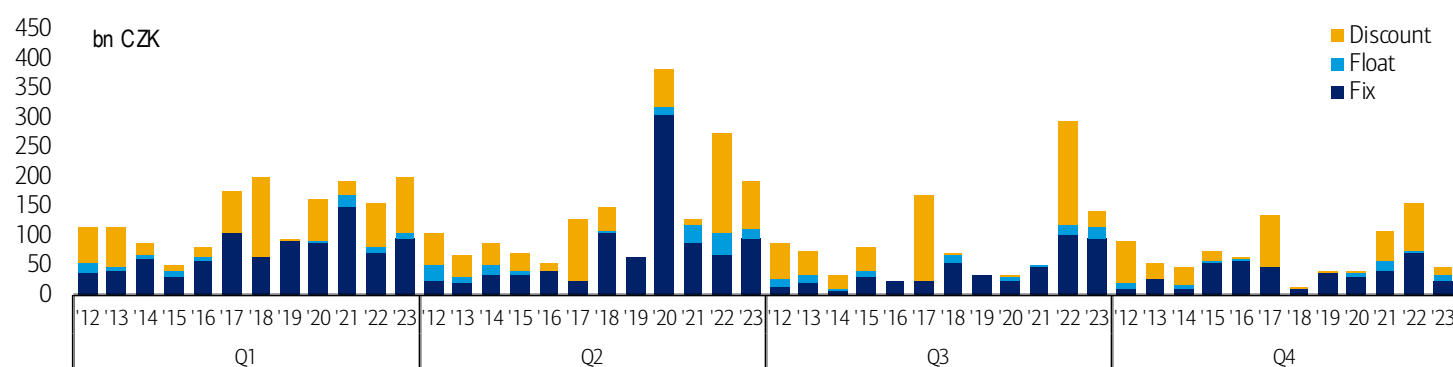
Czechia has been relatively slow in its financing progress this year, with around 72% of its borrowing requirements covered so far. But the country is likely to see fiscal tightening next year and substantially lower gross borrowing requirement (c.30% less compared to 2023), which should be supportive for tighter ASW spreads.

Overall, demand for bonds has weakened recently (in line with other EEMEA countries), as evident in the falling bid-to-cover in auctions (Exhibit 18). The share of non-resident holdings in local bonds has been falling recently as real money investors underweight Czech bonds. With the cutting cycle starting in February 2024 on our forecasts, there is room for more buying from international investors.

Despite a decent fiscal outlook, ASW spreads remain on the wider side relative to recent history, especially in the 10y area (Exhibit 21). Our bias would be to be long ASW spreads at these levels, but the expected reward is likely to be small, which is why we do not have this trade on.

Exhibit 17: Issuance profile in Czechia (in notional amounts of bn CZK - all government debt securities)

Much less issuances in 2023 compared to 2022

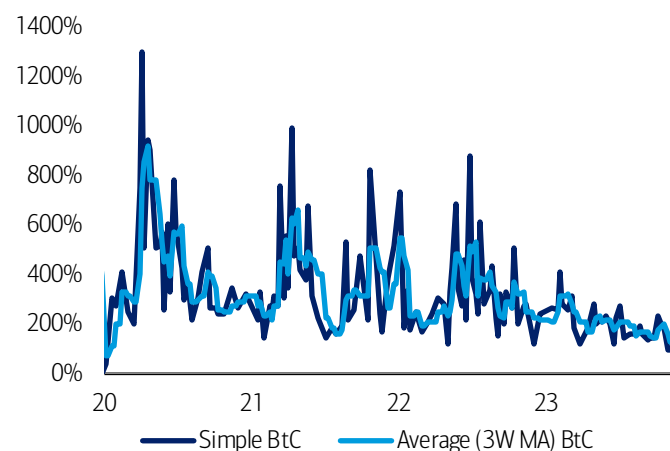


Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 18: Bid-to-Cover for bonds and bills

Falling demand for bonds

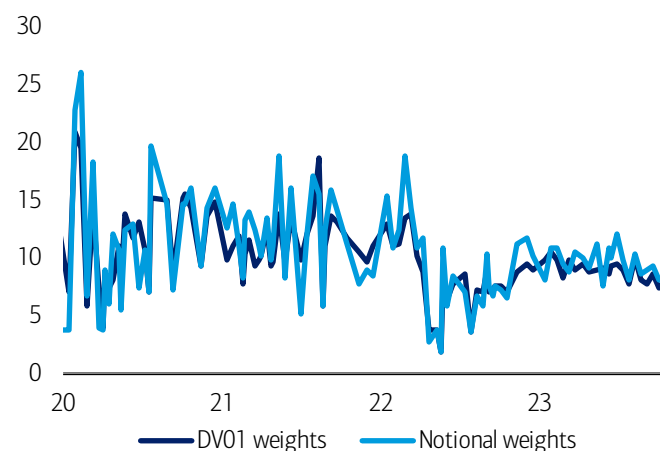


Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 19: Av. Maturity at auction Fixed rate bonds

Increase in maturity of bonds issued recently due to decline in yields



Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 20: CZK 5Y ASW since 2007

Czech ASW spreads are at wider levels compared to recent history

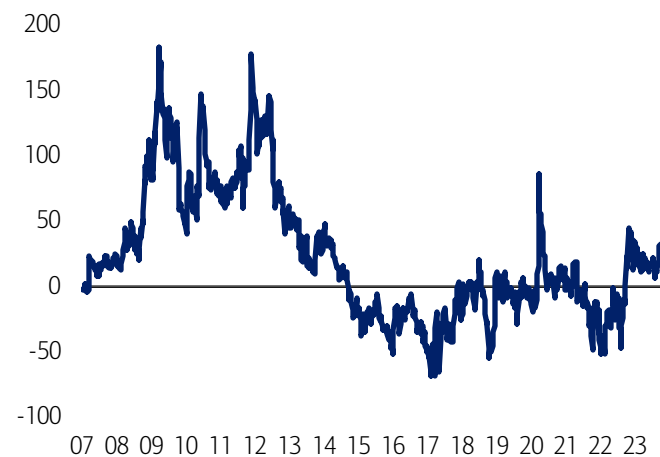


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 21: CZK 10Y ASW since 2007

Czech ASW spreads are at wider levels compared to recent history

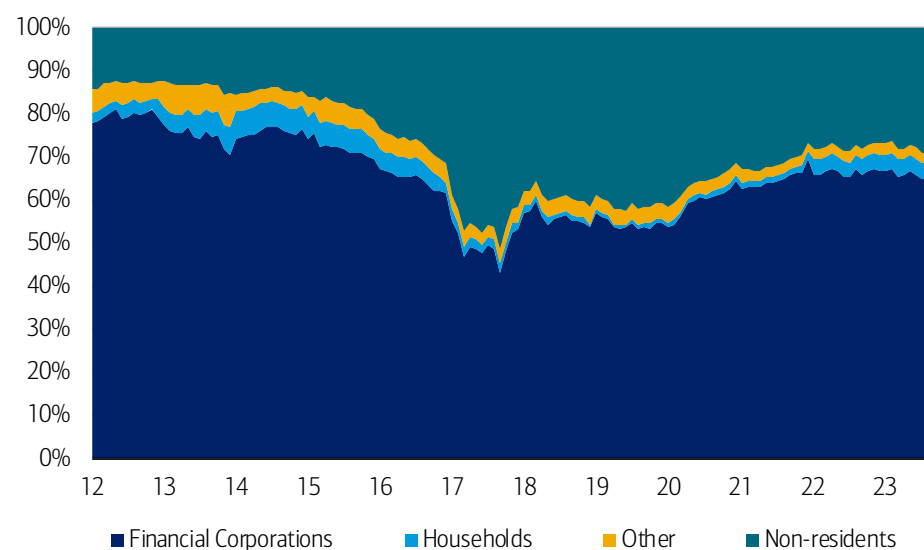


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 22: Czechia local debt split by holder

Non-resident share is declining



Source: Haver, BofA Global Research

BofA GLOBAL RESEARCH

Israel

Uncertainty weighs on the budget

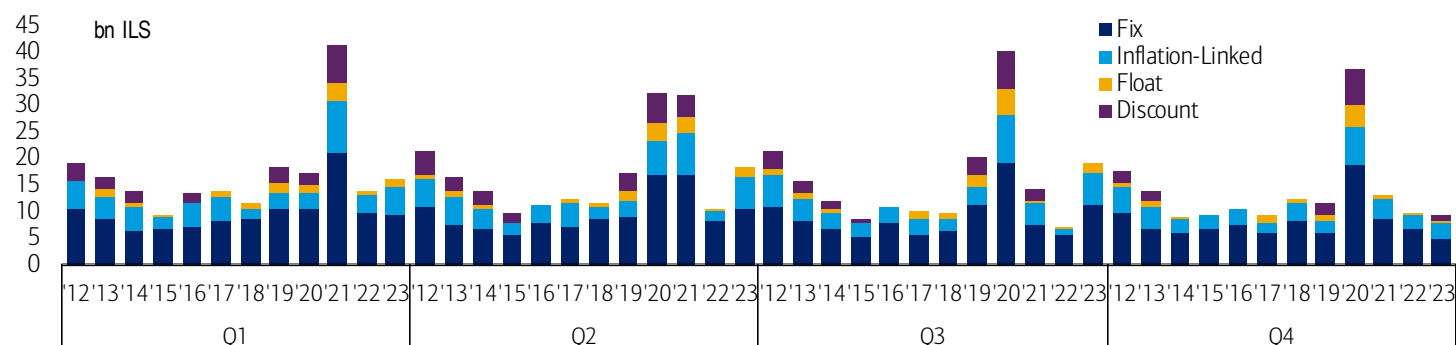
Before the conflict started, the year-to-date budget deficit was 1.5% of GDP and we expected it to reach 2% by year-end. In October, the deficit increased to 2.6% of the GDP, revenues decreased 16.6% and expenditures increased 32.2% when compared to same month last year. We believe that the economic slowdown will continue to weigh on tax revenues and costs related to the conflict such as defence spending and support for affected businesses and households will weigh on expenditures.

We now expect the deficit to reach 4% at year-end 2023 and 5% in 2024. However, there are still discussions around spending cuts and a lot of uncertainty surrounding the duration and cost of the conflict. Hence, the budget outlook is still not very clear, and we refrain from making point estimates given the high degree of uncertainty surrounding the economic outlook, so our forecasts on borrowing needs should be seen as guidance at this point.

ASW spreads in Israel look wide relative to recent history (Exhibit 26 - Exhibit 27). A worsening fiscal outlook because of a conflict now and judiciary reform before are the main drivers of this widening. However, demand for bonds should remain strong, especially from local real money investors (Exhibit 24). Our bias is for ASW spreads to tighten, but conviction in this view is low given the uncertain outlook.

Exhibit 23: Issuance profile in Israel (in notional amounts of bn ILS - all government debt securities)

Outlook for fiscal crucially depends on the course of the conflict

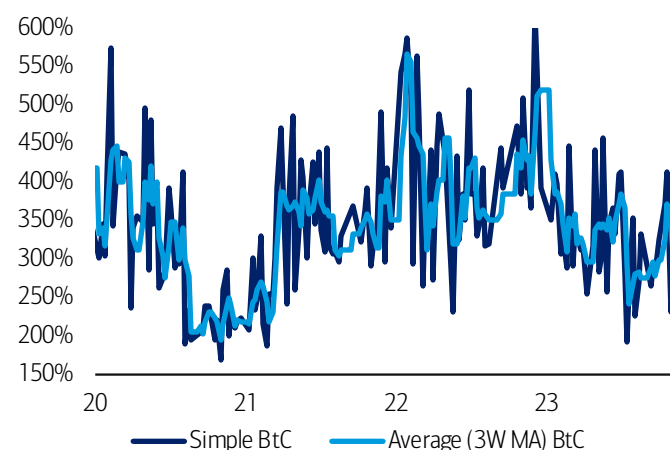


Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 24: Bid-to-Cover for bonds and bills

Lower demand in recent auctions

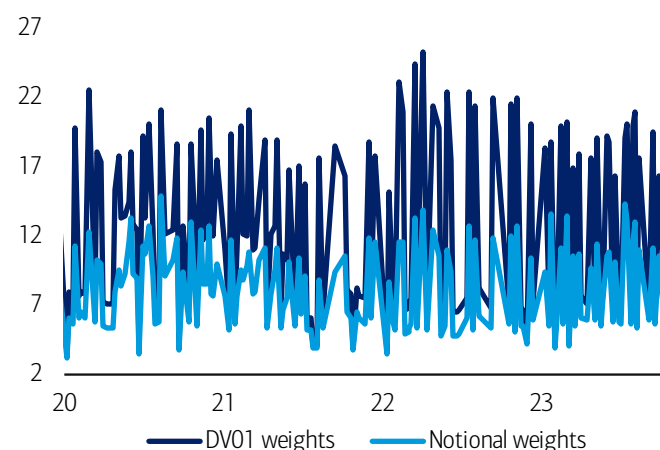


Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 25: Av. Maturity at auction Fixed rate bonds

The treasury prefers 5-10y bonds on the local market



Source: BofA Global Research, National authorities

BofA GLOBAL RESEARCH

Exhibit 26: ILS 5Y ASW since 2007

It is wider relative to recent history due to rising fiscal risks

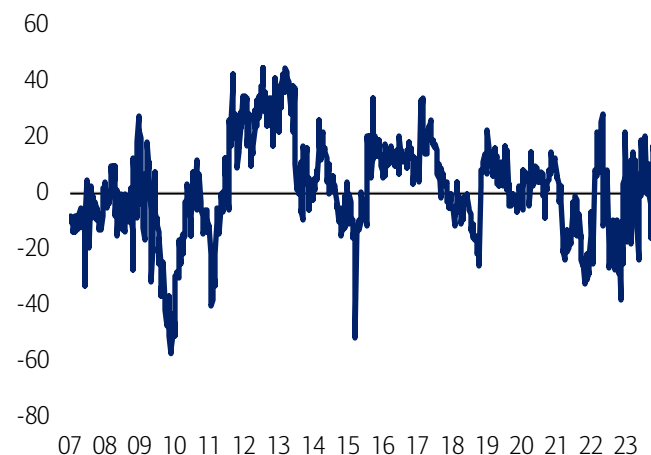


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 27: ILS 10Y ASW since 2007

It is wider relative to recent history due to rising fiscal risks

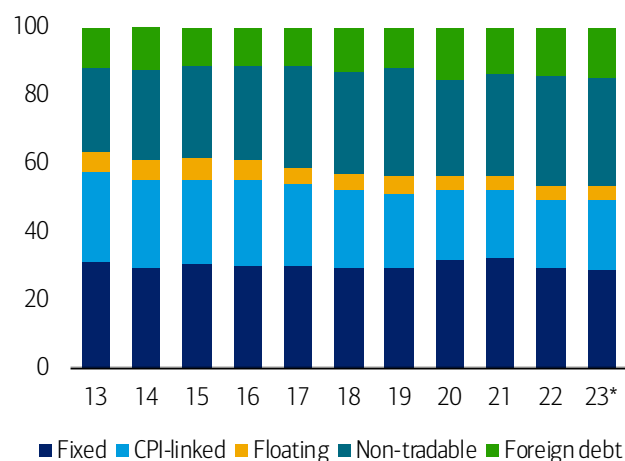


Source: Bloomberg, BofA Global Research

BofA GLOBAL RESEARCH

Exhibit 28: Distribution of government debt by instrument, %

Fixed-rate local bonds are only a small part of issuance volumes

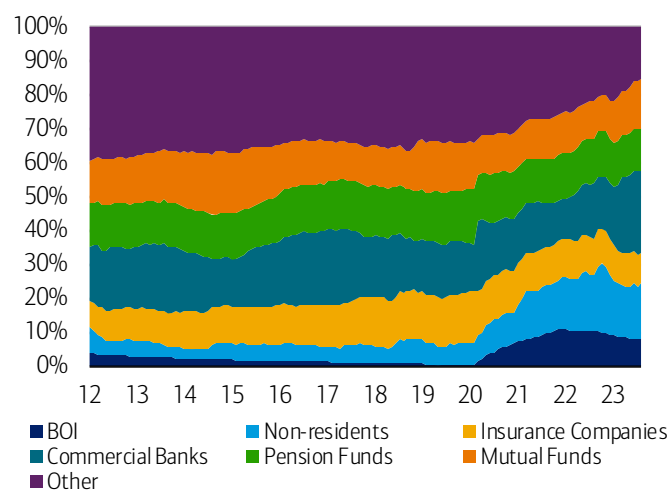


*As of Q2 2023. Source: Haver, MoF

BofA GLOBAL RESEARCH

Exhibit 29: Israel local debt split by holder

Small share of foreign investors in local bonds in Israel



Source: Haver, BofA Global Research

BofA GLOBAL RESEARCH

Analyst Certification

I, Mikhail Liluashvili, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

Special Disclosures

Some of the securities discussed herein should only be considered for inclusion in accounts qualified for high risk investment.

Disclosures

Important Disclosures

FUNDAMENTAL EQUITY OPINION KEY: Opinions include a Volatility Risk Rating, an Investment Rating and an Income Rating. **VOLATILITY RISK RATINGS**, indicators of potential price fluctuation, are: A - Low, B - Medium and C - High. **INVESTMENT RATINGS** reflect the analyst's assessment of both a stock's absolute total return potential as well as its attractiveness for investment relative to other stocks within its Coverage Cluster (defined below). Our investment ratings are: 1 - Buy stocks are expected to have a total return of at least 10% and are the most attractive stocks in the coverage cluster; 2 - Neutral stocks are expected to remain flat or increase in value and are less attractive than Buy rated stocks and 3 - Underperform stocks are the least attractive stocks in a coverage cluster. An investment rating of 6 (No Rating) indicates that a stock is no longer trading on the basis of fundamentals. Analysts assign investment ratings considering, among other things, the 0-12 month total return expectation for a stock and the firm's guidelines for ratings dispersions (shown in the table below). The current price objective for a stock should be referenced to better understand the total return expectation at any given time. The price objective reflects the analyst's view of the potential price appreciation (depreciation).

Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster ^{R1}
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

^{R1} Ratings dispersions may vary from time to time where BofA Global Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

INCOME RATINGS, indicators of potential cash dividends, are: 7 - same/higher (dividend considered to be secure), 8 - same/lower (dividend not considered to be secure) and 9 - pays no cash dividend. *Coverage Cluster* is comprised of stocks covered by a single analyst or two or more analysts sharing a common industry, sector, region or other classification(s). A stock's coverage cluster is included in the most recent BofA Global Research report referencing the stock.

Due to the nature of strategic analysis, the issuers or securities recommended or discussed in this report are not continuously followed. Accordingly, investors must regard this report as providing stand-alone analysis and should not expect continuing analysis or additional reports relating to such issuers and/or securities.

BofA Global Research personnel (including the analyst(s) responsible for this report) receive compensation based upon, among other factors, the overall profitability of Bank of America Corporation, including profits derived from investment banking. The analyst(s) responsible for this report may also receive compensation based upon, among other factors, the overall profitability of the Bank's sales and trading businesses relating to the class of securities or financial instruments for which such analyst is responsible.

BofA Securities fixed income analysts regularly interact with sales and trading desk personnel in connection with their research, including to ascertain pricing and liquidity in the fixed income markets.

Other Important Disclosures

Prices are indicative and for information purposes only. Except as otherwise stated in the report, for any recommendation in relation to an equity security, the price referenced is the publicly traded price of the security as of close of business on the day prior to the date of the report or, if the report is published during intraday trading, the price referenced is indicative of the traded price as of the date and time of the report and in relation to a debt security (including equity preferred and CDS), prices are indicative as of the date and time of the report and are from various sources including BofA Securities trading desks.

The date and time of completion of the production of any recommendation in this report shall be the date and time of dissemination of this report as recorded in the report timestamp.

This report may refer to fixed income securities or other financial instruments that may not be offered or sold in one or more states or jurisdictions, or to certain categories of investors, including retail investors. Readers of this report are advised that any discussion, recommendation or other mention of such instruments is not a solicitation or offer to transact in such instruments. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor for information relating to such instruments.

Rule 144A securities may be offered or sold only to persons in the U.S. who are Qualified Institutional Buyers within the meaning of Rule 144A under the Securities Act of 1933, as amended. **SECURITIES OR OTHER FINANCIAL INSTRUMENTS DISCUSSED HEREIN MAY BE RATED BELOW INVESTMENT GRADE AND SHOULD THEREFORE ONLY BE CONSIDERED FOR INCLUSION IN ACCOUNTS QUALIFIED FOR SPECULATIVE INVESTMENT.**

Recipients who are not institutional investors or market professionals should seek the advice of their independent financial advisor before considering information in this report in connection with any investment decision, or for a necessary explanation of its contents.

The securities or other financial instruments discussed in this report may be traded over-the-counter. Retail sales and/or distribution of this report may be made only in states where these instruments are exempt from registration or have been qualified for sale.

Officers of BofAS or one or more of its affiliates (other than research analysts) may have a financial interest in securities of the issuer(s) or in related investments.

This report, and the securities or other financial instruments discussed herein, may not be eligible for distribution or sale in all countries or to certain categories of investors, including retail investors.

Refer to [BofA Global Research policies relating to conflicts of interest](#).

"BofA Securities" includes BofA Securities, Inc. ("BofAS") and its affiliates. Investors should contact their BofA Securities representative or Merrill Global Wealth Management financial advisor if they have questions concerning this report or concerning the appropriateness of any investment idea described herein for such investor. "BofA Securities" is a global brand for BofA Global Research.

Information relating to Non-US affiliates of BofA Securities and Distribution of Affiliate Research Reports:

BofAS and/or Merrill Lynch, Pierce, Fenner & Smith Incorporated ("MLPF&S") may in the future distribute, information of the following non-US affiliates in the US (short name: legal name, regulator): Merrill Lynch (South Africa): Merrill Lynch South Africa (Pty) Ltd., regulated by The Financial Service Board; MLI (UK): Merrill Lynch International, regulated by the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA); BofASE (France): BofA Securities Europe SA is authorized by the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers (AMF). BofA Securities Europe SA ("BofASE") with registered address at 51, rue La Boétie, 75008 Paris is registered under no 842 602 690 RCS Paris. In accordance with the provisions of French Code Monétaire et Financier (Monetary and Financial Code), BofASE is an établissement de crédit et d'investissement (credit and investment institution) that is authorised and supervised by the European Central Bank and the Autorité de Contrôle Prudentiel et de Résolution (ACPR) and regulated by the ACPR and the Autorité des Marchés Financiers. BofASE's share capital can be found at www.bofam.com/BofASEdisclaimer; BofA Europe (Milan): Bank of America Europe Designated Activity Company, Milan Branch, regulated by the Bank of Italy, the European Central Bank (ECB) and the Central Bank of Ireland (CBI); BofA Europe (Frankfurt): Bank of America Europe Designated Activity Company, Frankfurt Branch regulated by BaFin, the ECB and the CBI; BofA Europe (Madrid): Bank of America Europe Designated Activity Company, Sucursal en España, regulated by the Bank of Spain, the ECB and the CBI; Merrill Lynch (Australia): Merrill Lynch Equities (Australia) Limited, regulated by the Australian Securities and Investments Commission; Merrill Lynch (Hong Kong): Merrill Lynch (Asia Pacific) Limited, regulated by the Hong Kong Securities and Futures Commission (HKSF); Merrill Lynch (Singapore): Merrill Lynch (Singapore) Pte Ltd, regulated by the Monetary Authority of Singapore (MAS); Merrill Lynch (Canada): Merrill Lynch Canada Inc, regulated by the Canadian Investment Regulatory Organization; Merrill Lynch (Mexico): Merrill Lynch Mexico, SA de CV, Casa de Bolsa, regulated by the Comisión Nacional Bancaria y de Valores; Merrill Lynch (Argentina): Merrill Lynch Argentina SA, regulated by Comisión Nacional de Valores; BofAS Japan: BofA Securities Japan Co., Ltd., regulated by the Financial Services Agency; Merrill Lynch (Seoul): Merrill Lynch International, LLC Seoul Branch, regulated by the Financial Supervisory Service; Merrill Lynch (Taiwan): Merrill Lynch Securities (Taiwan) Ltd., regulated by the Securities and Futures Bureau; BofAS India: BofA Securities India Limited, regulated by the Securities and Exchange Board of



India (SEBI); Merrill Lynch (Israel): Merrill Lynch Israel Limited, regulated by Israel Securities Authority; Merrill Lynch (DIFC): Merrill Lynch International (DIFC Branch), regulated by the Dubai Financial Services Authority (DFSA); Merrill Lynch (Brazil): Merrill Lynch S.A. Corretora de Títulos e Valores Mobiliários, regulated by Comissão de Valores Mobiliários; Merrill Lynch KSA Company: Merrill Lynch Kingdom of Saudi Arabia Company, regulated by the Capital Market Authority.

This information: has been approved for publication and is distributed in the United Kingdom (UK) to professional clients and eligible counterparties (as each is defined in the rules of the FCA and the PRA) by MLI (UK), which is authorized by the PRA and regulated by the FCA and the PRA - details about the extent of our regulation by the FCA and PRA are available from us on request; has been approved for publication and is distributed in the European Economic Area (EEA) by BofASE (France), which is authorized by the ACPR and regulated by the ACPR and the AMF; has been considered and distributed in Japan by BofAS Japan, a registered securities dealer under the Financial Instruments and Exchange Act in Japan, or its permitted affiliates; is issued and distributed in Hong Kong by Merrill Lynch (Hong Kong) which is regulated by HKSCF; is issued and distributed in Taiwan by Merrill Lynch (Taiwan); is issued and distributed in India by BofAS India; and is issued and distributed in Singapore to institutional investors and/or accredited investors (each as defined under the Financial Advisers Regulations) by Merrill Lynch (Singapore) (Company Registration No 198602883D). Merrill Lynch (Singapore) is regulated by MAS. Merrill Lynch Equities (Australia) Limited (ABN 65 006 276 795), AFS License 235132 (MLEA) distributes this information in Australia only to 'Wholesale' clients as defined by s.761G of the Corporations Act 2001. With the exception of Bank of America N.A., Australia Branch, neither MLEA nor any of its affiliates involved in preparing this information is an Authorised Deposit-Taking Institution under the Banking Act 1959 nor regulated by the Australian Prudential Regulation Authority. No approval is required for publication or distribution of this information in Brazil and its local distribution is by Merrill Lynch (Brazil) in accordance with applicable regulations. Merrill Lynch (DIFC) is authorized and regulated by the DFSA. Information prepared and issued by Merrill Lynch (DIFC) is done so in accordance with the requirements of the DFSA conduct of business rules. BofA Europe (Frankfurt) distributes this information in Germany and is regulated by BaFin, the ECB and the CBI. BofA Securities entities, including BofA Europe and BofASE (France), may outsource/delegate the marketing and/or provision of certain research services or aspects of research services to other branches or members of the BofA Securities group. You may be contacted by a different BofA Securities entity acting for and on behalf of your service provider where permitted by applicable law. This does not change your service provider. Please refer to the [Electronic Communications Disclaimers](#) for further information.

This information has been prepared and issued by BofAS and/or one or more of its non-US affiliates. The author(s) of this information may not be licensed to carry on regulated activities in your jurisdiction and, if not licensed, do not hold themselves out as being able to do so. BofAS and/or MLPF&S is the distributor of this information in the US and accepts full responsibility for information distributed to BofAS and/or MLPF&S clients in the US by its non-US affiliates. Any US person receiving this information and wishing to effect any transaction in any security discussed herein should do so through BofAS and/or MLPF&S and not such foreign affiliates. Hong Kong recipients of this information should contact Merrill Lynch (Asia Pacific) Limited in respect of any matters relating to dealing in securities or provision of specific advice on securities or any other matters arising from, or in connection with, this information. Singapore recipients of this information should contact Merrill Lynch (Singapore) Pte Ltd in respect of any matters arising from, or in connection with, this information. For clients that are not accredited investors, expert investors or institutional investors Merrill Lynch (Singapore) Pte Ltd accepts full responsibility for the contents of this information distributed to such clients in Singapore.

General Investment Related Disclosures:

Taiwan Readers: Neither the information nor any opinion expressed herein constitutes an offer or a solicitation of an offer to transact in any securities or other financial instrument. No part of this report may be used or reproduced or quoted in any manner whatsoever in Taiwan by the press or any other person without the express written consent of BofA Securities. This document provides general information only, and has been prepared for, and is intended for general distribution to, BofA Securities clients. Neither the information nor any opinion expressed constitutes an offer or an invitation to make an offer, to buy or sell any securities or other financial instrument or any derivative related to such securities or instruments (e.g., options, futures, warrants, and contracts for differences). This document is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of, and is not directed to, any specific person(s). This document and its content do not constitute, and should not be considered to constitute, investment advice for purposes of ERISA, the US tax code, the Investment Advisers Act or otherwise. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this document and should understand that statements regarding future prospects may not be realized. Any decision to purchase or subscribe for securities in any offering must be based solely on existing public information on such security or the information in the prospectus or other offering document issued in connection with such offering, and not on this document.

Securities and other financial instruments referred to herein, or recommended, offered or sold by BofA Securities, are not insured by the Federal Deposit Insurance Corporation and are not deposits or other obligations of any insured depository institution (including, Bank of America, N.A.). Investments in general and, derivatives, in particular, involve numerous risks, including, among others, market risk, counterparty default risk and liquidity risk. No security, financial instrument or derivative is suitable for all investors. Digital assets are extremely speculative, volatile and are largely unregulated. In some cases, securities and other financial instruments may be difficult to value or sell and reliable information about the value or risks related to the security or financial instrument may be difficult to obtain. Investors should note that income from such securities and other financial instruments, if any, may fluctuate and that price or value of such securities and instruments may rise or fall and, in some cases, investors may lose their entire principal investment. Past performance is not necessarily a guide to future performance. Levels and basis for taxation may change.

BofA Securities is aware that the implementation of the ideas expressed in this report may depend upon an investor's ability to "short" securities or other financial instruments and that such action may be limited by regulations prohibiting or restricting "shortselling" in many jurisdictions. Investors are urged to seek advice regarding the applicability of such regulations prior to executing any short idea contained in this report.

This report may contain a trading idea or recommendation which highlights a specific identified near-term catalyst or event impacting a security, issuer, industry sector or the market generally that presents a transaction opportunity, but does not have any impact on the analyst's particular "Overweight" or "Underweight" rating (which is based on a three month trade horizon). Trading ideas and recommendations may differ directionally from the analyst's rating on a security or issuer because they reflect the impact of a near-term catalyst or event.

Certain investment strategies and financial instruments discussed herein may only be appropriate for consideration in accounts qualified for high risk investment.

Foreign currency rates of exchange may adversely affect the value, price or income of any security or financial instrument mentioned in this report. Investors in such securities and instruments effectively assume currency risk.

BofAS or one of its affiliates is a regular issuer of traded financial instruments linked to securities that may have been recommended in this report. BofAS or one of its affiliates may, at any time, hold a trading position (long or short) in the securities and financial instruments discussed in this report.

BofA Securities, through business units other than BofA Global Research, may have issued and may in the future issue trading ideas or recommendations that are inconsistent with, and reach different conclusions from, the information presented herein. Such ideas or recommendations may reflect different time frames, assumptions, views and analytical methods of the persons who prepared them, and BofA Securities is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this information.

In the event that the recipient received this information pursuant to a contract between the recipient and BofAS for the provision of research services for a separate fee, and in connection therewith BofAS may be deemed to be acting as an investment adviser, such status relates, if at all, solely to the person with whom BofAS has contracted directly and does not extend beyond the delivery of this report (unless otherwise agreed specifically in writing by BofAS). If such recipient uses the services of BofAS in connection with the sale or purchase of a security referred to herein, BofAS may act as principal for its own account or as agent for another person. BofAS is and continues to act solely as a broker-dealer in connection with the execution of any transactions, including transactions in any securities referred to herein.

Copyright and General Information:

Copyright 2023 Bank of America Corporation. All rights reserved. iQDatabase® is a registered service mark of Bank of America Corporation. This information is prepared for the use of BofA Securities clients and may not be redistributed, retransmitted or disclosed, in whole or in part, or in any form or manner, without the express written consent of BofA Securities. BofA Global Research information is distributed simultaneously to internal and client websites and other portals by BofA Securities and is not publicly-available material. Any unauthorized use or disclosure is prohibited. Receipt and review of this information constitutes your agreement not to redistribute, retransmit, or disclose to others the contents, opinions, conclusion, or information contained herein (including any investment recommendations, estimates or price targets) without first obtaining express permission from an authorized officer of BofA Securities.

Materials prepared by BofA Global Research personnel are based on public information. Facts and views presented in this material have not been reviewed by, and may not reflect information known to, professionals in other business areas of BofA Securities, including investment banking personnel. BofA Securities has established information barriers between BofA Global Research and certain business groups. As a result, BofA Securities does not disclose certain client relationships with, or compensation received from, such issuers. To the extent this material discusses any legal proceeding or issues, it has not been prepared as nor is it intended to express any legal conclusion, opinion or advice. Investors should consult their own legal advisers as to issues of law relating to the subject matter of this material. BofA Global Research personnel's knowledge of legal proceedings in which any BofA Securities entity and/or its directors, officers and employees may be plaintiffs, defendants, co-defendants or co-plaintiffs with or involving issuers mentioned in this material is based on public information. Facts and views presented in this material that relate to any such proceedings have not been reviewed by, discussed with, and may not reflect information known to, professionals in other business areas of BofA Securities in connection with the legal proceedings or matters relevant to such proceedings.

This information has been prepared independently of any issuer of securities mentioned herein and not in connection with any proposed offering of securities or as agent of any issuer of any securities. None of BofAS any of its affiliates or their research analysts has any authority whatsoever to make any representation or warranty on behalf of the issuer(s). BofA Global Research policy prohibits research personnel from disclosing a recommendation, investment rating, or investment thesis for review by an issuer prior to the publication of a research report containing such rating, recommendation or investment thesis.

Any information relating to the tax status of financial instruments discussed herein is not intended to provide tax advice or to be used by anyone to provide tax advice. Investors are urged to seek tax advice based on their particular circumstances from an independent tax professional.

The information herein (other than disclosure information relating to BofA Securities and its affiliates) was obtained from various sources and we do not guarantee its accuracy. This information may contain links to third-party websites. BofA Securities is not responsible for the content of any third-party website or any linked content contained in a third-party website. Content contained on such third-party websites is not part of this information and is not incorporated by reference. The inclusion of a link does not imply any endorsement by or any affiliation with BofA Securities. Access to any third-party website is at your own risk, and you should always review the terms and privacy policies at third-party websites before submitting any personal information to them. BofA Securities is not responsible for such terms and privacy policies and expressly disclaims any liability for them.

All opinions, projections and estimates constitute the judgment of the author as of the date of publication and are subject to change without notice. Prices also are subject to change without notice. BofA Securities is under no obligation to update this information and BofA Securities ability to publish information on the subject issuer(s) in the future is subject to applicable quiet periods. You should therefore assume that BofA Securities will not update any fact, circumstance or opinion contained herein.

Certain outstanding reports or investment opinions relating to securities, financial instruments and/or issuers may no longer be current. Always refer to the most recent research report relating to an issuer prior to making an investment decision.

In some cases, an issuer may be classified as Restricted or may be Under Review or Extended Review. In each case, investors should consider any investment opinion relating to such issuer (or its security and/or financial instruments) to be suspended or withdrawn and should not rely on the analyses and investment opinion(s) pertaining to such issuer (or its securities and/or financial instruments) nor should the analyses or opinion(s) be considered a solicitation of any kind. Sales persons and financial advisors affiliated with BofAS or any of its affiliates may not solicit purchases of securities or financial instruments that are Restricted or Under Review and may only solicit securities under Extended Review in accordance with firm policies.

Neither BofA Securities nor any officer or employee of BofA Securities accepts any liability whatsoever for any direct, indirect or consequential damages or losses arising from any use of this information.

Research Analysts

Asia FI/FX Strategy & Economics

Helen Qiao

China & Asia Economist
Merrill Lynch (Hong Kong)
+852 3508 3961
helen.qiao@bofa.com

Claudio Piron

Emerging Asia FI/FX Strategist
Merrill Lynch (Singapore)
+65 6678 0401
claudio.piron@bofa.com

Adarsh Sinha

FX Strategist
Merrill Lynch (Hong Kong)
+852 3508 7155
adarsh.sinha@bofa.com

Jojo Gonzales ^^

Research Analyst
Philippine Equity Partners
jojo.gonzales@pep.com.ph

Abhay Gupta

Emerging Asia FI/FX Strategist
Merrill Lynch (Singapore)
abhay.gupta2@bofa.com

Pipat Luengnaruemitchai

Emerging Asia Economist
Kiatnakin Phatra Securities
pipat.luen@kcpfg.com

Miao Ouyang

China & Asia Economist
Merrill Lynch (Hong Kong)
miao.ouyang@bofa.com

Xiaoqing Pi

China Economist
Merrill Lynch (Hong Kong)
xiaoqing.pi@bofa.com

Benson Wu

China & Korea Economist
Merrill Lynch (Hong Kong)
benson.wu@bofa.com

Ting Him Ho, CFA

Asia Economist
Merrill Lynch (Hong Kong)
tinghim.ho@bofa.com

Janice Xue

Emerging Asia FI/FX Strategist
Merrill Lynch (Hong Kong)
janice.xue@bofa.com

Kai Wei Ang

Asia & ASEAN Economist
Merrill Lynch (Singapore)
kaiwei.ang@bofa.com

EEMEA Cross Asset Strategy, Econ

David Hauner, CFA >>

Global EM FI/FX Strategist
MLI (UK)
+44 20 7996 1241
david.hauner@bofa.com

Mai Doan

CEE Economist
MLI (UK)
mai.doan@bofa.com

Zumrut Imamoglu

Turkey & Israel Economist
MLI (UK)
zumrut.imamoglu@bofa.com

Vladimir Osakovskiy >>

EEMEA Sov.Credit/EQ strategist
Merrill Lynch (DIFC)
vladimir.osakovskiy@bofa.com

Jean-Michel Saliba

MENA Economist/Strategist
MLI (UK)
jean-michel.saliba@bofa.com

Merveille Paja

EEMEA Sovereign FI Strategist
MLI (UK)
merveille.paja@bofa.com

Mikhail Liluashvili

EEMEA Local Markets Strategist
MLI (UK)
mikhail.liluashvili@bofa.com

Tatonga Rusike

Sub-Saharan Africa Economist
MLI (UK)
tatongarusike@bofa.com

LatAm FI/FX Strategy & Economics

Claudio Irigoyen

Global Economist
BofAS
+1 646 855 1734
claudio.irigoyen@bofa.com

David Beker >>

Bz Econ/FI & LatAm EQ Strategy
Merrill Lynch (Brazil)
+55 11 2188 4371
david.beker@bofa.com

Jane Brauer

Sovereign Debt FI Strategist
BofAS
+1 646 855 9388
jane.brauer@bofa.com

Carlos Capistran

Canada and Mexico Economist
BofAS
+1 646 743 2921
carlos.capistran@bofa.com

Pedro Diaz

Caribbean Economist
BofAS
pdiaz2@bofa.com

Antonio Gabriel

Global Economist
BofAS
antonio.gabriel@bofa.com

Christian Gonzalez Rojas

LatAm Local Markets Strategist
BofAS
christian.gonzalezrojas@bofa.com

Lucas Martin, CFA

Sovereign Debt FI Strategist
BofAS
lucas.martin@bofa.com

Alexander Müller

Andean(ex-Ven) Carib Economist
BofAS
alexander.muller@bofa.com

Natacha Perez

Brazil Economist
Merrill Lynch (Brazil)
natachaperez@bofa.com

Sebastian Rondeau

LatAm FI/FX Strategist
BofAS
sebastian.rondeau@bofa.com

Ezequiel Aguirre

LatAm FI/FX Strategist
BofAS
ezequiel.aguirre2@bofa.com

BofA Securities participated in the preparation of this report, in part, based on information provided by Philippine Equity Partners, Inc. (Philippine Equity Partners). ^^Philippine Equity Partners employees are not registered/qualified as research analysts under FINRA rules.

Trading ideas and investment strategies discussed herein may give rise to significant risk and are not

suitable for all investors. Investors should have experience in relevant markets and the financial resources to absorb any losses arising from applying these ideas or strategies.

>> Employed by a non-US affiliate of BofAS and is not registered/qualified as a research analyst under the FINRA rules.

Refer to "Other Important Disclosures" for information on certain BofA Securities entities that take responsibility for the information herein in particular jurisdictions.