

India Viewpoint

FY25 Union budget preview: Continued consolidation

Despite poll pressure, fiscal consolidation to continue

Concerns surrounding fiscal slippage in an election year are understandable. However, we expect the Centre to meet their fiscal deficit target of 5.9% of GDP in FY24. For FY25, we see Centre's fiscal deficit to consolidate further to 5.3% of GDP, despite poll pressure. [We have previously argued](#) that the current government's intent is to consolidate fiscal deficit through capital expenditure driven growth instead of expenditure compression. We expect this strategy to continue in FY25 union budget as well. [Digitization led formalization of the economy](#) is a blessing in disguise aiding tax buoyancy on one side and reducing wasteful expenditure (subsidy leakage) on the other.

See FY24 fiscal deficit at 5.9% of GDP, FY25 at 5.3%

Between Apr-Nov in FY24, India used up 50.7% of the full year budgeted fiscal deficit target. This compares well vs the median 75.9% of total that gets exhausted during Apr-Nov usually. The outperformance was led by higher than median revenue receipts even as total expenditure continued to trace the median run rate. For the remainder of FY24, we see higher than budgeted tax and non-tax revenue to more than offset- the potential shortfall in divestment proceeds, higher than budgeted subsidy bill, modestly higher interest expense and other revenue expenditure. We do see some saving on the loans and advances component of capital expenditure. This should result in a lower than budgeted fiscal deficit in absolute terms, while meeting the target 5.9% of GDP, despite lower than estimated nominal GDP outcome.

In our [Year Ahead 2024](#) we looked at multiple macro variables a year before, during and after national polls and failed to establish any correlation between macro performance and elections. For FY25, we expect Centre's fiscal deficit to consolidate to 5.3% of GDP, tracking the glide path to 4.5% of GDP by FY26. On the receipts side, we estimate revenue receipts at INR30.4trn (up 10.5% yoy vs FY24 BofAe), led by a 10% yoy increase in tax revenue, 14% jump in non-tax revenue and modest increase in divestment proceeds. Resultantly, total receipts in FY25 are estimated at INR31.15trn, up from INR27.83trn in FY24 (BofAe). On the expenditure front, we estimate total expenditure in FY25 to grow by 7.2% yoy, down from an estimated 8.2% yoy in FY24 BofAe (budgeted growth is estimated at 7.5% yoy). As for composition- interest expense burden and subsidy bill, both are estimated to rise further. Revenue expenditure net of interest payments and subsidies is estimated to grow modestly. Robust growth in capex (18.5% yoy, BofAe) is estimated, in line with policy focus showcased so far.

Market borrowings, largely unchanged

Market borrowings have been the main source of funding the fiscal deficit. Over the last 10 years, on an average 65% of fiscal deficit for the Centre has been funded via market borrowings. In FY24, gross and net market borrowings stood at INR 15.4 trn and INR 11.8 trn respectively. For FY25, at 5.3% of GDP, we are tracking a fiscal deficit of INR17.6 trn. We expect 65% of this to be financed by market borrowings. Accordingly, we see market borrowings in FY25 at INR 11.6 trn. Given maturities of INR 3.61 trn in FY25, gross market borrowings are estimated at INR 15.2 trn.

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 10 to 11.

12647818

Timestamp: 18 January 2024 04:00PM EST

19 January 2024

GEM Economics
Asia | India

Aastha Gudwani
India Economist
BofAS India
+91 22 6632 8648
aastha.gudwani@bofa.com

Asia FI Strategy & Economics
Merrill Lynch (Hong Kong)

GEMs FI Strategy & Economics
BofAS

[See Team Page for List of Analysts](#)**Glossary**

GDP: Gross domestic product
BE: Budget estimate
RE: Revised estimate
FD: Fiscal deficit
TD: Till Date

Despite headwinds, FY24 fiscal deficit target on track

Between Apr-Nov in FY24, India used up 50.7% of the full year budgeted fiscal deficit target. This compares well vs the median 75.9% of total that gets exhausted during Apr-Nov usually. The outperformance was led by higher than usual revenue receipts even as total expenditure continued to trace the median run rate. Exhibits 2,3 & 4 show monthly run rate of fiscal deficit, revenue receipts and total expenditure vs median monthly run rate (cumulative) in a fiscal year. As for fiscal deficit, month after month, the actual run rate has been meaningfully lower than the median run rate. This is driven by outperformance of revenue receipts, which in FY24TD are tracking 65.3% of FY24BE vs 53% of full year (usually). Expenditure run rate on the other hand is mostly in line with median. Exhibit 5 shows that Apr-Nov FY24 yoy growth rate for total receipts and tax revenue receipts at 19.2% yoy and 17.2% yoy is sizably higher than the average growth rate seen in these months over the last 10years. The reverse is true for total expenditure, where corresponding figures are 8.6% yoy for FY24 Apr-Nov vs 11% yoy, 10year average. Interestingly, growth in capex at 31% yoy FY24 (Apr-Nov) is sharply higher than the 10-year average seen in this period of 17.5% yoy. Media reports suggest that various ministries have been frontloading their capital expenditure in the run up to general elections in May 2024. These include- Ministry of road, transport & highways, Ministry of Defense & Ministry of railways. In Exhibit 6 we decode components of tax revenue responsible for driving higher than budgeted growth rate. Both corporate and income collection have surpassed their budgeted growth rates meaningfully, more than offsetting the disappointment seen in excise and custom duty revenue collection.

Exhibit 1: Fiscal math: Expect FY24 fiscal deficit to meet the targeted 5.9% of GDP, see it consolidating to 5.3% of GDP in FY25

Robust tax revenue growth, higher non tax revenue and prudent expenditure growth to pave way for consolidation in FY25

in INR crore	FY23 Actuals	FY24 BE	FY24 BE yoy	FY24 (Apr- Nov)	FY24 TD yoy	Imputed yoy growth for Dec-Mar FY24 for BE to be met	Avg Dec- Mar yoy	FY24 BofAe	FY25 BofAe	FY24 yoy BofAe	FY25 yoy BofAe
1. Revenue receipts	2383519	2632281	10.4%	1720120	20.9%	-5.0%	8.50%	2750000	3040000	15.4%	10.5%
Tax revenue	2097368	2330631	11.1%	1435755	17.2%	2.6%	10.30%	2400000	2640000	14.4%	10.0%
Non-tax revenue	286151	301650	5.4%	284365	43.4%	-80.3%	4.90%	350000	400000	22.3%	14.3%
2. Non-Debt Capital receipts	72187	84000	16.4%	25463	-38.6%	90.6%	1.20%	33000	75000	-54.3%	127.3%
2.1 Recovery of loans	26152	23000	-12.1%	16604	27.2%	-51.2%	1.90%	23000	25000	-12.1%	8.7%
2.2 Other receipts	46035	61000	32.5%	8859	-68.8%	196.2%	7.90%	10000	50000	-78.3%	400.0%
3. Total receipts (1+2)	2455706	2716281	10.6%	1745583	19.2%	-2.1%	11.20%	2783000	3115000	13.3%	11.9%
4. Revenue expenditure	3452518	3502724	1.5%	2066522	3.6%	-1.4%	5.30%	3565000	3725000	3.3%	4.5%
of which, interest payments	928424	1079971	16.3%	607963	11.5%	23.2%	3.80%	1080000	1100000	16.3%	1.9%
of which, subsidy	530959	374707	-29.4%	242755.55	-19.4%	-42.6%		420000	425000	-20.9%	1.2%
& residual	1993135	2048046	2.8%	1215803	5.8%	886.4%	7.50%	2065000	2200000	3.6%	6.5%
5. Capital expenditure	736319	1000373	35.9%	585645	31.0%	43.4%	23%	970000	1150000	31.7%	18.6%
of which, loans & advances	115268	163834	42.1%	80886	48.0%	36.8%	-125%	135000	100000	17.1%	-25.9%
6. Total expenditure (4+5)	4188837	4503097	7.5%	2652167	8.6%	6.0%	7.00%	4535000	4875000	8.3%	7.5%
Fiscal deficit	1733131	1786816		906584		16.6%	2.30%	1752000	1760000	1.1%	0.5%
as % of GDP	6.4	5.9						5.9	5.3		

Source: CGA, FinMin

BofA GLOBAL RESEARCH

Going forward, for the remainder of FY24, below are our key observations:

The first advance estimate of FY24 nominal GDP growth by MOSPI (apex statistical agency) came in at 8.9% yoy (vs 10.5% yoy assumed in budget math by Ministry of finance). This arithmetically pushes up fiscal deficit as % of GDP by 10bp. We believe, absolute fiscal deficit for FY24 would turn out to be lower than BE, thus meeting the target 5.9% of GDP.

If we look at actual Apr-Nov FY24 yoy growth rate for each sub-component of fiscal deficit and compare it with the budgeted growth rate, one can extrapolate the Dec-Mar average growth rate needed to achieve the budgeted target.

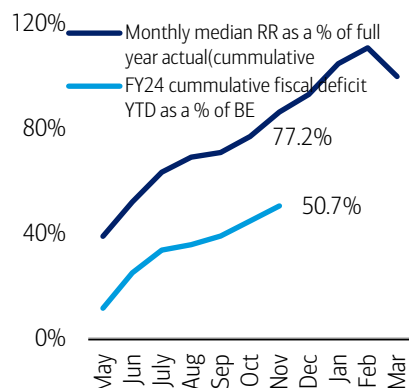
As can be seen in Exhibit 1, in case of revenue receipts the imputed growth rate for Dec-Mar FY24 stands at -5% yoy, on one hand. On the other hand, a 90.6% yoy growth is needed in case of non-debt capital receipts, to achieve the budget estimate. Comparing this with average Dec-Mar growth rate over the past decade, we conclude that:

- Tax revenue is expected to exceed BE by INR693bn, non-tax revenue by INR483bn.
- Divestment proceeds are expected to fall short of BE by INR510bn.
- In sum, total receipts are expected to surpass BE by INR667bn.
- This however would get absorbed to make up for higher-than-expected subsidy bill to the tune of INR330bn and provide for lower than estimated nominal GDP.
- We see a modest increase vs BE numbers in case of interest payments even as 10y bond yields in FY24TD have averaged 15bp lower vs FY23, amidst elevated borrowing.
- Revenue expenditure net of interest payments and subsidy is estimated to overshoot the budgeted number.
- On capex side, we see some saving/shortfall in loans by Centre to state (50year interest free loan), to the tune of INR300bn.

In sum, we see higher than budgeted tax and non-tax revenue to provide for potential shortfall in divestment proceeds, higher than budgeted subsidy bill, modestly higher interest expense and other revenue expenditure. We do see some saving on the loans and advances component of capital expenditure. This should result in a lower than budgeted fiscal deficit in absolute terms, while meeting the target 5.9% of GDP, despite lower than estimated nominal GDP growth rate.

Exhibit 2: Fiscal deficit: monthly run rate vs median

Actual monthly outcome has outperformed median run rate month after month

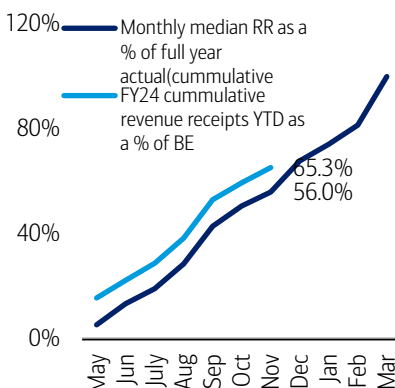


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 3: Revenue receipts monthly run-rate vs median

Revenue receipts have been consistently higher than usual

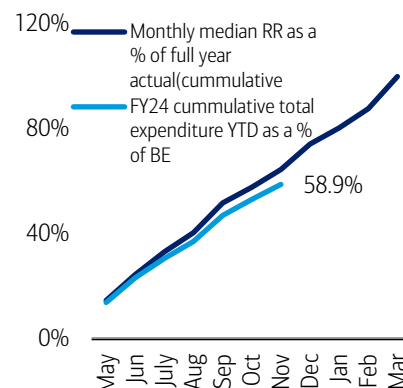


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 4: Total expenditure: monthly run rate vs median

Expenditure run rate has mostly hugged the median monthly run rate

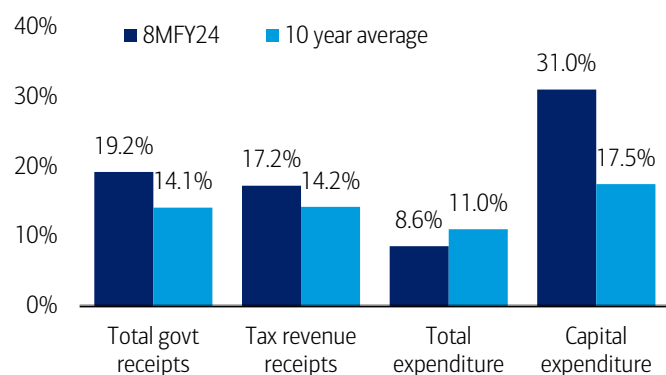


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 5: Apr-Nov FY24 growth rates have outperformed 10y avg

Both tax and non-tax revenue growth has been reasonably higher than 10yr avg growth rate, capex growth is sizably higher

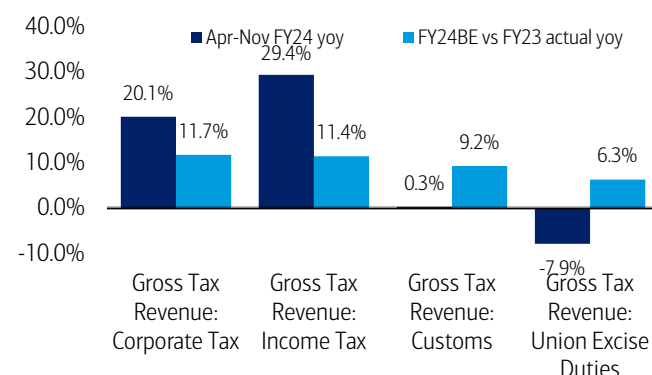


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 6: Tax revenue growth rate: Apr-Nov FY24 vs F24BE yoy

Direct tax revenue growth has been sharply higher than budgeted, more than offsetting the lower than budgeted outcome for indirect tax growth



Source: CGA, CEIC

BofA GLOBAL RESEARCH

Moving on to FY25 fiscal math: tracking glide path

As general elections in May 2024 draw closer, markets are worried if the interim budget that will be presented on Feb 1st would reel under any such political compulsions. In our [Year Ahead 2024](#) we looked at multiple macro variables a year before, during and after national polls and failed to establish any correlation between macro performance and elections. Atop that, we have previously argued that the current leadership under PM Modi has shown fiscal prudence by focusing on capital expenditure driven growth to consolidate fiscal deficit instead of expenditure compression. Continuing with that spirit, we expect Centre's fiscal deficit to consolidate to 5.3% of GDP in FY25, tracking the glide path to 4.5% of GDP by FY26.

Our key assumptions are:

A main reason of a lower-than-expected nominal GDP growth, was the sharp WPI deflation seen in FY24 (-1.1% yoy between Apr-Dec). As this reverses, we expect Finance ministry to work with a 10-10.5% yoy nominal GDP growth estimate for FY25. (BofAe real GDP growth in FY25 is 5.8% yoy, CPI inflation is 4.6% yoy).

Exhibit 7 shows strong positive correlation between nominal GDP growth and direct tax revenue growth. Accordingly, we estimate tax revenue to grow by 10% yoy in FY25. In fact, improved tax buoyancy (Exhibit 8) could potentially result in tax revenue growth rate to exceed nominal GDP growth rate. Post pandemic, tax buoyancy has risen steadily to 1.18 vs 1.03 in the decade preceding Covid-19.

Indirect tax collection has been showing encouraging signs too. Monthly run rate of GST collection has risen sharply from INR98k in FY19 to INR1.66trn in FY24 (Apr-Nov, Exhibit 9). One can argue that the share of IGST that now goes to center is tapering (and rightly so, with states getting their due share, Exhibit 10), the continuation of GST compensation cess until FY26 (all the proceeds belong to Centre) offers an alternate revenue source.

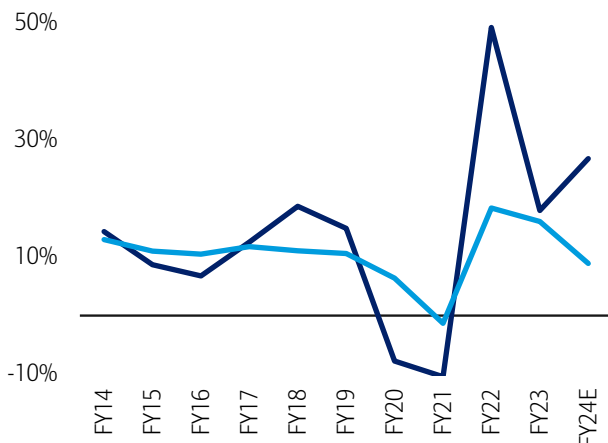
Non-tax revenue, led by dividend and profits is expected to exceed the budget estimate in FY24 given higher than expected dividend transferred by the RBI (Exhibit 11). Media reports suggest that RBI's balance sheet has risen in FY24 and thus the RBI could give an even higher dividend in FY25. Centre's public sector enterprises (CPSEs) are also expected to yield higher dividend amidst improved profitability. Accordingly, we peg non-tax revenue in FY25 at INR 4 trn.

As for divestment, proceeds between Apr-Nov FY24 have disappointed vs estimates. Only in 3 out of last 16 years have actual divestment proceeds surpassed the budgeted number (Exhibit 12). In that context, we assume a modest INR500bn from non-debt capital receipts in FY25. We are mindful of the downside risk this estimate entails.

In sum, on the receipts side, for FY25 we estimate revenue receipts at INR30.4trn (up 10.5% yoy vs FY24 BofAe), led by a 10% yoy increase in tax revenue, 14% jump in non-tax revenue and reasonable increase in divestment proceeds. Resultantly, total receipts in FY25 are estimated at INR31.15trn, up from INR27.83trn in FY24 (BofAe).

Exhibit 7: Direct tax revenue growth & nominal GDP growth yoy

While nominal GDP growth is expected to stay low given WPI deflation, direct tax revenue growth has been high benefitting from improved compliance

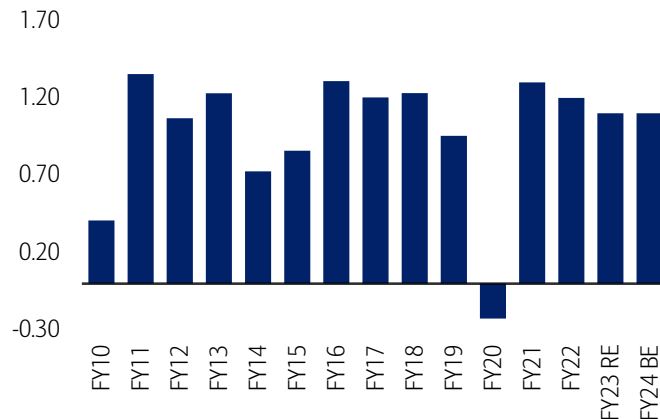


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 8: Tax buoyancy (Centre + states combined)

Post pandemic tax buoyancy has improved steadily to 1.18 vs 1.03 in the 10 years preceding the pandemic

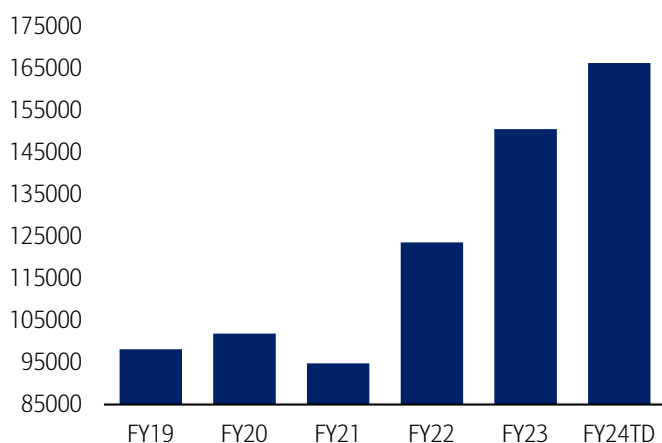


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 9: GST collection monthly run rate, FY basis

Monthly GST collection run rate has risen sharply from INR98k in FY19 to INR1.66trn in FY24 so far

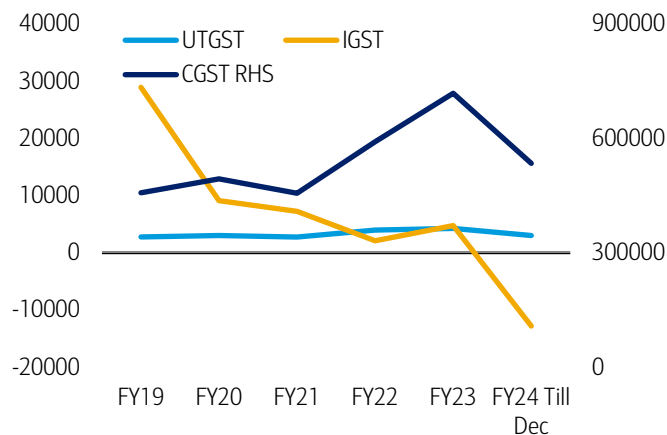


Source: GST council

BofA GLOBAL RESEARCH

Exhibit 10: Annual GST collected by Centre (in INR cr)

With state GST arrears now close to getting settled, IGST's contribution to Centre's tax revenue is falling

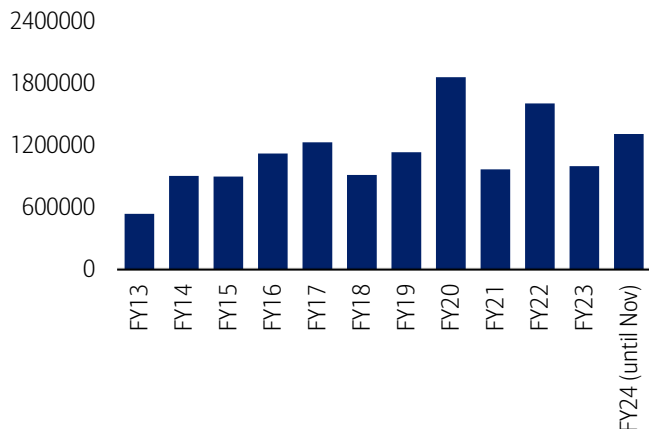


Source: CEIC

BofA GLOBAL RESEARCH

Exhibit 11: Non-tax revenue: Dividend & profits (45% of NTR)

Higher than budgeted dividend & profits from RBI & CPSEs have aided non-tax revenue collection in FY24 so far



Source: CGA, CEIC, In INR mn

BofA GLOBAL RESEARCH

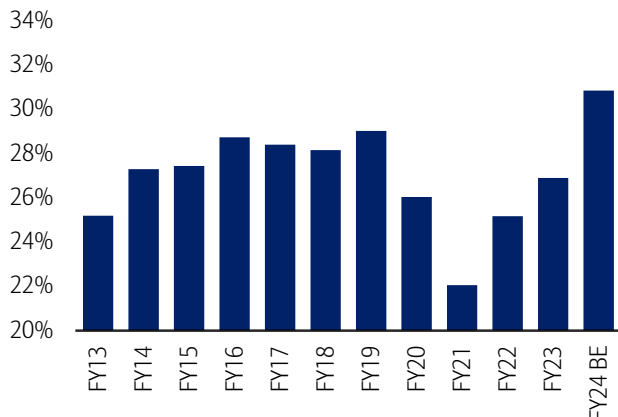
Moving on to the expenditure side:

Of the total expenditure, 85% is revenue (or current) expenditure and 15% is capital expenditure. Within revenue expenditure, interest payment and subsidy bill together account for 41% of total. Amidst elevated borrowing, interest expense has grown sizably over the last few years, accounting for 30.8% of total revenue expenditure in FY24 (Exhibit 13). We don't see any respite in the interest burden in FY25 and estimate it to rise modestly to INR11.1trn.

India's subsidy bill is largely divided into 3 categories food (45%), fuel (15%) and fertilizer (32%). Additional expenditure on account of extending the free food grain program and cooking gas cylinder price cut together amounted to INR330bn in FY24 (Exhibit 14). For FY25 we estimate food subsidy to remain elevated as free food grain program is extended by 5 years. Some saving on the fertilizer subsidy could in part offset the higher food subsidy bill. Accordingly, we estimate subsidy bill to rise further to INR4.25trn in FY25.

Exhibit 13: Interest payment as % of revenue expenditure

Amidst higher borrowing, interest cost burden has risen meaningfully from 25% of total revenue expenditure in FY13 to 31% in FY24



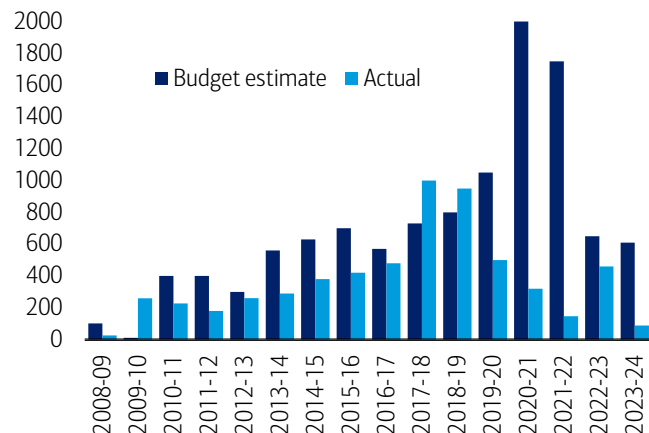
Source: CGA, CEIC

BofA GLOBAL RESEARCH

Net of interest payment and subsidies, revenue expenditure is estimated to grow by 6.5% yoy in FY25 vs 3.6% yoy in FY24 (BofAe). Budgeted growth for revenue expenditure net of interest payment and subsidies is even lower at 2.8% yoy (Exhibit 15).

Exhibit 12: Divestment proceeds: BE vs Actual (INR bn)

For the fifth successive year, actual divestment proceeds fell short of budgeted

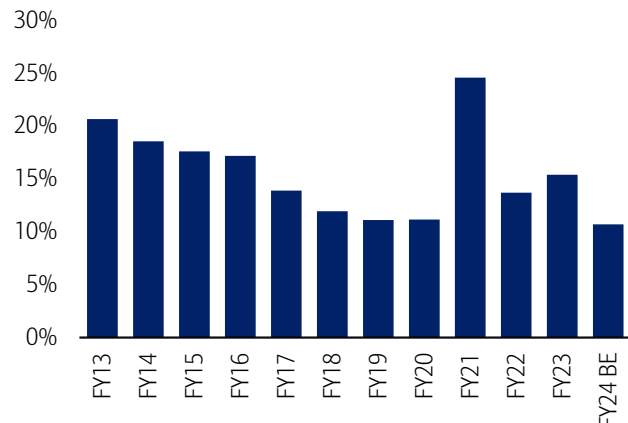


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 14: Total subsidies as % of revenue expenditure

Overall subsidies share in revenue expenditure has been coming off steadily since the pandemic, now seen at 10.7% of RE, down from 24.6% in FY21

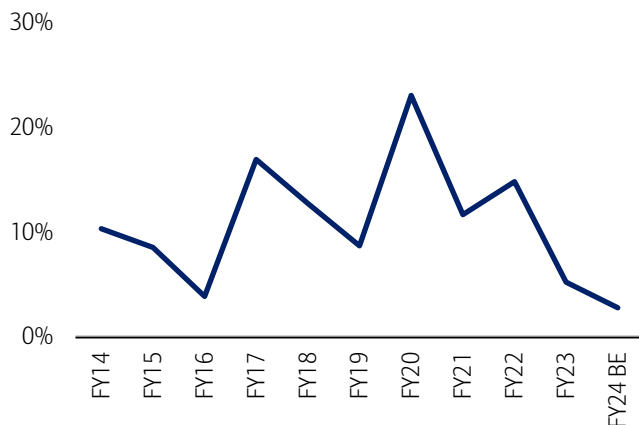


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 15: Growth of revenue expenditure net of interest payments and subsidies (% yoy)

RENIS growth in FY24 is estimated to slow to 2.8% yoy vs 5.2% yoy in FY23



Source: CGA, CEIC

BofA GLOBAL RESEARCH

One of the striking features of fiscal management under the current leadership has been deployment of resources towards capital expenditure vs non-committed revenue expenditure. Accordingly, capital outlay as % of GDP has risen steadily from 1.6% of GDP in FY21 to 2.8% of GDP in FY24 (Exhibit 16).

Since the pandemic, Centre's support to states, especially towards augmenting capital spend has been improving. Loans and advances as a share of capex has accordingly moved up from 10.5% during FY13-FY20 to 16.7% between FY21-FY24 (Exhibit 17). Between Apr-Nov FY24, INR81k of the budgeted INR1.63 trn have been disbursed by Centre to states as a 50year interest free loan. We believe this is front loaded and expect FY24 total loans disbursement to stand at INR1.35 trn.

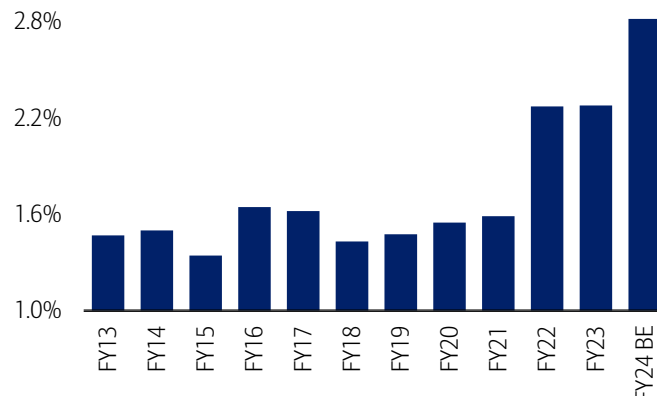
In FY25, we expect the government to focus on capital outlay and contain the loans and advances component at INR 1 trn. Accordingly, we see an 18.5% yoy increase in capex in FY25.

In sum, on the expenditure side, we see total expenditure in FY25 to grow by 7.2% yoy, down from an estimated 8.2% yoy in FY24 BofAe (budgeted estimate is 7.5% yoy). As for composition, interest expense burden and subsidy bill, both are estimated to rise further. Revenue expenditure net of interest payments and subsidies is estimated to grow modestly. We estimate robust growth in capex (18.5% yoy, BofAe) continuing with policy focus exhibited so far.

A quick word on the quality of fiscal deficit: While some may argue that Covid-19 has again derailed India's fiscal consolidation path, we would like to highlight an underlying shift in the quality of fiscal deficit. Policy focus of the current government has been to drive capital expenditure driven growth which in turn aids revenue mobilization and finally facilitates fiscal consolidation as against expenditure compression led fiscal consolidation. Accordingly, ratio of revenue expenditure to capital outlay (RECO), which is a relevant proxy of quality of fiscal deficit has been falling steadily from 7.6 in FY20 to 4.2 in FY24 (Exhibit 18). We expect this moderation to continue in FY25.

Exhibit 16: Capital outlay as % of GDP

Big ticket infra has been a policy focus, resultantly capital outlay as % of GDP has risen steadily from 1.5% in FY19 to 2.8% in FY24

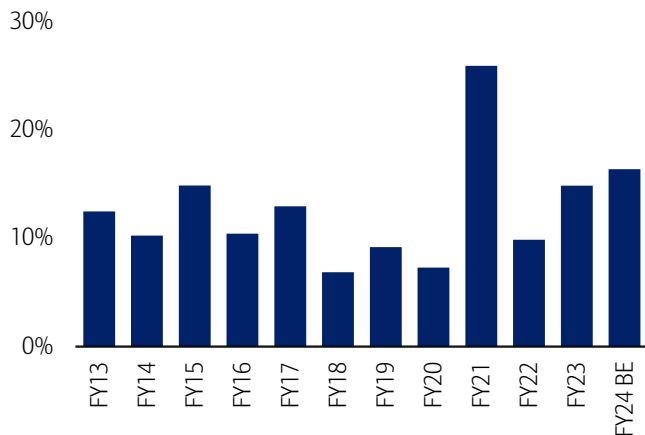


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 17: Loans & advances as % of Capex

Centre has been giving a larger share of capex as loans to states, that has gone up from 7.3% in FY20 to 16.4% in FY24



Source: CGA, CEIC

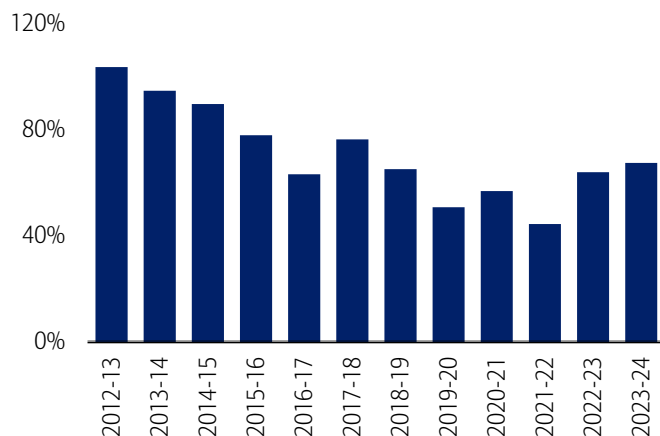
BofA GLOBAL RESEARCH

Market borrowings, largely unchanged

Market borrowings have been the main source of financing the fiscal deficit. Over the last 10 years, on an average 65% of fiscal deficit for the Centre has been funded via market borrowings (Exhibit 19). In FY24, gross and net market borrowings stood at INR 15.4 trn and INR 11.8 trn respectively (Exhibit 20). For FY25, at 5.3% of GDP, we are tracking a fiscal deficit of INR17.6 trn. We expect 65% of this to be financed via market borrowings. Accordingly, we see market borrowings in FY25 at INR 11.6 trn. Given maturities of INR 3.61 trn in FY25, we estimate gross market borrowings at INR 15.2 trn.

Exhibit 19: Financing of Centre's fiscal deficit via market borrowing

Over the last 10 years, 65% of fiscal deficit has been funded by market borrowings

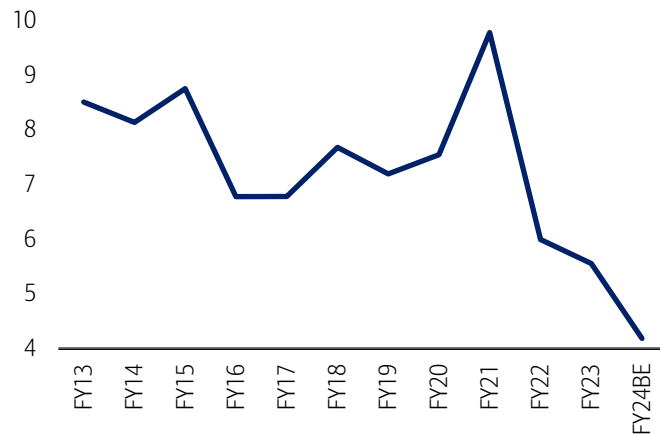


Source: RBI, FinMin

BofA GLOBAL RESEARCH

Exhibit 18: Ratio of revenue expenditure to capital outlay (RECO)

RECO has fallen steadily from 9.8 in FY21 to an estimated 4.2 in FY24

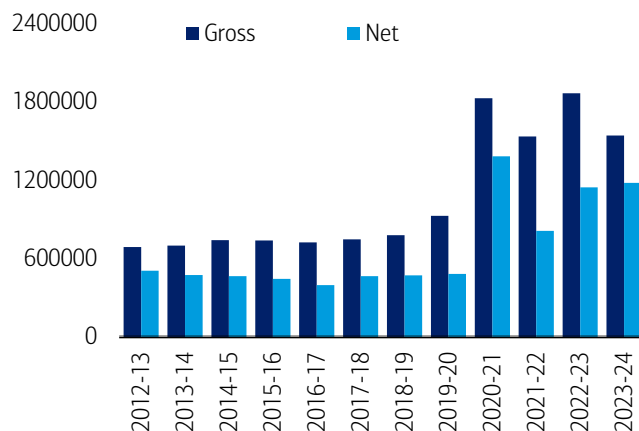


Source: CGA, CEIC

BofA GLOBAL RESEARCH

Exhibit 20: Gross vs net market borrowing (in INR crore)

Maturities in FY25 stand at INR3.61 trn, roughly same as FY24



Source: RBI, FinMin

BofA GLOBAL RESEARCH

Special Disclosures

In accordance with the SEBI (Foreign Portfolio Investors) Regulations, 2019 and with guidelines issued by the Securities and Exchange Board of India (SEBI), foreign investors (individuals as well as institutional) that wish to transact the common stock of Indian companies must have applied to, and have been approved as per SEBI (Foreign Portfolio Investors) Regulations, 2019. Each investor who proposes to transact common stock of Indian companies will be required to obtain Foreign Portfolio Investor (FPI) registration as per SEBI (Foreign Portfolio Investors) Regulations, 2019. Certain other entities are also entitled to transact common stock of Indian companies under the Indian laws relating to investment by foreigners. BofA Securities reserves the right to refuse to provide a copy of research on common stock of Indian companies to a person not resident in India. American Depositary Receipts (ADR) representing such common stock are not subject to these Indian law restrictions and may be transacted by investors in accordance with the applicable laws of the relevant jurisdiction. Global Depositary Receipts (GDR) and the Global Depositary Shares (GDS) of Indian companies, Indian limited liability corporations, have not been registered under the U.S. Securities Act of 1933, as amended, and may only be transacted by persons in the United States who are Qualified Institutional Buyers (QIBs) within the meaning of Rule 144A under the Securities Act. Accordingly, no copy of any research report on Indian companies' GDRs or GDSs will be made available to persons who are not QIBs.

BofA Securities India Limited (BofAS India) is regulated by the Securities and Exchange Board of India (SEBI) and provides the following services in India: Research, Equity Sales & Trading, Futures & Options, Electronic Trading, Equity Capital Markets, Debt Capital Markets and M&A. SEBI Registration Nos. Research Analyst: INH000000503, Stock Broking: INZ000217333 (Trading and Clearing Member of NSE and BSE – Capital Markets and Equity Derivatives), Merchant Banker: INM000011625, CIN U74140MH1975PLC018618. Registration granted by SEBI and certification from National Institute of Securities Markets (NISM) in no way guarantee performance of the intermediary or provide any assurance of returns to investors. BofAS India's registered office is at Ground Floor, A Wing, One BKC, G Block, Bandra Kurla Complex, Bandra (East), Mumbai 400 051, India, Tel: +91 22 6632 8000 and the contact details of its Compliance Officer (Shervin Purohit) are: Tel: (91-22) 6632 8853, Email: shervin.purohit@bofa.com. For specific grievances, if any, please contact the Grievance Officer (Amish Shah) and contact details are: Tel: (91-22) 6632 8000, Email: dg.rsch_in_complaint@bofa.com. Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Disclosures

Important Disclosures

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.

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.

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.

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.

Individuals identified as economists do not function as research analysts under U.S. law and reports prepared by them are not research reports under applicable U.S. rules and regulations.

Macroeconomic analysis is considered investment research for purposes of distribution in the U.K. under the rules of the Financial Conduct Authority.

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 HKSF; 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.

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 2024 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 or 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 Strategy & Economics