

Household net financial savings at 8.3% of GDP in FY22

However, liabilities at an 18-year low of just 2.5% of GDP is perplexing

- According to the Reserve Bank of India (RBI), household gross financial savings (GFS) in India touched a five-year low of 10.8% of GDP in FY22, as compared to a 14-year high of 16% of GDP in FY21. In contrast, financial liabilities of households touched an 18-year low of 2.5% of GDP last year, as compared to ~4% of GDP each in the preceding four years. Consequently, household net financial savings (NFS) dropped to 8.3% of GDP in FY22, as compared to the near record high of 12% of GDP (it was 12.1% of GDP in FY10) in FY21 and slightly higher than the average of ~8% of GDP in the preceding five years.
- Details of GFS reveal that the share of 'deposits' was just 27.2% of GFS in FY22, the second-lowest in the last 50 years, and the share of 'currency in hand' was also at a five-year low of 10.5% of GFS. In contrast, the share of Insurance, provident, and pension fund (IP&PF) rose to a multi-decade high of 40% (with a higher share only in FY17). The share of small savings (i.e. claims on the government) is estimated to have touched a 16-year high of 13.3% and the share of risky assets (i.e. shares and debentures) was also at a five-year high of 8.9% of GFS.
- The share of small savings and risky assets has averaged 9.5%/7.3% over the past six years, registering a multi-fold increase from an average share of just 0.6%/2.9% in the previous decade.
- At the same time, household liabilities from Banks, as per the RBI's estimates, shrank by ~24% YoY in FY22 – the sharpest decline in 14 years, which is perplexing. As per the RBI's quarterly Basic Statistical Return (BSR-1), the share of the household sector in bank lending rose to 53.8% in FY22 from 52.6% in FY21. This was due to the 13% growth in lending to the household sector in FY22, while total loans rose by just 11%.
- We have prepared our own in-house estimates of household savings. A comparison of RBI data vis-à-vis MOFSL estimates suggests that while our GFS estimates show a divergence of +/-5% (or -0.4/+0.6pp of GDP), the divergence in liabilities over FY19-21 was between -5% (-0.2pp) and +2% (0.1pp). Our estimates suggest that household liabilities stood ~4% of GDP in FY22.
- This is important because if household liabilities are revised upward, then household NFS can be revised to ~7% of GDP – the lowest in more than three decades (it was 7.1% of GDP in FY15). Household debt will also be revised to 36.8% of GDP in Mar'22, as against RBI's data of 35.3% of GDP. In any case, it is down from its peak of 39.3% in FY21, but higher than 33.4% of GDP as of Dec'19.
- The analysis of HH savings is incomplete without physical savings as NFS accounts for 35-40% of total HH savings in India. As per our estimates, physical savings rose by one-third to 11.8% of GDP in FY22, from a multi-year low of 10.6% of GDP in FY21. It means that: a) Total HH savings stood at 20.1% of GDP (or 25.2% of PDI, as per our estimates) in FY22, down from 22.6% (or 27.1% of PDI) in FY21, but similar to the pre-COVID levels; b) The share of (net) financial savings fell to 41% (from a 24-year high of 53.2% in FY21) of HH total savings in FY22; and c) Unlike most Western economies, there were (and are) no excess savings in India.
- As per our estimates, HH GFS fell to just 7.1% of GDP in 1QFY23, while liabilities eased to 3.6% of GDP. HH NFS, thus, eased to ~3.5% of GDP in the quarter-ending Jun'22, marking the lowest level in any quarter since 1QFY19, when the quarterly data became available. Financial savings are generally weaker in the first quarter and the strongest in the fourth quarter of any fiscal.
- Going forward, we expect household savings and India's domestic savings to weaken sharply in FY23. The sharp surge in India's current account deficit (CAD) towards 3.8% of GDP in FY23 can be attributed either to a rise in investments or a fall in savings. Our forecasts suggest that total investments may remain unchanged ~31% of GDP in FY23. If so, it implies that almost the entire widening of CAD is due to a reduction in savings, at least partly led by high inflation. At 27% of GDP, GDS in FY23 will be the lowest in the past two decades. This is, in fact, a direct cause of higher GDP growth in a rising inflation environment.

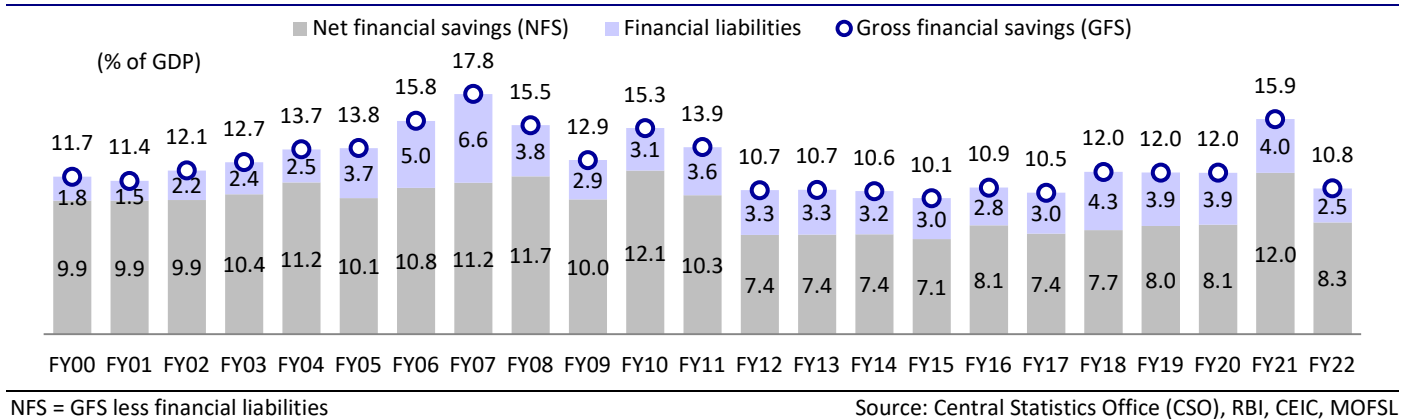
Household GFS in India fell to a five-year low of 10.8% of GDP in FY22 as compared to a 14-year high of 16% of GDP in FY21

HH NFS fell to 8.3% of GDP in FY22, slightly higher than the pre-COVID level:

According to the RBI, household GFS in India touched a five-year low of 10.8% of GDP in FY22, as compared to a 14-year high of 16% of GDP in FY21 (refer Exhibit 1). It means that GFS in FY22 was comparable to the lows seen between FY12 and FY17 (barring FY15, when it was just 10.1% of GDP). It was, however, much lower than the pick-up seen during the pre-COVID years – 12% of GDP each in the FY18-20 period.

In contrast, financial liabilities of households touched an 18-year low of 2.5% of GDP last year, as compared to ~4% of GDP each in the preceding four years. Household liabilities peaked at 6.6% of GDP in FY07, after which it has broadly stayed between 3% and 4% of GDP in the past decade.

Exhibit 1: HH NFS fell to 8.3% of GDP in FY22

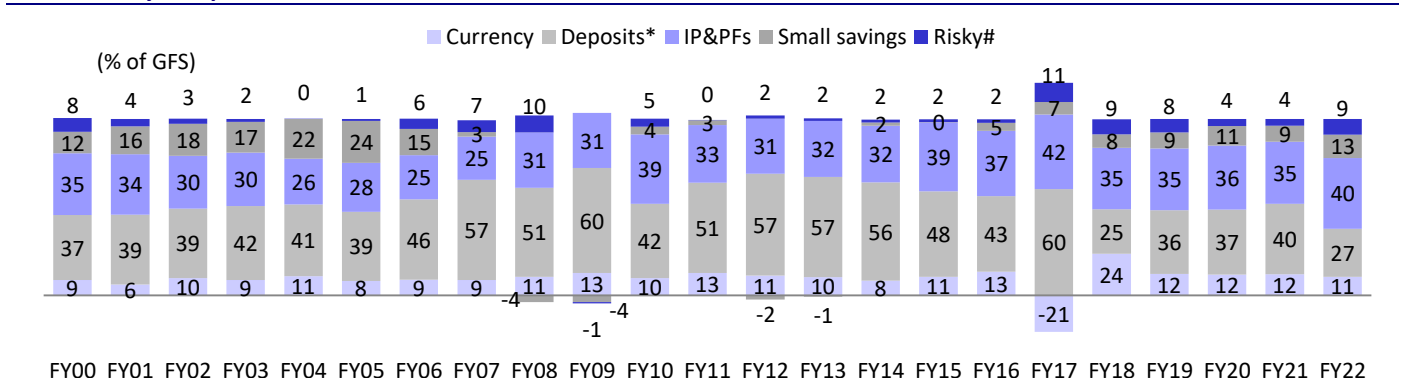


Consequently, household NFS dropped to 8.3% of GDP in FY22, as compared to the near record high of 12% of GDP (it was 12.1% of GDP in FY10) in FY21 and slightly higher than the average of ~8% of GDP between FY16 and FY20 (refer Exhibit 1).

Currency and deposits dipped, while the share of other assets surged in FY22:

There are six major financial assets in which households park their savings: currency in hand; deposits (Banks and non-Banks); Insurance, provident and pension funds; small savings (which is an indirect exposure to government bonds), and risky assets (into shares and debentures in financial markets).

Exhibit 2: Key components of HH GFS



*Banks and non-Banks
#Shares and debentures (financial markets)

Insurance, provident and pension funds (IP&PF)
Source: CSO, RBI, MOFSL

Details of GFS reveal that the share of 'deposits' was just 27.2% of GFS in FY22, the second-lowest in the last 50 years, and the share of 'currency in hand' was also at a five-year low of 10.5% of GFS (*refer Exhibit 2 above*).

The share of small savings/ risky assets has averaged 9.5%/7.3% in the past six years, registering a multi-fold increase from just 0.6%/2.9% in the previous decade

In contrast, the share of IP&PF rose to a multi-decade high of 40% (with a higher share only in FY17 when demonetization was implemented). The share of small savings (i.e. claims on the government) is estimated to have touched a 16-year high of 13.3%. The share of risky assets (i.e. shares and debentures) was at a five-year high of 8.9% of GFS.

The share of small savings and risky assets has averaged 9.5%/7.3% over the past six years, registering a multi-fold increase from an average share of just 0.6%/2.9% in the previous decade.

Exhibit 3: Key components of HH financial savings

	INR t				As a percentage of GDP			
	FY19	FY20	FY21	FY22	FY19	FY20	FY21	FY22
GFS	22.6	24.1	31.6	25.6	12.0	12.0	16.0	10.8
Deposits*	7.8	8.8	12.2	7.0	4.1	4.4	6.2	2.9
Currency	2.8	2.8	3.8	2.7	1.5	1.4	1.9	1.1
Insurance	3.9	3.7	5.6	4.4	2.1	1.9	2.8	1.9
Provident and Pension Funds	4.0	5.0	5.5	5.8	2.1	2.5	2.8	2.5
Investments#	1.7	1.0	1.2	2.3	0.9	0.5	0.6	1.0
Mutual Funds	1.5	0.6	0.6	1.6	0.8	0.3	0.3	0.7
Small savings	2.1	2.6	2.8	3.4	1.1	1.3	1.4	1.4
Financial Liabilities (FL)	7.7	7.7	7.9	5.9	4.1	3.9	4.0	2.5
SCBs	14.9	16.3	23.8	4.9	7.9	8.1	12.0	2.1
NBFCs + HFCs	7.3	8.3	12.2	0.9	3.9	4.1	6.2	0.4
Net Financial Savings (NFS)	14.9	16.3	23.8	19.7	7.9	8.1	12.0	8.3

*Banks and non-Banks

#Shares and debentures (financial markets)

Source: CSO, RBI, MOFSL

Household liabilities shrank by ~24% YoY in FY22, the sharpest decline in 14 years

The sharp fall in household liabilities in FY22 is perplexing...: At the same time, the fall in household liabilities in FY22 is perplexing. As per the RBI's estimates, household liabilities from Banks shrank by ~24% YoY in FY22 – the sharpest decline in 14 years (*refer Exhibit 4*). After growing at an average of 15% for 12 successive years (up to FY21), the decline of almost a quarter in financial liabilities was notable in FY22.

Exhibit 4: HH liabilities fell for the first time in 13 years in FY22 – the sharpest fall in 14 years

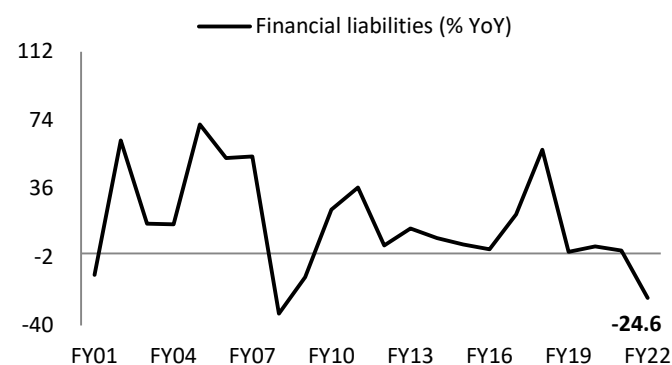
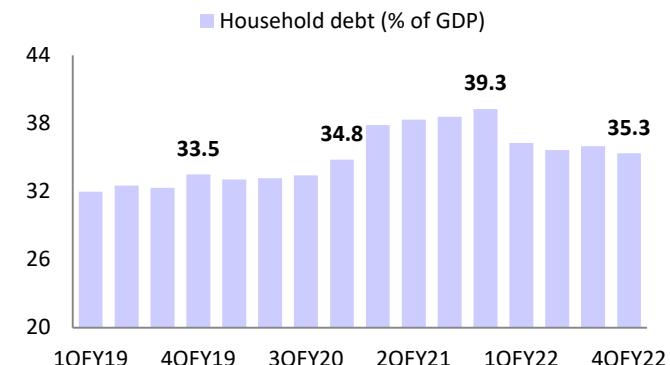


Exhibit 5: Household debt, as per RBI, eased to 35.3% of GDP in FY22, down from its peak of 39.3% in FY21



Source: CSO, RBI, MOFSL

Household debt was estimated at INR83.6t, or 35.3% of GDP, in 4QFY22. At its peak, it stood at 39.3% of GDP in FY21 from 32%-33% of GDP in FY19 and FY20 (refer Exhibit 5).

...and is in contrast to our estimates: We have prepared our own in-house estimates of household savings (refer [here](#) and [here](#) for detailed notes). A comparison of RBI data vis-à-vis MOFSL estimates suggests that while our GFS estimates show a divergence of +/-5% (or -0.4/+0.6pp of GDP), the divergence in liabilities over FY19-21 was between -5% (-0.2pp) and +2% (0.1pp). Our estimates suggest that household liabilities stood ~4% of GDP in FY22 (refer Exhibit 6 and 7).

Our estimates of financial liabilities confirm they were ~4% of GDP in FY22, same as in the past few years, but higher than RBI's estimate of 2.5% of GDP

As per MOFSL's estimates, HH GFS stood at 11.1% of GDP in FY22, which is not very different from RBI's estimate of 10.8% of GDP. However, our estimates of financial liabilities confirm that they were ~4% of GDP in FY22, same as in the past few years, but much higher than RBI's estimate of 2.5% of GDP. While NFS fell to 8.3% of GDP, as per the RBI, our estimates suggest a decline to ~7% of GDP.

Exhibit 6: The divergence between our GFS estimates v/s that of RBI stood at +/-5%...

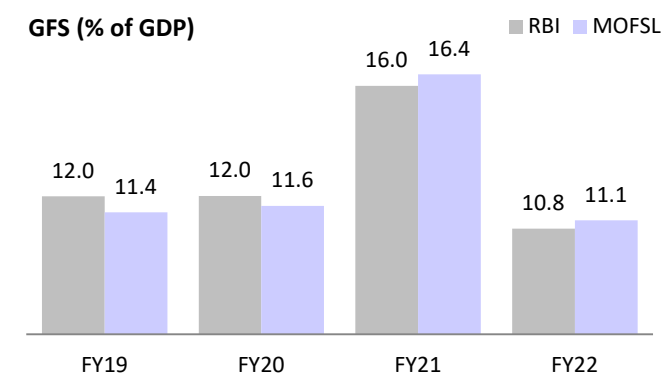
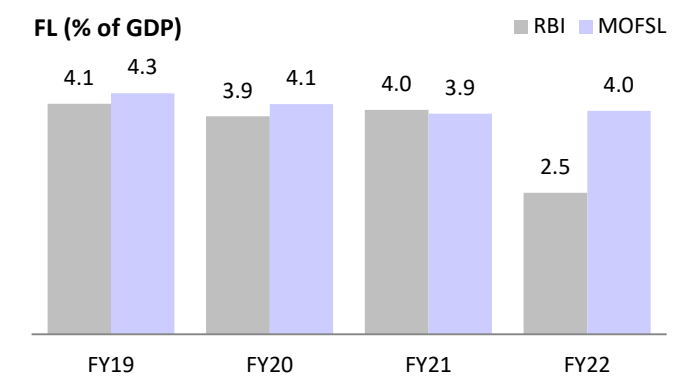


Exhibit 7: ...with a similar divergence in liabilities, except FY22



Source: RBI, CSO, SEBI, CEIC, MOFSL

It is even more surprising because our estimates of HH liabilities are based on RBI's other quarterly publication: BSR-1. As per BSR-1, the share of the household sector in lending by SCBs rose to 53.8% in FY22 from 52.6% in FY21. This was due to the 13% growth in lending to the household sector in FY22, while total loans increased by just 11%. This is what makes RBI's estimate of a 24% decline in household liabilities (from Banks) so unbelievable.

If household liabilities are revised upward, then NFS can fall to ~7% of GDP, the lowest in over three decades

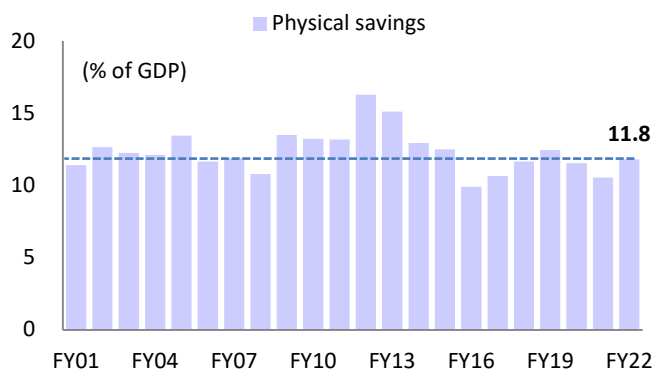
It is important because if household liabilities are revised upward, then their NFS can fall to ~7% of GDP – the lowest in more than three decades (it was 7.1% of GDP in FY15). Household debt has been revised to 36.8% of GDP in Mar'22, as against RBI's data of 35.3% of GDP.

Physical HH savings grew to 11.8% of GDP in FY22...: Indian household savings have two components: (net) financial savings and physical savings. The analysis of HH savings is incomplete without physical savings as NFS accounts for 35-40% of total HH savings in India.

As per our estimates, physical savings rose by one-third to 11.8% of GDP in FY22, from a multi-year low of 10.6% of GDP in FY21

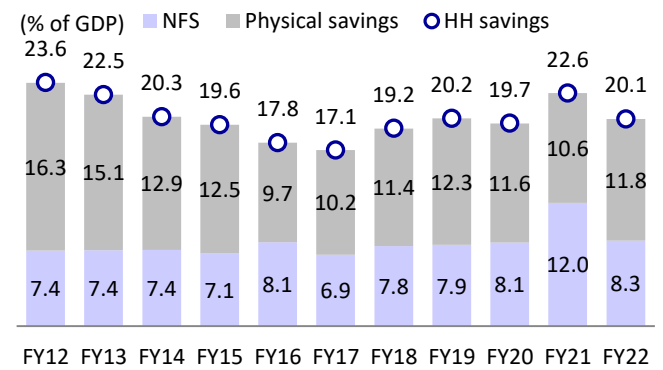
As per our estimates, physical savings rose by one-third to 11.8% of GDP in FY22, from a multi-year low of 10.6% of GDP in FY21 (*refer Exhibit 8*). Beginning in the 21st century, physical household savings grew rapidly in India. While it had rarely touched 10% of GDP in the 20th century, it has never fallen below 10% (except in FY16 when it stood at 9.9%) in the first two decades of the 21st century. This has been one of the primary supporters of India's GDP growth.

Exhibit 8: HH physical savings rose to 11.8% of GDP in FY22 v/s 10.6% in FY21...



*Estimate physical HH savings based on data for 26 states, accounting for more than 92% of all S&RC receipts

Exhibit 9: ...implying that total HH savings were ~20% of GDP, unchanged from pre-COVID levels



* MOFSL estimate

Source: RBI, CSO, SEBI, CEIC, MOFSL

...implying total HH savings of ~20% of GDP, same as in the pre-COVID period:

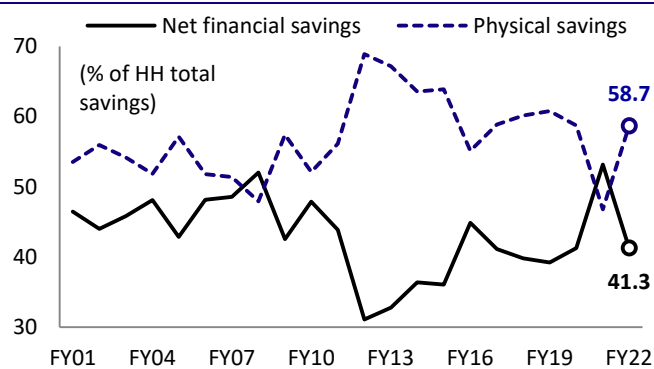
Total HH savings stood at 20.1% of GDP (or 25.2% of PDI, as per our estimates) in FY22, down from 22.6% (or 27.1% of PDI) in FY21, but similar to the pre-COVID levels (*refer Exhibit 9*).

Our calculations suggest that the share of financial savings fell to 41% of total HH savings in FY22 from a 24-year high of 53.2% in FY21

Our calculations suggest that the share of financial savings fell to 41% (from a 24-year high of 53.2% in FY21) of HH total savings in FY22, while physical savings account for the rest (*refer Exhibit 10*).

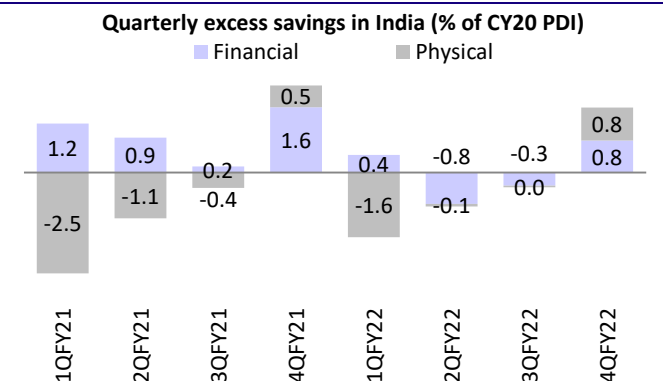
As discussed in our previous [report](#), although there were excess financial savings in India in FY21, it was offset by lower physical savings. In FY22, even financial savings fell to pre-COVID levels, leaving no scope for excess personal or HH savings in India, unlike Western nations (*refer Exhibit 11*).

Exhibit 10: The share of physical savings is back to ~60% of total HH savings in FY22



FY22 physical savings are MOFSL estimates

Exhibit 11: Unlike the West, India never experienced excess personal or HH savings

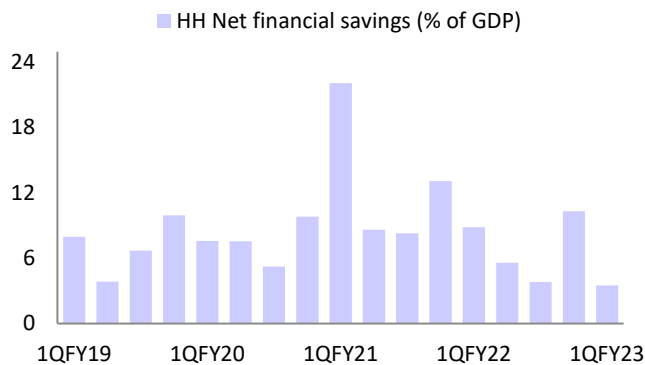


Source: RBI, CSO, SEBI, CEIC, MOFSL

As per our estimates, HH NFS eased to ~3.5% of GDP in the quarter-ending Jun'22, marking the lowest level since 1QFY19

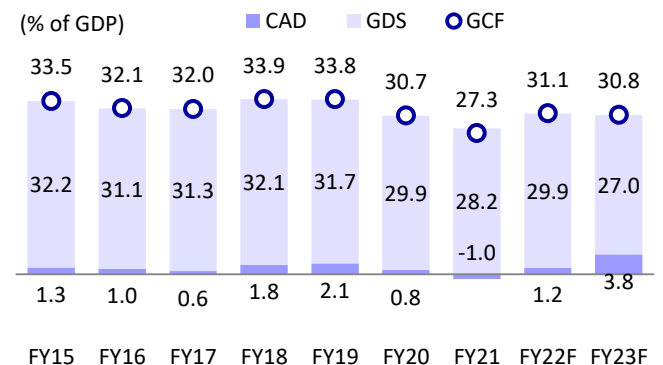
HH NFS is estimated to have fallen further in 1QFY23: As per our estimates, HH GFS fell to just 7.1% of GDP in 1QFY23, while liabilities eased to 3.6% of GDP. HH NFS eased to ~3.5% of GDP in the quarter-ending Jun'22, marking the lowest level in any quarter since 1QFY19, when the quarterly data became available (*refer Exhibit 12*). Financial savings are generally weaker in the first quarter and the strongest in the fourth quarter of any fiscal.

Exhibit 12: HH financial savings are estimated to have fallen further in 1QFY23



This chart is based on MOFSL estimates

Exhibit 13: We expect India's domestic savings to fall to two-decade low in FY23



F = Forecasts

Source: RBI, CSO, CEIC, MOFSL

India's domestic savings can fall to a two-decade low of 27% of GDP in FY23 as higher inflation failed to dent consumption and GDP growth

Conclusion: Expect lower domestic savings in FY23

Going forward, we expect household savings and India's gross domestic savings (GDS) to weaken sharply in FY23. The sharp surge in India's CAD towards 3.8% of GDP in FY23 can be attributed either to a rise in investments or a fall in savings. Based on available data for 1Q, our [forecasts](#) suggest that total investments may remain unchanged ~31% of GDP in FY23. If so, it implies that almost the entire widening of CAD – to 3.8% from 1.2% of GDP in FY21 – is due to a reduction in savings (*refer Exhibit 13*). At 27% of GDP, GDS in FY23 will be the lowest in the past two decades.

One of the primary causes of this sharp reduction in GDS will be higher inflation. Although consumption and GDP growth are expected to remain reasonably strong in FY23, the high inflation implies that it will be possible only due to a sharp reduction in savings, resulting in a wider CAD. Without a strong revival in GDS, any pickup in investments will drive CAD higher. Therefore, India must strive to push savings higher to achieve higher growth on a sustainable basis for a long period of time.

NOTES

Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	> - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

Disclosures:

The following Disclosures are being made in compliance with the SEBI Research Analyst Regulations 2014 (herein after referred to as the Regulations).

Motilal Oswal Financial Services Ltd. (MOFSL) is a SEBI Registered Research Analyst having registration no. INH000000412. MOFSL, the Research Entity (RE) as defined in the Regulations, is engaged in the business of providing Stock broking services, Depository participant services & distribution of various financial products. MOFSL is a listed public company, the details in respect of which are available on www.motilaloswal.com. MOFSL (erstwhile Motilal Oswal Securities Limited - MOSL) is registered with the Securities & Exchange Board of India (SEBI) and is a registered Trading Member with National Stock Exchange of India Ltd. (NSE) and Bombay Stock Exchange Limited (BSE), Multi Commodity Exchange of India Limited (MCX) and National Commodity & Derivatives Exchange Limited (NCDEX) for its stock broking activities & is Depository participant with Central Depository Services Limited (CDSL) National Securities Depository Limited (NSDL), NERL, COMRIS and CCRL and is member of Association of Mutual Funds of India (AMFI) for distribution of financial products and Insurance Regulatory & Development Authority of India (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Ltd. are available on the website at <http://onlinereports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf>

Details of pending Enquiry Proceedings of Motilal Oswal Financial Services Limited are available on the website at <https://galaxy.motilaloswal.com/ResearchAnalyst/PublishViewLitigation.aspx>

MOFSL, its associates, Research Analyst or their relatives may have any financial interest in the subject company. MOFSL and/or its associates and/or Research Analyst or their relatives may have actual beneficial ownership of 1% or more securities in the subject company at the end of the month immediately preceding the date of publication of the Research Report or date of the public appearance. MOFSL and its associate company(ies), their directors and Research Analyst and their relatives may have any other potential conflict of interests at the time of publication of the research report or at the time of public appearance, however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.

In the past 12 months, MOFSL or any of its associates may have:

- received any compensation/other benefits from the subject company of this report
- managed or co-managed public offering of securities from subject company of this research report,
- received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- received compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company of this research report.
- MOFSL and its associates have not received any compensation or other benefits from the subject company or third party in connection with the research report.
- Subject Company may have been a client of MOFSL or its associates during twelve months preceding the date of distribution of the research report.
- Research Analyst may have served as director/officer/employee in the subject company.
- MOFSL and research analyst may engage in market making activity for the subject company.

MOFSL and its associate company(ies), and Research Analyst and their relatives from time to time may have:

- a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein.
- be engaged in any other transaction involving such securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the company(ies) discussed herein or act as an advisor or lender/borrower to such company(ies) or may have any other potential conflict of interests with respect to any recommendation and other related information and opinions.; however the same shall have no bearing whatsoever on the specific recommendations made by the analyst(s), as the recommendations made by the analyst(s) are completely independent of the views of the associates of MOFSL even though there might exist an inherent conflict of interest in some of the stocks mentioned in the research report.

Above disclosures include beneficial holdings lying in demat account of MOFSL which are opened for proprietary investments only. While calculating beneficial holdings, it does not consider demat accounts which are opened in name of MOFSL for other purposes (i.e holding client securities, collaterals, error trades etc.). MOFSL also earns DP income from clients which are not considered in above disclosures.

To enhance transparency, MOFSL has incorporated a Disclosure of Interest Statement in this document. This should, however, not be treated as endorsement of the views expressed in the report. MOFSL and / or its affiliates do and seek to do business including investment banking with companies covered in its research reports. As a result, the recipients of this report should be aware that MOFSL may have a potential conflict of interest that may affect the objectivity of this report.

Terms & Conditions:

This report has been prepared by MOFSL and is meant for sole use by the recipient and not for circulation. The report and information contained herein is strictly confidential and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent of MOFSL. The report is based on the facts, figures and information that are considered true, correct, reliable and accurate. The intent of this report is not recommendatory in nature. The information is obtained from publicly available media or other sources believed to be reliable. Such information has not been independently verified and no guaranty, representation of warranty, express or implied, is made as to its accuracy, completeness or correctness. All such information and opinions are subject to change without notice. The report is prepared solely for informational purpose and does not constitute an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments for the clients. Though disseminated to all the customers simultaneously, not all customers may receive this report at the same time. MOFSL will not treat recipients as customers by virtue of their receiving this report.

Analyst Certification

The views expressed in this research report accurately reflect the personal views of the analyst(s) about the subject securities or issues, and no part of the compensation of the research analyst(s) was, is, or will be directly or indirectly related to the specific recommendations and views expressed by research analyst(s) in this report.

Disclosure of Interest Statement

Companies where there is interest

Analyst ownership of the stock

No

A graph of daily closing prices of securities is available at www.nseindia.com, www.bseindia.com. Research Analyst views on Subject Company may vary based on Fundamental research and Technical Research. Proprietary trading desk of MOFSL or its associates maintains arm's length distance with Research Team as all the activities are segregated from MOFSL research activity and therefore it can have an independent view with regards to subject company for which Research Team have expressed their views.

Regional Disclosures (outside India)

This report is not directed or intended for distribution to or use by any person or entity resident in a state, country or any jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL & its group companies to registration or licensing requirements within such jurisdictions.

For Hong Kong:

This report is distributed in Hong Kong by Motilal Oswal capital Markets (Hong Kong) Private Limited, a licensed corporation (CE AYY301) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) "SFO". As per SEBI (Research Analyst Regulations) 2014 Motilal Oswal Financial Services Limited (SEBI Reg No. INH000000412) has an agreement with Motilal Oswal capital Markets (Hong Kong) Private Limited for distribution of research report in Hong Kong. This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The Indian Analyst(s) who compile this report is/are not located in Hong Kong & are not conducting Research Analysis in Hong Kong.

For U.S.

MOTILAL OSWAL Financial Services Limited (MOFSL) is not a registered broker - dealer under the U.S. Securities Exchange Act of 1934, as amended (the "1934 act") and under applicable state laws in the United States. In addition MOFSL is not a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended (the "Advisers Act" and together with the 1934 Act, the "Acts"), and under applicable state laws in the United States. Accordingly, in the absence of specific exemption under the Acts, any brokerage and investment services provided by MOFSL, including the products and services described herein are not available to or intended for U.S. persons. This report is intended for distribution only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the Exchange Act and interpretations thereof by SEC (henceforth referred to as "major institutional investors"). This document must not be acted on or relied on by persons who are not major institutional investors. Any investment or investment activity to which this document relates is only available to major institutional investors and will be engaged in only with major institutional investors. In reliance on the exemption from registration provided by Rule 15a-6 of the U.S. Securities Exchange Act of 1934, as amended (the "Exchange Act") and interpretations thereof by the U.S. Securities and Exchange Commission ("SEC") in order to conduct business with Institutional Investors based in the U.S., MOFSL has entered into a chaperoning agreement with a U.S. registered broker-dealer, Motilal Oswal Securities International Private Limited, ("MOSIPL"). Any business interaction pursuant to this report will have to be executed within the provisions of this chaperoning agreement.

The Research Analysts contributing to the report may not be registered /qualified as research analyst with FINRA. Such research analyst may not be associated persons of the U.S. registered broker-dealer, MOSIPL, and therefore, may not be subject to NASD rule 2711 and NYSE Rule 472 restrictions on communication with a subject company, public appearances and trading securities held by a research analyst account.

For Singapore

In Singapore, this report is being distributed by Motilal Oswal Capital Markets Singapore Pte Ltd ("MOCMSPL") (Co Reg. No. 201129401Z) which is a holder of a capital markets services license and an exempt financial adviser in Singapore, as per the approved agreement under Paragraph 9 of Third Schedule of Securities and Futures Act (CAP 289) and Paragraph 11 of First Schedule of Financial Advisors Act (CAP 110) provided to MOCMSPL by Monetary Authority of Singapore. Persons in Singapore should contact MOCMSPL in respect of any matter arising from, or in connection with this report/publication/communication. This report is distributed solely to persons who qualify as "Institutional Investors", of which some of whom may consist of "accredited" institutional investors as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Accordingly, if a Singapore person is not or ceases to be such an institutional investor, such Singapore Person must immediately discontinue any use of this Report and inform MOCMSPL.

Disclaimer:

The report and information contained herein is strictly confidential and meant solely for the selected recipient and may not be altered in any way, transmitted to, copied or distributed, in part or in whole, to any other person or to the media or reproduced in any form, without prior written consent. This report and information herein is solely for informational purpose and may not be used or considered as an offer document or solicitation of offer to buy or sell or subscribe for securities or other financial instruments. Nothing in this report constitutes investment, legal, accounting and tax advice or a representation that any investment or strategy is suitable or appropriate to your specific circumstances. The securities discussed and opinions expressed in this report may not be suitable for all investors, who must make their own investment decisions, based on their own investment objectives, financial positions and needs of specific recipient. This may not be taken in substitution for the exercise of independent judgment by any recipient. Each recipient of this document should make such investigations as it deems necessary to arrive at an independent evaluation of an investment in the securities of companies referred to in this document (including the merits and risks involved), and should consult its own advisors to determine the merits and risks of such an investment. The investment discussed or views expressed may not be suitable for all investors. Certain transactions -including those involving futures, options, and other derivative products as well as non-investment grade securities - involve substantial risk and are not suitable for all investors. No representation or warranty, express or implied, is made as to the accuracy, completeness or fairness of the information and opinions contained in this document. The Disclosures of Interest Statement incorporated in this document is provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. This information is subject to change without any prior notice. The Company reserves the right to make modifications and alterations to this statement as may be required from time to time without any prior approval. MOFSL, its associates, their directors and the employees may from time to time, effect or have effected an own account transaction in, or deal as principal or agent in or for the securities mentioned in this document. They may perform or seek to perform investment banking or other services for, or solicit investment banking or other business from, any company referred to in this report. Each of these entities functions as a separate, distinct and independent of each other. The recipient should take this into account before interpreting the document. This report has been prepared on the basis of information that is already available in publicly accessible media or developed through analysis of MOFSL. The views expressed are those of the analyst, and the Company may or may not subscribe to all the views expressed therein. This document is being supplied to you solely for your information and may not be reproduced, redistributed or passed on, directly or indirectly, to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject MOFSL to any registration or licensing requirement within such jurisdiction. The securities described herein may or may not be eligible for sale in all jurisdictions or to certain category of investors. Persons in whose possession this document may come are required to inform themselves of and to observe such restriction. Neither the Firm, nor its directors, employees, agents or representatives shall be liable for any damages whether direct or indirect, incidental, special or consequential including lost revenue or lost profits that may arise from or in connection with the use of the information. The person accessing this information specifically agrees to exempt MOFSL or any of its affiliates or employees from, any and all responsibility/liability arising from such misuse and agrees not to hold MOFSL or any of its affiliates or employees responsible for any such misuse and further agrees to hold MOFSL or any of its affiliates or employees free and harmless from all losses, costs, damages, expenses that may be suffered by the person accessing this information due to any errors and delays.

Registered Office Address: Motilal Oswal Tower, Rahimullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022-3980 4263; www.motilaloswal.com. Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai- 400 064. Tel No: 022-71881000. Details of Compliance Officer: Neeraj Agarwal, Email Id: na@motilaloswal.com, Contact No. 022-71881085.

Registration details of group entities: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL: IN-DP-16-2015; NSDL: IN-DP-NSDL-152-2000; Research Analyst: INH000000412 . AMFI: ARN : 146822. IRDA Corporate Agent - CA0579. Motilal Oswal Financial Services Ltd. is a distributor of Mutual Funds, PMS, Fixed Deposit, Insurance, Bond, NCDs and IPO products. Customer having any query/feedback/ clarification may write to query@motilaloswal.com. In case of grievances for any of the services rendered by Motilal Oswal Financial Services Limited (MOFSL) write to grievances@motilaloswal.com, for DP to dp@motilaloswal.com.