### FINANCIAL SERVICES

# **ECOSCOPE**

### **The Economy Observer**

### A primer of Household finances in India

Income, savings, and debt patterns reflect deteriorating financial position

- The household sector, which includes all individuals and unincorporated enterprises, is one of the three primary domestic participants in an economy. From the perspective of GDP, the household (HH) sector has the highest share and contribution to GDP growth, as their spending consumption and investments accounts for ~70% of GDP. This is not only true for India, but for most other major nations on the planet. Still, the data availability and research dedicated to this segment is not up to the mark in India. Not only is there an absence of a comprehensive and timely income statistics (on monthly or quarterly basis), but quarterly consumption data presents many challenges and annual savings data is highly under-researched. With a sharp surge in personal loans in the recent period, household debt has attracted some attention.
- In this note, we intend to discuss in detail about personal disposable income (PDI), household savings, their debt and spending patterns in the country. Given below are some of the questions we have answered in this note:
- What are the recent trends in PDI and what are its constituents?
- What explains the combination of weak PDI growth and very strong growth in personal income tax (PIT) collection?
- > What explains low and falling household savings in India? Why are they important and do they pose a concern?
- > Why does household net financial savings (NFS) hold special significance in economic growth?
- What are the recent trends and key drivers of household debt in India?
- Is the recent surge in household debt a matter of concern?
- Lastly, is the recent slowdown in private consumption temporary or structural? Can household spending (consumption + investments) grow much faster in FY25 and beyond than in FY24?
- These answers help us draw conclusions regarding the ability of consumers to support economic growth in India. The growth in private final consumption expenditure (PFCE) in nominal terms has weakened to 8.0-8.5% YoY in FY24, the slowest in two decades, barring FY21. In real terms also, PFCE growth (at 3-4%) was the slowest in two decades. Is this something fleeting or more durable? Not only consumption, household total spending growth was only ~9% YoY in FY24, much weaker than 10.5% in the previous four years (FY20-FY23) and 11-12% in the pre-pandemic years.
- Our conclusions are clear. The financial position of the household sector in India began deteriorating in the pre-pandemic years and continued to worsen in the recent years as well. Not only is the growth in household debt in recent years the fastest in several decades, it has coincided with weak income growth. At the same time, while physical savings are substituting financial savings, the collapse in the latter is unprecedented and HH total savings have declined. Our calculations suggest that HH net financial savings (NFS) have likely fallen further in FY24 (to about 5% of GDP, from 5.3% in FY23), and even if it remains unchanged in FY25 (though we hope it improves from these levels), household spending growth would remain subdued at sub-10%.
- Overall, we expect household spending growth to remain muted in FY25 and for the next few years, until HH NFS comes back to a reasonable level of 7-8% of GDP. In particular, we believe that while consumption could grow faster in FY25 compared to the two-decade slowest growth in FY24, household investments (which largely consist of the residential real estate) could moderate. This assumption is based on the expectation that HH NFS picks up to 5.5% of GDP this year.
- If household spending remains subdued (as we predict) and the government spending also grows slowly in order to meet its fiscal consolidation path, then the entire responsibility to keep nominal GDP growth intact at 11% (same as in the prepandemic years, let alone higher growth) falls on the corporate sector. This would be a tall task for the corporate sector (since it contributes only about 20%-25% to GDP growth), and therefore underlines the urgent need for HH NFS to pick up in the coming years.
- Alternatively, HH NFS may remain stuck at low levels (or fall further), potentially boosting GDP growth in the near term. However, this growth model will become unsustainable when corporate investments pick up in the future.

Nikhil Gupta – Research analyst (Nikhil.Gupta@MotilalOswal.com)

Tanisha Ladha – Research analyst (Tanisha.Ladha@MotilalOswal.com)

Investors are advised to refer through important disclosures made at the last page of the Research Report. Motilal Oswal research is available on www.motilaloswal.com/Institutional-Equities, Bloomberg, Thomson Reuters, Factset and S&P Capital.

### **ECOSCOPE**

Personal disposable income (PDI): Trends, constituents, and drivers

Aggregate income (equal to GDP) generated in an economy is distributed among the three domestic economic participants – household (HH), corporate, and the government. In simple words, PDI is the total income accrued to the household sector after paying taxes in an economy, i.e., take-home income. In this section, we will delve deeper into the long-term trends in PDI growth and its key components. Overall, PDI growth has moderated in the post-pandemic years, which was broadly the case in the pre-pandemic period as well. This fact poses another important question regarding its disconnect with very strong growth in personal income taxes (PIT). We argue that the sharp uptick in PIT in the past four years is not due to higher income, but led by a regulatory change in FY21.

### 1. Falling share of PDI (as % of GDP/GNDI) neither unique nor concerning

Based on three-year centered moving average (3ycma), nominal PDI growth stayed in a narrow range of 10-12% YoY in the pre-pandemic years (FY14-FY19), compared to an average growth of 16% in the prior six years (FY08-FY13). Due to the pandemic, it moved into high single-digit growth post-FY20, but recovered to 12% in FY23 (*Exhibit 1*).

India's long-term data suggests that PDI growth has lagged GDP growth for majority of the postindependence period in India

What is more important to note is that GDP growth has outpaced PDI growth in the post-pandemic period (FY20-FY23), due to which the share of PDI – as % of gross national disposable income (GNDI) or GDP – has fallen to a five-year low of 77.8% in FY23 (*Exhibit 2*). This, however, is neither unique nor concerning. India's long-term data suggests that PDI growth has lagged GDP growth for majority of the post-independence period in India, and that is why the fall in the share of PDI (as % GNDI) has been happening almost continuously for a long period of time (*Exhibit 3*).

Moreover, if we compare the share of household income in recent years vis-à-vis two decades ago (2000-04) in the world's other major economies, we find that it has declined in many of these economies (*Exhibit 4*). Notably, this share at 79% in the last five years (and 78% in FY23) in India is the highest compared to other nations.

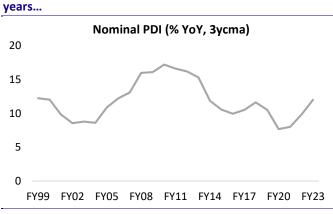


Exhibit 1: Nominal PDI growth has weakened in the past few years... Exhibit 2: ...and it has fallen to five-year low of 78% of GNDI in FY23

Nominal PDI (% of GNDI) 85 80 75 70 65 FY99 FY03 FY07 FY11 FY15 FY19 FY23 GNDI = Gross national disposable income

<sup>3-</sup>year centered moving average (Assuming 9% growth in FY24) 2004-05 base till FY11; 2011-12 base since FY12

Source: Central Statistics Office (CSO), CEIC, RBI, MOFSL

### **ECOSCO**PE

#### Exhibit 3: PDI has lagged GDP growth during most decades...

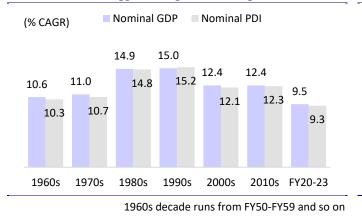
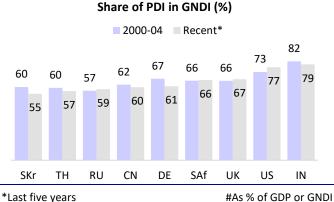


Exhibit 4: ...and is the case in many other economies as well



Source: CSO, CEIC, Various national sources, MOFSL

# 2. Lower share of compensation of employees (CoE) in line with the low share of regular wage/salaried employment

Further details of PDI reveals that it can be divided into three major components – compensation of employees (CoEs, earned by regular wage/salaried workers), mixed income/operating surplus (MI/OS, earned by self-employed or own-account workers) and others (including property income, interest receipts, current transfers form the government etc.). In India, only about 40% of PDI comes from CoEs, while another 35% accrues to the self-employed people. After remaining steady for many years in the pre-pandemic period, this composition changed slightly in the favor of CoEs, at the cost of self-employed class (*Exhibit 5*). A comparison of the break-up of India's PDI vis-à-vis other major nations suggests that the share of CoEs – at 40% - is, by far, the lowest and compares with 55-86% in other economies. While the share of 'others' in India is similar to that in the US (and lower than in Russia), the share of MI/OS – at 35% - is the highest in PDI (*Exhibit 6*).

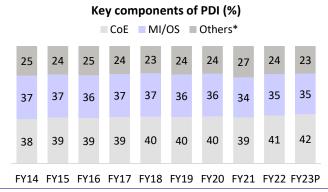
This, however, should not be surprising considering the profile of India's workforce. Based on International Labour organization (ILO), the share of self-employed is as high as 75% in India, while regular employees account for less than a quarter of its workforce *(Exhibit 7)*. Unfortunately, the share of the latter has actually fallen in the post-pandemic period.

The share of regular employees at ~25% is the lowest in India, and compares with >90% in Germany, Russia, and the US A comparison with other major nations suggests that the share of regular employees is, by far, the lowest in India, and compares with more than 90% in Germany, Russia, and the US (*Exhibit 8*). At the same time, India's self-employed workforce is huge.

The lower share of CoEs in India represents the earnings of regular employees, which accounts for a small portion of the total workforce in the country.

The share of CoEs – at 40% in India is, by far, the lowest and compares with 55-86% in other economies

# Exhibit 5: Compensation of employees (COEs) accounts for only ~40% of PDI...



\*Include property income, current transfers and others

## Exhibit 7: India's workforce profile may explain the lower share of CoEs...

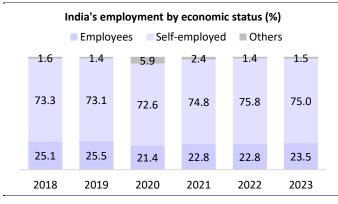
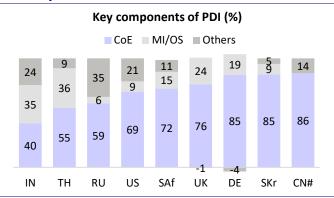
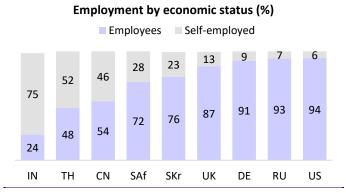


Exhibit 6: ...which is the lowest compared to that in world's other major economies



Arranged by the share of CoEAverage of last five years#Data up to 2021Source: CEIC, Various national sources, MOFSL

# Exhibit 8: ...as the share of regular wage/salaried employees is the lowest compared to other nations



Source: International Labour Organization (ILO), MOFSL

# 3. What explains the combination of weak PDI growth and strong personal income taxes (PIT)?

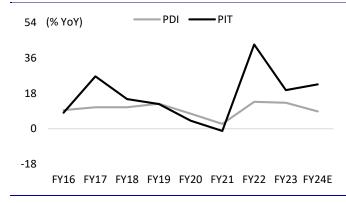
After discussing India's PDI, it is important to address the most perplexing question about it. If PDI growth has moderated in India, what explains a very strong rise in PIT? Income taxes paid by entities other than corporations (i.e., the household sector, conveniently called personal income taxes) have increased at a compounded rate of ~20% during the last four years (FY21-FY24RE), while PDI (and GDP) growth is more modest at <10% (*Exhibit 9*). Consequently, PIT has increased to 3.5% of GDP in FY24RE (and budgeted at 3.5% in FY25 as well), up from 2.5% in the pre-pandemic years (*Exhibit 10*). If PDI growth is so muted, what explains this surge in PIT?

We believe that taxes paid on dividends explain a good chunk of the surge in PIT during the past four years Because of the lack of any details on PIT, the question is largely unsettled with possible explanations like the K-shaped recovery or higher surcharges on high-income individual taxpayers. We, however, believe that taxes paid on dividends explain a good chunk of the surge in PIT during the past four years.

In its <u>2020-21 Budget speech</u>, on the 1<sup>st</sup> February 2020, before the pandemic hit us, the Finance Minister proposed "...to remove the DDT and adopt the classical system of dividend taxation under which the companies would not be required to pay DDT. The dividend shall be taxed only in the hands of the recipients at their applicable rate...". It means that dividend distribution tax (DDT) ended to exist in its erstwhile

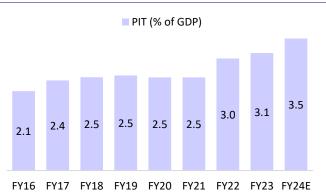
form in FY21, and was shifted from the corporation taxes into PIT. With such a shift, the tax rate on dividends was also changed from 15% (plus surcharges and cess) to the personal income tax applicable to the individual taxpayer. These two related changes – to our mind – explains about 60-65% of the surge in PIT in the post-pandemic years.

Exhibit 9: Personal income taxes (PIT) have grown very strongly in the past three years...





ECOSCOPE



Source: Union Budget documents, Capitaline, Author's calculation

The shift of dividend taxes from the corporation taxes to PIT alone accounts for 60-65% of the surge in PIT

According to the last data available for DDT under corporation taxes, it amounted to INR500b (or 0.3% of GDP) in FY20. It is common knowledge that the equity market is dominated by the high-income or the wealthiest individuals. In the US, as much as 87% of all corporate equities and mutual fund shares were held by the top 20% income earners (or 20% wealthiest) in 2023. It would not be unfair to assume that similar is the case in India also, and thus, their dividend receipts are subjected to a much higher tax rate since FY21. Including the surcharges, the effective tax rate on dividends could be 35-40%, double the tax rate on dividends till FY20.

Excluding dividend taxes, thus, PIT would have mostly increased in line with nominal PDI/GDP, with better growth only in FY24 Further, our calculations suggest that listed companies accounted for about 75% of total dividends paid in the country in the pre-pandemic years (back calculated from dividend tax receipts). Assuming that the share of listed companies would have increased to 90%-100% now, taxes on dividends (with an effective tax rate of 36%) would amount to INR1.8-2t in FY24 or 0.6-0.7% of GDP (*Exhibit 11*). If so, the shift of dividend taxes from the corporation taxes to PIT alone accounts for 60-65% of the surge in PIT (to 3.5% of GDP, from 2.5% in the pre-FY20 years). Excluding dividend taxes, thus, PIT would have mostly increased in line with nominal PDI/GDP, with better growth only in FY24. PIT excluding dividend taxes (PIT ex DT) amounted to 2.4% of GDP in FY23, lower than 2.5% of GDP each in FY19 and FY20, but likely surged to 2.8% of GDP in FY24RE (*Exhibit 12*).

0.3

0.3

0.2

0.2



Exhibit 11: A good chunk of PIT growth is likely because of the inclusion of dividend taxes since FY21...

Taxes paid on dividends\* (% of GDP)

0.3

0.7

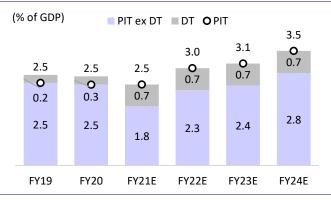
0.7

0.7

О

0.7

Exhibit 12: ...without which PIT growth may not have been as impressive in the post-pandemic period



\*Shifted from corporate to PIT from FY21. Tax rate on dividends also changed from 15% in FY20 to applicable individual income tax slab (assumed at 36%)

FY16 FY17 FY18 FY19 FY20 FY21E FY22E FY23E FY24E

MOFSL estimates from FY21 based on total dividends paid by listed companies and effective tax rate of 36% Source: Union Budget documents, Capitaline, MOFSL

Besides dividends, it is very likely that the capital market could have accounted for another 5-10% of the surge in PIT in FY24. The securities transaction taxes (STT) are also expected to triple to INR360b in FY25BE (or 0.11% of GDP), from INR124b (or 0.06% of GDP) in FY20.

Besides dividends, the capital market could have accounted for another 5-10% of the surge in PIT in FY24 Overall, the following three factors explain the surge in PIT in the last few years – 1) inclusion of taxes on dividends into PIT, from the corporation taxes, 2) almost doubling of the effective tax rate on dividends, which have almost doubled, and 3) capital market transactions (incurring STT) and capital gains taxes. In other words, the growth in PIT, excluding these factors, has been largely in line with the nominal PDI/GDP growth. Additionally, the K-shaped recovery (since the surcharges were increased at high-income levels) may have also contributed to the surge in PIT, but its impact is likely small.

The share of PFCE has risen to almost three-decade high of 77% of PDI in FY23 and that of physical savings was at a decade high of 17%

### Household savings – Why do NFS hold special importance?

What do consumers do with their earnings? They can either spend it on consumption or invest in property market (called physical savings) or save in financial assets. PDI, thus, is divided into these three segments – private final consumption expenditure (PFCE), physical savings, and net financial savings (NFS). The share of PFCE has risen to almost three-decade high of 77% of PDI in FY23 and that of physical savings was at a decade high of 17%, implying that NFS has fallen to a four-decade low of 7% of PDI (*Exhibit 13*). These shares would have changed only slightly in FY24, with PFCE and NFS falling a little, while physical savings are expected to have risen further (official data only available up to FY23 as of now). NFS and physical savings, together, are called HH total savings in India.

In this section, we delve deeper into the recent trends of HH savings, and dissect the changing composition and preferences within that. We also argue that HH NFS holds special significance in economic growth, and thus, its sharp collapse in the last two years should not be ignored.

### 1. What are the significant shifts in household savings?

HH savings in India consist of two parts – net financial savings (NFS) and physical savings. NFS is arrived by adjusting gross financial savings (GFS) with financial liabilities (FL). GFS includes seven key areas: currency, deposits (bank and non-bank), insurance, provident and pension funds (P&PFs, including public provident funds [PPF]), shares & debentures (S&D), claims on government (small savings), and others. HH physical savings primarily constitute residential real estate (accounting for about two-thirds) and machinery & equipment (owned by producers within the HH sector).

HH total savings were at a six-year low of 18.4% of GDP in FY23, as NFS collapsed to a four-decade low of 5.3% of GDP of PDI As mentioned above, physical savings were at a decade high in FY23 (and we expect it to have increased further in FY24). At 13.2% of GDP, HH physical savings have come a long way from its trough of 10% in FY16 and pre-pandemic levels of 11-12% of GDP (*Exhibit 14*). Nevertheless, HH total savings were at a six-year low of 18.4% of GDP in FY23 (*Exhibit 15*), as NFS collapsed to a four-decade low of 5.3% of GDP (*Exhibit 16*).

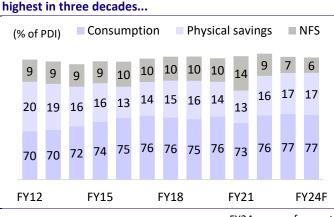
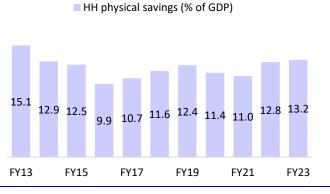


Exhibit 13: PFCE accounted for 77% of PDI in FY23, the

#### FY24 are our forecasts

Exhibit 14: ...and physical savings (=investments) were at a decade high in FY23



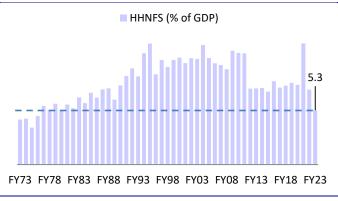
Source: CSO, CEIC, MOFSL

ECOSCOPE

# Exhibit 15: HH total savings, however, were at a six-year low in the year...

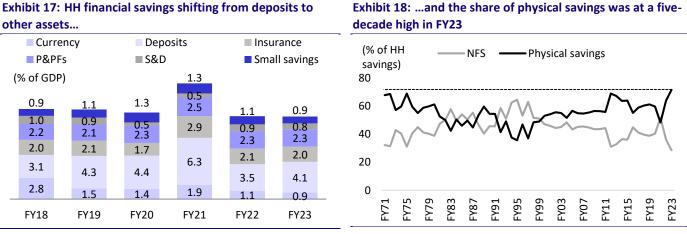
(% of GDP) NFS Physical savi	ngs OHH total savings
22.5 20.3 19.6 18.0 18.1 19.3 20 19.3 20	22.7 0.3 19.1 • 20.1 18.4
000	0 0 0 0 0 0
<sup>15.1</sup> 12.9 12.5 9.9 10.7 11.6 <sup>12</sup>	<sup>2.4</sup> 11.4 12.8 13.2
7.4 7.4 7.1 8.1 7.4 7.6 7.	.9 7.7 7 3
7.4 7.4 7.1 8.1 7.4 7.6 7.	.9 7.7 7.3 <sub>5.3</sub>
FY13 FY14 FY15 FY16 FY17 FY18 FY	19 FY20 FY21 FY22 FY23

Exhibit 16: ...as HH NFS collapsed to a four-decade low of 5.3% of GDP in FY23



Source: CSO, CEIC, MOFSL

Physical savings accounted for more than 71% of total HH savings in FY23, the highest proportion in at least the past half-century Three key trends have emerged within HH total savings in recent years. *First*, within GFS, HHs have increased their exposure to non-deposit assets such as shares & debentures, pension & provident funds and small savings (*Exhibit 17*). *Second*, HHs have transitioned away from financialization of its savings by allocating a larger portion to physical assets in the post-pandemic years. Physical savings accounted for more than 71% of total HH savings in FY23, the highest proportion in at least the past half-century, and compared to 60% in the pre-pandemic years (*Exhibit 18*). And *third*, HH liabilities have mounted in the past few years, particularly in the last couple of years. All these trends are interconnected, reflecting the evolving preferences of Indian consumers, which present both opportunities and some challenges.



Source: CSO, CEIC, MOFSL

### 2. Was a dramatic fall in HHNFS in FY23 a one-off?

Our estimates suggest that HHNFS fell slightly (or, at best, remained steady) in FY24, and thus, the fall in in FY23 was not a one-off The collapse in NFS in FY23 was sudden, and thus, there were doubts over its durability. It may be, as was argued, a response to the all-time high NFS of 11.7% of GDP in FY21 (the pandemic year). However, our <u>estimates</u> clearly suggests that HHNFS fell slightly (or, at best, remained steady) in FY24, and thus, the fall in HH NFS in FY23 was not a one-off.

Based on our component-wise calculations, we believe that HH GFS increased slightly to 10.8% of GDP in 9MFY24, as higher deposits and small savings were almost entirely offset by the fall in currency holdings. HHNFS, however, was 5.0-



5.5% of GDP in FY24, since higher GFS was more than offset by the stronger rise in FL – to 6.2% of GDP in 9MFY24, from 5.7% of GDP in the corresponding period a year ago (*Exhibit 19*).

% of CDD		ļ	Annual data	•		First nine-month data#					
% of GDP	FY19 FY20 FY21 FY22 FY23		9MFY20	9MFY21	9MFY22	9MFY23	9MFY24				
GFS	12.0	11.6	15.4	11.1	11.0	10.5	14.5	9.0	10.5	10.8	
Deposits	4.3	4.4	6.3	3.5	4.1	3.3	4.9	1.8	3.8	4.5	
Currency	1.5	1.4	1.9	1.1	0.9	0.8	2.2	0.7	0.4	-0.7	
Insurance	2.1	1.7	2.9	2.1	2.0	2.1	3.0	2.0	2.1	2.2	
P&PFs^	2.1	2.3	2.5	2.3	2.3	2.0	2.3	2.0	2.2	2.4	
Investments@	0.9	0.5	0.5	0.9	0.8	0.8	0.3	1.0	0.7	0.7	
Small savings	1.1	1.3	1.3	1.1	0.9	1.4	1.6	1.5	1.2	1.5	
Financial liabilities	4.1	4.1	4.0	3.8	6.0	3.3	3.4	3.2	5.7	6.2	
Bank loans	3.3	2.9	3.3	3.3	4.6	2.9	3.1	2.7	4.5	4.9	
HFCs*	0.3	0.0	0.3	0.4	0.4	0.1	0.2	0.4	0.4	0.1	
NBFCs	0.5	1.2	0.4	0.1	0.9	0.4	0.2	0.1	0.8	1.3	
NFS	7.3	7.5	11.6	7.4	5.1	7.2	11.0	5.9	4.8	4.6	

### Exhibit 19: HH NFS likely steady at 5-5.5% of GDP in FY24 as well

~CSO's data up to FY23

 Including net flows into MFs and capital raised ^ Assumptions for 9MFY24 Source: Various national sources, CEIC, MOFSL

#Based on RBI's quarterly data (up to FY23), which may be different from CSO's data

\*For comparison sake, HDFC Ltd. is included in HFCs in 2Q/3QFY24

### 3. Why does HHNFS hold special significance in economic growth?

In my Book titled *"The Eight Per Cent Solution"*, I have used an identity extensively, which I call the *Theory of Everything*. It says that every rupee (physically) invested in an economy must be financed either through gross domestic savings (GDS) or foreign savings (i.e., current account deficit, CAD), i.e., *Total investments = GDS + CAD*.

As the name suggests, it provides important insights analyzing the potential impacts of any economic policy in this context. It indicates that any policy announced to affect the external balance must alter the interaction between total investments and domestic savings in an economy.

CAD is – barring some errors & omissions – the sum of the differences of savings and investments of each of the three institutional participants – HH, corporate and government. The higher savings, given a level of total investments, will lead to lower CAD (or higher surplus) and vice-versa. Therefore, one must analyze the sectoral balances – savings *minus* investments – to understand the likely implications on CAD. Commenting on only savings or investments isn't as comprehensive and helpful.

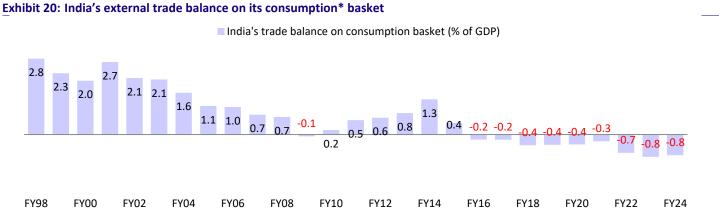
The rise and fall of HHNFS can happen only due to two factors – either consumption and/or physical savings could grow faster than income/GDP

HH NFS, therefore, holds special significance since it represents the surplus(+)/deficit(-) of the household sector, i.e., the difference between its total savings and investments. The rise and fall of HHNFS, as % of income/GDP, can happen only due to two factors – either consumption and/or physical savings could grow faster than income/GDP, shifting the balance towards de-financialization within HH total savings. Of course, HH total savings fall in the former case, but remain unchanged in the latter (but this is not important for this discussion).



Source: CMIE, CEIC, MOFSL

Consumption in India has become import-oriented in the past many years. Based on our classification of India's foreign trade, consumption basket (primarily including agricultural products, textiles and electronic goods) has seen a continued deterioration in its external balance. India used to run a large foreign trade surplus of ~3% of GDP on its consumption basket in the mid-1990s, which worsened to a surplus of only 1% of GDP by mid-2000s and turned into a small deficit in the pre-COVID years (beginning FY16) to a trade deficit of 0.7% of GDP in the last three years (FY22-FY24). Therefore, if higher consumption drives lower HHNFS, it is very likely to lead to higher CAD (Exhibit 20).



\*Includes agriculture, textiles (including readymade garments), electronic goods and others

amid higher total investments.

The conclusions, however, would not be very different, if a surge in physical savings drive lower HHNFS – by changing the composition of HH total savings. Let's assume household total savings remain unchanged at 19% of GDP (hypothetically) in the year 1 and 2, but physical savings increase to 13% from 12%, while HHNFS fall to 6% from 7% of GDP earlier. Assuming all other things constant, higher physical savings would push India's total investments higher by the same extent. However, with no change in corporate and government net surplus/deficit (i.e., difference between savings and investments), India's CAD will widen (by lesser extent since income also rises with higher investments) since household surplus (i.e., HHNFS) has declined

In case, total investments, and thus, income (or GDP), remain unchanged and physical savings substitute corporate or government savings, then lower NFS does not lead to higher CAD. However, one must remember that household investments (majorly in the residential property market) may be less efficient than the government (i.e., infrastructure) and corporate investments (in machinery & equipment). And thus, even though lower HHNFS does not pose a direct challenge, if higher physical savings replace corporate/government investments, it could certainly hurt overall efficiency in the economy, and thus, GDP growth.

The policy makers must ensure to push India's total savings higher before a revival in its investment rate

In any case, since the broad general expectation (or narrative) is for India's investment rate to pick up from FY25, we don't find the declining trend of HHNFS very comforting in India. Irrespective of its drivers, a durable fall in HHNFS combined with higher investment rate, has the potential to widen India's external deficit (i.e., CAD). The policy makers, thus, must ensure to push India's total savings higher before a revival in its investment rate.



### Household debt – Is it concerning or not?

India's household debt is estimated at 38% of GDP in FY23, as per the recent data published by the Reserve Bank of India (RBI) in Sep-23. Although there are no official updates yet, our calculations suggest that it is likely to have touched 40% of GDP as of Dec-23. As % of PDI, household debt is expected to have risen to 52% in FY24F, compared to 48% in FY23. Is this a matter of concern? Is HH debt in India high or low? How does one approach this question? In this section, we address these questions and discuss HH debt in detail.

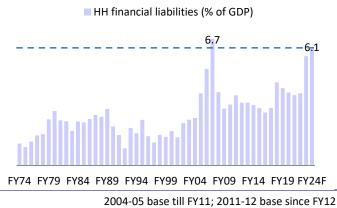
### 1. Household borrowings/debt has risen rapidly in the last few years

Household borrowings have increased rapidly in the past many years. From its peak annual level of 6.7% of GDP in FY07, household financial liabilities (FL) dropped to  $\sim$ 3% of GDP in FY09 and remained around that level till FY17. In the run-up to the pandemic (FY18-FY21), FL increased towards 4% of GDP, which surged to 5.8% of GDP in FY23 and our calculations suggest that it likely crossed 6% of GDP in FY24F, only the second time in history (Exhibit 21).

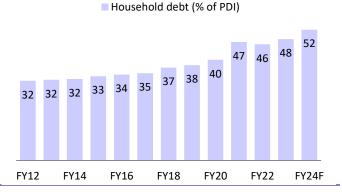
With mounting annual borrowings, HH debt surged from 32% of PDI in FY12/FY13 to 40% in FY20 and further to 48% in FY23

With mounting annual borrowings, HH debt (outstanding stock) surged from 32% of PDI in FY12/FY13 to 40% in FY20 and further to 48% in FY23. We project it to have risen further to 52% of PDI in FY24F (Exhibit 22), as HH borrowings is likely to grow ~13% YoY compared to 9% growth in PDI during the year.

Exhibit 21: Household annual financial liabilities likely at ~6% of GDP in FY24F...



### Exhibit 22: ...which means that household debt may have risen to ~52% of PDI



Source: RBI, CEIC, MOFSL

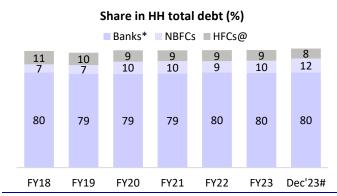
### 2. What is driving household debt in India?

The Banking sector accounts for about fourfifths of HH total debt, while HFCs and other NBFCs account for ~10% each

We divide household debt into four parts – agricultural debt, housing loans, nonhousing personal loans and loans taken by small businesses (calculated as the residual). The RBI publishes quarterly data on scheduled commercial banks' (SCBs) aggregate loan book divided into household, corporate and government sector. The Banking sector (including SCBs and cooperative &credit societies) accounts for about four-fifths of HH total debt, while housing finance companies (HFCs) and other nonbanking financial companies (NBFCs) account for ~10% each (Exhibit 23). This ratio has remained quite stable in the past few years.

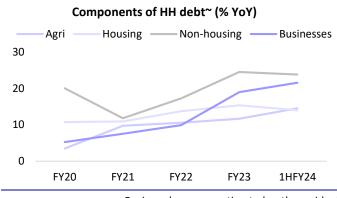
Non-housing personal loans are now the largest component with 32% share in HH total debt, followed by housing loans (~30%), business loans (24%) and agricultural loans RBI data provides details of SCBs exposure to the household sector into the four components, HFCs debt is entirely housing debt and we classify NBFCs loan book to the household sector using RBI data (assuming no exposure to unincorporated businesses since there is not enough data). Such compilation suggests that non-housing personal loans are now the largest component with 32% share in HH total debt, followed by housing loans (~30%), business loans (24%) and agricultural loans (remaining ~15%). Interestingly, while the share of housing loans has remained broadly stable in the past few years, non-housing personal loans have witnessed an increase, while business and agricultural loans have fallen (*Exhibit 24*). This is because non-housing personal loans have increased at an average of ~20% in the last five years, compared to ~13% average growth each in housing and businesses, with 10% growth in agricultural loans. Notably, business loans have increased ~20% in the last two years, second to 24% growth in non-housing personal loans (*Exhibit 25*).

# Exhibit 23: Banks\* account for four-fifths of household total debt in the country



\*Including cooperative and credit societies @HDFC Ltd. included in HFCs for comparison purposes #MOFSL estimates (Official data available up to FY23)

### Exhibit 25: Non-housing personal loans have increased at the fastest pace in the last few years...



Business loans are estimated as the residual

'Others' is a residual

Within non-housing loans, it is very clear that while 'vehicle' loans account for more than a fourth of such loans, their share has been broadly static in the past few years. Gold and education loans account for a very small portion of household debt, while 'others' have seen the maximum increase within non-housing personal loans

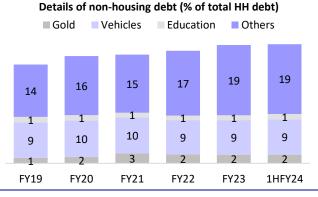
### Exhibit 24: Housing loans account for ~30% of household total debt in India

Details of household debt~ (% of total) ■ Agri ■ Housing ■ Non-housing ■ Businesses@										
26		25		24		23		23	24	
26		29		29		30		31	32	
30		30		31		31		30	29	
17		16		16		16		15	15	
FY19		FY20		FY21		FY22		FY23	1HFY24	

~Excluding cooperative & credit societies @Business loans are estimated as the residual Source: RBI, CEIC, MOFSL

ECOSCOPE

### Exhibit 26: ...of which 'others' have risen at the fastest pace in the past few years



<sup>~</sup>Excluding cooperative & credit societies Source: RBI, CEIC, MOFSL



56

50

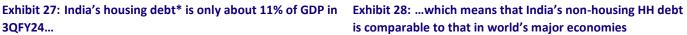
(Exhibit 26). Although there is a lack of clarity on 'others', it includes all sort of loans, such as medical loans, credit cards, personal exigencies, consumer durables among others.

Non-housing HH debt is ~30% of GDP in India, comparable to that in Malaysia and Taiwan, and higher than in the US, Japan and China All-in-all, it means that housing debt in India amounts to ~11% of GDP, up from 10% in FY20, and non-housing HH debt is ~30% of GDP (Exhibit 27 and 28). A comparison of the latter with their counterparts in world's major economies confirms that India's non-housing HH debt is comparable to that in Malaysia (MY) and Taiwan (TW), and higher than in the US, Japan (JP), and China (CN).

18 18

12 12 13

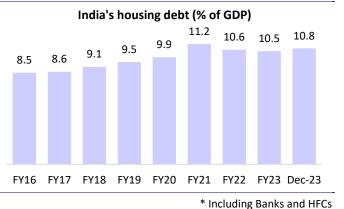




HH non-mortgage debt (% of GDP)

RU#SAF ID DE UK US JP CN AU CA TW MY IN SKr TH

24 24 24 25 27 28 29 30



#Data as of Sep-23 (Dec-2023 for all others) Source: CEIC, Various national sources, MOFSL

### 3. Is India's HH debt a concern?

Many participants compare India's HH debt-to-GDP ratio with that in other economies and conclude that even though it has risen sharply in the past few years, at 40%, it is still among the lowest compared to others (Exhibit 29). To our mind, this is not appropriate. One of the most well-acceptable ways to answer this question is to estimate HH debt service ratio (DSR). DSR measures the portion of income used by the borrower to meet its repayment (principal + interest) obligations. So, a DSR of 10% would mean that, on an average, a typical household spends 10% of its income to meet its loan repayment dues. A higher DSR, thus, means higher debt repayment obligations, which tend to affect GDP growth adversely via the restricted ability of a household to grow its spending and savings. A look at the trends in India's HH DSR and its comparison with other economies will throw valuable insights into this question.

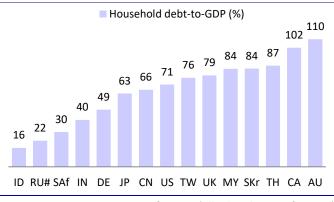
According to the RBI, debt service ratio (DRS) of Indian households is estimated at 6-7%, compared to our estimate of 11-12%

An estimation of DSR has two major components - residual maturity and effective interest rate. The lower the residual maturity and the higher the effective interest rate, the higher (and worse) the DSR will be and vice-versa. According to the Financial Stability Report of the RBI published in December 2023, DSR of Indian households was estimated at 6-7%, which is not only comparable to other economies, but also very stable in the past few years. According to the RBI, the weighted average effective interest rate stood at 9.7% in March 2023 and the residual maturity of retail loans (from a survey of 12 major scheduled commercial banks, comprising about 80% of the retail loan portfolio at the system level) was 12.7 years on the existing stock of debt.

This, however, is in stark contrast to our calculations of household DSR in India, which was published in a <u>report</u> titled *"How sustainable is India's household debt?"* on 4<sup>th</sup> October 2023. According to our analysis, DSR for Indian households is 11-12% (almost double of that estimated by the RBI), which is not only much higher than its counterparts in other major economies, but has also increased gradually over the past many years. The substantial difference between our and the RBI's estimates of household DSR emerges from the estimates of residual maturity (effective interest rate estimates are similar). In stark contrast to the RBI's residual maturity of 12.7 years, our calculations suggested a residual maturity of only about 5.5 years. What explains this difference and what are its implications?

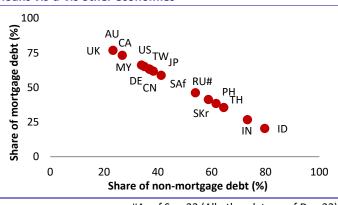
As mentioned above, there are four parts in India's HH debt – housing loans, nonhousing personal loans, agricultural loans and business loans. Even if one assumes a residual (not contracted) maturity of 12 years on housing loan portfolio, the remaining HH debt must have a residual maturity of about 13 years to make RBI's estimates believable. This looks highly impractical *(Exhibit 30)*.





#As of Sep-23 (All other data as of Dec-23)





#As of Sep-23 (All other data as of Dec-23) Source: CEIC, Various national sources, MOFSL

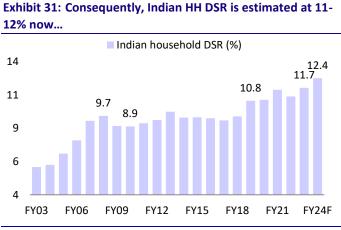
Agricultural loans, which account for ~15% of HH debt in India, are primarily shortterm crop loans, with a maturity about a year. Similarly, business loans, which accounts for 24-25% of HH debt in India, are also likely to be dominated by working capital loans (of 1-3 years), rather than long-term investment loans (which would largely be a part of corporate loans).

Of the non-housing personal loans, vehicle loans (including that of banks and nonbanking finance companies, NBFCs) account for 9-10% and education loans were only about 1% of HH debt. These loans are likely to have a residual maturity of up to 5 years, with the remaining non-housing personal loans (which includes all unsecured and gold loans) falling into 1-3 years' maturity profile.

30% of HH debt may have a residual maturity of 12 years, another 10-15% of say, 5 years, and the remaining 55-60% may have a maturity of, say 2 years In short, this understanding suggests that 30% of HH debt may have a residual maturity of 12 years, another 10-15% is likely to have a residual maturity of say, 5 years, and the remaining 55-60% may have a residual maturity of, say 2 years (i.e., 1-3 years). If so, the weighted average residual maturity of the entire HH debt would be 5.3-5.5 years. Notably, only 22.5% of SCBs' entire loan book (at INR143t) had a maturity of above 5 years in FY23, compared to 16-17% a decade ago.

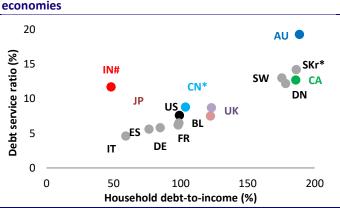
With an effective interest rate of 9.7 years and weighted average residual maturity of 5.5 years, Indian household DSR would be 11-12% in FY23/FY24F, instead of 6-7% estimated by the RBI. Further, it has also increased over a period of time – to 11-12% now from ~10% up to FY18 (*Exhibit 31*).

Is this high or low? This can be gauged by comparing 11-12% DSR for Indian households at 52% leverage ratio (debt-to-PDI), with 6-9% DSR in several advanced economies with much higher (almost double) leverage ratio. HH DSR in China with debt-to-income ratio of more than 100% is estimated at 8.5%. A few advanced economies, which have a HH DSR of more than 10%, have household debt at more than 175% of income (*Exhibit 32*).



Assuming residual maturity of 5.5 years

Exhibit 32: ...which is much higher than that in other major



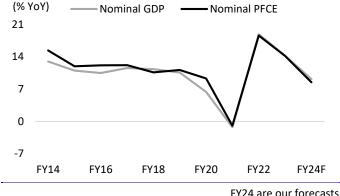
\*Dec-22, #Mar-23 (All other data as of Sep'23) Source: CEIC, Various national sources, MOFSL

ECOSCOPE

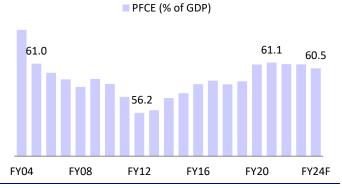
# Private final consumption expenditure (PFCE): Is the slowdown temporary or durable?

The household sector is the primary consumer in any economy. Of the total final consumption expenditure in India, consumers account for ~85%, while the government contributes to the remaining 15%. PFCE, thus, is the largest component of GDP in India, like in most other economies in the world. In the pre-pandemic years (FY13-FY20), PFCE growth outpaced GDP growth significantly. While the former grew at an average of 12.1% during the eight-year period, the latter posted an average growth of 11% *(Exhibit 33)*. Accordingly, the share of PFCE in GDP increased to multi-year high of ~61% in FY20 and remained there till FY23, from its all-time low of 56.2% in FY12 *(Exhibit 34)*. Notably, the share of PFCE in GDP has risen for the first time in India since the 1970s.





# Exhibit 34: ...due to which PFCE (as % of GDP) increased for the first time in the 2010s decade since the 1970s



Source: CSO, CEIC, MOFSL

ECOSCOPE

PFCE growth has exceeded PDI growth for the first time in the post-independence era in the 2010s decade, which has continued in the first four years of the 2020s decade as well Although PFCE is generally seen as a ratio of GDP, it is more appropriate to compare it with PDI. As mentioned earlier, PDI growth has lagged GDP growth in the last few years. It means that PFCE has not only increased faster than GDP, but it has also outpaced PDI growth in the last many years *(Exhibits 35)*. As % of PDI, PFCE stood at 77%, the highest in almost three decades *(Exhibit 36)*. In fact, a look at the long-term trends in PDI and PFCE growth reveals that the latter has exceeded the former for the first time in the post-independence era in the 2010s decade, which has continued in the first four years of the 2020s decade as well *(Exhibit 37)*.

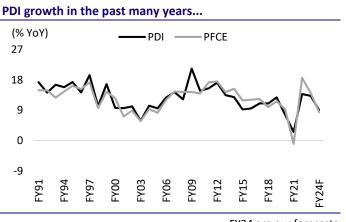
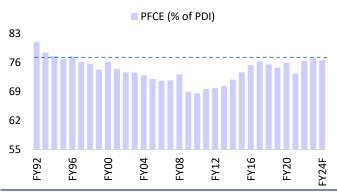


Exhibit 35: More importantly, PFCE growth has outpaced

Exhibit 36: ...due to which PFCE (as % of PDI) has risen to almost three-decade highest level in FY23



FY24 are our forecasts

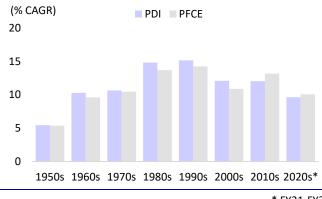
Source: CSO, CEIC, MOFSL

### ECOSCOPE

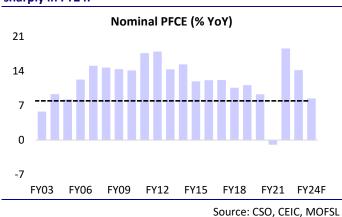
PFCE, however, has weakened sharply in FY24. In the first three quarters of the year, real (nominal) PFCE has increased at just 3.7% (8%) YoY, compared to 8.7% (17.4%) in the previous year. It is very likely, thus, that real (nominal) PFCE growth will be 3-4% (8-8.5%) in FY24E, the slowest in the past two decades (except FY21). Although the slowdown in consumption had come as a surprise to many participants, we had **projected** a slowdown in household spending (either consumption and/or investments) in FY24. As it turned out, both have weakened, though the weakness in PFCE has outpaced the weakness in household investments (=physical savings).

A decline in NFS by one percentage point of GDP allows a growth of ~8pp in physical savings or about 2pp in PFCE Our calculations suggest that compared to an average growth of 16.4% and 28.2% during the previous two years (and 10.3%/12.2% in the previous four years, i.e. FY20-FY23), PFCE growth could have moderated to 8.4% YoY in FY24 *(Exhibit 38)*, while physical savings could have increased 12% last year. If so, it is likely that HHNFS declined further to 5% of GDP (and 6.3% of PDI) in FY24E, from a four-decade low of 5.3% (6.6%) in FY23. The fall in NFS may not be much in FY24, but we must note that a decline in NFS by one percentage point of GDP allows a growth of ~8pp in physical savings or about 2pp in PFCE (or some combination of both).

### Exhibit 37: PFCE has grown faster than PDI for the first time in the recent decade in the post-independence period



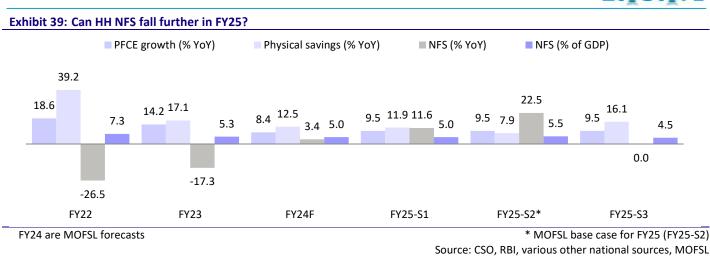






We expect the residential real estate to see sharper moderation in FY25, especially since PFCE growth is expected to recover Is this slowdown temporary or structural? We believe that like FY24, household spending (PFCE + physical savings) growth could remain modest in FY25 as well; however, faster growth in PDI (in line with GDP growth) could help push HH total savings higher – only marginally – for the second consecutive year *(Exhibit 39)*. At the same time, we hope (as reflected in our base case, FY25-S2) that HHNFS recovers in FY25 (to 5.5% of GDP), which means that the residential real estate (a large part of physical savings) would see sharper moderation this year, especially since PFCE growth is expected to recover.

Alternatively, HH NFS may remain unchanged (at 5% of GDP) or fall further (to 4.5% of GDP), and thereby boost the residential property market (FY25-S1 and FY25-S3, respectively). Lastly, nominal PFCE may continue to grow at the same pace or slowly this year (say 7-8%), which means that real PFCE grows faster, as the deflator is expected to be lower in FY25. In this case, HH savings could also pick up faster, helping both NFS and physical savings.



We believe that household spending could continue to grow modestly for the next few years, until HHNFS comes back to a reasonable level of 7-8% of GDP

Overall, we believe that household spending (consumption + investments) is likely to continue to grow modestly (say, 9-10% YoY per annum) for the next few years, slower than 11-12% growth witnessed in the pre-pandemic years, until HH NFS comes back to a reasonable level of 7-8% of GDP. Further, we hope that HHNFS recovers within HH savings, so that a pick-up in India's investments, led by corporate sector as and when it happens, does not create external imbalances in the economy.

**EcoSco** 

An average growth of 27%

in HH borrowings in recent

years is the highest ever, at

a time when PDI growth has

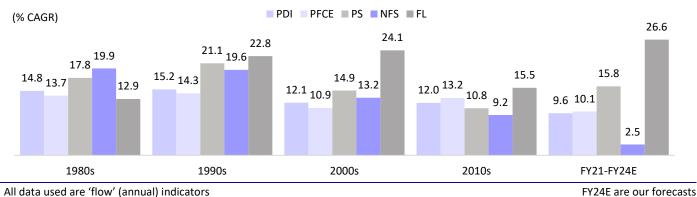


### Conclusion – Household financial position has deteriorated:

sector, delving deeper into its earnings, savings (financial and physical), borrowings/debt and consumption patterns. Our conclusion is that its finances have worsened in the past few years, and thus, it would be unreasonable to expect them to continue to be the primary driver of economic growth in the coming years. A look at the long-term finances of household finances (Exhibit 40) confirms that: 1) Income growth has weakened continuously in the past few decades, falling into single-digits in the last four years (FY21-FY24E), led by the pandemic, 2) For the first time, PFCE growth outpaced PDI growth in the 2010s decade, which continued in the post-pandemic years as well (see Exhibit 41 also), 3) Although household borrowings have risen at the fastest pace (of all the indicators) in almost all the decades, its average growth of 27% in recent years is the highest, at a time when PDI growth has been the least, and 4) While financial savings have been replaced by physical savings since the 1990s, the collapse in the former in the recent years in unprecedented.

In this report, we discussed in detail the financial position of the Indian household

#### Exhibit 40: A look at long-term trends in household finances (% CAGR)



All data used are 'flow' (annual) indicators PS = physical savings (=investments)

### Exhibit 41: PDI growth has lagged PFCE growth for the first time in the post-independence period...

Exhibit 42: ...which is tantamount to lower household savings and rising debt

Source: RBI, CEIC, Various national sources, MOFSL

19.6

FY15

20.5 8.0

FY12

OHH debt

19.3 20.3 19.1

L8.1

40.8

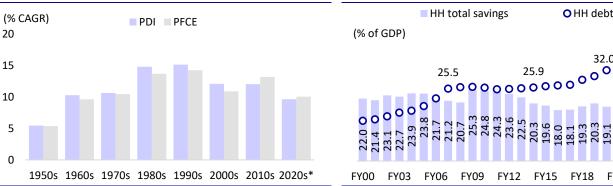
L8.4 18.5

32.0°°°

22 20.

FY18 FY21 FY24F

Source: CSO, CEIC, MOFSL



\*FY21-FY24F

Household spending may remain subdued on average in the coming years unless their finances improve

We believe that it is just a beginning of a long-term trend. Household spending (consumption + investments) may remain subdued on average in the coming years (it may grow faster in one year and slower in another), unless household finances improve. Combined with the fact that the growth in government spending will remain muted over the next few years due to ongoing fiscal consolidation, the entire responsibility of keeping GDP growth at ~7% will fall on the corporate sector.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing



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 <u>www.motilaloswal.com</u>, 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. (INSE) 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 (IRDA) as Corporate Agent for insurance products. Details of associate entities of Motilal Oswal Financial Services Ltd. are available on the website at <a href="http://onlinereports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf">http://onlinereports.motilaloswal.com/Dormant/documents/Associate%20Details.pdf</a>

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

MOFSL, it's 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 associates 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:

- a) received any compensation/other benefits from the subject company of this report
- b) managed or co-managed public offering of securities from subject company of this research report,
- c) received compensation for investment banking or merchant banking or brokerage services from subject company of this research report,
- d) 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 it's 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) a long or short position in, act as principal in, and buy or sell the securities or derivatives thereof of companies mentioned herein.

(b) 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 clasing prices of conveition is over	lable at your popindic come your begindic come Descards Analyst views on Subject Company may your based on Fundamental research and Technical

A graph of daily closing prices of securities is available at <u>www.nseindia.com</u>, <u>www.bseindia.com</u>. 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 AYY-301) 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 activity to which this document relates is only available to 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 (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, Motial 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. 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 of Singapore .Accordingly, if a Singapore person is not, or ceases to be, such an investor, they 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, another 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 alternations 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, not 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.

This report is meant for the clients of Motilal Oswal only.

Investment in securities market are subject to market risks. Read all the related documents carefully before investing.

Registration granted by SEBI and certification from NISM in no way guarantee performance of the intermediary or provide any assurance of returns to investors. Registered Office Address: Motilal Oswal Tower, Rahimtullah Sayani Road, Opposite Parel ST Depot, Prabhadevi, Mumbai-400025; Tel No.: 022 - 71934200 / 71934263; www.motilaloswal.com.

Correspondence Address: Palm Spring Centre, 2nd Floor, Palm Court Complex, New Link Road, Malad (West), Mumbai-400022, Tel No. 022 71881000. Details of Compliance Officer: Neeraj Agarwal, Email ld: na@motilaloswal.com, Contact No. 022-40548085.

Grievance Redressal Cell:

Contact Person	Contact No.	Email ID
Ms. Hemangi Date	022 40548000 / 022 67490600	query@motilaloswal.com
Ms. Kumud Upadhyay	022 40548082	servicehead@motilaloswal.com
Mr. Ajay Menon	022 40548083	am@motilaloswal.com

Registration details of group entities.: Motilal Oswal Financial Services Ltd. (MOFSL): INZ000158836 (BSE/NSE/MCX/NCDEX); CDSL and NSDL: IN-DP-16-2015; 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 dpgrievances@motilaloswal.com.