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Interlinkages between South African households' financial position and the domestic financial system

Abstract

Households' directly and indirectly engage with both financial and non-financial institutions. They allocate cash acquired from income and other sources to financial assets or non-financial assets, thereby intimately interacting with many components of the financial system. This note is particularly interested in the interconnectedness of households with the financial system and any potential spillovers of vulnerabilities from the households and the potential impact on financial stability. This is achieved by assessing households' financial positions and exposure to the financial system in their capacity as borrowers, insurance beneficiaries, investors, and bondholders.

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The note finds that domestic households remain vulnerable but resilient amid the challenging macroeconomic environment. The impact of the pandemic on economic activity, thus far, has had the largest detrimental impact on household’s income and to a lesser extent on their balance sheet positions. From a financial stability perspective, various indicators of liquidity and solvency, namely debt-to-income ratio, debt-servicing costs, amongst others, show that households remain solvent and have adequate liquidity to service debt obligations despite pressures on their incomes and thus do not currently pose material or immediate financial stability concern. However, sustained pressure on households’ financial position may change the outlook. Further, the note finds that the link between households and the non-bank financial intermediation sector may pose liquidity risk during periods of stress. The risk may be passed through panic selling of financial assets by households and thus measures to circumvent this potential risk to financial stability should be investigated in depth.

1. Introduction

The household sector (households) is important for the financial system as it is a key participant in the South African economy, in part, because of its ability to influence economic activity but also because of its significant exposure to the financial sector. Households play a variety of roles in the financial sector, as borrowers, savers, and investors by allocating funds earned from income and other sources to financial assets or non-financial assets and thus closely interacting with different parts of the financial system (Santoso and Sukada, 2009). Therefore, households pose a risk to the financial system and are also exposed to risks from the financial system as the ultimate bearers of financial products.

The South African financial system is highly developed, concentrated, and interconnected, and thus fragilities in the household sector might spill over to the banking sector and other parts of the financial sector. Financial decisions by households may vary in accordance with their risk profiles and therefore affect the flow, reallocation, and absorption of risks throughout the financial system. Traditional assessments of financial stability tend to lean on the resilience of the banking sector (IMF, 2005).

This note aims at assessing households' financial positions and exposure to the financial system in their capacity as borrowers, insurance beneficiaries, investors, and bondholders. Section 2 of the note provides a brief overview of macroeconomic dynamics in the household sector. Section 3 delves into the financial flows of the sector, differentiating between assets and liabilities. Section 4 provides an assessment of household risk to the financial system and Section 5 discusses data limitations. Lastly, Section 6 concludes with possible future considerations.

2. Overview of the impact of macroeconomic dynamics on the South African households

Global and domestic economic activity influences decision making in households. Economic developments directly impact household finances, consumption levels and savings patterns. Following the global financial crisis (GFC), South Africa experienced a period of stagnant economic growth which was further exacerbated by the COVID-19 pandemic (pandemic). The South African economy experienced some recovery towards the end of 2021, but spill overs from the ongoing Russia-Ukraine war, floods in KwaZulu-Natal, and load shedding continued to weigh on domestic economic activity. Real GDP declined by 1.3% in the fourth quarter of 2022 considerably lower than expectation, bringing overall growth for 2022 to 2.0% lower than 2.5% recorded in 2021. The South African Reserve Bank (SARB) downgraded the growth projections for the domestic economy from an already bleak 0.3% forecast at the January to 0.2% in 2023[2] at the March 2023 meeting citing that the economy remains severely impaired by extensive load shedding and logistical constraints. The dwindling economic growth prospects coupled with the effects of the pandemic have had a significant impact on the employment of households. Unemployment rate remains elevated at 32.7% (Q4:2022) and has weakened income growth prospect for households as well as negatively impacted consumption patterns.

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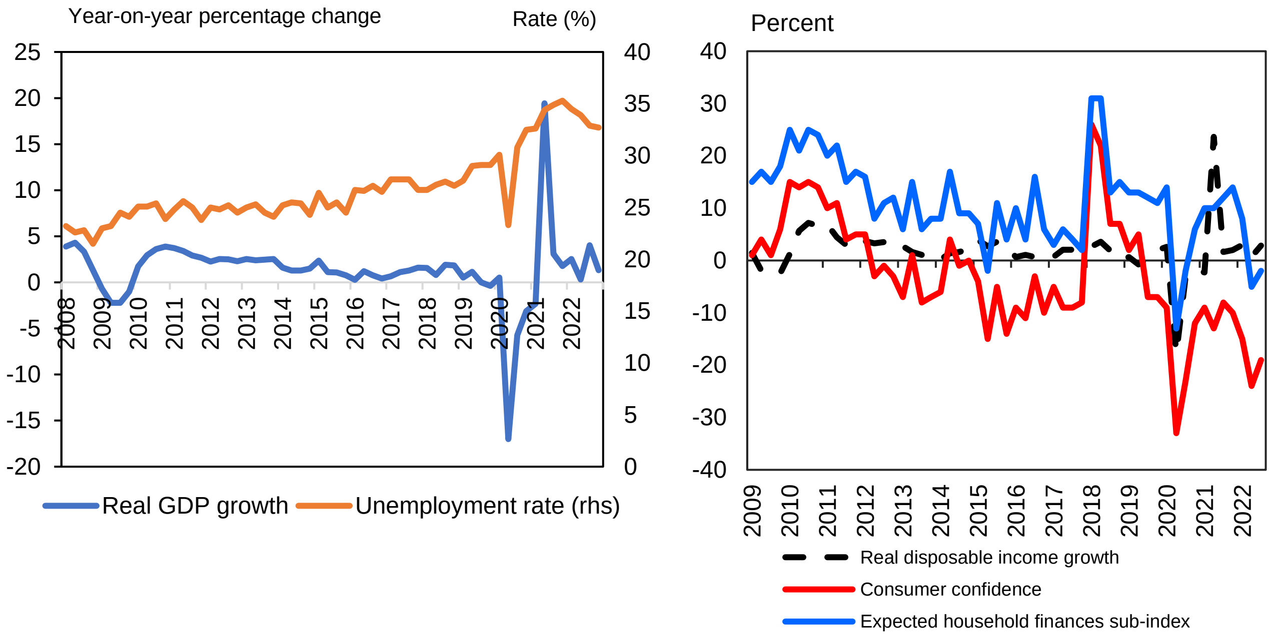
2 MPC Statement March 2023

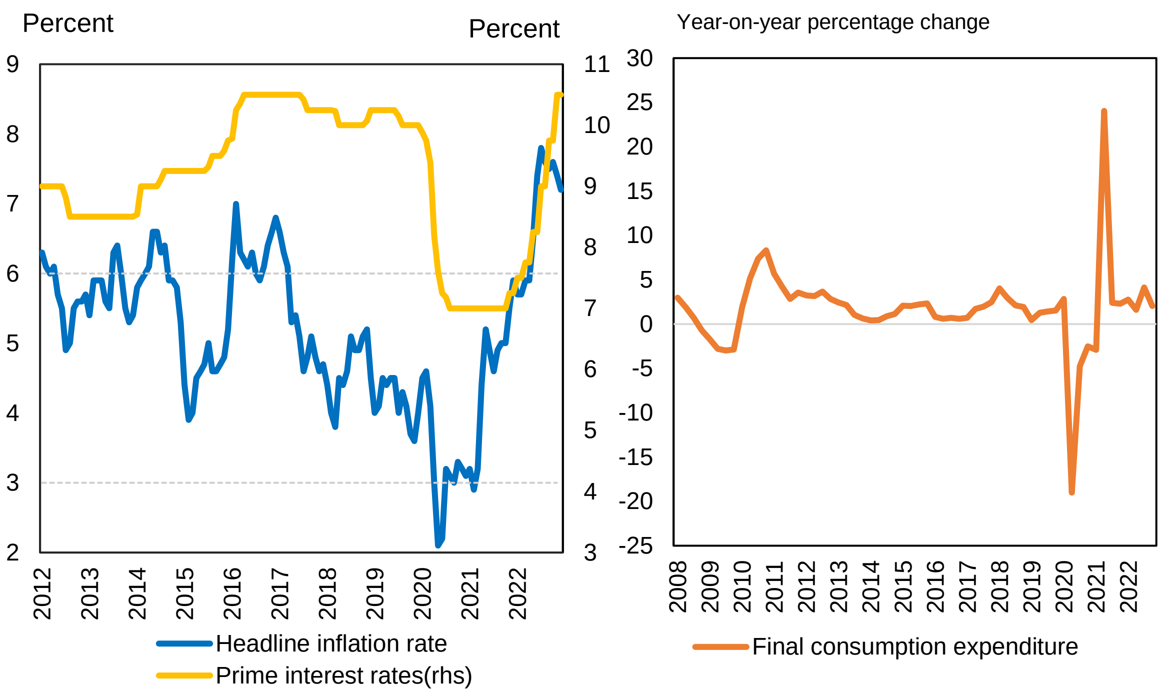
Figure 1: Economic growth, unemployment rate, income, and confidence indices



Sources: SARB, Stats SA and BER

Households' final consumption expenditure remains weak on the back of slow income growth, weak consumer confidence, persistent inflationary pressures, and lacklustre labour markets (Figure 1). Growth in real final consumption expenditure by households declined from 4.1% in the third quarter of 2022 to 2.0% in the fourth quarter 2022. Geopolitical tensions amidst supply chain constraints have caused increases in food and fuel prices, further exacerbating the strain on vulnerable households. Furthermore, higher than expected global inflation has pushed central banks to accelerate the normalisation of policy rates. As a result, the SARB has cumulatively raised interest rates by 425 basis points between November 2021 and March 2023 in an effort to combat domestic inflation pressures (Figure 2).

Figure 2: Inflation and interest rates (left) and consumption expenditure (right)

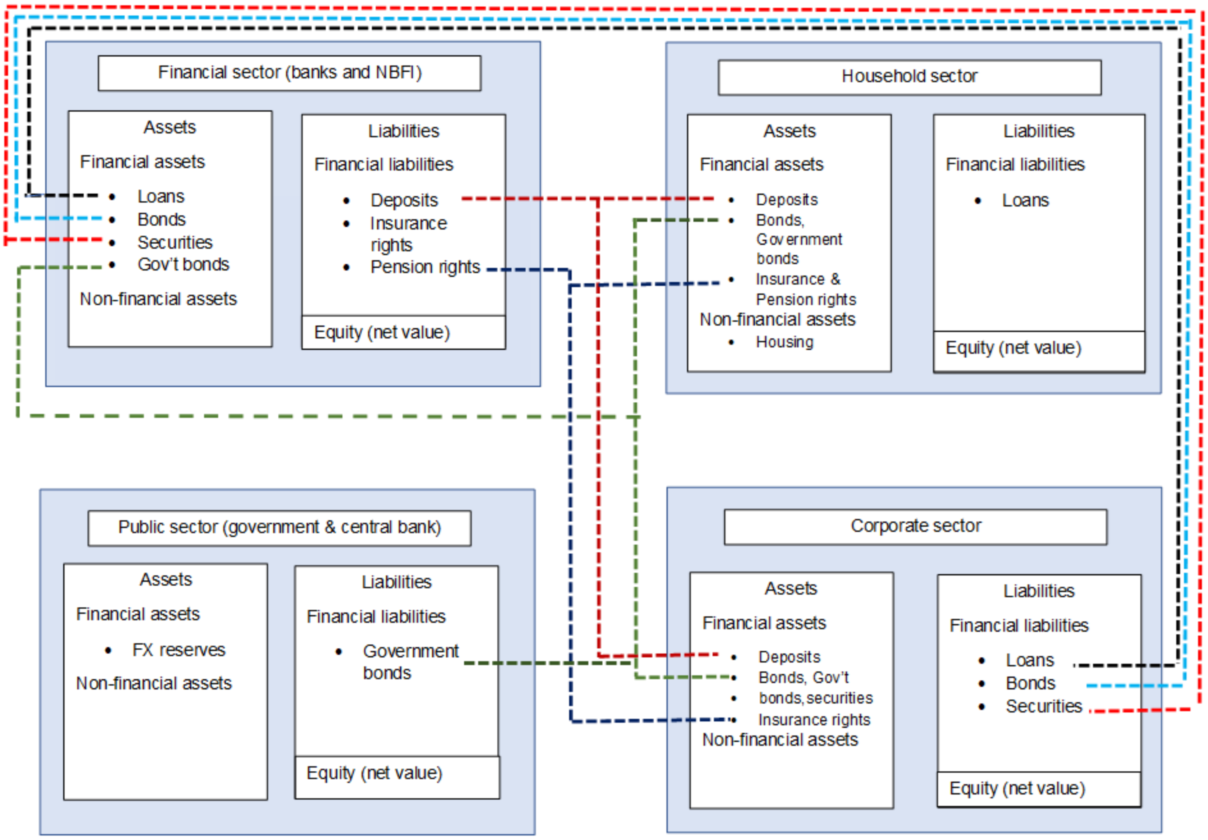


Sources: SARB and Stats SA

3. Interlinkages between households' and the financial system

Households interact with financial and non-financial institutions directly and indirectly. Figure 3 shows a graphical representation of the interactions. This note is particularly interested in the interconnectedness of households with the financial system and any potential spillovers of vulnerabilities from the households and the potential impact on financial stability.

Figure 3: Household and sectoral balance sheets



Adapted from: Santoso et. al (2009)

(i) Holdings of assets and liabilities in the financial sector

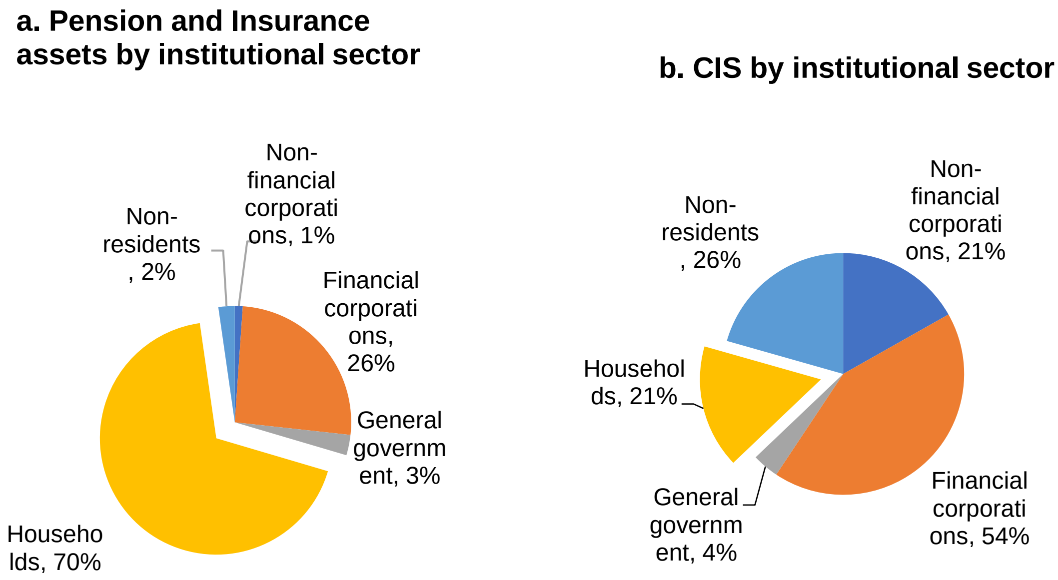
As at the end of June of 2022, assets in the non-bank financial intermediation (NBFI) sector were largely held by households' and financial corporations[3] (Figure 4). For households, this reflects the large holdings in pension funds and direct and indirect holdings in Collective Investment Schemes (CIS). The large exposure of NBFI to the household sector may leave the NBFI sector exposed to potential vulnerabilities, especially given the current economic climate of high unemployment, weak economic growth, and rising cost of living. In the long run these factors could potentially weaken the NBFI sector through, but not limited to, (i) reduced demand for new financial products as household finances come under pressure; (ii) decreased pension fund

[3] Financial corporations both hold assets on their own capacity but mostly on behalf of both households and other institutions.

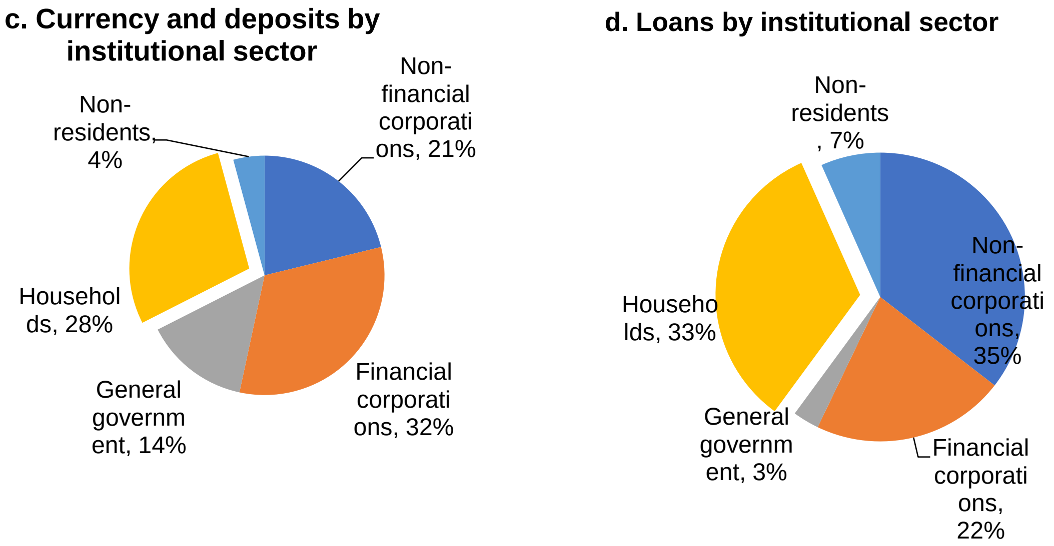
contributions as salaries decline and unemployment increases; and (iii) increased withdrawal of discretionary investments to augment incomes.

In contrast monetary institutions are less dependent on households' deposits for liquidity as their deposits are diversified across the various sectors. Similarly, monetary institutions' debt extended to households only accounts for about a third of total debt. However, while the dependence of banks on households may be less relative to economy wide totals, the indirect linkages may still have consequences for banks. Furthermore, South African banks are the primary issuers of households' debt and remain susceptible to risk of defaults, especially as households face pressures such as rising debt service cost and lacklustre labour markets.

Figure 4: Assets and liabilities holdings by different sectors of the economy[4]



[4] The data is at the end of June 2022.



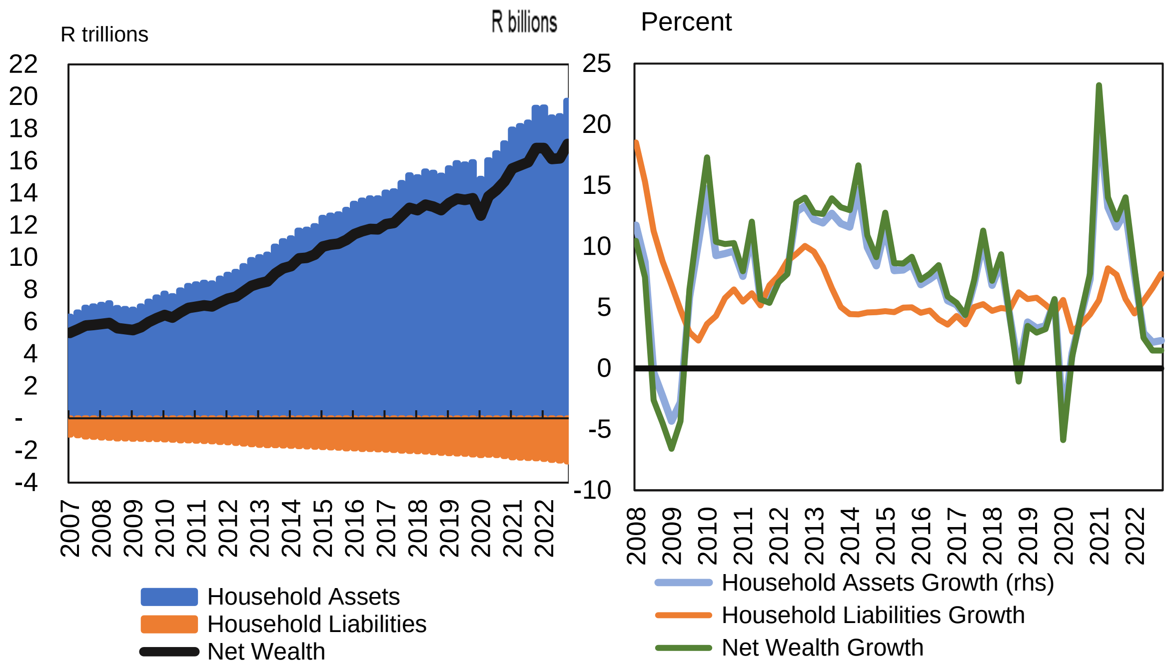
Source: SARB

Against the backdrop of the interconnectedness of households and the financial system provided above, the next sections consider the performance of domestic households' balance sheets and the implications on financial stability.

4. Overview of the performance of South African households' balance sheet

Households' balance sheet has remained resilient notwithstanding the vulnerabilities brought about by the pandemic. Households' net wealth recovered from the lows observed at the onset of the pandemic. Furthermore, despite the drop in net wealth in the second and third quarter of 2022 households' net wealth ended 2022 on a positive note at R17.1 trillion, the highest value on record. The growth was driven by an increase in financial assets following a rebound in financial markets. While households' net wealth has rebounded from the pandemic lows growth in liabilities, particularly unsecured lending has increased considerably in recent quarters offsetting some of the positive households' net wealth gains. Figure 5 shows that households' assets were valued at R19.7 trillion in the fourth quarter of 2022, while liabilities were R2.7 trillion.

Figure 5: Trends in households' balance sheet



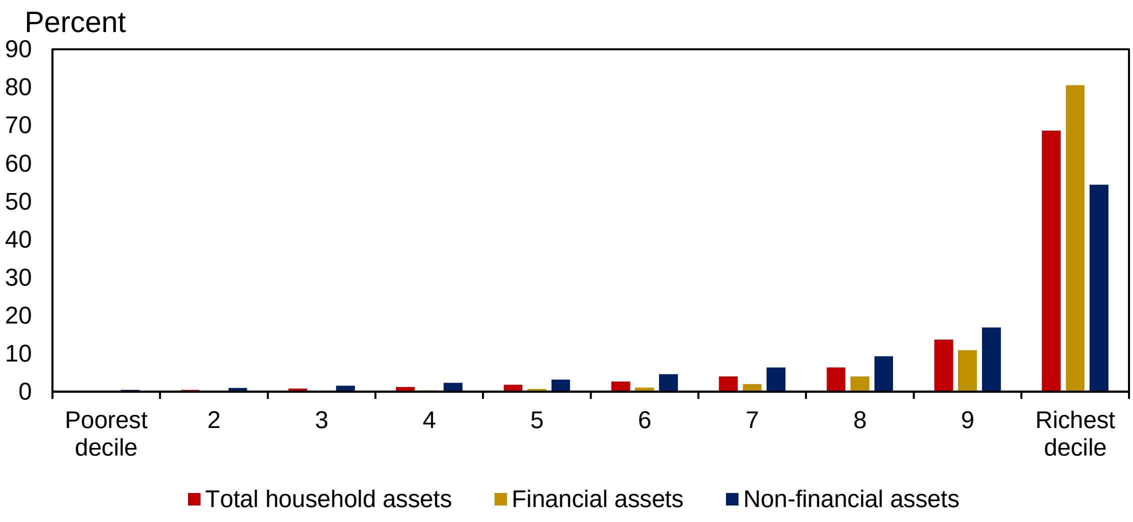
Source: SARB

4.1. Households' assets

Households' assets have increased significantly over the years, driven mostly by favourable returns from financial investments. Total households' assets have increased close to three-fold since the GFC, surging from R7.1 trillion in the first quarter of 2008 to R19.7 trillion in fourth quarter of 2022. Households are a critical source of funding for both the private and public sector. However, households' financial assets are highly susceptible to market shocks and abrupt asset valuations movements as can be observed when looking at the sharp decline in asset growth at the on-set of the pandemic (Figure 5). These adverse market movements leave households' net wealth vulnerable and may lead to unintended consequences such as panic selling of financial assets in an attempt to mitigate against further potential losses during a stress period. This may have an impact on liquidity particularly for non-bank financial intermediaries (NBFI).

While households' assets have increased significantly, the majority of households remain vulnerable, particularly considering the income and wealth inequality in the country. South Africa is ranked as the world's most unequal country, with a higher gini-coefficient compared to some emerging markets (Annexure A). A small percentage of households hold the majority of assets, especially financial assets. According to a recent World Bank report,[5] in South Africa the richest decile of households hold 68.6% of total assets and 80.6% of financial assets, while the poorest decile holds only 0.2% of total assets and zero financial assets (Figure 6). It is worth noting that most of the financial assets held by the richest income decile were bonds and stocks, while the lower income households tend to hold more of housing and pension benefits.[6] Income and wealth inequality remains a key concern to the sustainability of households and may have potential financial stability concern, as they may lead to civil unrest by the marginalised and wealth migration by the wealthy. The richest decile also holds the highest percentage of liabilities compared to the poorest decile as they tend to hold higher valued loan amounts. However, of major concern is the level of debt to income of the low-income earners as they are more likely to hold higher debt to income and this may leave banks, but mostly, microlenders susceptible to credit risk.

Figure 6: Holdings of assets by income deciles



Source: World Bank, 2022

[5] Inequality in Southern Africa: An Assessment of the Southern African Customs Union, March 2022

[6] Wealth Inequality in South Africa, 1993–2017.

(i) Financial assets

Households' financial assets continued to strengthen despite the weak economic environment and tightening financial conditions. The growth, however, is not broad-based given the inequitable distribution of wealth. "Slow and inequitable economic growth" and the potential impact on financial stability is covered in depth in the risk and vulnerability matrix (RVM) published in recent editions of the *Financial Stability Review* (FSR).[7] Households' financial assets comprise of retirement fund holdings, deposits held with monetary institutions, insurance benefits, money market fund, unit trusts and shares. Households' financial assets have more than doubled in the last decade from R6.1 trillion in the first quarter of 2012 to R14.0 trillion in the fourth quarter of 2022. The increase was led by growth in other financial assets[8] and pension entitlements (Figure 7). Households' financial assets account for the largest share of households' assets at 70.8% (Figure 7). This further highlights the interlinkages between the financial sector and households and consequently financial stability. As with the GFC, households' financial assets saw a sharp decline at the onset of the COVID-19 pandemic. However, unlike during the GFC, the recovery was slightly quicker. This difference can be attributed to the less pronounced decline in holdings of other financial assets, as well as the varying economic and financial conditions experienced prior to the GFC and the pandemic. While financial assets have recovered somewhat from the pandemic lows the effects of tightening financial conditions, low domestic and global economic growth as well as geo-political tensions have left the recovery volatile.

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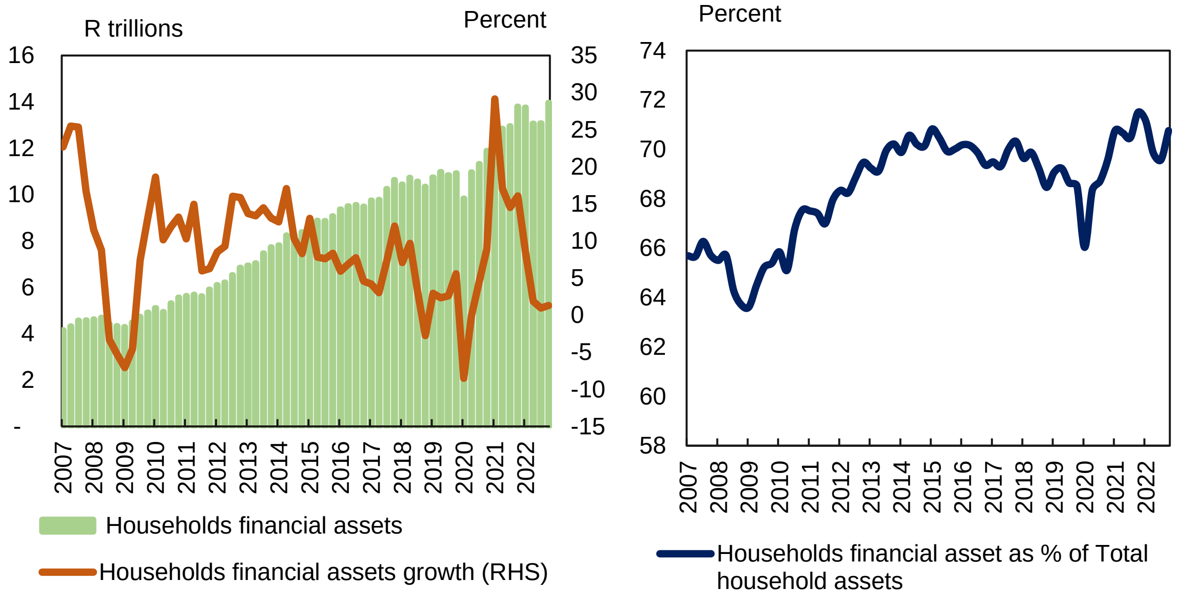
7 https://www.resbank.co.za/content/dam/sarb/publications/reviews/finstab-review/2022/financial-stability-review/first-edition-2022-financial-stability-review/FSR%20May%202022%201st%20edition.pdf

8 Other financial assets predominantly refer to collective investment schemes.

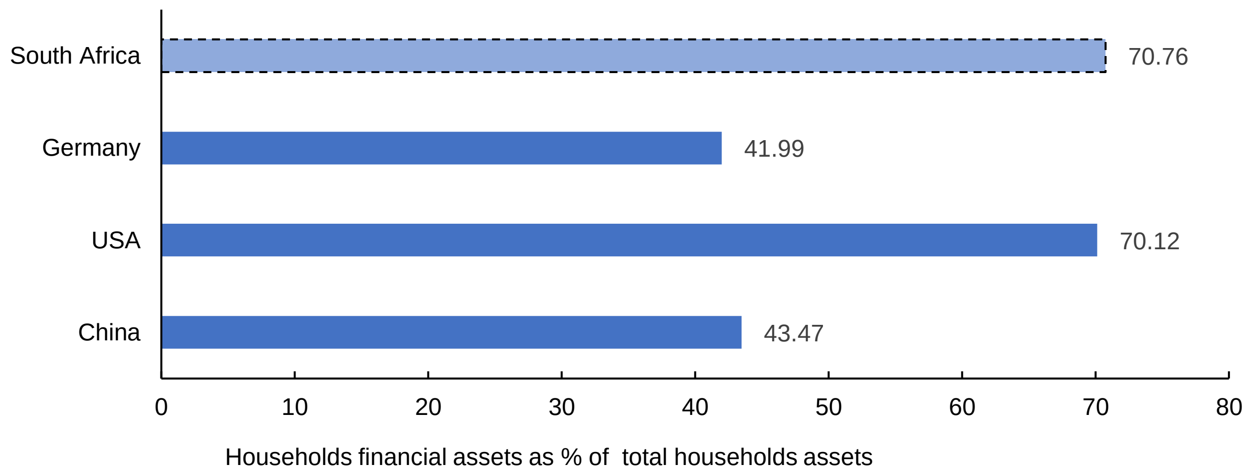
Figure 7: Households' financial assets



Source: SARB

Figure 8 below shows that the South African households' financial assets as a share of to total assets mirrors that of the USA and varies significantly when looking at China and Germany that have a smaller share of financial assets to total assets.

Figure 8: South African Households financial assets compared to selected countries[9]



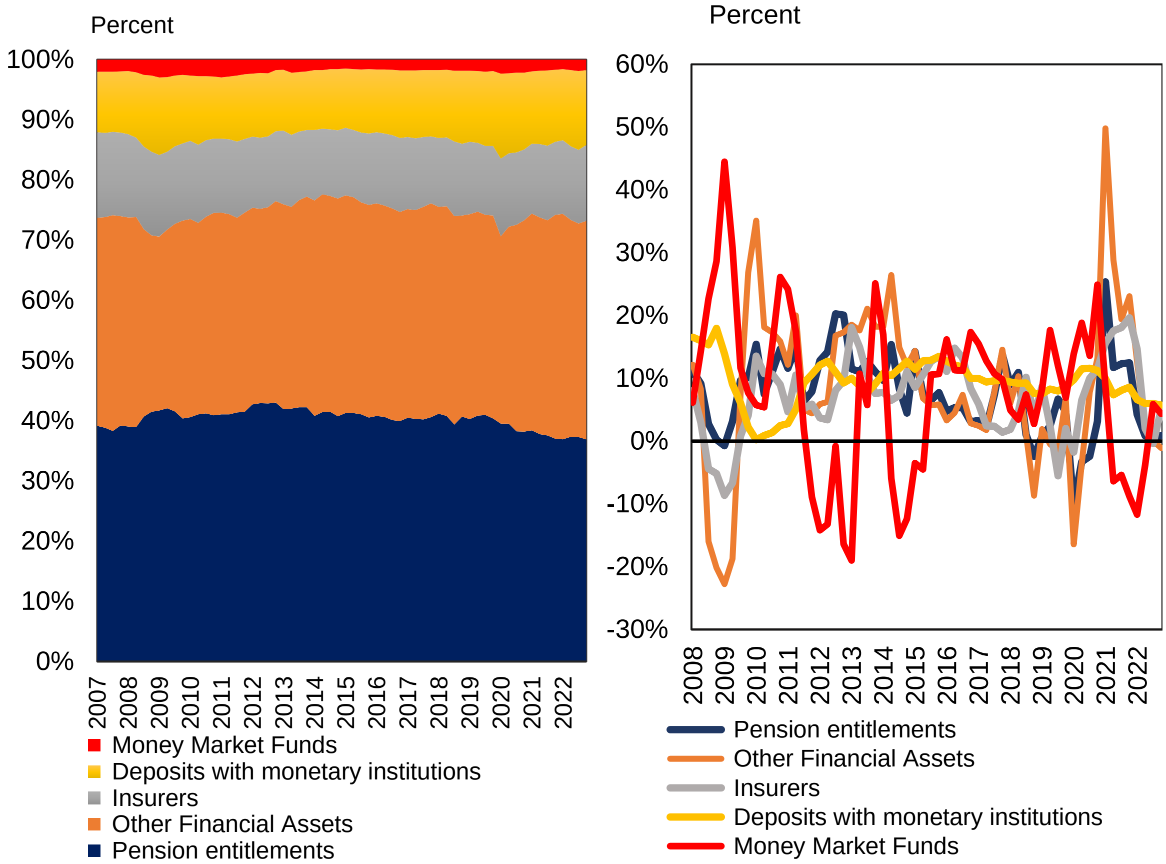
Source: SARB, US Federal Reserve, Seafer and Deutsche Bundesbank

[9] Data on China is at end of 2019 while the Germany and USA are end of 2021.SA data are end of 2022

The composition of households' financial assets has changed moderately between 2008 and 2022 with other financial assets and retirement funds entitlements accounting for the majority of assets at 48.8% and 36.9% of total assets, respectively. Post the GFC the weighting of other financial assets have steadily increased while retirement funds have declined. Retirement funds holdings amounted 40.2% of total financial assets in the first quarter of 2009, before increasing to an average of 42.9% in 2012 and currently have declined and almost mirrors other financial assets holdings. While other financial assets holding have increased from 28.9% in the first quarter 2009 and peaked at 37.4% in the first quarter of 2022. This reflects robust returns in the CIS which do not have the same regulatory requirements as retirement funds in terms of asset allocations.[10] Insurers and retail fund asset managers tend to be heavily invested in equities and investment funds and therefore are more exposed to market volatility (good or bad). This volatility may leave funds vulnerable to large withdrawals by households in times of financial distress. Money market funds (MMFs) account for close to 2% of households' assets, but movements in these funds tends to be more volatile compared to other asset classes because of their liquid nature and therefore easier to access by households. Interestingly, deposits with monetary institutions tend to be relatively stable over time. This could potentially be attributed to the perceived safety households attach to banks. Further investigations into this trend could offer useful insights for financial stability (Figure 9 RHS).

[10] Retirement funds that are under Regulation 28 of the Pension Funds Act. Regulation 28 of the Pension Funds Act - protects retirement fund member savings by limiting the extent to which funds may invest in a particular asset or in particular asset classes and prevents excessive concentration of risk.

Figure 9: Composition of households' financial assets (left) and growth rates (right)

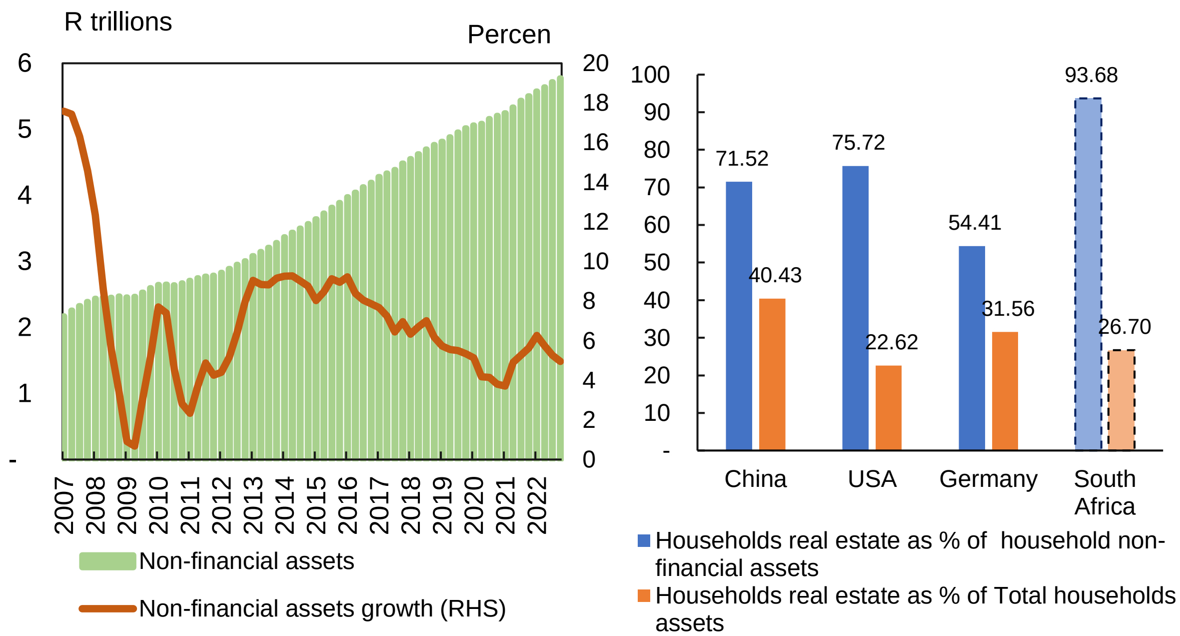


Source: SARB

(ii) Non-financial assets

South African households' non-financial assets comprises of over 90% real estate which is significantly high when compared to China, USA and Germany (Figure 10).SA household non-financial assets grew by 5.0% year-on-year to R5.8 trillion in the fourth quarter of 2022 compared to the 5.6% year-on-year growth in 2021, 3.8% in 2020 and 5.3% in 2019. Non-financial assets account for 29% of total assets and about 55.6% of non-financial assets are held in residential buildings (primary housing). Developments around house prices, demand for housing and interest rate changes are major determinants in the movement of households' non-financial assets. Between 2020 and 2021 robust growth in house prices and increased demand for mortgage loans was supported by accommodative interest rates aimed at helping ease the impact of the pandemic. This supported growth on mortgages particularly for first time home buyers. However, as cost of living increases amid rising inflation and policy normalisation, this could lead to stretched households defaulting on their mortgages and may impact adversely on the profitability of banks. Additionally, as interest rates increase and demand for property slows, decline in property prices may lead to a deterioration in the value of properties and could pose a risk for banks if households' default on their mortgage payments and the property is sold at less than the loan value. Lastly, households on occasion use properties as collateral to gain access to credit. Adverse movements in property prices and low demand for mortgages may affect bank's ability to sell these properties to cover the loan agreement should households' default. Going forward, rising interest rates are expected to put pressure on the demand for mortgage loans.

Figure 10: Households' non-financial assets[11] (left) and comparison with other countries (right)



Source: SARB, US federal reserve, Seafer and Deutsche Bundesbank

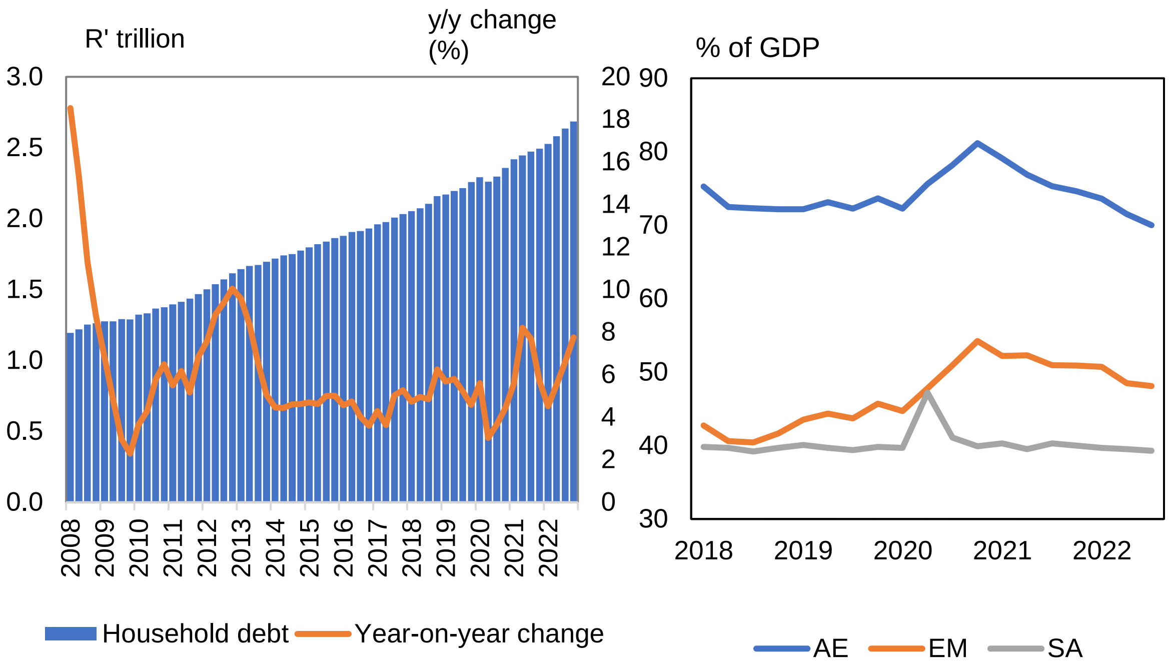
11 Data on China as at end of 2019 while the rest of the selected countries are as end of 2021.

4.2. Household liabilities

Household debt has increased since the GFC, driven by demand for housing and consumption. The total value of households' debt has doubled since the GFC, increasing the total outstanding stock of households' debt from R1.2 trillion at the end of 2008 to about R2.7 trillion in fourth quarter of 2022. While debt has increased significantly over the years and remains elevated, domestic households' debt to GDP remains relatively lower than that of other emerging market (EM) economies. Moreover, in contrast to other EM's, domestic households' debt-to-GDP slowed post the initial COVID-19 shock because of domestic financial institutions adopting stringent credit extension approaches and deleveraging by households that could afford to do so. However, this trend reversed and demand for unsecured credit increased as higher inflation and interest rates placed pressure on household incomes.

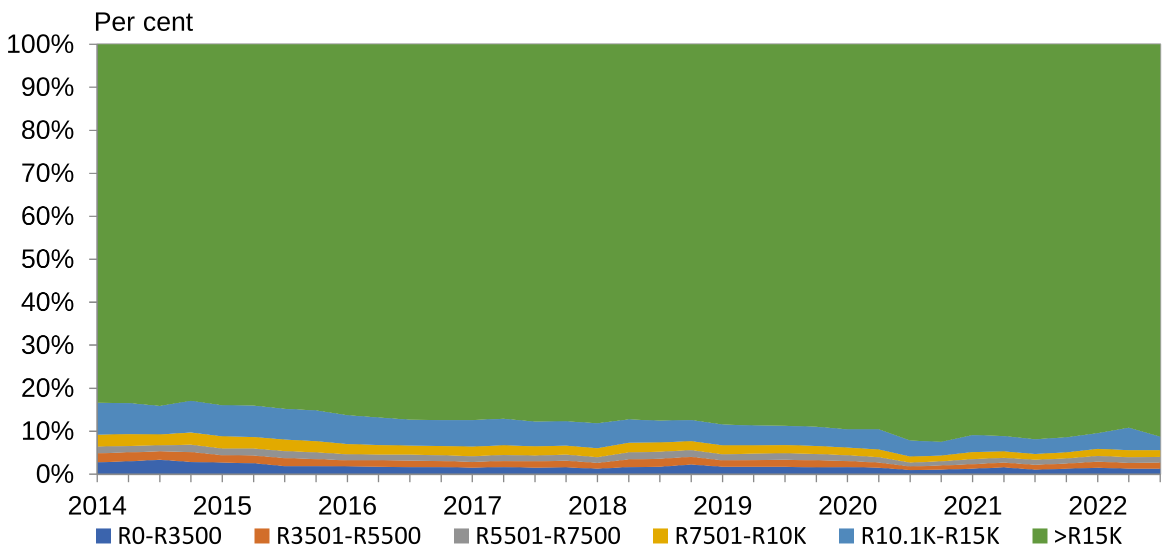
Households earning more than R15 000 per month have accounted for over 80% of total credit extended, while lower income categories (R3 500 – R10 000 per month) have low access to credit as they account for less than 20% of all credit provided. The uneven distribution of credit across the income groups means that households with access to more debt (value of debt) tend to have relatively high incomes and wealth (access to both secured and unsecured credit) while low-income households tend to be more leveraged, have a higher debt service cost relative to income and have lower liquidity buffers (André, 2016).

Figure 11: Household debt (left) and debt-to-GDP for Advanced Economies (AE), EM and SA (right)



Sources: SARB and Bank for International Settlements

Figure 12: Households credit by income group

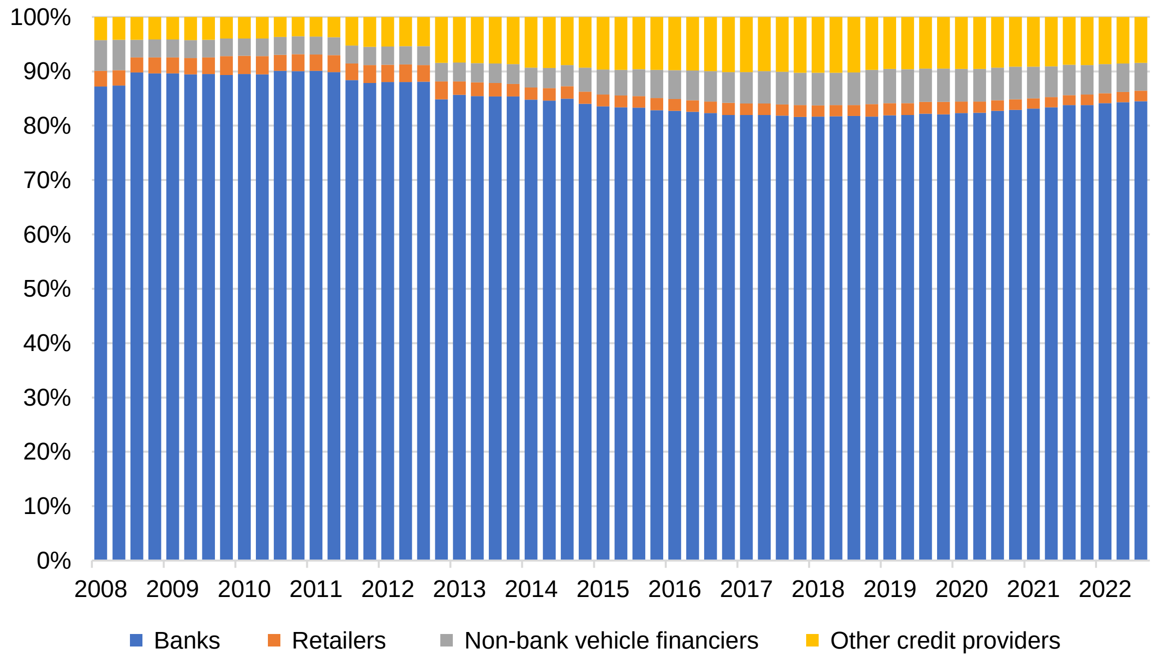


Source: National Credit Regulator (NCR)

(i) Holders of household liabilities

Banks account for the largest portion of credit extended to households. South African households rely on banks for credit, with approximately 80% of household debt coming from banks and the remaining 20% from NBFI and microlenders (Figure 13). While banks remain the primary issuer of credit to households, other financial intermediaries have continued to grow in importance over the years. The growth might signify the growth of microlenders as alternatives sources of credit for households who would ordinarily not be catered for by banks. Data on non-bank institutions offering households debt is needed to understand this phenomenon better and the potential implications for financial stability, if any.

Figure 13: Holders of household liabilities



Source: NCR

(ii) Composition of household liabilities

Secured credit[12] (77%) has been the main driver of household debt with mortgage advances contributing the largest share to household debt (59%) followed by other secured debt such as leasing finances and instalments sales (18%). This type of credit

[12] Secured credit constitutes of mortgage advances, leasing finance and instalment sale credit.

has trended upwards since the beginning of 2021 and recorded 7.3% growth year-on-year in the fourth quarter of 2022 compared to 3.1% in the same quarter of 2020. Growth in secured credit was driven by the accommodative monetary policy stance as well as changes in consumer housing needs. Along with growth in mortgage loans, loan-to-value (LTV) of 100% were granted to more households during the pandemic. On average, about 36% of new mortgages in last quarter of 2022 were granted LTVs of 100% up from 26% of new mortgages same quarter in 2020. As mentioned earlier, rising interest rates will likely dampen demand for housing, and this will likely result in lower growth in secured credit in particular mortgage credit.

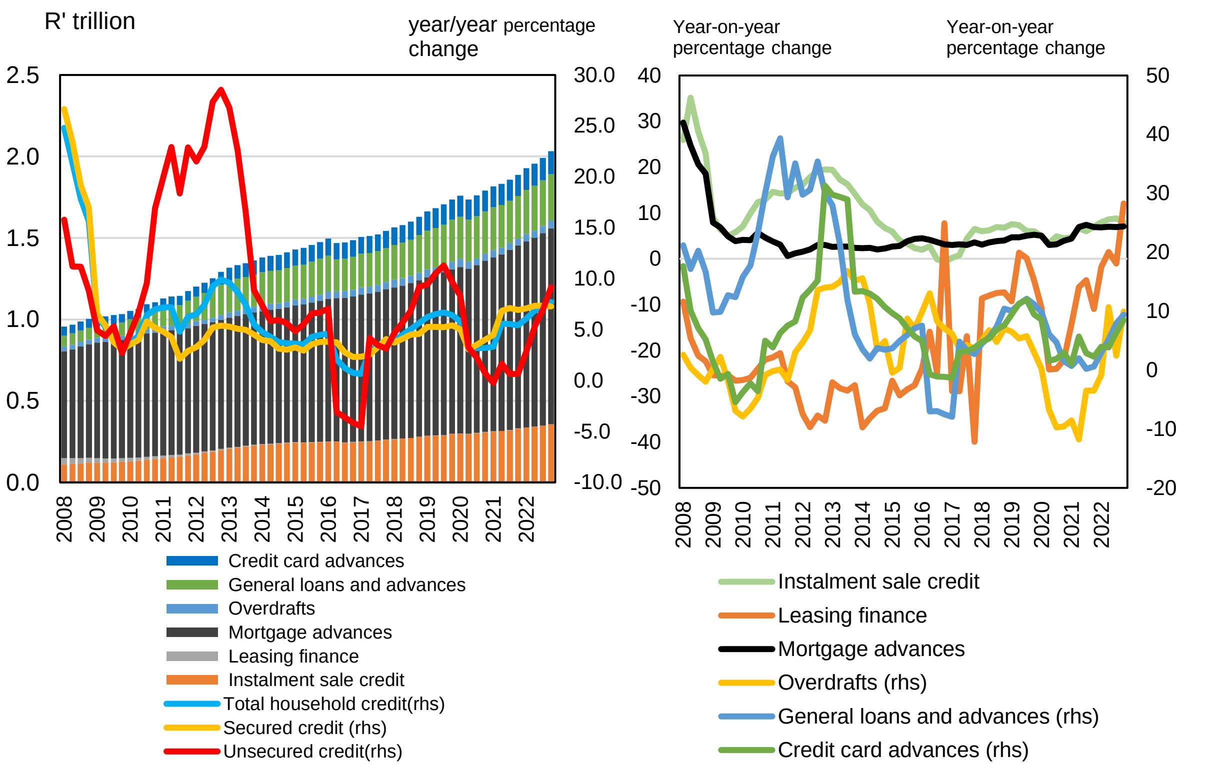
Unsecured credit[13] growth has fluctuated over the past years, recording double-digit growth from 2011 to 2013 and again from 2017 to 2018. Following these periods, growth in unsecured credit has remained low and declined during the pandemic period in line with low consumption expenditure and strict lending practices by credit institutions. Growth in this type of credit is a concern as households tend to access it in times of distress to supplement income. Recent banking sector data showed that unsecured credit is increasing, from 0.7% in the fourth quarter of 2021 to 9.2% in the same quarter of 2022. This is in line with increasing costs of living as distressed households could be using it to supplement their income, however worth noting is that low base effects are also at play as unsecured credit was relatively muted throughout the height of the pandemic.

In addition, the South African credit bureaus held records for over 26 million credit active consumers as at the last quarter of 2022 (Appendix). Of this, approximately 17.9 million (66.5%) were classified as in “good standing”,[14] while the remaining 9.7 million (33%) had impaired records.[15] This entails that 33% of all credit-active consumers are struggling to honour their debt obligations. Growth in impaired records increased in the last quarter of 2022, the historical trend has shown that it increases during periods of higher levels of debt, specifically unsecured debt as observed between 2011 - 2015 and again between 2017 - 2018 (Figure 14). This is also suggesting that high levels of debt, especially unsecured debt eventually becomes a

13 Unsecured credit growth constitutes of credit cards, general loans, and advances
14 A good standing consumer refers to clients that is current on their debt and/or is two months or less in arrears.
15 A record on which a consumer is either three or more payments/months in arrears or which has an adverse listing, judgement order or administration order.

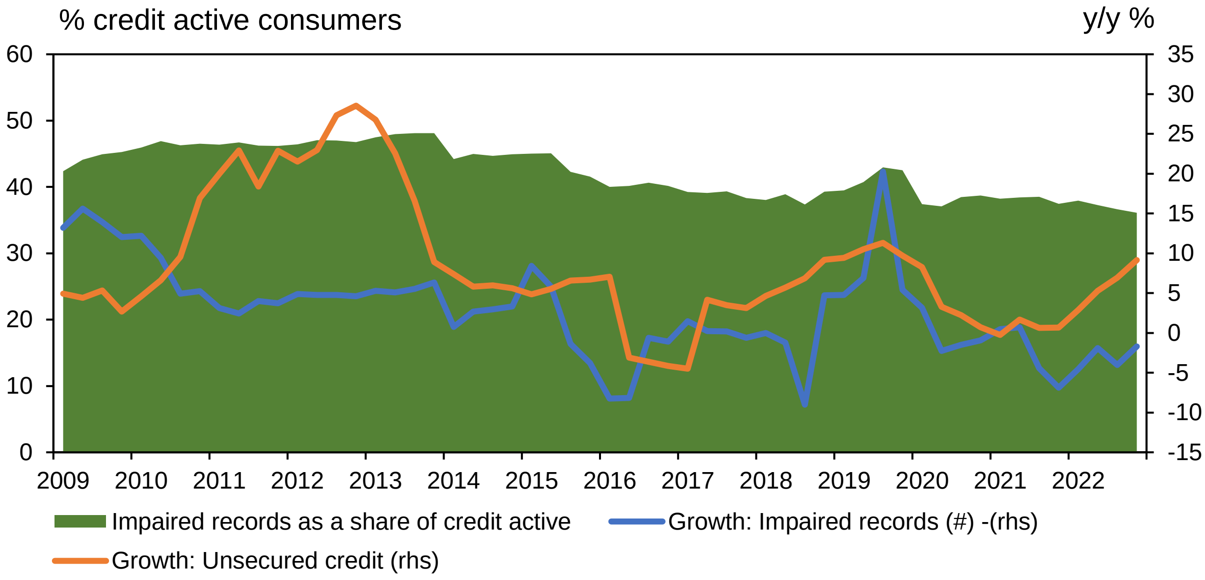
financial burden for consumers. Going forward, it is expected that unsecured credit will increase further as interest rates, food and transport cost continue to increase. Rising uptake of unsecured credit coupled with declining savings and lacklustre income growth could be a signal of distressed lending which poses a risk to the banking sector given the higher probability of defaults associated with unsecured lending. However, it is worth mentioning that unsecured credit accounts approximately 20% of total household credit. Notwithstanding this, it still warrants closer monitoring of bank retail defaults.

Figure 14: Composition of household debt held by banks (left) and growth in various credit categories (right)



Source: SARB

Figure 15: Consumer credit standing



Source: NCR and SARB

5. Assessment of household risk to the financial system using the balance sheet approach

This section assesses the overall risk that households pose to the financial sector, specifically using the framework developed by Santoso and Sukada (2009). Santoso and Sukada (2009) established a framework for assessing threats posed by the household sector to the financial system. The framework focuses on four types of balance sheet mismatches that will determine the sectors' ability to service debt when faced with a shock. These are:

1. Maturity/Liquidity mismatches, where the liabilities due in the short term cannot be covered by liquid assets;
2. Currency mismatches, which may expose the financial sector to foreign exchange rate risk that may lead to capital loss;
3. Capital structure concerns, where a sector relies heavily on debt rather than on equity in its financing, to the point that it is vulnerable to a cash flow shock; and
4. Solvency problems, where a sector's total assets are inadequate to cover its liabilities.

5.1. Assessment of South African households' risk to the financial system

This section will focus on liquidity and solvency mismatches as they would have the most impact on the financial system. A brief discussion on currency mismatches is included as well. The capital structure does not form part of this analysis as this mismatch is geared towards businesses.

5.1.1 Liquidity/maturity mismatch

I. Debt-to-income ratio

The household debt-to-income ratio which is calculated as the ratio of debt to gross disposable income provides a measure of how well households will be able to service their short-term debt with their income. On average, the higher the ratio, the more indebted and vulnerable households are, and the greater the risk of debt overhang.[16] South African households' debt-to-income ratio has trended downwards from the highs observed during the GFC. The decline in the debt-to-income ratio has been largely due to slower growth in new debt acquired by households during the pandemic. Notwithstanding the declining trend in the debt-to-income ratio, South African households remain highly indebted compared to some other EMs. The domestic debt-to-income ratio decreased to 61.6% in the fourth quarter of 2022 down from a peak of 75.2.% observed in the second quarter of 2020 and considerably lower than a mean of 67% between 2007 and 2022. By contrast, South Africa still has a high debt-to-income ratio when considering countries such as Brazil and Russia that have debt-to-income ratios of 45% and 37%, respectively in 2019.[17] However, South Africa's debt-to-income ratio compares favourably to China's debt-to-income ratio that is over 90%.[18] It is worth noting that when isolating household debt - income held by banks and household mortgage, the ratios show that banks' exposure has also eased. Banks' debt-to-income and mortgage debt-to-income ratios were 46.7% and 28.6% in the last quarter of 2022 respectively, down from 60% and 40% in 2008 and to their long-term averages of 52.7% and 34.7%.

16 Debt overhang refers to a large debt burden that a household cannot take on additional debt to finance future assets/consumption. The burden is huge that all earnings pay off existing debt rather than fund consumption, making the potential for defaulting higher.

17 https://data.oecd.org/hha/household-debt.htm

18 https://tradingeconomics.com/china/households-debt-to-income

II. Debt-service cost to disposable income ratio

Debt servicing cost is calculated as the ratio of the financing cost of debt to disposable income. It measures households' ability to keep up with their instalments and interest payments on their debt. Changes in the interest rate have a significant impact on this ratio. On average, the higher the ratio, the greater the risk that households would not be able to service their debt, thus posing a higher credit risk to banks. The domestic households' debt-service-cost-to-disposable income ratio has remained relatively steady since the highs observed during the GFC, averaging over 11% during the GFC compared to the long-term average of around 9.0%. In 2021, the ratio declined considerably to a low of 6.9% on the back of an accommodative monetary policy stance taken at the onset of the pandemic. However, as monetary policy normalises amid rising inflation, debt servicing costs have increased to 7.9% in the last quarter of 2022, still below pre-pandemic levels. The debt-servicing cost is expected to rise further in the short and medium term as financial conditions continue to tighten and interest rates remain higher for longer.

The risk to maturity/liquidity mismatches, while not significant for financial instability, still exists as vulnerable households may potentially be unable to service their debt during difficult times. To this end, the retail default ratio[19] remains elevated and at levels similar to those observed during the GFC. The difference, however, is that elevated default rates during the GFC were due to increased demand for debt, whereas currently default rates have largely been driven by the impact of the pandemic on household incomes, especially during hard lockdowns. The impact of tighter financial conditions is expected to be more pronounced for low-income households who are more likely to hold higher debt relative to income. Overall, while the household debt-to-income ratio declined and debt-servicing costs remain relatively low, households are susceptible to shocks and remain vulnerable. The increase in liabilities coupled with subdued household income remains a concern for future liquidity of households.

19 Retail default ratio calculated as retail defaults divided by total on balance sheet exposures or the percentage of all outstanding loans that have not been paid for over 90 days to total on balance sheet exposures.

5.1.2 Solvency mismatches

I. Current assets to liabilities

The ratio of current assets to liabilities is calculated as households' deposits plus money market fund assets, relative to total debt. The ratio shows the extent to which current assets cover households' debt obligations, with a higher ratio indicating higher leverage. The ratio has trended downwards as households' finances come under pressure and savings and debt are used to augment incomes. Current assets to liabilities have decreased considerably to 135.3.% in fourth quarter of 2022, down from an average of about 200% during the GFC. This is also below the pre-pandemic average of 144% and a long-term average of 171% between 2007 and 2022. The decline was largely driven by a significant increase in deposits as well as muted growth in liabilities. During periods of stress there seems to be a trend by households to withdraw their holdings in MMFs and increase their bank deposits. While this bodes well for banks' liquidity, it leaves MMFs exposed to liquidity risk. Furthermore, while the ratio has decreased, the rate at which households are saving has also decreased, leaving households with less discretionary savings to utilise in periods of stress. However, notwithstanding the vulnerabilities, the ratio shows that households' debt obligations relative to current assets have improved since the GFC.

II. Gearing ratio

The gearing ratio is calculated as the ratio of total liabilities to total assets. It measures the extent to which households' assets cover their liabilities. A higher ratio shows that households rely more on debt than assets to finance their expenses. The ratio shows that since 2021 households are relatively less leveraged and have somewhat reduced their reliance on debt. Households' total liabilities to total assets have declined to 13.6% in the fourth quarter of 2022 down from an average of 17% during the GFC and slightly below the pre-pandemic average of 14% and lower than the long-term average of 15%. This trend was largely driven by growth in cautionary savings at the beginning of the pandemic and muted unsecured debt growth as households took a "wait and see" approach to the pandemic. However, it is expected that lower income households have a higher ratio which may be masked by using aggregated data as aggregated data tends to distort the extent of this vulnerability. Going forward, it is expected that demand for debt will increase coupled with a decline in savings as households feel pressure and struggle to keep up with the increased costs of living.

Despite pockets of vulnerabilities, South African households remain highly solvent and have reduced their reliance on debt and increased their assets, particularly financial assets. The risk, however, lies on how quickly these assets can be liquidated to cover debt and given that a significant portion (49.3%) of households' assets are held in pension entitlements and insurance benefits which tend to be illiquid (i.e. less accessible on demand). In the short-term and during periods of severe stress households may still struggle to service their debt despite being technically solvent. This is because their liquidity needs may not be met, and if met, it may be at significant losses, which would weaken their overall balance sheet strength and adversely impact their net wealth. The proposed two-pot[20] system as recently announced by the National Treasury may help to alleviate this risk. However, these changes to the retirement funds may also inadvertently increase liquidity issues within the retirement funds, asset managers and the bond market if the demand becomes unpredictable and large numbers of individuals put withdrawal notices at the same time.

5.1.3 Currency mismatches

South African households' potential currency mismatches may arise through their investments in offshore assets. The extent of this mismatch, if any, is currently not quantified due to data limitations. However, approximately only 1% of households' liabilities are denominated in foreign currency and thus they have limited exposure to currency fluctuations.

[20] A two-pot system is a proposed amendment to the retirement funds systems wherein contributions from members will be split between a "retirement pot" and a "savings pot". The two-pot system would allow members of retirement funds to access one-third of their pension savings once a year from the "savings pot", while "retirement pot" remains locked in until retirement and can only be utilised in extreme cases of need. http://www.treasury.gov.za/comm_media/press/2022/2022073101%20Media%20Statement%20Two%20pots%20retirement%20reform%20proposals.pdf

6. Data limitations

Due to data limitations the analysis was conducted using aggregated data which may mask vulnerabilities within the different household segments, particularly the middle-income segment. Disaggregated data is therefore needed to provide a more complete picture of the vulnerabilities in the household sector. For, instance there has been an increase in distressed lending within some vulnerable households.[21] The extent to which this poses material risks to the banking sector is not explicitly reflected in the balance sheet liabilities data. To this end, it would be worthwhile to have more granular data that shows credit extension by income,[22] especially given the inequality in South Africa. It is important to consider the off-balance sheet financial obligations of consumers (especially those of the middle segment), as on-balance sheet obligations may significantly mask the actual burden facing these households. Aggregate data suggest that households have sufficient buffers when faced with economic shocks, but the aggregate may mask underlying tail risks in the distribution.

From an NBFI and household nexus perspective, data on redemption trends and investments could assist in understanding liquidity transmissions between households and the NBFI sector to better detect emerging vulnerabilities. Disaggregated data on insurance premium demands and lapses by households would be useful to observe the impact of strained household income on the insurance sector could provide useful information for financial stability analysis.

7. Conclusions/Summary and considerations

The domestic household sector remains vulnerable but resilient amid the challenging macroeconomic environment. The impact of the pandemic on economic activity, thus far, has had the largest detrimental impact on household's income and balance sheet positions. However, indicators for the various balance sheet mismatches such as debt-to-income ratio, debt-servicing costs and others show that households remain solvent and have adequate liquidity to service debt obligations despite pressures on

[21] Some South African households support themselves and their immediate families as well as their extended family (parents, siblings, etc.).

[22] The NCR has some data on credit by income group however, the income bands are not inflationary adjusted and income of R15 000 and above are grouped together making it difficult to make meaningful conclusions.

disposable incomes. While the debt overhang vulnerability has reduced somewhat, households' level of indebtedness remains elevated and possible spill over to the banking sector through increased default rates remain a key concern. Additionally, the nexus between households and NBFIs may pose liquidity risk to the NBFI sector during periods of stress through panic selling of financial assets by households. Going forward, closer monitoring of the household sector is essential given the highlighted risks combined with persistent inflation, rapid tightening of global and domestic financial conditions, increased geopolitical tensions, weak economic growth, and the high unemployment rate.

From a policy perspective further work needs to be done to (i) Understand the impact of household inequality on the financial system. Considering that a small portion of households hold assets and the recent increase in immigration by the wealthy. (ii) The vulnerability of the financial system to civil unrests, particularly as households come under increasing pressure and the unemployment rate continues to increase. (iii) Stress testing household balance sheets could also provide useful insights into vulnerabilities and implications for the banking and NBFI sectors as well as the real economy.

Lastly, while current aggregated data suggest that households have sufficient buffers when faced with economic shocks, disaggregated data is needed to provide a more complete picture of vulnerabilities in the household sector.

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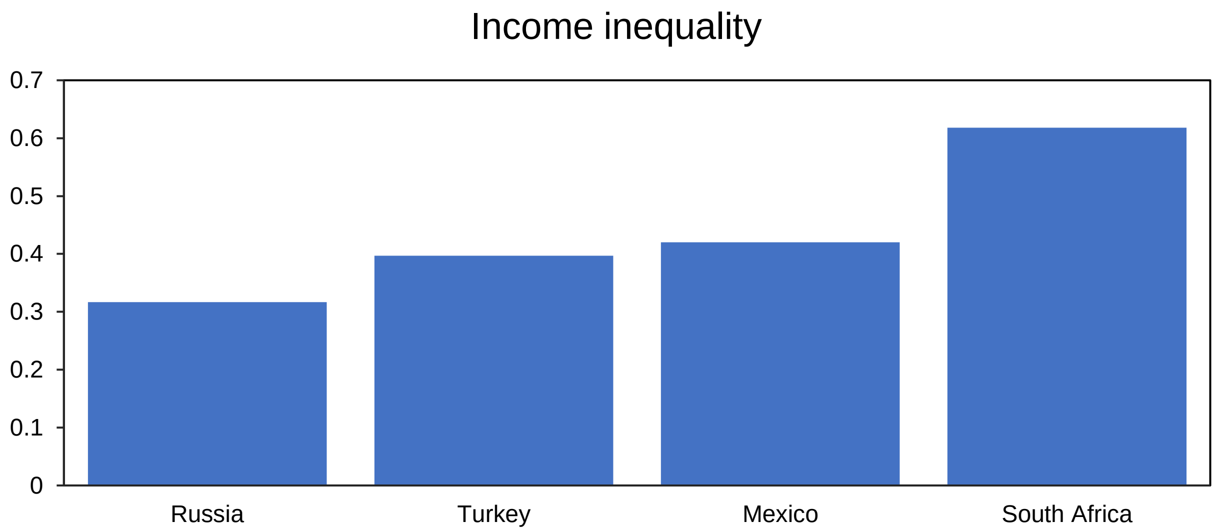
World Bank 2022. Inequality in Southern Africa: An Assessment of the Southern African Customs Union

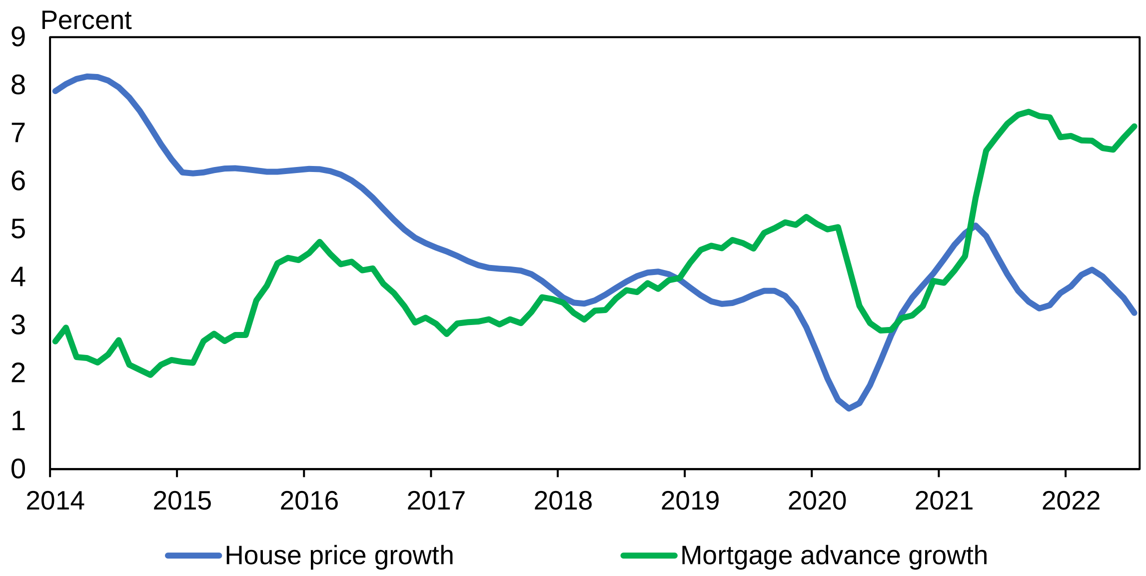
Annexure A

Figure 1: Gini-coefficient for SA and other emerging market economies



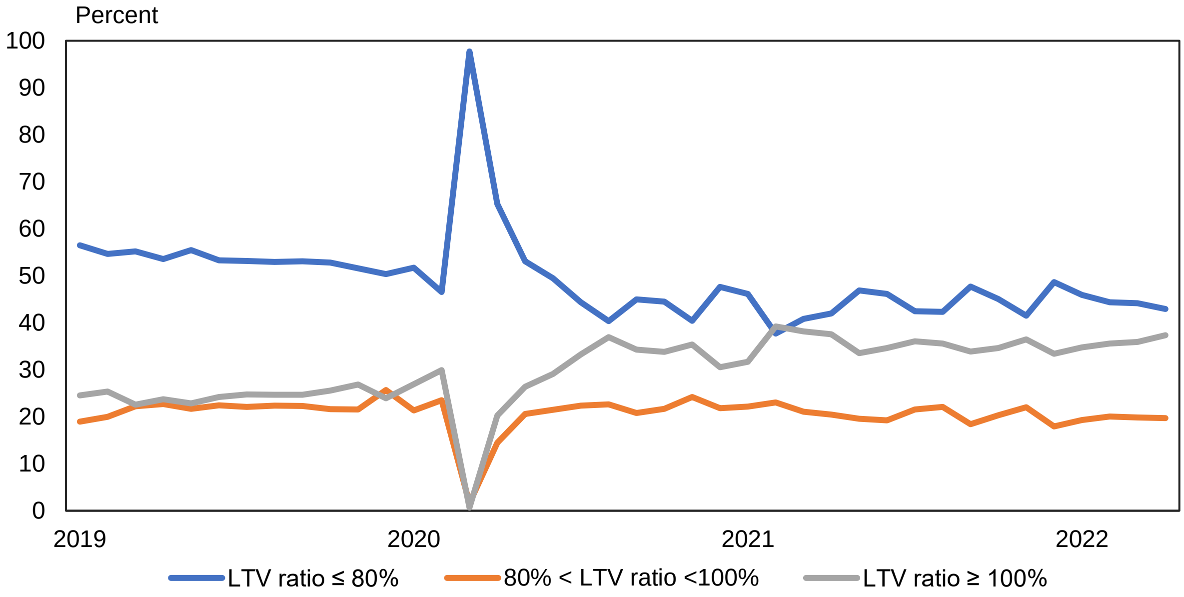
Source: OECD, latest data available

Figure 2: House prices



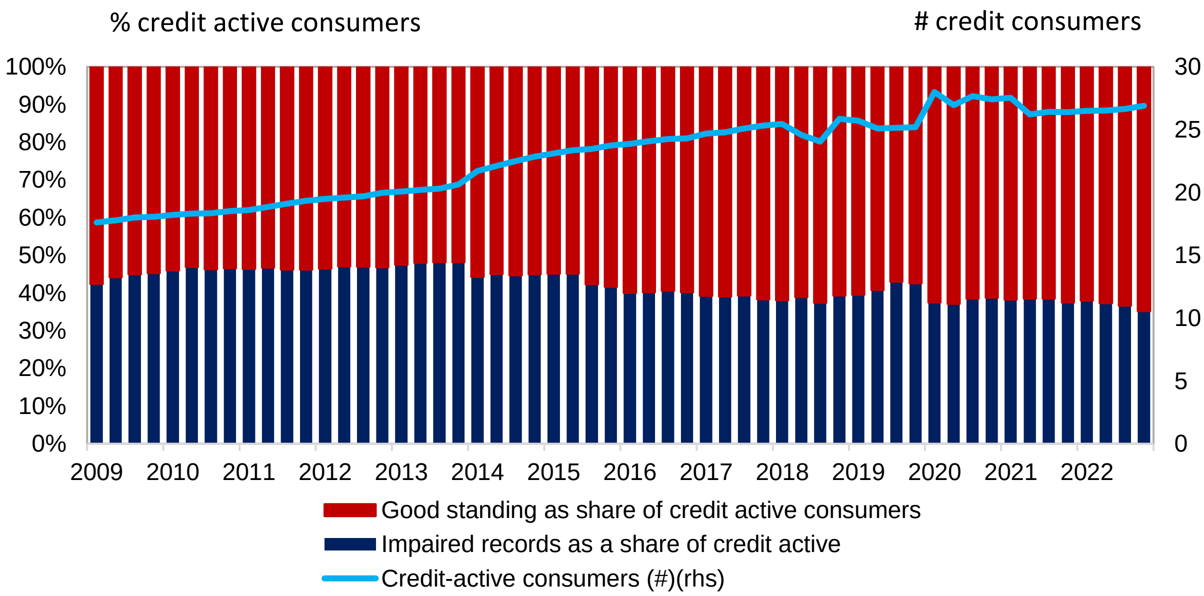
Source: BIS and SARB

Figure 3: Loan-to-Value



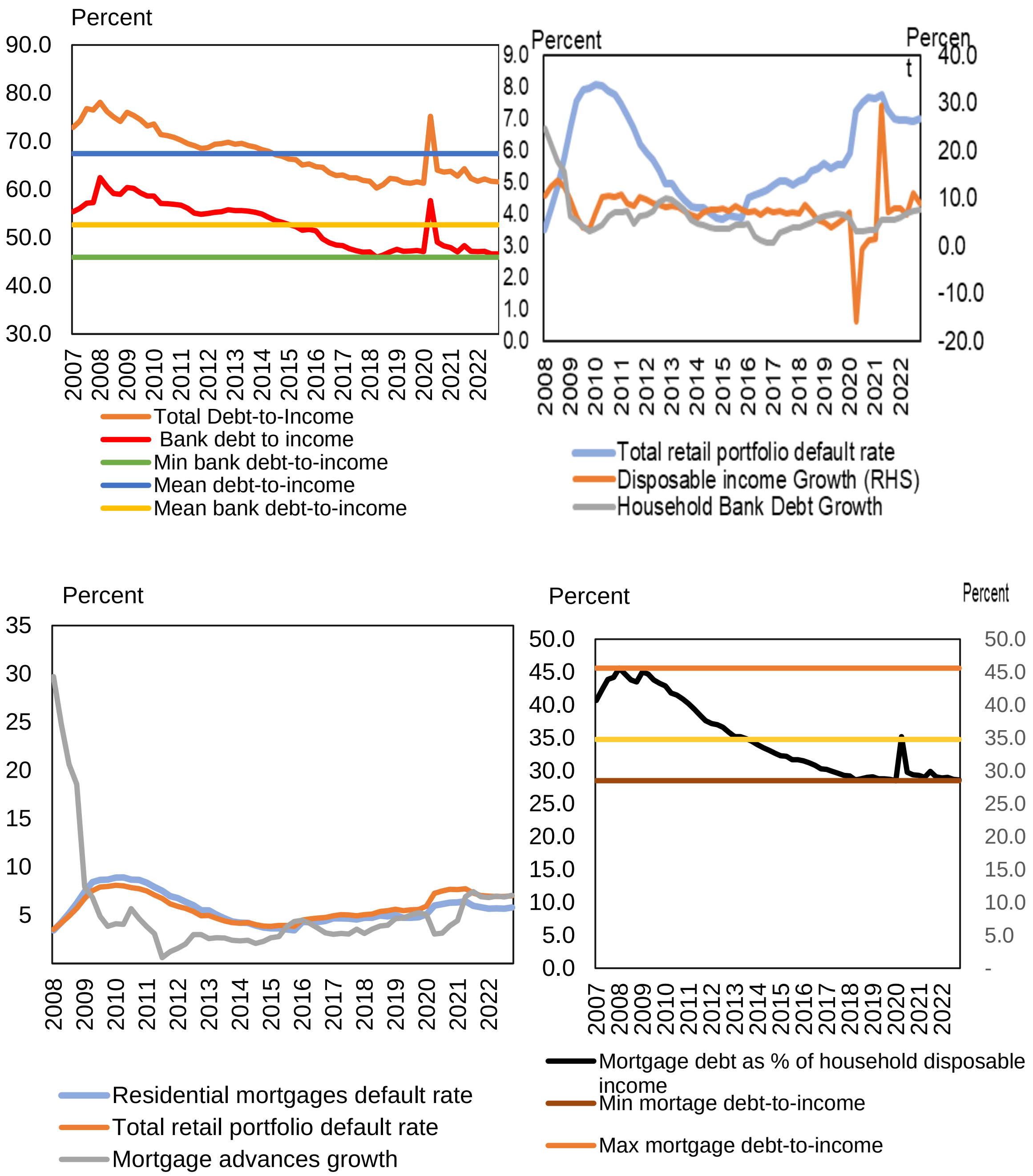
Source: SARB

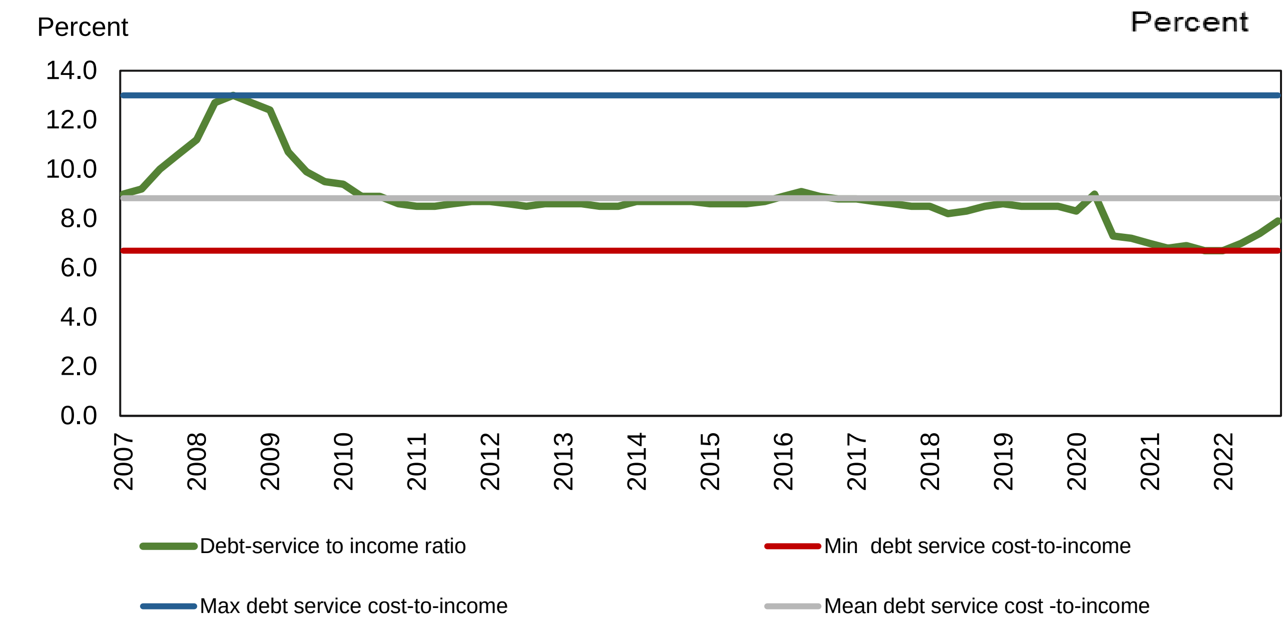
Figure 3: Credit standing of consumers



Source: NCR

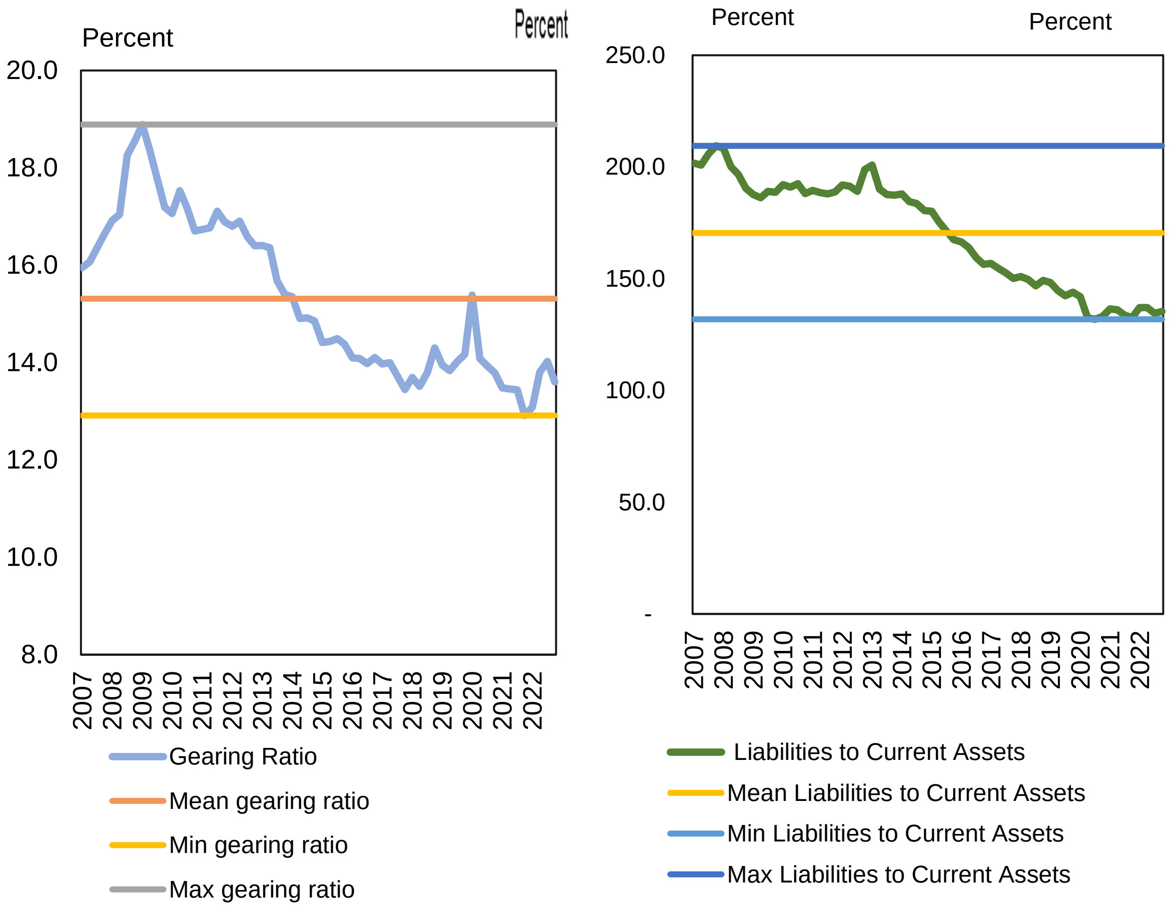
Figure 4: Liquidity mismatch indicators





Source: SARB

Figure 5: Solvency mismatch indicators



Source: SARB