



BANK ĊENTRALI TA' MALTA  
EUROSISTEMA  
CENTRAL BANK OF MALTA

# HOUSEHOLD DISPOSABLE INCOME AND SAVING RATE – NEW MEASURE AND A COMPARISON WITH THE EUROPEAN UNION

## BOX 1: HOUSEHOLD DISPOSABLE INCOME AND SAVING RATE – NEW MEASURE AND A COMPARISON WITH THE EUROPEAN UNION<sup>1</sup>

### Introduction

Household saving is an important determinant of the availability of funding for investments by both the private sector and government. The lower the household saving rate the lower the funding available to finance such investment and hence economic growth. In 2024, the National Statistics Office (NSO) started publishing a full sequence of non-financial accounts for the period 1995 to 2023.<sup>2,3</sup> As part of these accounts, the NSO has published an annual time series of households' disposable income and savings rate. These series will now be published on an annual basis along with other sector accounts data.<sup>4</sup>

As disposable income is a key determinant of private consumption, prior to the official publication of such variable, the Central Bank of Malta used to produce its own estimate. Disposable income is an important component of the macroeconomic framework of the Bank and is an explanatory variable in the private consumption equation within STREAM, the flagship model used to produce the Bank's projections.<sup>5</sup> Projections of disposable income as well as the saving ratio are regularly transmitted to the ECB as part of the bi-annual Eurosystem staff projections and published in the Bank's quarterly projections publication.

Following the publication of the sequence of non-financial accounts by the NSO, the Bank decided to replace its internal estimates and instead switched to the official series of disposable income and saving rate. However, since previously the Bank could not follow the official methodology to estimate disposable income due to some data limitations, its past estimate differs somewhat from that published by the NSO.

This box compares the Bank's historical estimates of disposable income and the savings rate with the new official series. It also compares the savings rate for Malta with that of the European Union (EU).

### A brief outline of the methodology underlying the official estimate of disposable income

The disposable income of each sector within the national accounts framework is derived as a balancing item from a set of ordered sequence of accounts, which describe the different stages of economic processes: production, generation of income, its distribution and redistribution, its use and asset accumulation. Each account has its 'uses' and 'resources' information, which are brought to balance with a balancing item. The uses refer to items

<sup>1</sup> Prepared by Abigail Marie Rapa, a principal economist within the Economic Analysis Department of the Central Bank of Malta.

<sup>2</sup> See [NSO News Release 198/2024](#) published on 23 October 2024.

<sup>3</sup> Data on disposable income was only provided in the National Accounts up to 1999. Thereafter readings for this series were not publicly available. See: Grech, O., "A New Measure of Household Disposable Income for Malta", *Annual Report*, Central Bank of Malta, 2013, pp. 42-48. Also, a discussion of the saving rate in Malta between 1970 and the late 1990s can be found in Grech, A. G., "The Private and Public Saving Gaps in Malta and their Impact on the Current Account", *Quarterly Review*, 33(1), Central Bank of Malta, 2000, pp. 51-61.

<sup>4</sup> The non-financial accounts by institutional sector describe the accounts of non-financial (S11) and financial (S12) corporations, general government (S13), households (S14) and non-profit institutions serving households (NPISH) (S15) and their relationships between them and with the rest of the world.

<sup>5</sup> See [STREAM](#).

payable from the relevant sector, while resources are receivables by the sector. For our purposes, we are particularly interested in the accounts of households and non-profit institutions serving households (NPISH) (sectors 14 and 15).

Households' disposable income includes wages and salaries, mixed income (income from self-employment and unincorporated enterprises), income from social benefits other than those in kind, other current transfers, and income from financial investments. It is netted of taxes on income, wealth, social security contributions paid by employees, the self-employed and the unemployed as well as interest on financial liabilities. The term gross implies the inclusion of depreciation costs.

$$ypd = yemp + socbenc + currtran - ssc - hhdirtax + totinv + selfempinc \quad (1)$$

where;

ypd = nominal disposable income

yemp = wage bill

socbenc = social benefits excluding in kind

currtran = other current transfers

ssc = social security contributions

hhdirtax = household direct taxes

totinv = total investment income (net)

selfempinc = self-employed income, including imputed rents

While the publication of the Sector Accounts by the NSO is essential, this still poses some challenges going forward. First, the Bank's macroeconometric model STREAM is estimated using data at quarterly frequency and given that the availability of official disposable income figures are at annual frequency, the quarterly measure to be used in the Bank's forecasting model needs to be interpolated. We utilize the Chow-Lin generalised least squares regression-based interpolation technique to transform each annual disposable income sub-component into quarterly frequency. This method is used for temporal disaggregation or interpolation of time series data, and it involves distributing a series to a higher frequency while maintaining the sum, average, first or last observation over each period.

Secondly, annual sector accounts are published yearly consistent with the second vintage (Q2) of national accounts published in August. However, most components of the nominal disposable income series shown in equation 1 are subsequently revised in each national accounts vintage. To maintain consistency with other components of the national accounts (such as private consumption) that are revised at quarterly intervals, we revise disposable income elements on a quarterly basis where possible. Hence, in between these vintages, the Bank could show slightly different values for disposable income and the savings rate than those published officially by the NSO. In the charts, this measure is referred to as 'latest estimate'. Nevertheless, in each December projection round, from now on the Bank's disposable income and saving rate will be consistent with the official sector accounts data published in the preceding October.

As the Bank takes into account all available quarterly releases of national accounts, its historic series of disposable income and the savings rate will also cover a longer time period than the sector accounts.

## Outcome

This section compares the Bank's estimate of disposable income based on the old methodology but using the latest quarterly national accounts data (Old CBM estimate), with the official measure of disposable income published by the NSO in the sector accounts. Chart 1 shows that the Bank's estimate of nominal disposable income based on the previous methodology was higher in level terms than the one which was published by the NSO. This is the case throughout the time series, although the difference was particularly pronounced from 2017 onwards.

Despite such level differences, Chart 2 shows that developments in terms of annual growth rates are broadly similar, except in a few years. In particular, we noticed a relatively strong difference in annual growth developments in 2023 (6.4 percentage points), 2008 (-6.2 percentage points) and 2009 (4.7 percentage points).

The largest contributors to such differences emanate from divergent growth developments in the total investment and self-employed income components. Information for both these sub-components was relatively scarce prior to the publication of the annual sector accounts, and hence, the Bank produced its own estimates that are likely to have suffered from relatively non-negligible statistical errors. Nevertheless, the dynamics of both series are qualitatively similar and mainly driven by the wage bill.

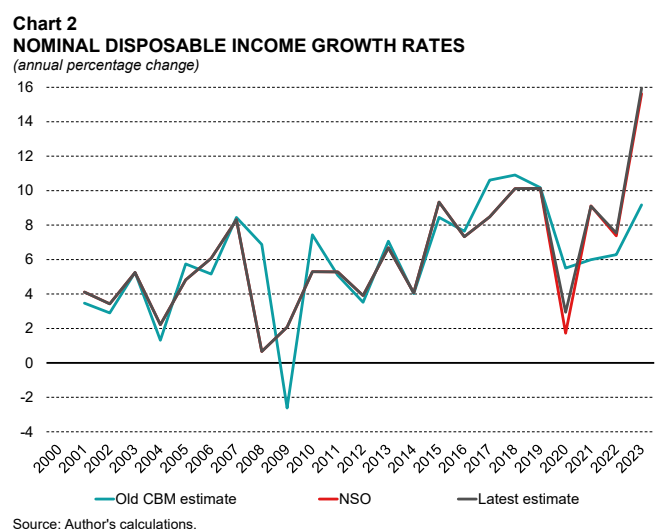
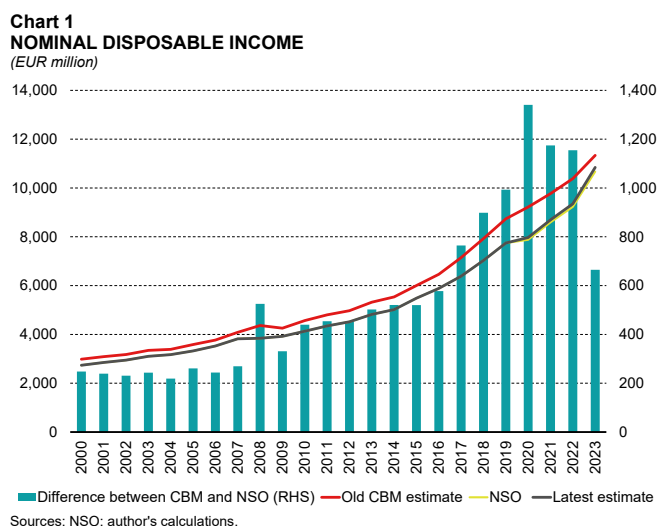
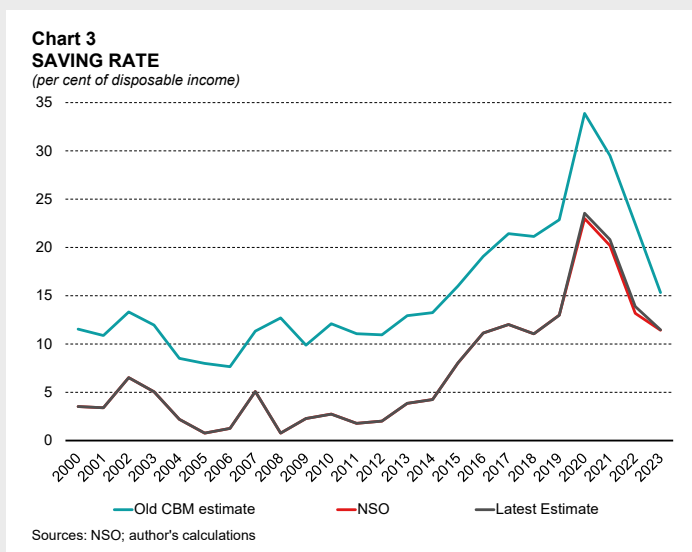


Chart 3 shows the implied differences in the saving ratio between the Bank's old estimate and the official saving ratio. In view of the above-mentioned scarce information about certain sub-components of disposable income (particularly self-employed income), the Bank had benchmarked the 2015 saving ratio with the 2015 Household Budget Survey (HBS).

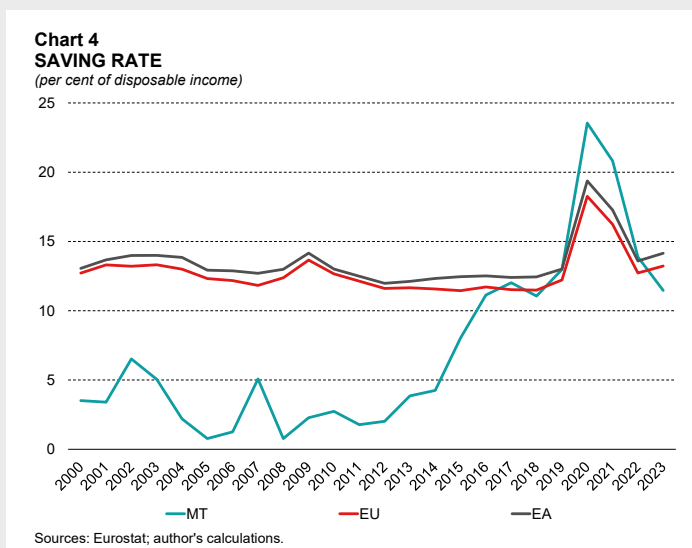


As the Bank's old estimate of disposable income was higher than the one published by the NSO, its saving ratio was also higher throughout the whole period. Chart 3 shows that while according to the Bank's old estimate, the saving ratio peaked at 34% in 2020, the peak of the NSO series is 23%. Nonetheless, the dynamics of the two savings rates derived by the two disposable income measures are very similar. This result mirrors the fact that the dynamics in terms of the two measures of disposable income were very similar.

Furthermore, from the charts above one can note that if disposable income is re-estimated, and the saving rate is derived using the latest national accounts data, the deviation from the sector accounts' series is small.<sup>6</sup> The next section of this short study uses the 'latest estimate' as Malta's figures.

### Comparison with the EU and EA

Looking at the developments in the saving rate in Malta and the EU one can note that the latter registered higher saving rates until 2017, by which time Malta's saving rate started exceeding the EU average. This also holds for the euro area (EA). As shown in Chart 4, for most of the early 2000s



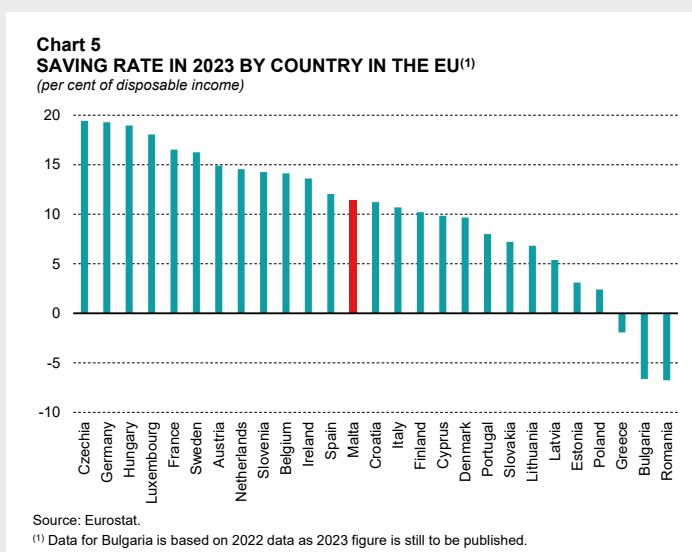
<sup>6</sup> The difference between the NSO estimate and the latest estimate occurs from 2020 onwards as the national accounts data is revised from 2020 onwards.

the saving rate for Malta stood lower than 5% while that of both the EU and EA hovered between 10% and 20%. Following the accession of Malta to the euro area, Malta's saving rate started to catch up with the EA average, fully catching up by 2017. Both the EU and EA rates were relatively stable during this period.

The saving rate spiked in 2020 for both Malta and the EU mainly due to lockdowns imposed during the COVID-19 pandemic aimed at containing the spread of the virus. Indeed, lockdowns limited the household final consumption expenditure, while government support helped to maintain the disposable income, resulting in a degree of forced savings. Following the lifting of most of the restrictions by 2022, the savings rate fell once again for all the series shown in Chart 4.

Furthermore, data for 2023 show some discrepancy in saving rate developments. While the saving rate has increased in the EU and EA between 2022 and 2023, this has continued to decline in Malta. This reflects that the robustness of Malta's private consumption growth was partly financed by past savings, in contrast to the weaknesses exhibited in most other European countries. This could also be in part due to the relatively weak transmission of the monetary policy tightening in Malta during this period, when compared to the rest of the euro area.

Chart 5 shows the saving ratios across EU countries in 2023. In most countries, households were net lenders to the economy with the only exceptions of Greece, Bulgaria and Romania, which registered negative saving rate in 2023. In 2023, the saving rate in Malta classified in the middle of the EU country distribution at 11.5%. The highest saving rate in 2023 was registered in the Czech Republic (19.4%), while the lowest rate was registered in Romania (-6.8%).



### Disposable income and saving rate projections

Looking ahead, in this projection exercise, disposable income growth is expected to remain robust, but to slow down in 2024. Growth is expected to edge up to 7.7% in 2025 partly reflecting revisions in the income tax brackets. It is then set to decelerate gradually to 4.8% by 2027 (see Chart 6). Growth is expected to be supported mainly by wages and salaries, which are expected to remain the main driver of disposable income.

Furthermore, as shown in Chart 6, in 2025 we expect the saving rate to edge up, reflecting the revision in the income tax bands as announced in Budget 2025. Indeed, whilst the lower taxes are expected to boost private consumption, the saving ratio is also expected to rise slightly. It should be kept in mind that the income boost is capped for the higher income tax brackets who typically have a lower average propensity to consume. The saving rate is then expected to stabilise, after the tax cut, to around 11%.

