National Bank of the Republic of North Macedonia

Savings in the age of zero interest rate – some evidence from SEE countries[1]

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Abstract

The past decade following the global economic crisis (2008-09) will be certainly marked as the era of historically low interest rates, while the current juncture of COVID-19 pandemic outbreak raises the occasion of another extended period of very low interest rates. Yields have been falling across the whole spectrum of financial assets, including bank deposits, raising the concern of possible negative impact of low interest rates on households' propensity to save. In this analysis, we briefly discuss developments in household savings against the low interest rates environment in the countries from the European Union (EU) and Southeastern Europe (SEE). The aim is to shed some light on the interest rate-savings relationship, observe the potential disruptions to this relation due to the persistently low interest rates and the role that the interest rates played vis-à-vis other factors in shaping households' decisions to save. The analysis points that low interest rates and their dynamics over time have not been a key determinant of saving and investment behavior of households in the region. Factors relating to disposable income and wealth, households' preferences and risk attitudes, as well as institutional frameworks, are likely to have been far more important determinants in this sense. In SEE countries, bank deposits have sustained and further strengthened their role as leading saving instrument in households' financial assets post-crisis, despite the low interest rate environment, while households' saving ratio has improved from very low and even negative levels in some countries pre-crisis.

[1] The views expressed in this analysis are those of the author and do not necessarily represent the views of the National Bank of the Republic of North Macedonia.

Savings in the age of zero interest rate – some evidence from SEE countries

The past decade following the global crisis will be certainly marked as the era of historically low interest rates. Yields have been falling across the whole spectrum of financial assets, including bank deposits as traditionally dominant form of household savings. Returns on bank deposits have been at a record low level for quite some time now, approaching to zero or even in negative territory in some countries. The issue of low interest rates became even more pressing at the current juncture of COVID-19 pandemic outbreak that urged major central banks to respond with extraordinary monetary stimulus once again in order to stabilize financial markets and contain the economic fallout from the pandemic. Central banks response was vigorous and swift, including interest rates cuts and massive assets purchase programs. This rises the occasion of another extended period of very low interest rates particularly if the coronavirus crisis turns out to have prolonged economic consequences, which will additionally have a negative impact on households' disposable income. Such developments have naturally fueled a debate over a potential negative impact on households' saving and investment behavior. The concern is that households could reduce their saving efforts and abandon longer-term saving objectives in response to low interest rates. In this analysis, we briefly discuss developments in household savings against the low interest rates environment in the countries from the European Union (EU) and South eastern Europe (SEE). The aim is to shed some light on the interest rate-savings relationship, observe the potential disruptions to this relation due to the persistently low interest rates and the role that the interest rates played vis-à-vis other factors in shaping households' decisions to save.

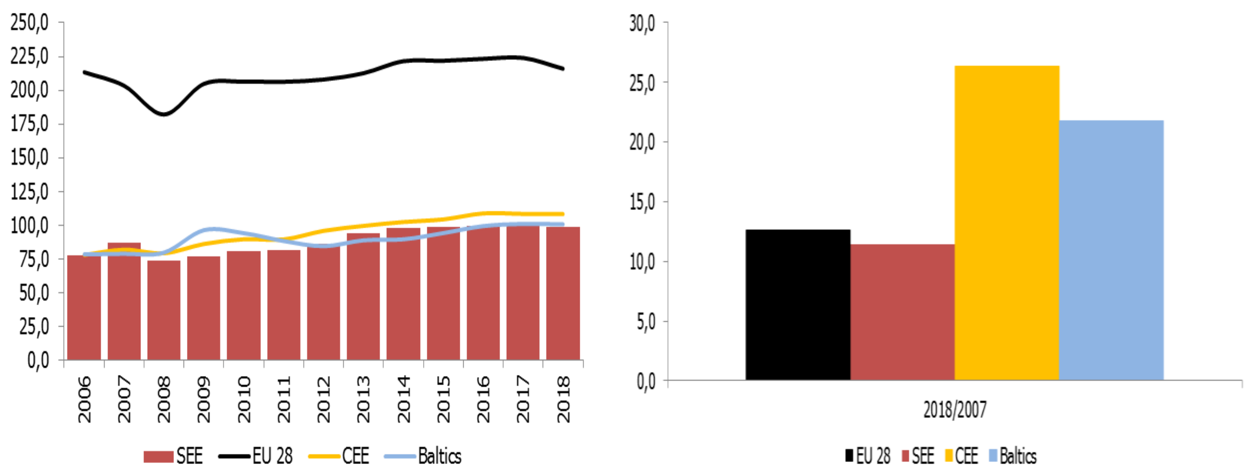
According to economic theory, interest rates can influence both the level and the structure of savings. While the interest rate effect on the level of savings is commonly perceived to be positive, the final effect is very difficult to be estimated a priori. In theory, the correlation between interest rates and the level of savings is essentially shaped by three effects - the income effect, the substitution effect and the wealth effect. Each of them differently impacts savings. An environment of very low interest rates, for example, can discourage savings because of the substitution effect, but it can also encourage it via the income effect as people may try to compensate for low interest rate by increasing the amount saved. Also, when observing the interest rate-saving correlation, it is more appropriate to look at real returns as they capture the wealth effect, calculating for the inflation risk on households' purchasing power. In theory, the interest rates can also influence the structure of savings. The search for yield in low interest rate environment may motivate households to extend the term structure of their portfolio or allocate assets to higher risk-higher return instruments. Yet, when analyzing household savings, one should bear in mind that interest rates are important but not an exclusive determinant of households' saving choices. There are several other factors that can theoretically impact households' decisions on how much and in which form to save. Trends in households' disposable income, the level of financial development and the availability of diverse saving instruments, the institutional frameworks, notably the tax and social security systems, as well as demographics and the extent to which the population is financially literate are all important determinants behind households' decisions to save. Households' attitude to risk and their liquidity preferences also seem to influence behavior. The low interest rate environment is unlikely to have changed this in any substantial way, with household savings continuing to grow post-crisis despite the subdued returns.

Data at EU level show that household financial assets are now higher than before the crisis (by 12.6 percentage points of GDP in 2018 as compared to 2007). The same pattern holds for the CEE region and the countries from SEE where data are available. In North Macedonia for instance, total household financial assets increased by 14 percentage points of GDP, which is above SEE[2] average of 11.4 percentage points of GDP increase in 2018 as compared to 2007. The outbreak of the global crisis and European debt crisis weighed on households' disposable income, weakening their ability to save. Households' financial assets (in terms of GDP) stalled and even decreased in some countries (in 2011 as compared to 2006) most notably in those member states that were more heavily affected by the crisis, such as Greece, Spain and Italy. Heightened uncertainty and problems in the banking sectors that prevailed at the time were another factor that suppressed savings in these countries as households reacted by withdrawing deposits from distressed banks. From the SEE region, households' financial assets depleted more notably in Romania, and to a certain extent in Slovenia. In other countries, such as North Macedonia and Croatia, households' financial assets continued to grow on average throughout the crisis, with banking sectors retaining their sound shape and stability. As the situation stabilized, with economies gradually recovering and labor markets improved, it gave impetus to disposable income and confidence and subsequently to savings with households' financial assets increasing across all EU member states in 2018 as compared to 2011 (with the exception of Ireland, Cyprus and Malta).

Saving ratio marginally depleted in the crisis but was quickly restored in its aftermath and remained at stable level afterwards. At EU level, saving ratio (defined as gross household saving divided by gross disposable income) post-crisis hovers at around 11%, which corresponds with the pre-crisis level and is above CEE[3] average (8.3%). Some of the SEE[4] countries show the lowest saving ratio of 4.6% on average post-crisis (2010-2018) but have the highest improvement over time from very low and even negative (in North Macedonia[5] and Bulgaria) saving rates pre-crisis to 7.5% on average in 2018 (increase in saving ratio by roughly 9.4 percentage points in 2018 as compared to 2005).

Chart 1. Financial assets of households

(in % of GDP) (change, in pp of GDP)



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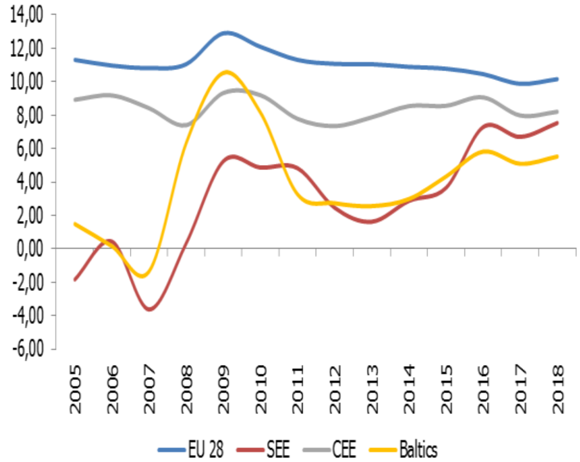
[2] Refers to Bulgaria, Croatia, Romania, Slovenia and North Macedonia.

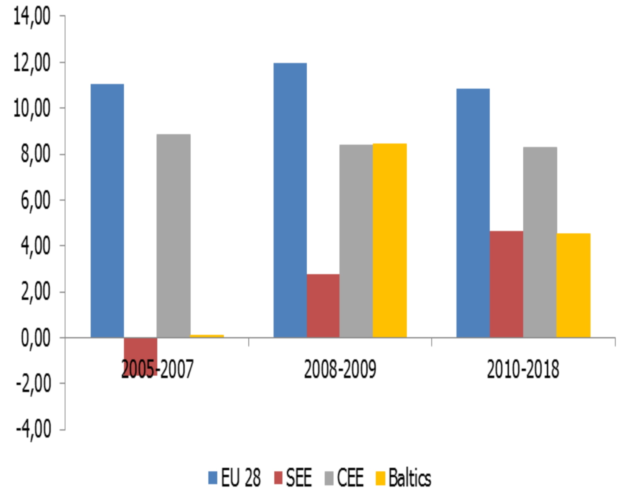
[3] Refers to the Czech Republic, Hungary, Poland and Slovakia.

[4] Refers to Bulgaria, Croatia, Slovenia and North Macedonia.

[5] Households' disposable income and savings ratio for North Macedonia are calculated by the NBRNM.

Chart 2. Gross household saving rate, in percent of gross disposable income
(in %) (period average, in %)





Note: Due to data availability, the SEE group includes Bulgaria, Croatia, Romania, Slovenia and North Macedonia. Romania is not included in the saving ratio average.
Source: Eurostat and NBRNM.

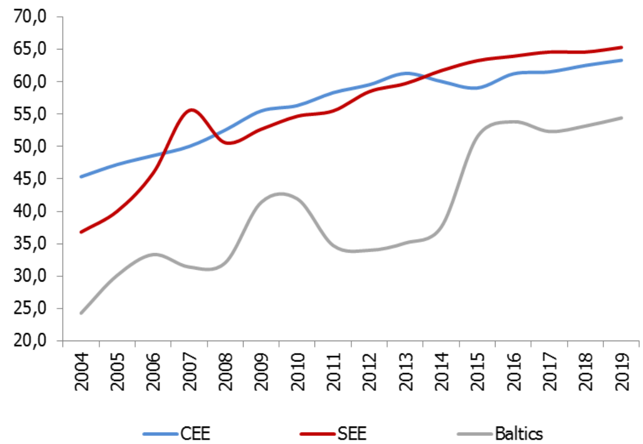
In the SEE countries, bank deposits have traditionally been the most prevalent form of household savings capturing nearly half of households' financial assets[6]. The global economic crisis and the low interest rate environment did not make much of a change in this respect. Even more, the share of currency and deposits in total financial assets has risen from 42.2% in 2007 to 49.7% on average in 2018[7]. Yet, observing the dynamics, one can notice a marked deceleration in the deposit growth in the midstream of the crisis, in line with the slowdown of overall activity, and lower confidence, despite the relatively high interest rates levels at that time. Household deposits typically constitute major part of total banks' deposits, hence, can be considered as leading determinant of the dynamics of total bank deposits. Data point to a steady deposit growth post-crisis despite the falling interest rates. Total deposits in SEE[8] grew by 6.5% on average y-o-y, post-crisis (2012-2019) as compared to 6.2% in CEE[9]. Within the region, all of the countries witnessed positive deposit growth on average. The growth rate was the highest in Montenegro (8.5%) and Serbia and Bosnia and Herzegovina (8.3% and 7.9%). In North Macedonia, total deposits increased by 7.4% on average (2012-2019), which is a positive outcome given the environment of global instability caused by the global and European debt crisis but also domestic political uncertainty in recent past. In terms of GDP, total deposits in SEE increased by 10 percentage points in 2019 as compared to 2011 on average, which points to a stronger growth as compared to CEE (5 percentage points). Nominal interest rates on deposits in the region[10] fell by 2.7 percentage points on average in 2019 as compared to 2011 approaching to zero in Serbia and Slovenia in recent years. In North Macedonia[11] and Bosnia and Herzegovina, total deposits interest rates

[6] The average refers to Bulgaria, Croatia, Romania, Slovenia and North Macedonia.
[7] Data refer to Bulgaria, Croatia, Romania, Slovenia and North Macedonia.
[8] Data on deposits growth, y-o-y and in terms of GDP, refer to Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, North Macedonia and Serbia.
[9] Data on deposits growth, y-o-y and in terms of GDP, refer to the Czech Republic, Hungary and Poland.
[10] Data on interest rates (nominal and real) refer to Albania, Bosnia and Herzegovina, Croatia, Montenegro, North Macedonia, Serbia and Slovenia.
[11] Refers to interest rate on total deposits.

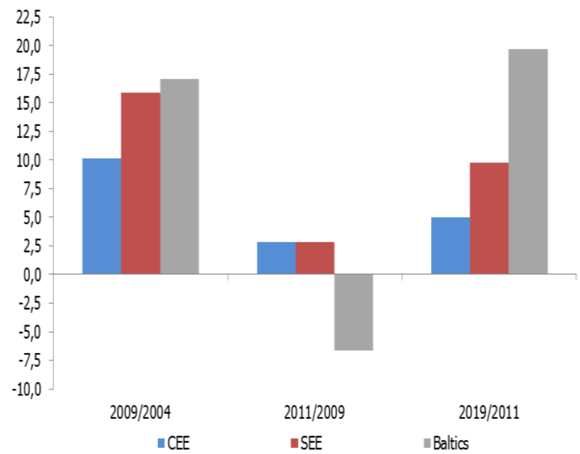
are still comparatively higher (at 1.3% and 1.1%, respectively, in 2019) but from levels above 3% pre-crisis. Such developments suggest that falling nominal interest rates have not been a major driver of the saving and investment behavior of households in the region which continued to allocate part of their income in bank deposits.

Chart 3. Total bank deposits

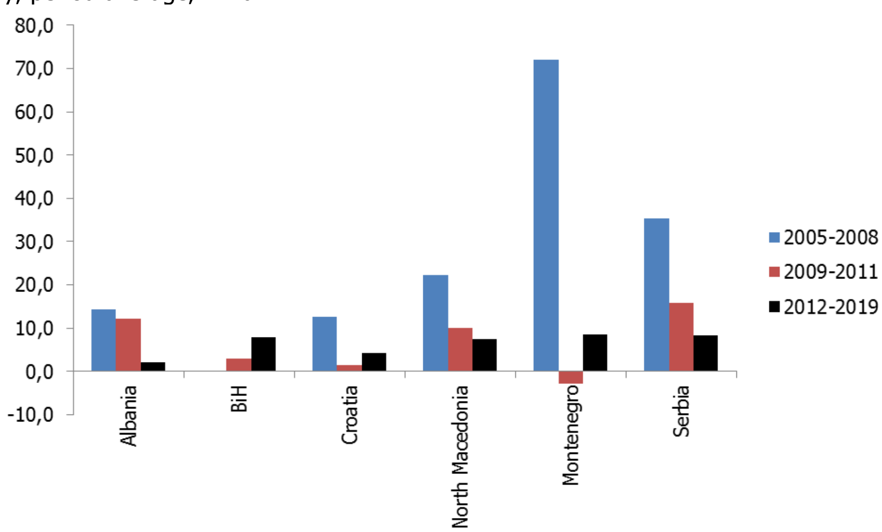
in % of GDP



change in pp of GDP



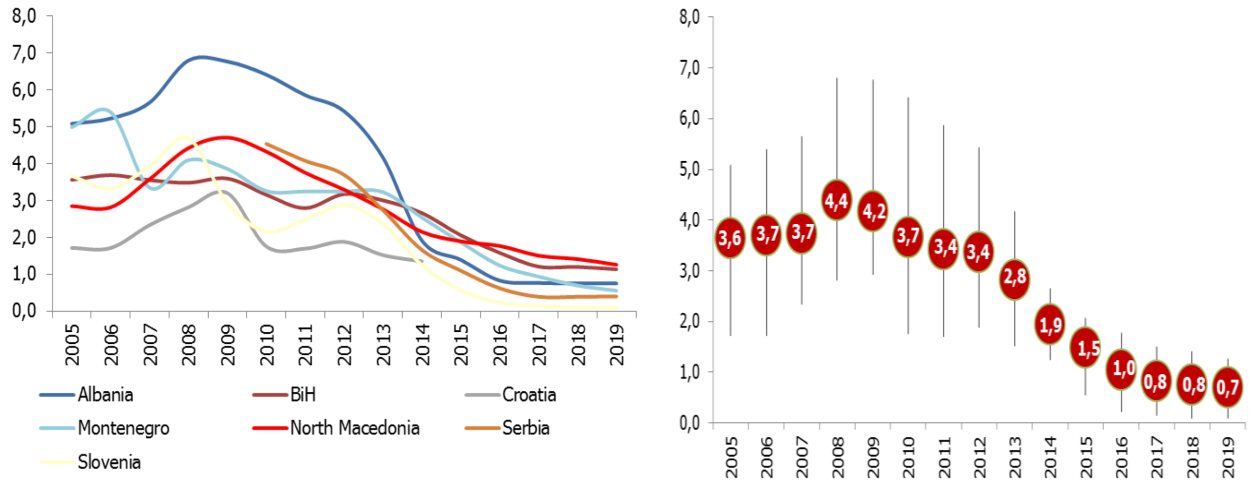
growth rate, y-o-y, period average, in %



Source: central banks websites.

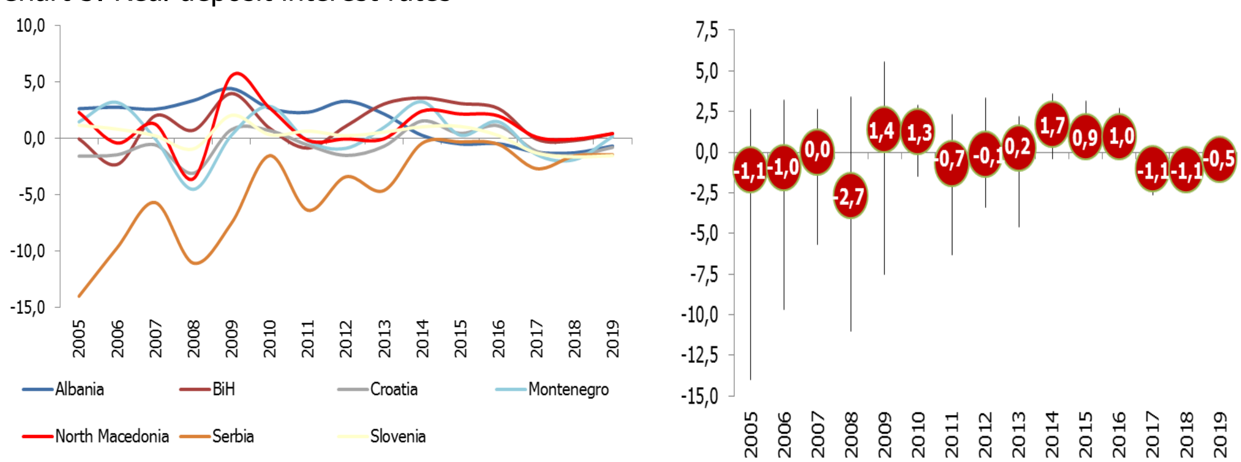
Looking at the real return on bank deposits in the SEE region, the analysis does not reveal strong shifts in the post-crisis period as compared to the pre-crisis. High nominal interest rates in the period pre-crisis coincided with comparatively higher inflation that resulted in low and even negative real returns across some countries. As the crisis emerged and with inflation starting to recede in 2009, real return stood higher at a level of around 1.4% from -2.7% on average in 2008. Real return increased again in the 2013-2016 period as notable consequence of the lower inflation rate before the very low close to zero nominal interest rates pushed it back into a negative territory once again during recent years. For the post-crisis period as a whole (2010-2019), real return was slightly positive on average (0.1%) as compared to the negative average rate in the years pre-crisis (-0.7 for 2005-2007). Hence, it cannot be that the return environment for bank deposits was exceptionally poor in recent years as lower inflation has managed to compensate for falling nominal interest rates even improving the real return on average post-crisis.

Chart 4. Nominal deposit interest rates



Note: The right-hand side chart shows minimum and maximum level of interest rates by countries and the average for the region represented by the red dots.
Source: World Bank, IMF WEO and central banks websites.

Chart 5. Real deposit interest rates



Note: The right-hand side chart shows minimum and maximum level of interest rates by countries and the average for the region represented by the red dots.
Source: World Bank, IMF WEO and central banks websites.

Alike the countries from the region, in North Macedonia, bank deposits are the prevailing instrument of household savings. For the post-crisis period (2012-2019), the share of bank deposits[12] in total households' financial assets amounted to 68.5% on average and is higher compared to its pre-crisis level of 57% in 2007. In terms of GDP, household deposits increased by 14.6 percentage points in 2019 as compared to 2007 to a level of 39.8% of GDP in 2019. A glance at the dynamics of household deposits over time points to the

[12] Including deposits at savings houses.

changes in the disposable income and the risk attitude of households as important determinants of their saving behavior. The growth in household deposits slowed down during the crisis despite high and increasing interest rates, underpinned by decelerating disposable income and increased risk aversion in the midstream of the crisis. Political instability in the country in recent years has also weighed on households' propensity to save that again accentuated the role of risk attitude. The movements in the interest rates seem to have not impacted much the overall dynamics in household savings. In the post-crisis period, interest rates on banks' deposits followed a generally decreasing trend from the high levels during the acute phase of the crisis, both in nominal and real terms. The real return was higher on Denar deposits as compared to foreign currency deposits which have observed negative real returns in certain years. The real interest rate on household Denar deposits in the period between 2012 and 2019 equaled 1.8% on average which is comparable, and slightly higher than the pre-crisis level of 1.3% on average (for 2006-2008). Foreign currency deposits provided real return of 0.1% on average post-crisis as compared to the negative real return of -2.2% on average pre-crisis. The evolution of interest rates may have influenced the composition of savings given that the post-crisis period was visibly marked by a shift towards long-term savings and savings in domestic currency. These developments probably reflect a combination of factors such as the enhanced confidence in the soundness and stability of the domestic banking sector, the credibility of the fixed exchange rate of the Denar against the Euro and the numerous macro-prudential measures that the National Bank has implemented post-crisis in order to support denarization of the domestic economy[13]. Yet, given the low interest rate environment and the higher returns associated with these deposit instruments, the search for yield may be among the motives for households' saving allocations post-crisis.

Chart 6. Household deposits

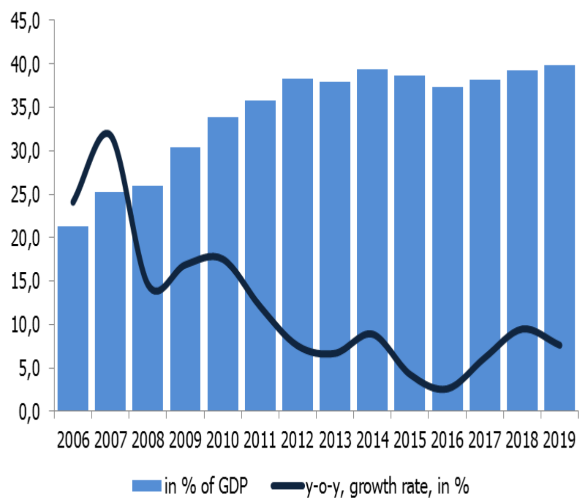
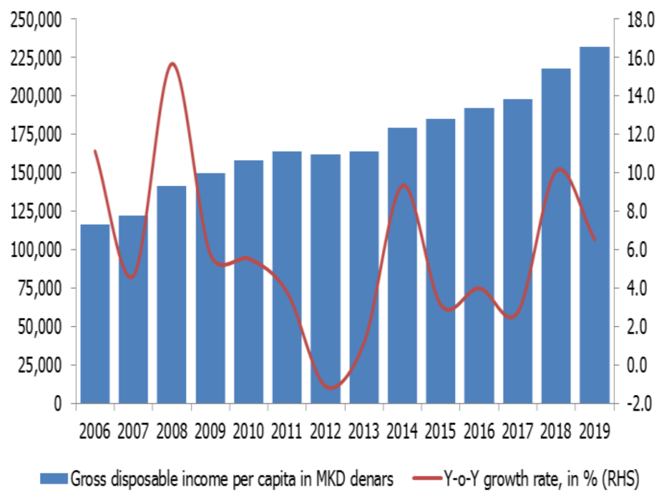


Chart 7. Households' gross disposable income



[13] For more details on the National Bank's measures please see the Strategy for Denarization of the Republic of Macedonia (www.nbrm.mk).

Chart 8. Interest rates on bank deposits in North Macedonia, in %

Nominal | Real

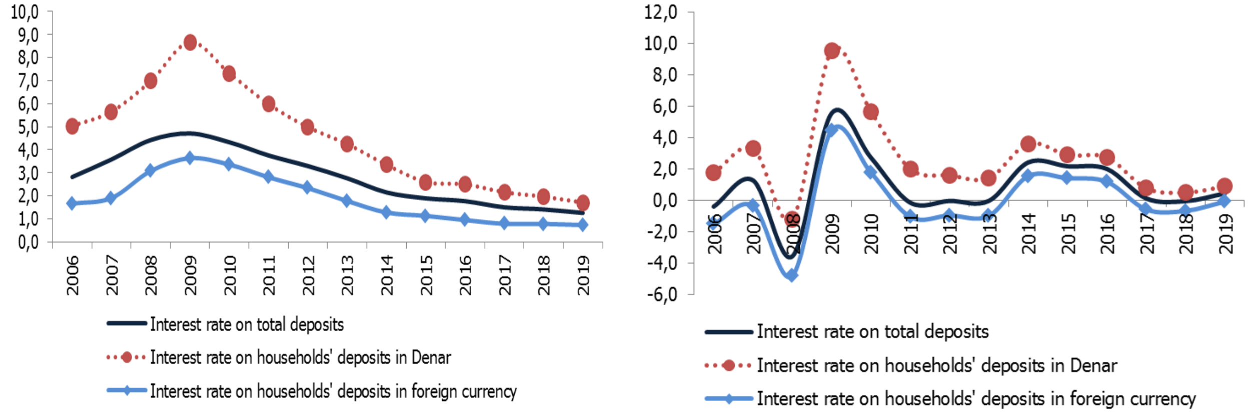
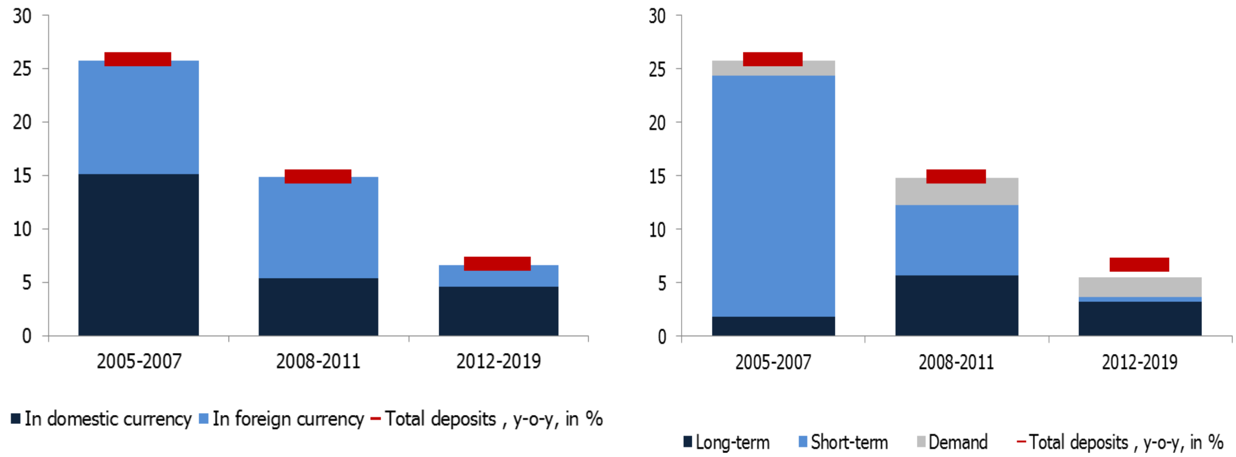


Chart 9. Contribution to annual growth in total household deposits
(in pp and in %, period average)



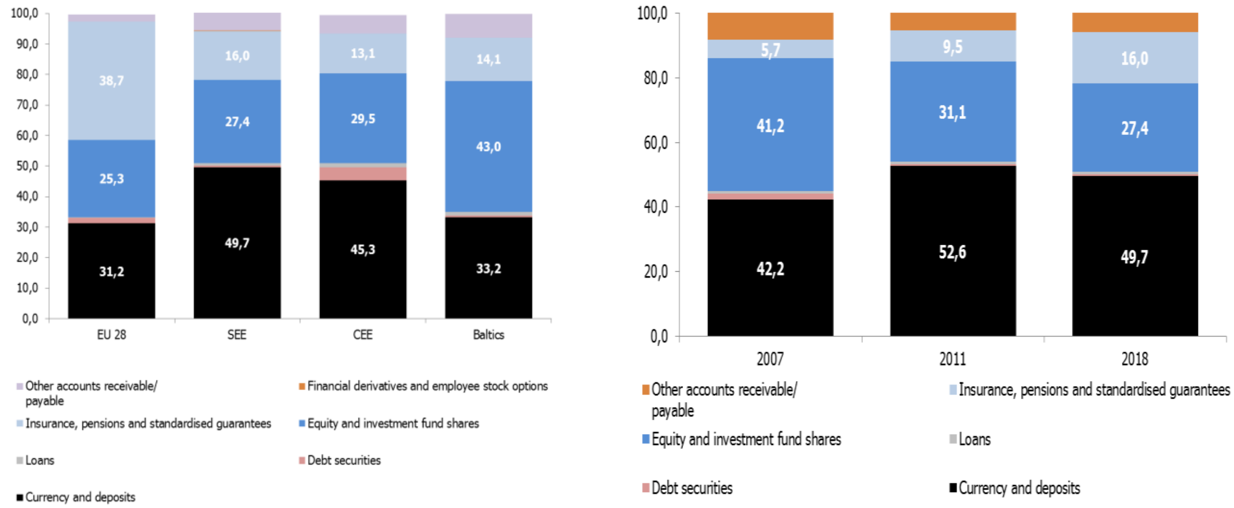
Source: National Bank of the Republic of North Macedonia and State Statistical Office of the Republic of North Macedonia.

Composition of financial assets held by households in SEE points to certain rebalancing of assets as compared to the pre-crisis period. The share of equity and investment fund shares has nearly halved as compared to the pre-crisis. These two asset classes typically offer higher yields as compared to bank deposits, but increase the risk of loss because of a drop in market prices. In adverse market conditions, equity securities may be subject to increased volatility, which can lead to losses as opposed to bank deposits that offer more stable and safe return. In this context, the drop in the share of equity and investment fund shares post-crisis is likely to reflect a "flight to safety" attitude by households, with stronger risk aversion dampening the importance of return as determinant of investment behavior. On the other hand, insurance and pensions have almost tripled their share supported by institutional changes and the setup of pension systems in some countries. Such is the case with North Macedonia where the current pension system based on multi-pillar design, including mandatory public and private pensions and voluntary private pensions, boosted private savings into the pension system. **Still, the share of insurance and pension instruments is rather low in SEE standing at around 16% of total households' assets in 2018. Bank deposits remain leading saving instrument and have further strengthened their role**

post-crisis despite the low interest rate environment. According to 2018 data, currency and deposits account for around 50% of total households' assets. The share is particularly high in North Macedonia (73%) and Croatia (50%). This saving structure of SEE[14] is comparable with CEE[15] countries but diverges from the EU average where insurance and pensions make up the highest portion of household savings. Bank deposits account for less than one third of households' assets at EU level. The same holds for the Baltics[16] where the largest part of households' assets is invested in equity and investment fund shares.

Chart 10. Financial assets of households, structure by instruments

Refers to 2018 Refers to SEE

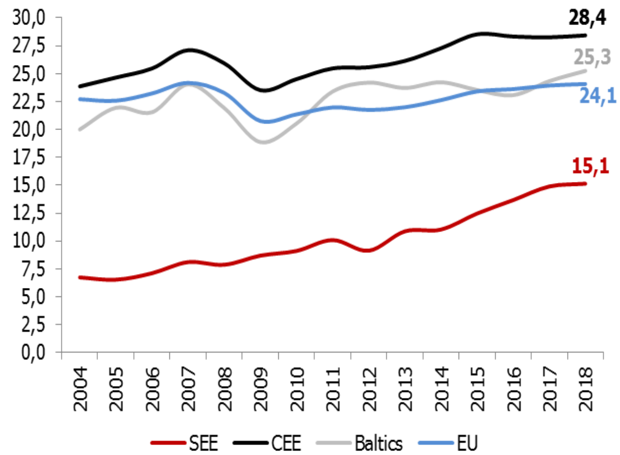


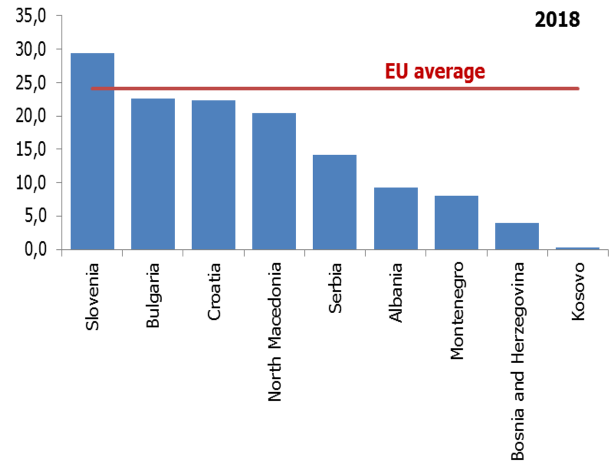
Note: Due to data availability, the SEE group includes Bulgaria, Croatia, Romania, Slovenia and North Macedonia.
Source: Eurostat and NBRNM.

The need for deeper and more developed non-banking financial industry to complement traditional bank saving instruments remains common feature for the region. The low interest rate environment may act encouraging in this sense. Insurance and pension companies can attract new savers by expanding the range of financial instruments and raising their attractiveness as compared to bank deposits. Investing in financial literacy and raising households' awareness about deposit alternatives is another factor that may provide support to non-banking financial institutions development. Strengthening the position of institutional investors can be multi-beneficial for SEE countries contributing towards fostering competition in the supply of financing and supporting economic activity in the region.

[14] Refers to Bulgaria, Croatia, Romania, Slovenia and North Macedonia.
[15] Refers to the Czech Republic, Hungary, Poland and Slovakia.
[16] Refers to Estonia, Latvia and Lithuania.

Chart 11. Gross domestic savings, in % of GDP





Source: World Bank data.

Boosting savings is particularly important given the low overall gross domestic saving rate in SEE[17] that averaged at 15.1% of GDP in 2018 as compared to 28.4% in CEE[18] and 24.1% at EU level. Looking at country-level, Bosnia and Herzegovina and Kosovo have the lowest gross domestic saving rates (3.9% and 0.3% of GDP, respectively), while Bulgaria and Slovenia have the highest (22.6% and 29.4% of GDP, respectively). North Macedonia ranks somewhere in the middle with gross domestic saving rate of 20.4% in 2018. These saving rates are not adequate to support investments that have plunged in the post crisis period and despite some recovery in recent period remain low, even below some traditional benchmarks for faster convergence. As initiatives to boost domestic savings will take time to bear fruit, attracting fresh capital from abroad is likely to remain important source to complement low domestic savings in SEE.

Conclusions

In a nutshell, the analysis indicates that low interest rates and their dynamics over time have not been a key determinant of saving and investment behavior of households in the region. This behavior has probably been shaped primarily by developments in the disposable income, wealth levels and households' preferences and risk attitudes and to some extent by institutional frameworks. In an environment of low inflation, real return of bank deposits has marginally improved post-crisis, suggesting that interest rates environment is not such as the low nominal interest rates would initially suggest. Households' saving ratio has actually improved in SEE to 7.5% on average in 2018 from very low and even negative levels in some countries pre-crisis. New savings were primarily channeled into bank deposits despite the low interest rates, which witnessed a steady growth post crisis, further strengthening their role as leading saving instrument within total households' financial assets. One of the factors behind these developments can be pronounced risk aversion among households in the recent past supported by capital market turmoil following the crisis that further suppressed the importance of return considerations for savings allocation. This is additionally supported by the still underdeveloped institutional investors market in SEE with

[17] Refers to Albania, Bulgaria, Bosnia and Herzegovina, Croatia, Kosovo, Montenegro, North Macedonia, Serbia, Romania and Slovenia.
[18] Refers to the Czech Republic, Hungary, Poland and Slovakia.

constrained saving alternatives that favor bank deposits as prevalent form of savings. Improving the financial literacy in the region and promoting initiatives to boost the still low domestic saving rates, can contribute towards development of the non-banking financial sector, which in turn can have multi-beneficial effects on the SEE countries by expanding the financing base and improving the growth perspectives.

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