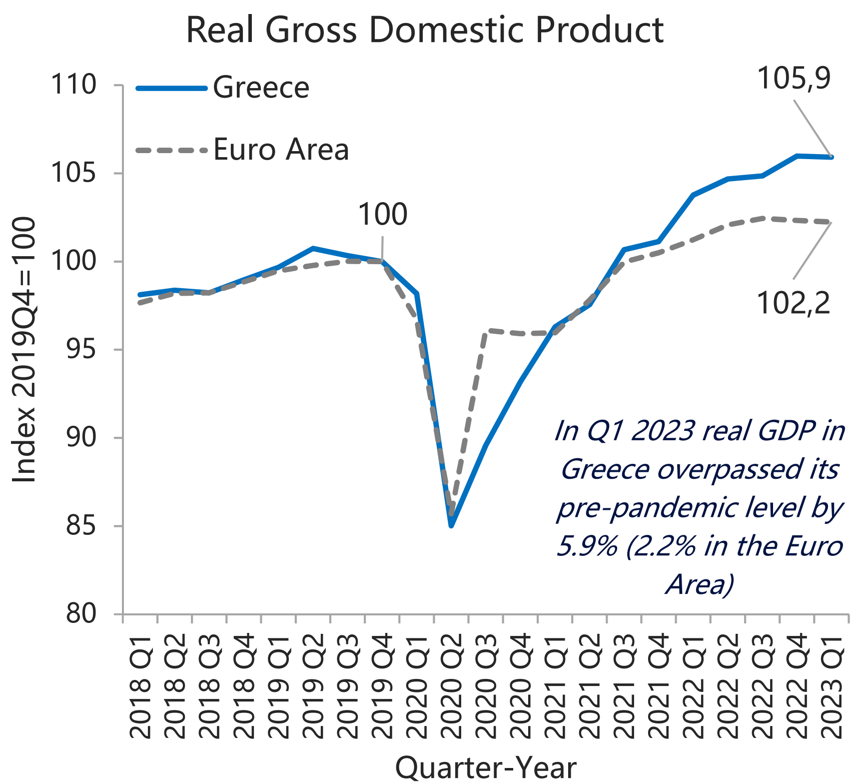
Greek Banking System Overview

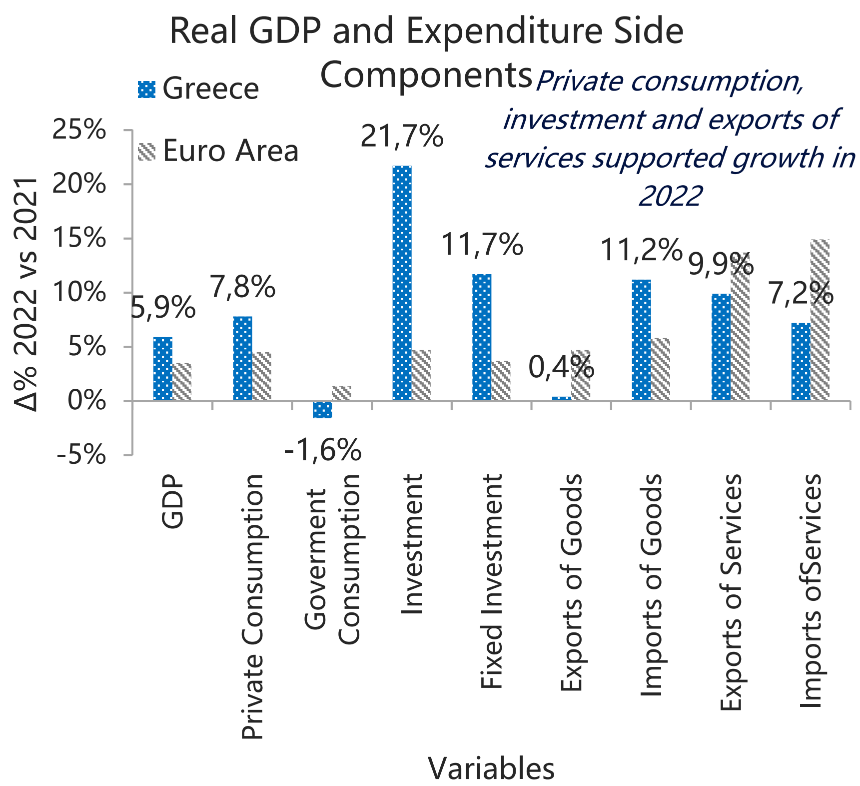
July 2023

Table of contents

1 Unravelling the Greek Economy: Challenges, Progress and Prospects

Growth performance surprised on the upside in 2022; real GDP growth at 5.9% vs 3.5% in the Euro Area

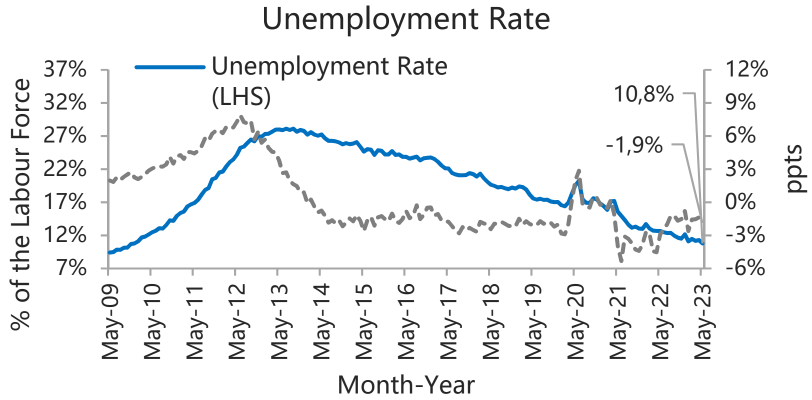


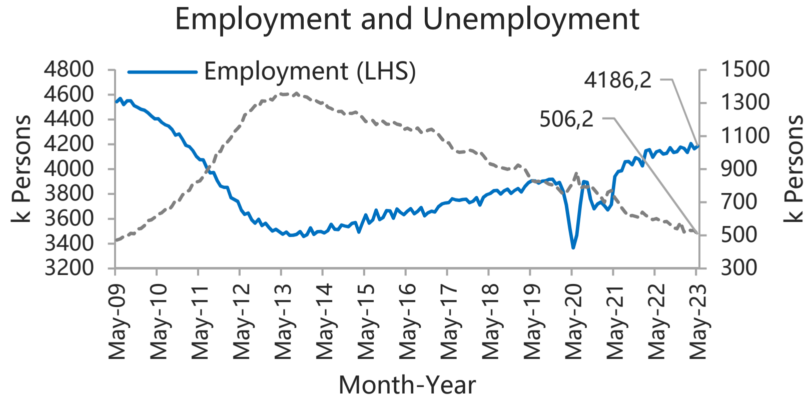


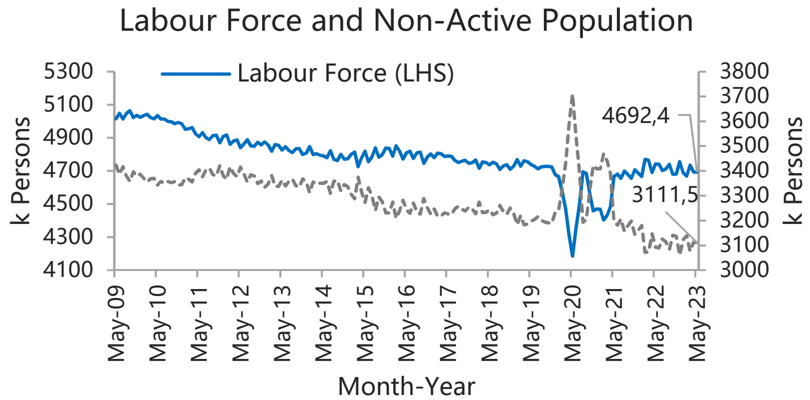
However, the fact that recovery was domestic demand-driven, came at a cost of the CA deficit widening to 9.7% of GDP

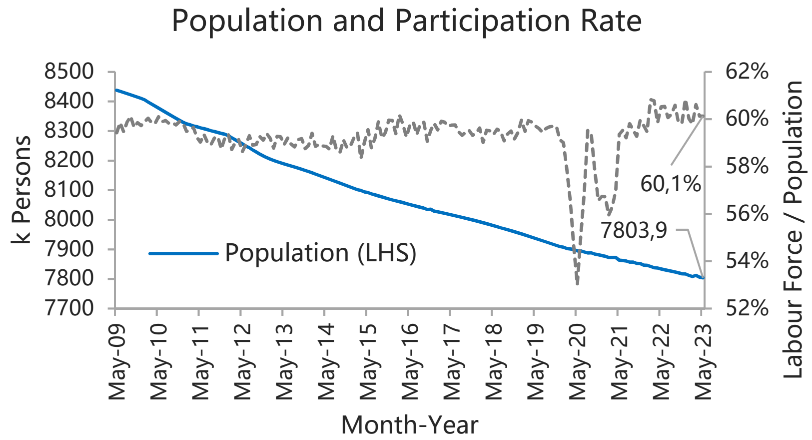
Source: ELSTAT, Eurostat, HBA member banks Research

Unemployment rate on a downward trend; still the 2nd highest in the Euro Area after Spain



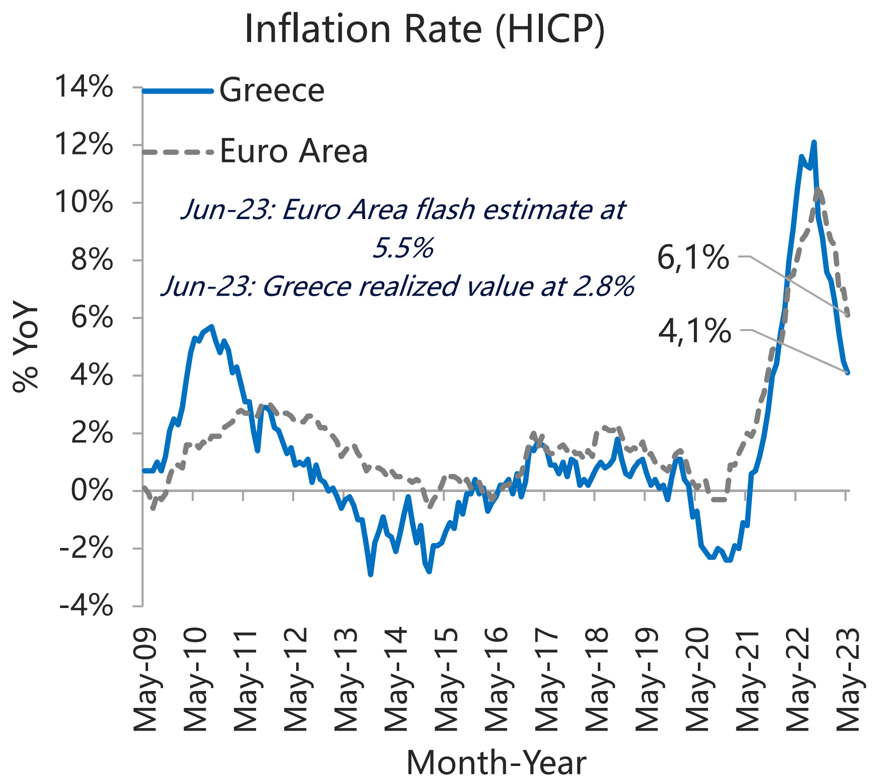


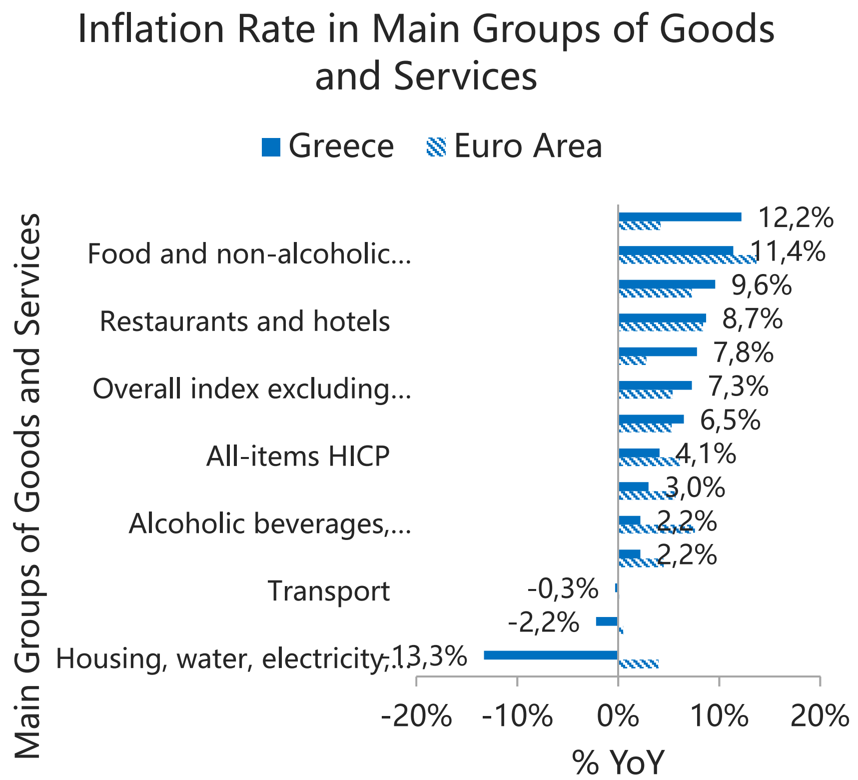




Source: ELSTAT, HBA member banks Research

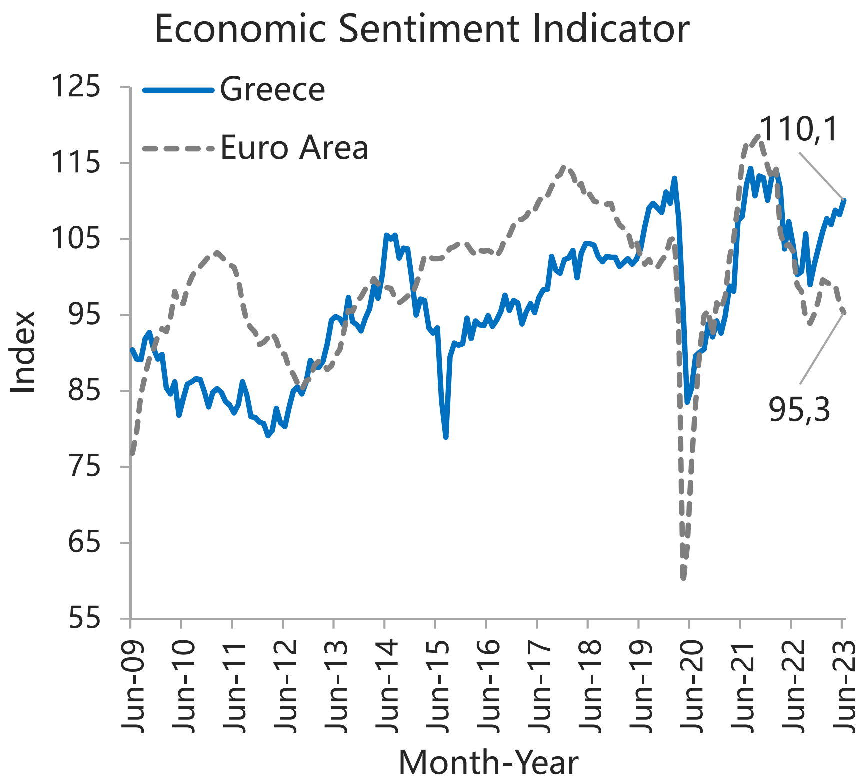
Headline HICP easing due to decline in energy and subsidies; high core inflation signals that price pressures are spreading more broadly

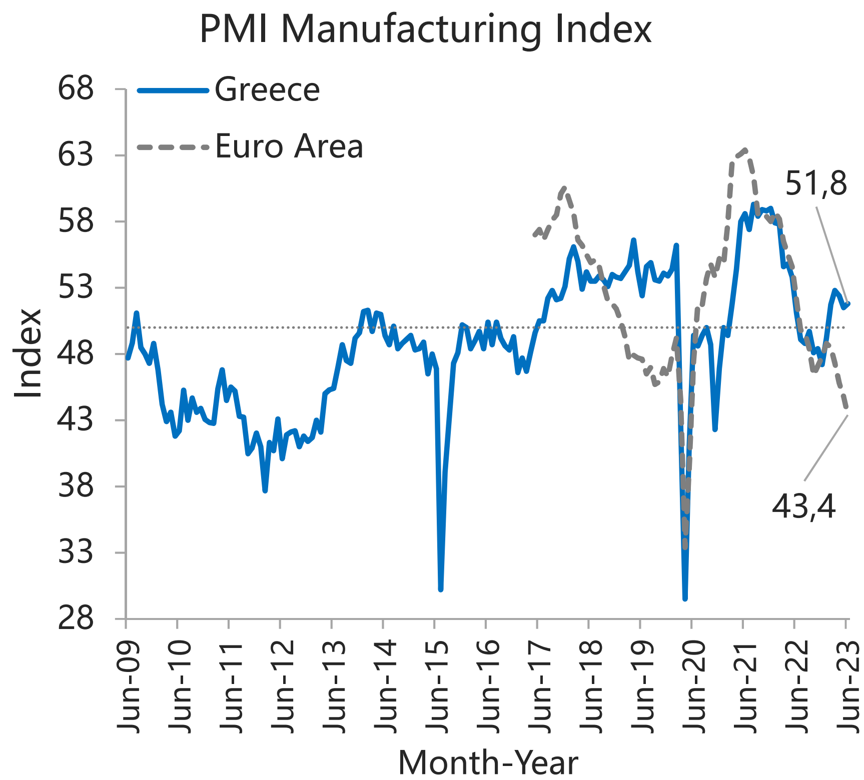




Source: ELSTAT, Eurostat, HBA member banks Research

Strong rebound of the ESI since Nov-22; PMI above the 50 threshold since Feb-23





Source: IOBE, European Commission, S&P Global, HBA member banks Research

Upward revisions of 2023 growth projections; Greece expected to overperform the Euro area; uncertainties remain

- Market consensus as of July-2023: real GDP growth in 2023 and 2024 at 2.0% and 2.0; inflation at 4.0% and 2.5% in 2023 and 2024; unemployment at 11.7% and 11.2% in 2023 and 2024
- Growth in 2023: poised to overperform EA; risks remain
- Re-emergence of twin deficits in 2020, persistence of the external deficit in 2021 and 2022
- Public debt above 206% of GDP in 2020, reverted to a declining path from 2021 (36 pps of GDP in only two years, inflation helps); at ca 171.3% of GDP in end 2022, below its 2019 level (it was at 178.2% of GDP in 2013)
- Adherence to fiscal prudence, RRF reforms and New Growth Plan for Greece essential for future growth

RISKS:

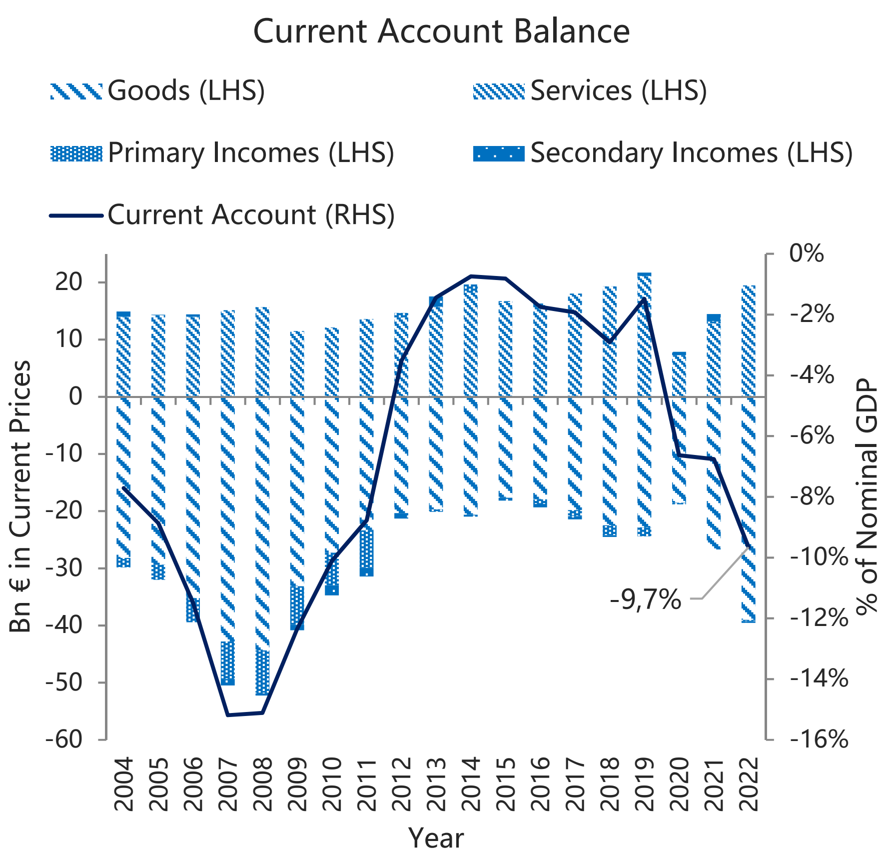
- Prolongation/escalation of the war in Ukraine lead to persistence of energy-driven supply shock and hysteresis in unemployment
- Non-transitory inflationary pressures, aggressive monetary tightening
- New increases in commodities prices
- Cliff effect from expiration of support schemes
- Delays in the implementation of RRF and national reforms
- Prolongation of external sector imbalances

Official sector projections

Institution	Date	2022	2023F	2024F	2025F	2026F
		Real GDP Growth (%, YoY)				
OECD	Mar-23	5.9	1.6	1.6	-	-
IMF	Apr-23	5.9	2.6	1.5	1.4	1.4
Greek Government	Apr-23	5.9	2.3	3.0	3.0	2.1
European Commission	May-23	5.9	2.4	1.9	-	-
Bank of Greece	Jun-23	5.9	2.2	3.0	2.7	-
		Unemployment (%, Workforce)				
OECD	Mar-23	12.4	11.8	11.3	-	
IMF	Apr-23	12.4	11.2	10.4	10.0	9.5
Greek Government	Apr-23	12.4	11.8	10.9	10.0	9.8
European Commission	May-23	12.4	12.2	11.8	-	
Bank of Greece	Jun-23	12.4	11.5	10.4	9.4	
		HICP (%, YoY)				
OECD	Mar-23	9.3	4.3	2.3	-	-
IMF	Apr-23	9.3	4.0	2.9	2.3	2.0
Greek Government	Apr-23	9.3	4.5	2.4	2.0	2.0
European Commission	May-23	9.3	4.2	2.4	-	-
Bank of Greece	Jun-23	9.3	4.3	3.8	2.3	-

Source: European Commission, IMF, 2022 Budget, Focus Economics

External sector: domestic demand-driven recovery and high energy prices led to persistence in the current account deficit

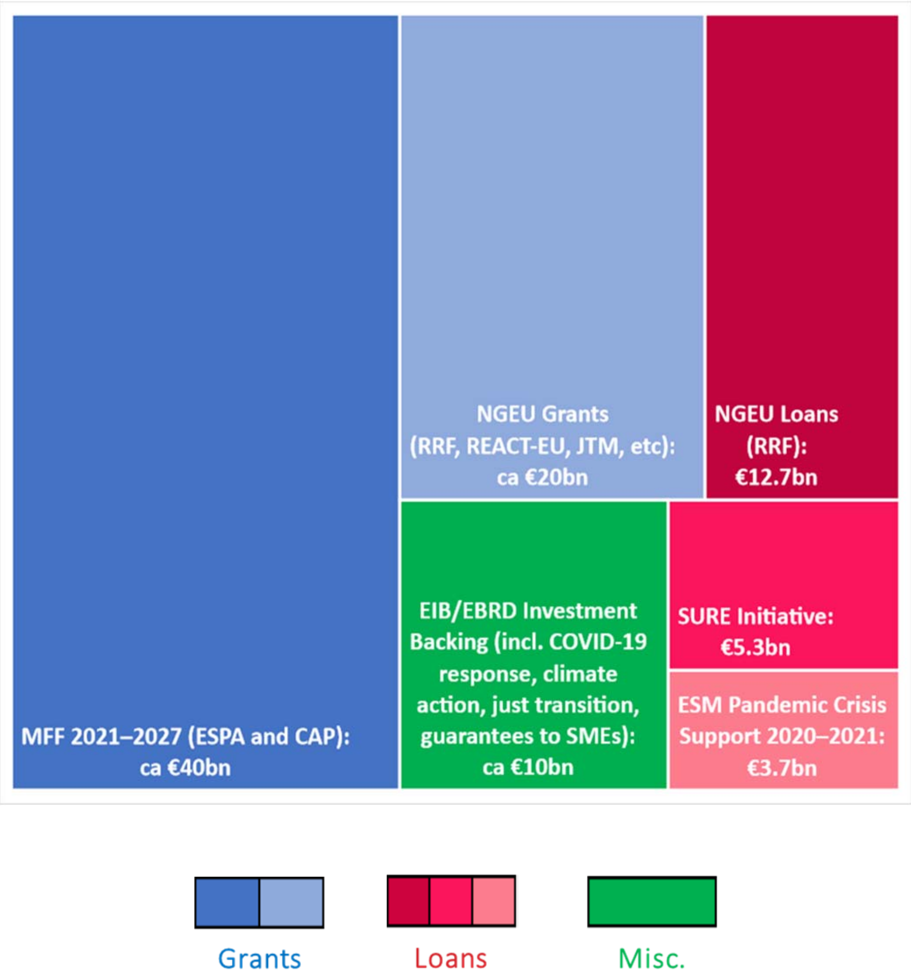


Source: BoG, HBA member banks Research

January-December	2021		2022	
Balance	Bn € (current prices)			
CA Balance	-12.3		-20.1	
R: receipts, P: payments	R	P	R	P
Goods	39.3	66.0	53.5	92.5
Services	35.1	22.2	47.5	28.1
Tourist	*10.5*	*1.1*	*17.6*	*1.9*
Primary Inc.	6.6	6.2	7.3	7.5
Secondary Inc.	5.0	3.8	4.4	4.7

- Current account deficit (CAD): 9.7% of GDP in 2022 from 6.8% in 2021, 6.6% in 2020 and 1.5% in 2019
- CAD improved in Jan-23 to Apr-23 by €3.0bn YoY (drop in energy prices, slow down in domestic demand and increase in secondary incomes)
- According to the BoG Monetary Policy Report (Jun-23), the CAD is expected to drop to 7.0% of GDP in 2023, 6.7% in 2024 and 6.1% in 2025.

More than €90bn available to Greece from EU initiatives



Total funds available (2020–27): 60+21.7+10 ≈ 92 bn

RRF funds

- €30.5bn (€17.8bn in grants, €12.7bn in loans) up to 2026
- Targeted, disbursed under strict conditions (milestones & targets) and according to an inflexible timeline, may act as a self-disciplinary mechanism
- 37% to be spent in "green transition" and 20% in the digital transformation of the economy; all funds should be committed by 2023
- Accounting for private sector leveraging (equity and loans), RRF projects are expected to mobilize in total more than €57bn of investment.

European Central Bank Instruments

- Pandemic Emergency Purchase Programme: €1850bn up to Mar 2022**; net GGB purchases at €38.2bn as of end-May 2023;** flexible re-investment exceeding rollover of expiring GGBs up to end-2024
- New instrument aimed at preventing fragmentation in Euro Area sovereign bonds market (TPI) developed

Sources: European Commission, ECB, National Recovery & Resilience Plan, EIB, EBRD

Significant boost to growth ahead from RRF funds

Greece is the largest RRF beneficiary relative to the size of its economy (RRF G&Ls at 16.8% of its 2021 GDP)

- Disbursement: Aug-21: RRF pre-financing —> Apr-22: 1st regular payment —> Jan-23: 2nd regular payment
  Total RRF funds disbursed: €11.1bn (G:€5.7bn / L:€5.4bn) out of €30.5bn (G:€17.8bn / L:€12.7bn) due to Greece up to 2026.
- Upcoming: Government applied for the 3rd payment in May-23, and for an additional €5bn of loans (on top of the €12.7bn) in Mar-23
- RRF grants: As of Jan-23, €13.7bn had been committed and as of Mar-23, €3.4bn had been disbursed by the Greek government, with 208 projects (at €2.4bn) under procurement, and an additional 38 projects (at €0.8bn) in the process of finalizing the deals with the chosen contractors
- RRF loans: 425 investment plans (at €15.7bn, out of which €5.5bn from RRF and €3.8bn from bank loans) submitted by private firms, with 178 of them already contracted (€6.8bn, RRF loans: €2.7bn, bank loans: €2.4bn) as of end May-23

Estimated RRF impact on GDP by 2026:

- BoG: +6.9% = 4.3% (G&L)* + 2.6% (SR)*
- MinFin/CoEA: +7.7% (aggregate)
- EC: +2.1% to +3.3% (G&L) + substantial SR effect

**G&L: effect of RRF grants and loans / SR: effect of structural reforms associated with RRF*

Sources: European Commission, Ministry of Finance, Greek NRRP (Greece 2.0), Bank of Greece

RRF impact on the economy
BoG estimates, % deviation compared to the case of no RRF

	2021	2022	2026	2030	2040
Real GDP	2.6	3.4	6.9	7.0	6.6
Private investment	7.2	13.3	19.8	8.70	4.8
Private sector employment	1.2	2.3	3.9	3.9	3.7
Tax revenue-to-GDP ratio*	1.1	1.7	2.8	2.6	2.8

All deviations are from the long-run equilibrium level without RRF.
**deviation in percentage points, not as a percentage.*

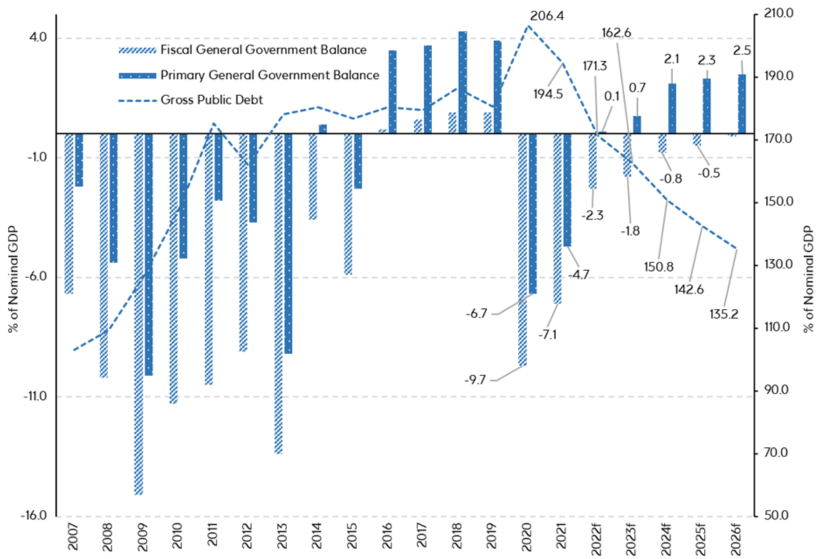
Public Economics: deterioration of the primary balance due to fiscal support measures

- Total 2021-22 Covid-19 related support measures of €44.2bn; €9.9bn of support measures against the 2022 energy crisis at a fiscal cost of € 4.4 bn (contribution of the Greek Energy Transition Fund at €5.6bn (Dec 2022))
- Permanent (mainly 2023) fiscal support measures include reduction of private sector's social security contributions by 3%, abolishment of the special solidarity contribution. In addition, low-cost mortgages for young persons/ couples, subsidies for the installment of photovoltaic panels in residencies, temporary abolishment of VAT for new constructions (until end of 2024); transports, cafes, cinemas, gyms, etc (until the end of 2023)
- **Primary balance for 2020, 2021 and 2022 at -6.7%. -4.7% and 0.1% of GDP respectively; for 2023, 2024, 2025 and 2026 expected at 0.7%, 2.1%, 2.3% and 2.5% of GDP respectively (SGP 2023).**
- **Primary surplus for 2023 up to 1.1% of GDP in case of no post election uncertainty (SGP).**
- **Conditional on the implementation of the new support measures that the government already announced (expected to pass in parliament by the end of July 2023), the primary balance for 2024-2026 will be lowered at around 2.1% of GDP**
- **Public debt for 2022 & 2023 expected at 171.3% & 162.6% of GDP respectively vs 194.6% in 2021. Public debt expected at 150.8%, 142.6%, and 135.2% for 2024, 2025 and 2026 respectively.**
- **Risk for 2023 fiscal targets from new significant measures against the energy crisis. European Commission already asked for the winding down of the energy support measures in 2023.**

2023 Budget: Fiscal Measures (€ bn)		
	2022	**2023**
Measures Against Energy Crisis	4.4	0.0*
Measures Against Covid19 Pandemic	4.4	0.2
Permanent Fiscal Measures	0.3	4.2+1.1**

* Measures for 2023 at €€2.7 bn but with zero fiscal cost (SGP 2023)

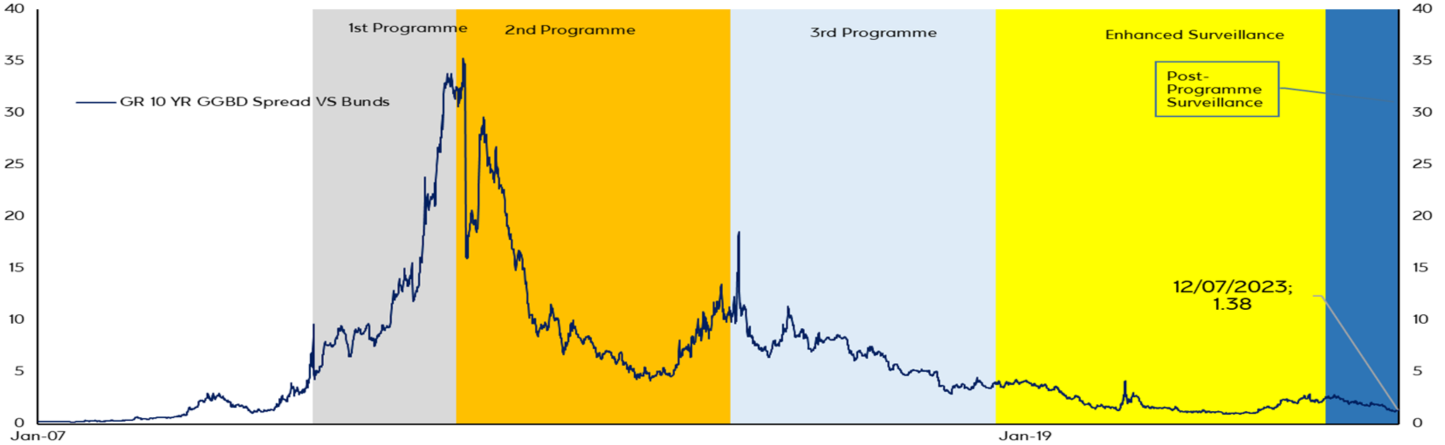
** Support measures expected to pass in parliament by the end of July 2023



Source: AMECO, ELSTAT, SGP 2023

Sovereign's rating constant or improved on reform momentum
….. still below investment grade

Moody's	S&P	Fitch	DBRS
Aaa	AAA	AAA	AAA
Aa1	AA+	AA+	AA HIGH
Aa2	AA	AA	AA
Aa3	AA-	AA-	AA Low
A1	A+	A+	A HIGH
A2	A	A	A
A3	A-	A-	A Low
Baa1	BBB+	BBB+	BBB HIGH
Baa2	BBB	BBB	BBB
Baa3	BBB-	BBB-	BBB Low
Ba1	BB+	BB+	BB HIGH
Ba2	BB	BB	BB
Ba3	BB-	BB-	BB LOW
B1	B+	B+	B HIGH
B2	B	B	B
B3	B-	B-	B LOW
Caa1	CCC+	CCC+	CCC HIGH
Caa2	CCC	CCC	CCC
Caa3	CCC-	CCC-	CCC LOW
Ca	CC	CC	CC HIGH
	C	C	CC
C	RD	RD	CC LOW
-	SD	D	C HIGH
-	D	-	C
-	-	-	C LOW
-	-	-	D



- Fitch on 9 June 2023 affirmed its rating of BB+ and kept its outlook unchanged at stable, ahead of the 25 June elections on the back of stronger expected nominal growth, successful structural reform implementation, improved public debt & favorable debt-servicing structure and expected policy continuity.
- S&P on 21 April 2023, rating unchanged at BB+ but with positive outlook (from stable previously) on the back of growth prospects and improved fiscal path.
- Moody's on 17 March 2023 affirmed its outlook at Ba3 (unchanged from Nov. 2020) and changed its outlook from stable to positive on the back of improved macroeconomic performance.
- DBRS on 7 March 2023, confirmed its previous BBHigh rating based on positive (but lower compared to previous years) expected real GDP growth, the fiscal support measures and the expected positive contribution of the RRF funds.
- Investment rating upgrade expected by year end (2023): Resolution of political uncertainty realised, sustainable growth and implementation of reforms the main prerequisites for obtaining investment grade rating. **Critical date for upgrade: 20 October (S&P)**.
- PDMA: funding needs for 2022 at €5.5 bn but market tapped for €8.3bn; financing needs for 2023 expected at €5.5 bn (2023 Budget); GGBs yields increased after Ukraine but spread at 138 bps (12.07.2023), 26 bps lower (investment grade) Italy; the PDMA tapped the market 7 times (excluding T-bills) so far for a total of €10.4bn (including bonds issued for the exchange with earlier issued T-bills of € 3.5bn)

Source: Bloomberg, ECB, PDMA

2 International banking crisis of March 2023 and lessons learnt

The timeline of Silicon Valley Bank (SVB) and Credit Swisse (CS) crises

SVB Failure

- **2022**: Recession problems in the high-tech sector and massive outflow of deposits
- SVB's large exposure to long-maturity bonds valued at historical cost
- Increase in interest rates by the Central Bank and consequent decrease in the fair value of bonds
- **March, 8, 2023:** Liquidity problems led to capitalization needs that forced the bank to record losses of about $1.8 billion
- The reluctance to participate in the recapitalization of the bank led depositors to panic and a bank run
- The bank was placed under receivership, with the result that unguaranteed deposits were put at risk
- **March, 13, 2023** In order to preserve public confidence in the domestic banking system, the US authorities announced the guarantee of all SVB deposits.

Source: BoG, Governor's Annual Report 2022, April 2023

CS Crisis

- **2021**: Archegos Capital and Greensill Capital collapse, leading to $1 billion in losses for SC
- **July and Aug. 2022:** Rumor circulates that CS faces impending failure, prompting clients to withdraw about $119 billion in funds in Q4 of 2022
- **March 2023:** CS announces the borrowing of up to $54 billion from the Swiss National Bank
- U.S. institutions Silicon Valley Bank and Signature Bank fail, setting the global financial system on panic
- Switzerland's regulatory authorities allowed the takeover of CS by UBS without the shareholder approval of either entity
- Switzerland's government agreed to provide $108.4 billion to ensure the deal is completed. For investors, about $17 billion in CS's contingent convertible bonds are wiped out as part of the takeover.

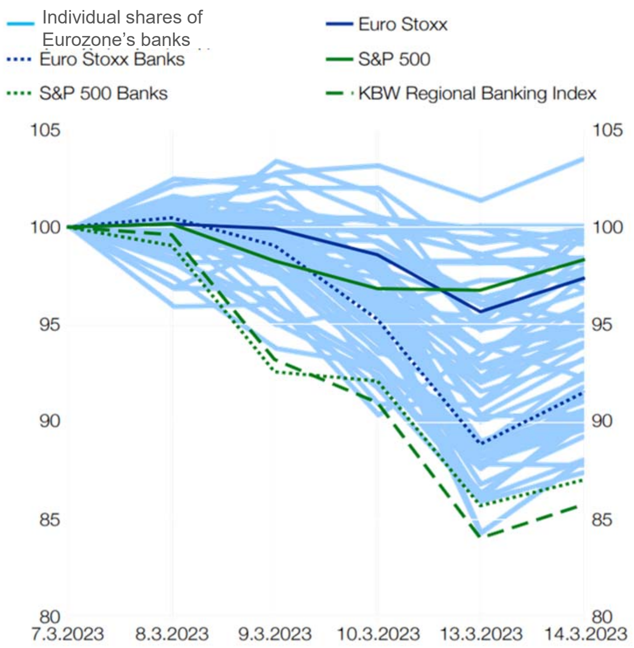
The implications of SVB and CS crises and lessons learnt

- The case of SVB is indicative of the impact of interest rate increases, both on the asset and liability sides of banks' balance sheets
- Following the interventions of the US and Switzerland authorities to contain the fallout from the crises of SVB and CS respectively, the risk of spillover has diminished
- Nevertheless, both cases found a private solution instead of entering into resolution.
- The liquidity backstop provided by governments emerges as a most important tool to calm markets

Regulatory policies designed after the global financial crisis aiming at reducing systemic risk in the financial system.

- In the EU these policies include, inter alia,
    - **Enhancement of the risk management and control function**
    - **Full scope of implementation of the Basel Committee standards**
    - **Adequate capital and liquidity**
    - **Strong supervision**
    - **Bank Resolution Framework**

Change in bank share prices during the SVB episode



Source: BoG, Governor's Annual Report 2022, April 2023

US bank stocks fell significantly between 9.3.2023 and 13.3.2023. Share prices showed a positive performance on 14.3.2023, following the announcement of the US authorities regarding the guarantee of all SVB deposits. In the Eurozone, bank stocks also fell, but less than those in the United States.

3 Transforming the Greek Banking Landscape: Navigating Challenges and Embracing Innovation

Key trends in 2023

Inflationary pressures and the significant rise in interest rates could lead to an improvement in banks’ net interest income, however it might also lead to a deterioration in banks’ funding conditions

High interest rates could also result in an increase in credit risk associated with a possible emergence of new non-performing loans in 2023

During 2022 the stock of deposits held by the domestic private sector increased, while Greek banks reported profits and lower credit risk provisions

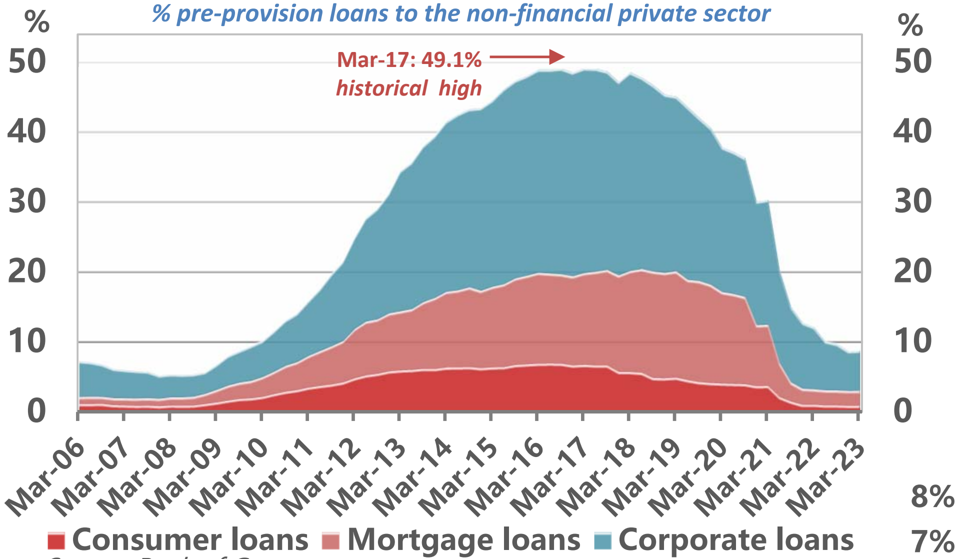
Key trends in 2023

Greek Significant Institutions have already achieved their operational target for a single digit NPL ratio but still remains above the euro area average

Banks' interest expenses are expected to increase after the termination of the ECB's COVID -19 emergency policy measures, as well as by the need to issue bonds to meet MREL requirements

Greek Banking Sector – Significant NPL deleveraging, new challenges ahead

Evolution of NPLs held by Greek banks
% pre-provision loans to the non-financial private sector

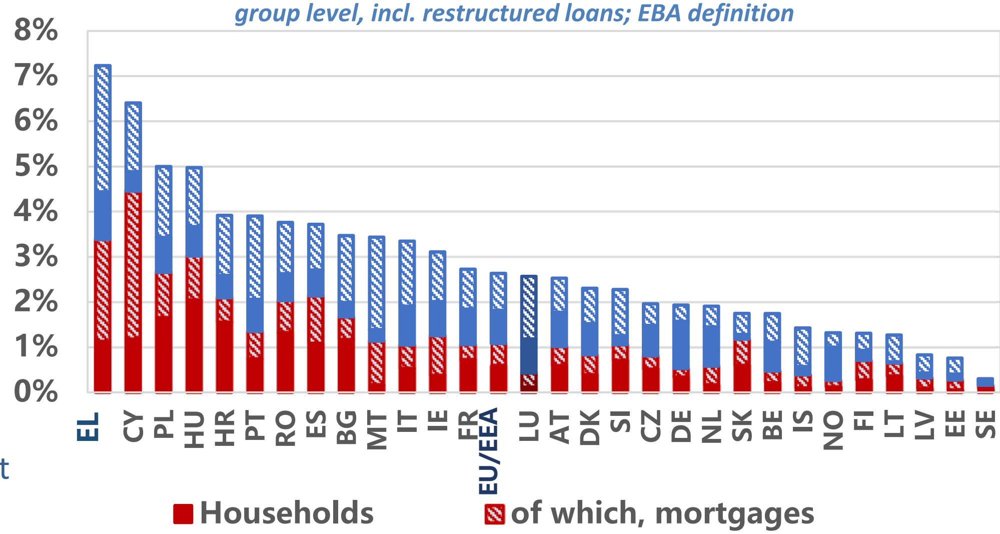


Source: Bank of Greece

- **Bank NPL ratio in Mar-23 at 8.8%** (BoG) –close to a 12-year low– following sales, write-offs and securitizations under the Hercules Asset Protection Scheme (pre-pandemic/end-2019 at 40%)
- New NPLs due to the pandemic and the energy crisis so far limited
- Bank liquidity **and capital adequacy remain** at high levels (CET1 ratio at 13.8%, LDR at 61%, LCR at 205% at end Mar-23); healthy profitability in 2022 carrying into Q1 2023

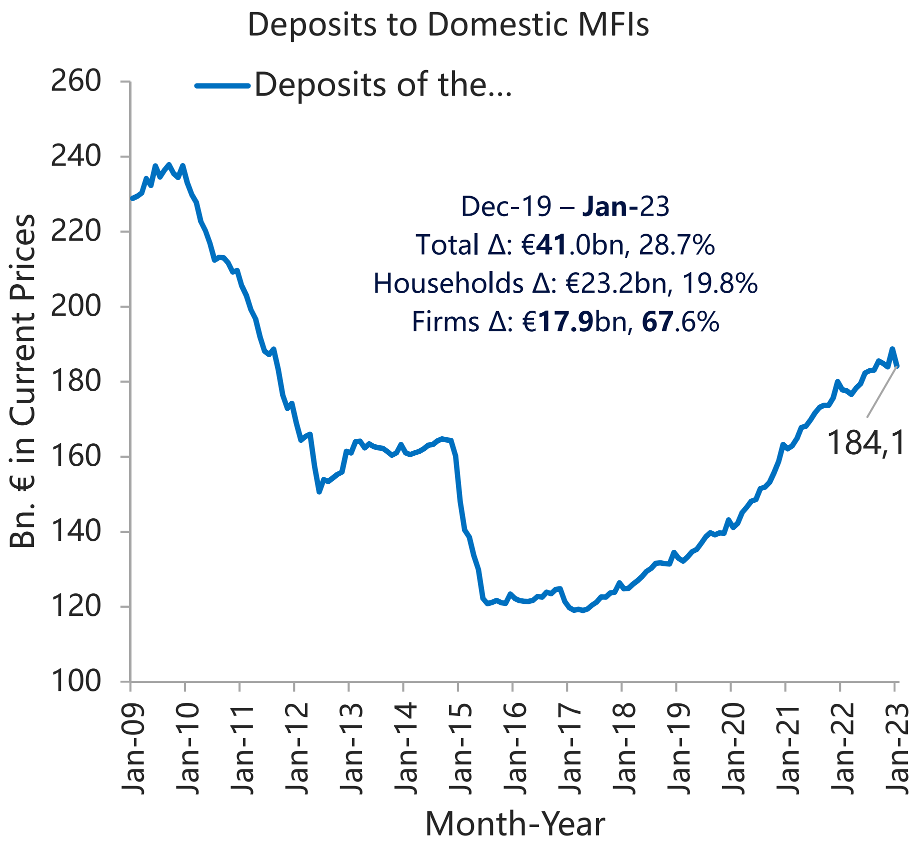
- Yet, significant challenges lie ahead:
  - Bank NPL ratio still the highest in EU27, with **more than €70bn of legacy NPLs off-bank balance sheets** at end-Q1 2023, as resolution proceeds at a slow pace
  - Increased living costs and higher interest rates **may curtail demand for new loans** and challenge households' and firms' capacity to service their debt
  - Banks aim to expand lending, **sustain** profitability and boost capital adequacy **amid uncertainty facing the international banking sector**

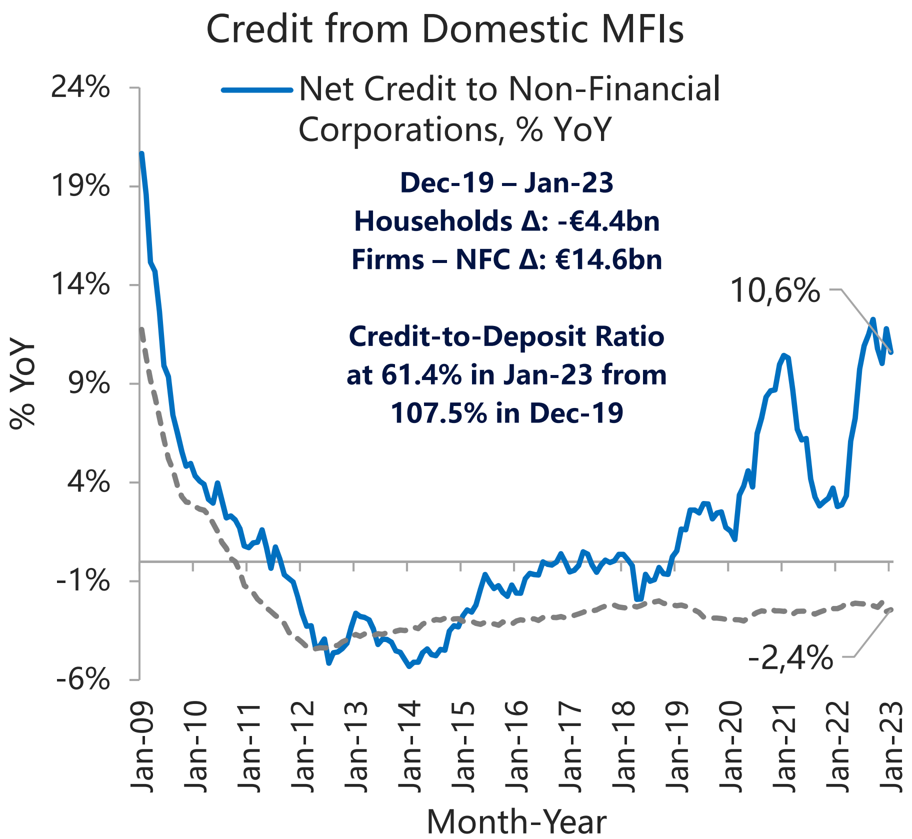
NPLs of the non-financial sector, Q1 2023
group level, incl. restructured loans; EBA definition



Sources: EBA, HBA member banks Research

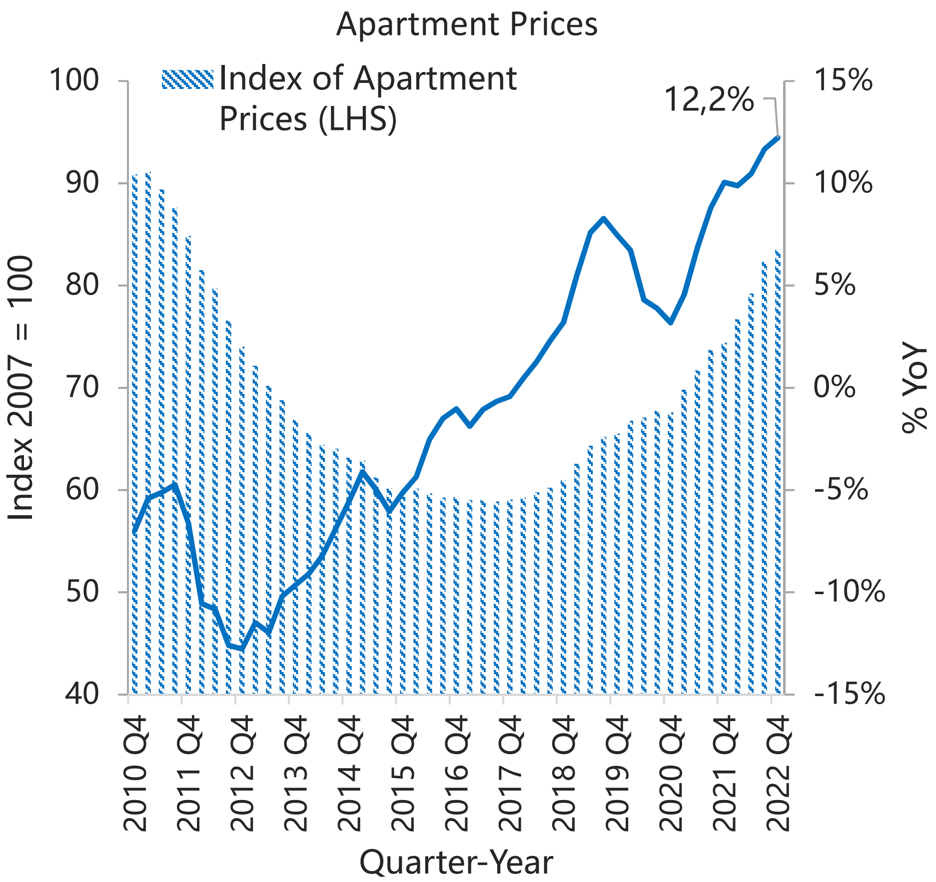
Financial conditions: large increase in private sector's deposits during the pandemic, net credit growth accelerates

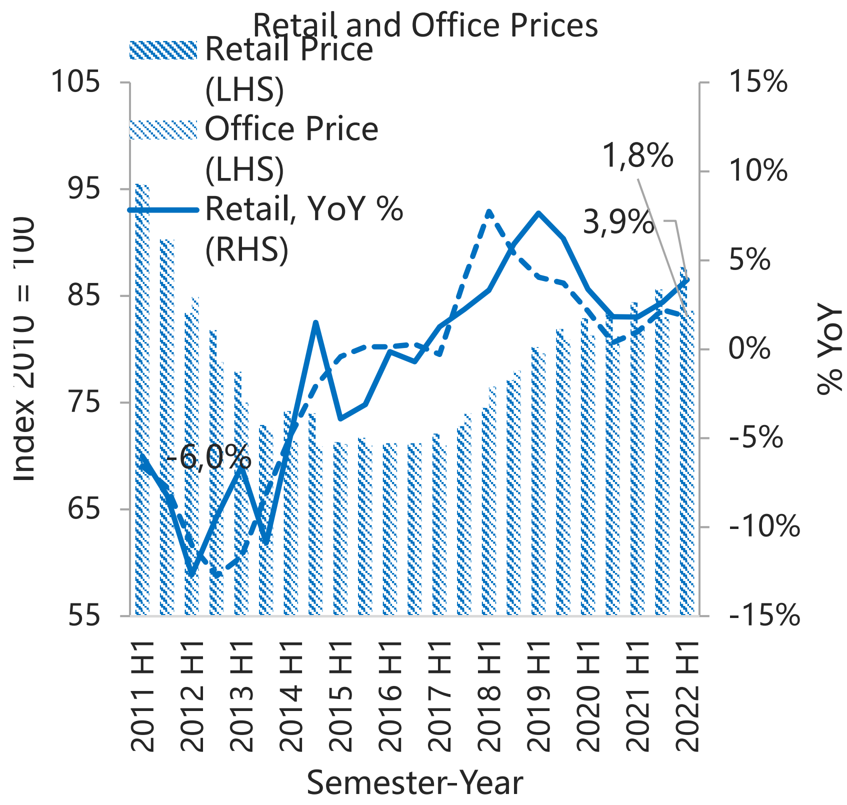




Source: BoG, HBA member banks Research

GR – Real estate prices: growth remained strong in Q4 2022; still 18.3% below pre-debt crisis peak in Q3 2008





Source: BoG, HBA member banks Research

4 Greek banking structure

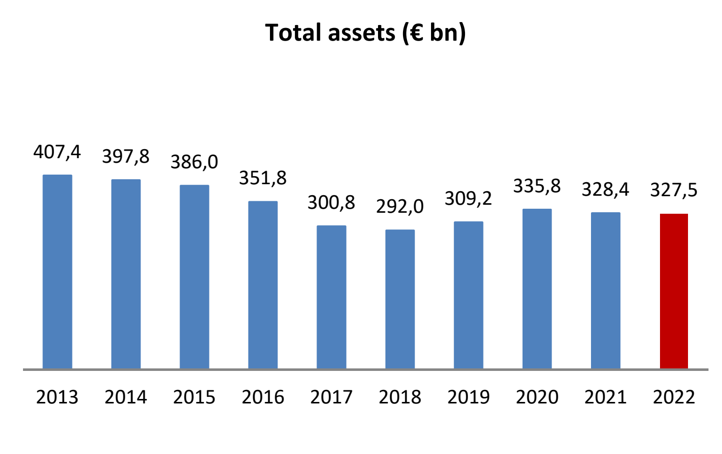
Sector total assets & concentration, Private Sector Deposits, Number of branches, Employees, ATMs, card payments and e-banking channels usage, card & credit transfers fraud

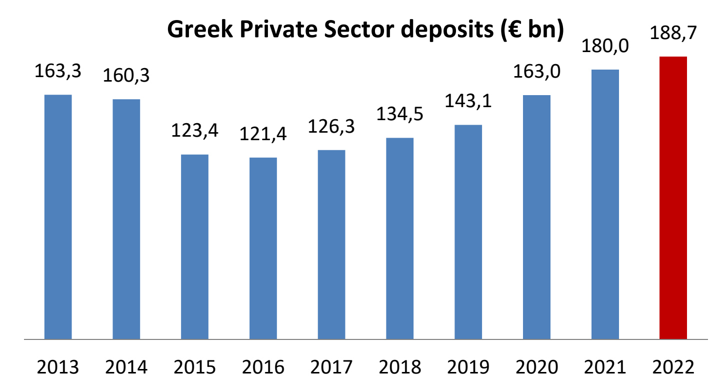
Greek Banking System today

	2022	2021	2018	2017
Total assets [1] (€ bn)	328	328	292	301
Private sector deposits[1] (€ bn)	189	180	135	126
Private sector gross loans[1] (€ bn)	116	110	170	184
NPL ratio - 4Q22[2]	8.7%	13%	31%	36%
CET 1 ratio - FY21[3]	14.4%	13%	16%	17%
Coverage ratio of NPEs[3]	45.3%	43%	47%	49%

- Employees [4] : 29,341 in 2022 from 39,383 in 2018
- Branches [4] : 1,483 in 2022 from 1,981 in 2018
- ATM [4]: 5,927 in 2022 from 5,594 in 2018
- Active debit/credit/prepaid cards in 2022 [4] : 20m (o/w: 75% debit, 14% Credit, 11% Prepaid) - 2018: 17.5m
- Domestic Debit/credit/prepaid cards payment transactions in 2022 [4] : 1,880m – 2018: 841m
- Domestic Debit/credit/prepaid cards value payments in 2022 [4] : 58,8€ bn – 2018: 34,5€ bn

1. *BoG, Aggregated balance sheet of financial institutions excl. BoG;*
2. *BoG, Governor's Annual Report 2023, April 2023 and Annual Report on operational targets for Q42018 of 4 systemic banks, April 2019*
3. *BoG, Monetary Policy Report (2022-2023), June 2023*
4. ECB, Banking Structural Financial Indicators & HBA data for ATMs, and active debit/credit/prepaid cards





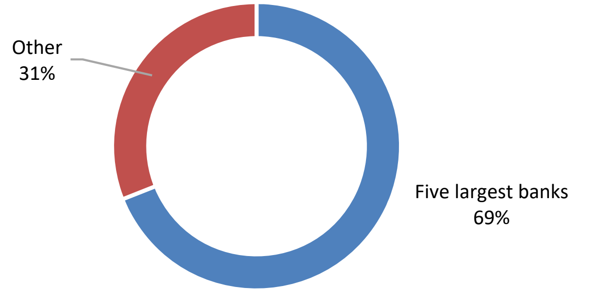
Source: BoG, Aggregated balance sheet of financial institutions excl. BoG

Sector concentrates around the "Significant" banks

- The number of domestic credit institutions was drastically reduced from 35 in 2009 to 14 today, of which 9 commercial and 5 cooperative
- Five largest banks (4 of them are deemed "Significant"), control ca. 95.7% banking assets:
  - Piraeus Bank
  - National Bank of Greece
  - Alpha Bank
  - Eurobank
  - Attica Bank
- The 21 foreign bank branches, although present in Greece, have insignificant market share

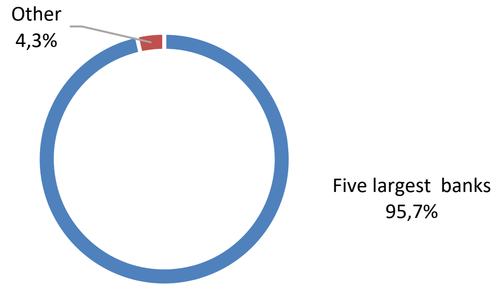
Source: ECB, Banking Structural Financial Indicators

Banking assets market shares 2009



Source: ECB, Banking Structural Financial Indicators

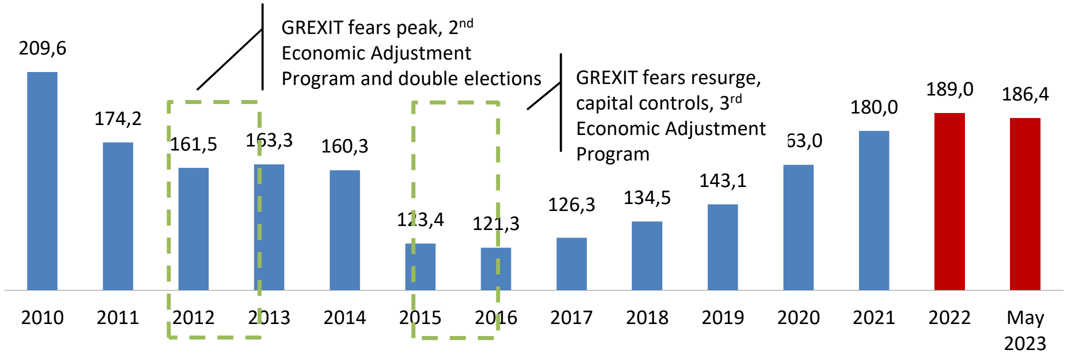
Banking assets market shares 2022



Source: ECB, Banking Structural Financial Indicators

Liquidity, a recurring concern throughout the crisis, improved significantly

Private Sector deposits sensitive on political/macro uncertainties (€ bn)



Source: BoG, aggregated balance sheet of other financial institutions

- Deposit flight occurs throughout the crisis with varying intensity
- GREXIT fears led to a sharp fall of deposits up to 2012 where the 2nd Economic Adjustment Program was voted in
- Deposits stabilized in 2013-14 only to drop again sharply in the first months of 2015 as GREXIT fears resurge
- Deposits drop in early 2017 but completion of the second review of the Third Adjustment Program had beneficial effect
- Private sector deposits continued to grow during 2022 (by €8.7 bn (or 5%), reaching around 1/2 of the 2021 flow. The annual growth rate of deposits was slowed down due to the increase of inflation and the decrease of the real deposit rate.
- By the end of 2022 deposits had reached €189 bn, which is the highest level since mid-2011.
- By the end May 2023 private sector deposits decreased by €2.6 bn

Downsizing of traditional channels, cost rationalization and personnel reduction

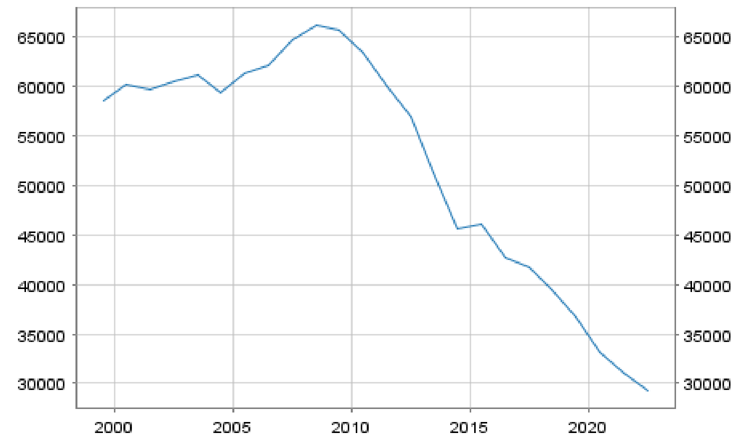
- Greek banks respond to the requirements of the restructuring plans and digital transformation through downsizing their traditional channels
- Reducing their personnel, exclusively through Voluntary Exit Schemes (VES) and natural attrition
- Since 2009:

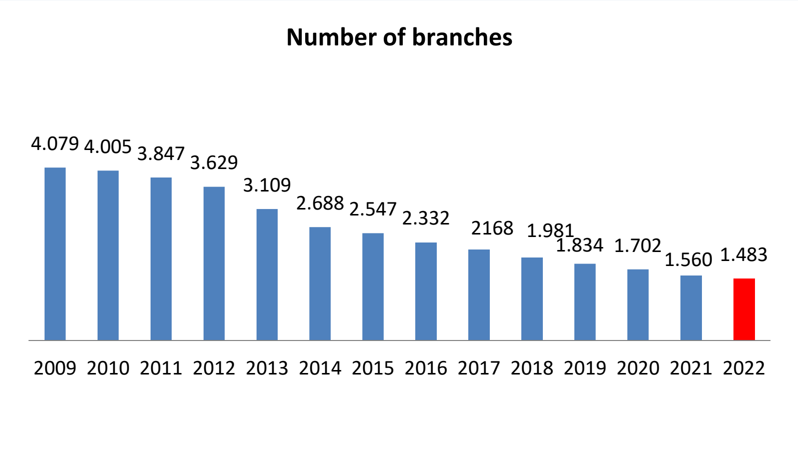
  Employees reduced by 55% (2022: 29.341, 2009: 65.682)

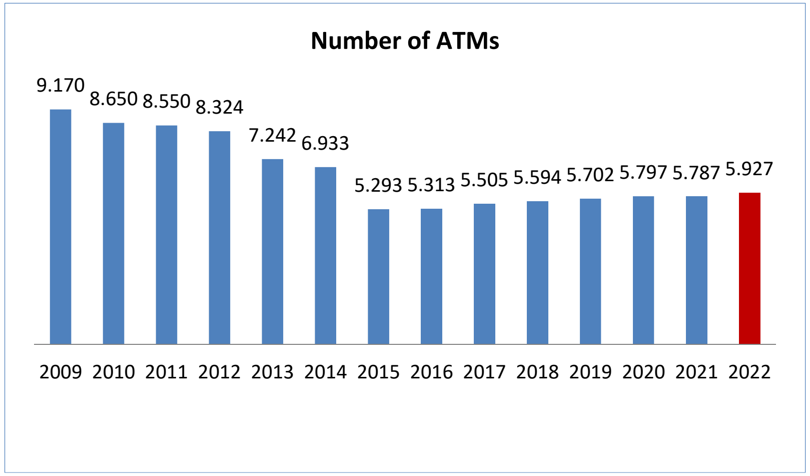
  Branch network reduced by 65% (2022: 1438, 2009: 4079)

  ATMs reduced by 35% (2022: 5927, 2009: 9170)

Source: ECB, Banking Structural Financial Indicators & HBA data for ATMs







Use of e-payments and e-banking channels increase sharply

- Increase usage of credit/debit/prepaid cards issued in Greece[1]:
  - Number of payment card transactions at 1,88bn (+20% yoy)
  - Value of payment card transactions at €58,8bn (+23% yoy)
  - Average value of transaction at € 31 (2021: € 30)
- Account to account transfers[2]:
  - Number of credit transfers & direct debit transactions at 507m (+2%yoy)
  - Total value of transactions at €744bn (+3%yoy)
- Card Fraud at negligible levels[3]: 1/6,700 (0,015%) fraud transaction and 1€ loss / €5,700 (0,017%). EU average at 0,028% in 2021[5].
- Credit transfer Fraud even lower levels[4]: 1H2022: 1/50,000 (0,002%) fraud transaction and 1€ loss / €25,000 (0,004%).

1.Source: HBA data for 2022
2.Source: ECB Payment statistics for 2021
3.Source: BoG, Financial Stability Review, May 2023
4.Source: BoG, Financial Stability Review, November 2022
5.Source, ECB, Report on card fraud in 2020 and 2021, May 2023

- More than 90% of payment transactions through internet & mobile banking
- Value of ATM cash withdrawals +9% yoy
- 3,8m internet banking active users at the end of 2022. 66% of them made at least one money transfer transaction every month.
- More than 5,1m mobile banking active users at the end of 2022. 55% of them made at least one money transfer transaction every month.
- Almost 40% of total money transfer transaction through mobile banking applications
- eKYC for AML purposes through Gov.gr service (fully digital)

5 Supervisory Greek Banking Systems Statistics

Operating Income, Operating Expenses, Cost-to-Income ratio, Cost of risks, Earnings Before & After Taxes (EBT/EAT), Loans-to-Deposit ratio, Liquidity ratios, Non-Performing Loans, Capital & Leverage ratios, Gross loans and bank credit to the private sector, Banking interest rates on new loans & new time deposits

Operating income, operating cost and cost-to-income ratio

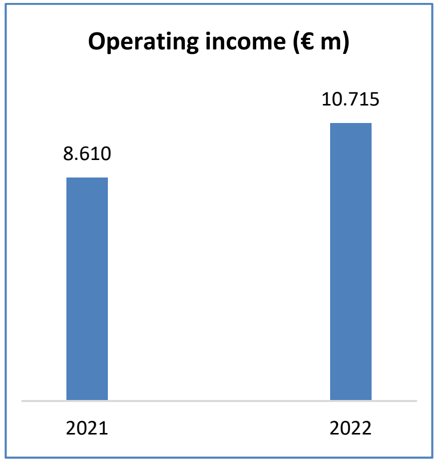
- In 2022 the **operating income of Greek banks increased by 24.4%** compared to 2021. Net interest income rose by 6.0%, as the increase in interest income in absolute terms was greater than the increase in interest expenses.

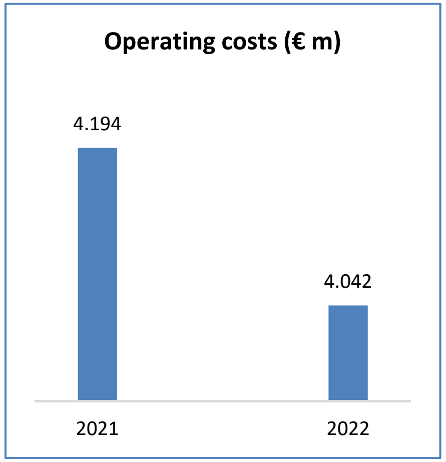
- **Net fee and commission income increased significantly, by 13.2%,** supported by fees from new loan disbursements, payments and fund transfers, credit cards, portfolio management and investment banking. Core operating income (i.e. net interest income and net fee and commission income) grew by 7.6% yoy.

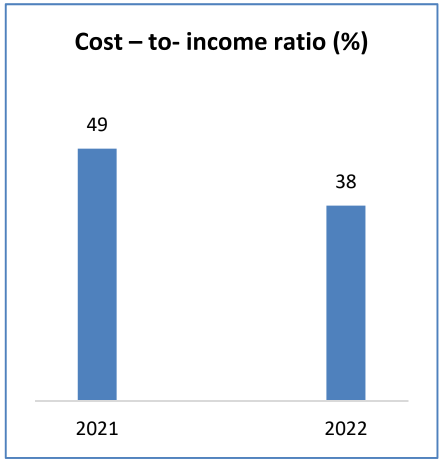
- **Operating costs decreased by 3.6%,** mainly due to a decrease in staff costs as a result of the implementation of voluntary retirement schemes in previous years and the one-off corporate transformation expenses that were incurred in 2021.

- Greek banks' **cost-to-income ratio** improved significantly in 2022 (December 2022: 37.7%, December 2021: 48.7%), remaining significantly lower than the European average (61.2%)

Source: BoG, Financial Stability Review, May 2023

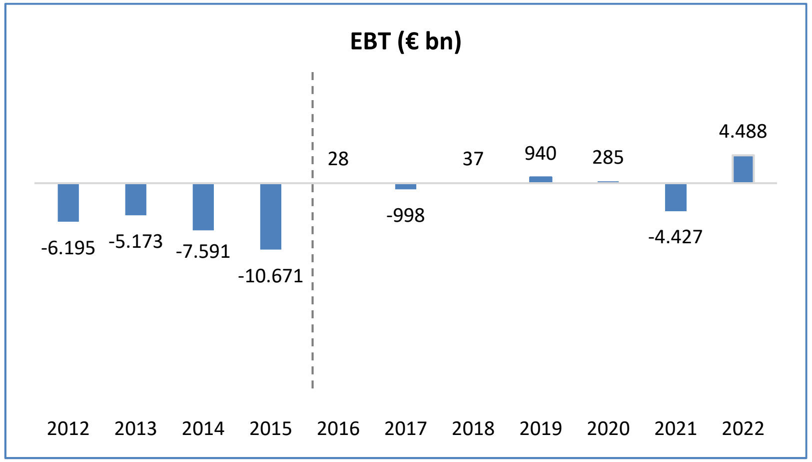


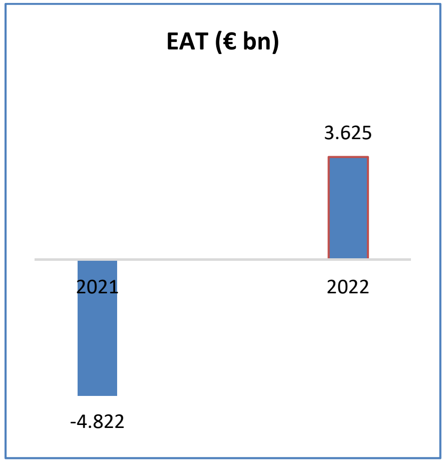




Cost of credit risk and profitability indicators

- The **cost of credit risk** e.g. the ratio of credit risk provisions (y-o-y) over loans after accumulated provisions, declined in 2022. In particular, impairment charges stood at €1.7 billion, compared with €8.5 billion in 2021.
- As a result, Greek banking groups recorded pre-taxes and after taxes profits. More specifically in 2022, Greek banks recorded **profit after taxes and discontinued operations amounting to €3.6 billion**, compared with losses of €4.8 billion in 2021, returning to profitability after two consecutive loss-making years. The increase in non-recurring income as well as the reduction in new provisions for credit risk significantly contributed to this development
- In 2022, the RoA and RoE ratios after tax and discontinued operations amounted to 1.1% and 13.4% respectively (2021: -1.5% and -20%)





Source: BoG, Financial Stability Review, May 2023

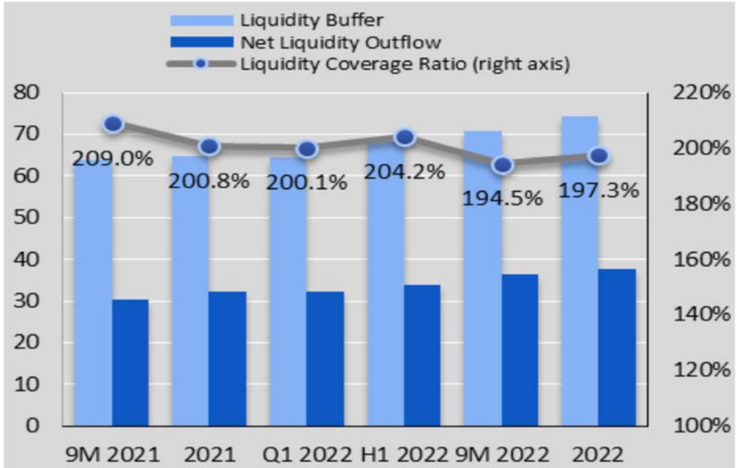
Liquidity ratios

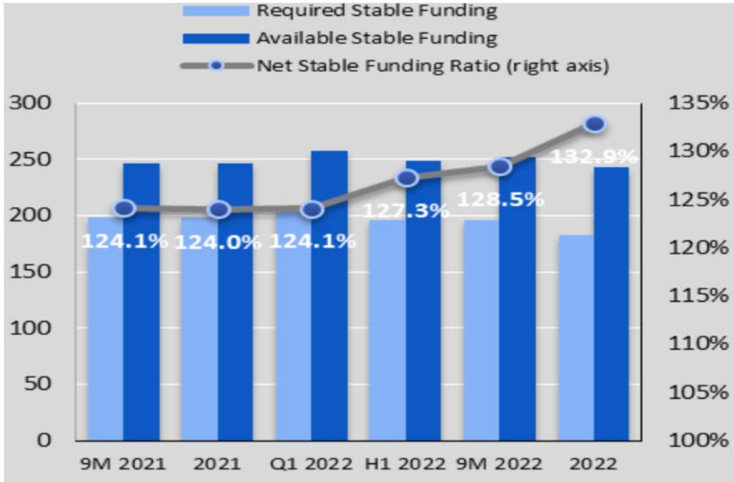
- In 2022, Greek banks' liquidity remained at a high level despite the partial repayment of the TLTRO III funding.

- The **Liquidity Coverage Ratio (LCR) stood at 197.3%** (Q4 2022) **and 205.7%** (Q1 2023) more than double compared to the supervisory requirement of 100% and remained significantly higher than the corresponding European average for banks in the Single Supervisory Mechanism (Q4 2022: 161,46%, Q1 2023: 161.27%).

- The **Net Stable Funding Ratio (NSFR) showed a significant increase in 2022 and stood at 132.9%** in December 2022, from 124% at the end of 2021, reflecting the adequate coverage of banks' long-term liabilities without requiring excessive use of short-term funding. The supervisory requirement for the NSFR is set at 100%. The rise in the NSFR is due to an increase in retail deposits, which partially offset the decline in Eurosystem funding.

- The NSFR for Greek banks remained slightly higher than the corresponding European average for banks in the Single Supervisory Mechanism (125.8% in the fourth quarter of 2022).

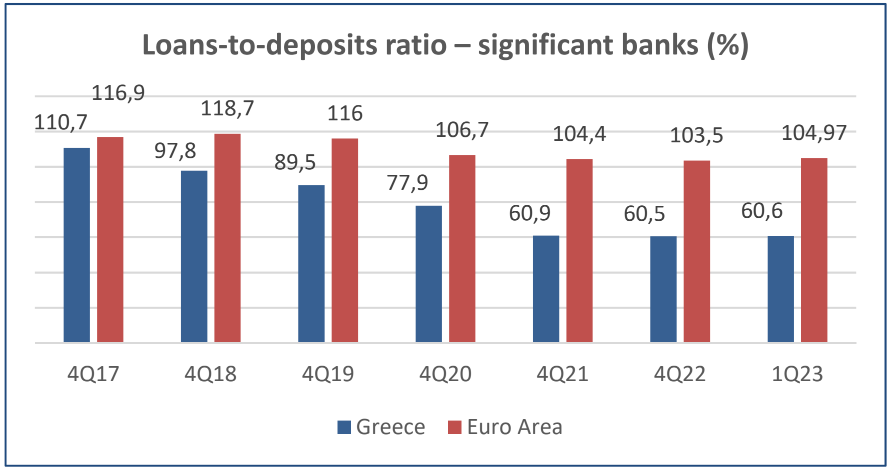




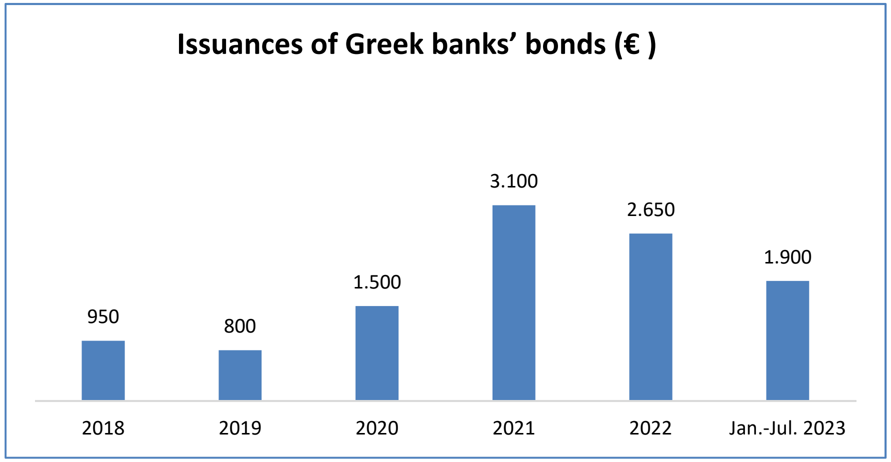
Source: BoG, Financial Stability Review, May 2023, SSM data for Euro Area and Greek significant banks as at 1Q2023

L:D ratio improves as deposits stabilize & in line with the MREL framework

- Crisis causes severe deposit outflows:
  - Deposits dropped by € 91bn (-42%) in the 2010-16 period
  - Gross loans dropped by 25% over the same period
- Loan deleveraging still continues
- **L:D ratio** 60,6% compared to 105% Euro Area significant banks average
- Greek banks are on track to meet the Minimum Requirements for Own Funds and Eligible Liabilities (**MREL**) by the end of 2025. In this context and despite the significant increase in yields, in 2022 the 4 significant Greek banks issued senior preferred bonds of a nominal value of €2,150 million and £200 million, as well as subordinated bonds of a nominal value of €300 million.
- In line with the MREL framework and also with a view to reducing reliance on ECB funding, subordinated debt issuances is continuing in 2023.

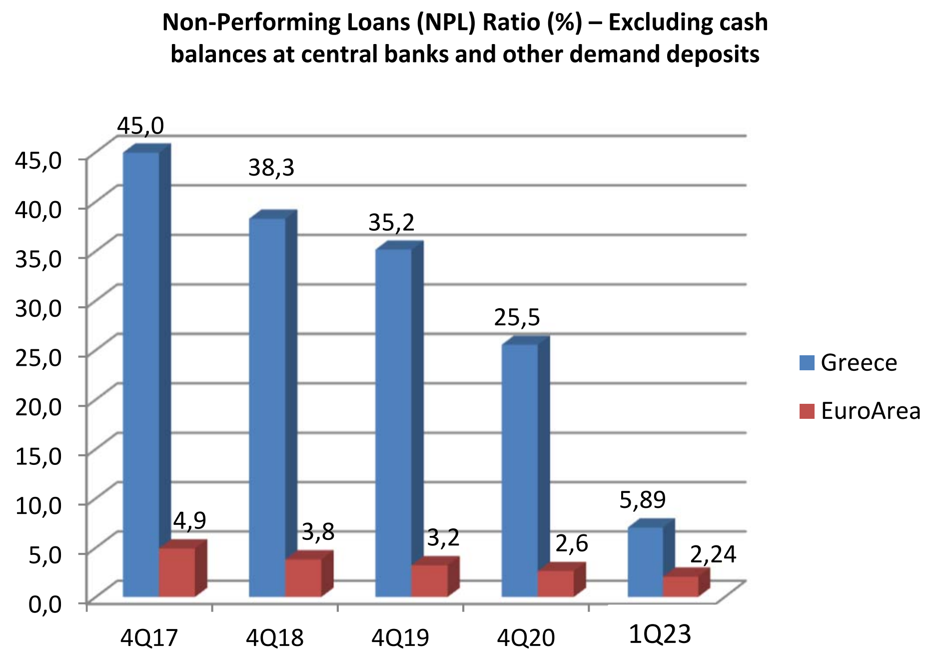


Source: SSM data for Euro Area and Greek significant banks as at 1Q2023



Source: BoG, Financial Stability Review, May 2023 & Greek banks announcements

Greek banks on track to meet NPL Euro Area average



Source: SSM data for Euro Area and Greek significant banks as at 1Q23

- NPL reduction in 2022 was achieved mainly through securitisations and transfers to international investors
- The stock of non-performing loans declined further in 2022, mostly through loan sales under the Hellenic Asset Protection Scheme
- This has led to an improvement in bank asset quality, reducing risk costs and widening profit margins
- NPLs stood at €9.4 billion in March 2023, down by €9 billion from end-December 2021 and €99.3 billion from end-March 2016

Source: BoG, Governor's Annual Report 2022, April 2023 & Financial Stability Review, May 2023

NPL management: Sources of risks and uncertainty

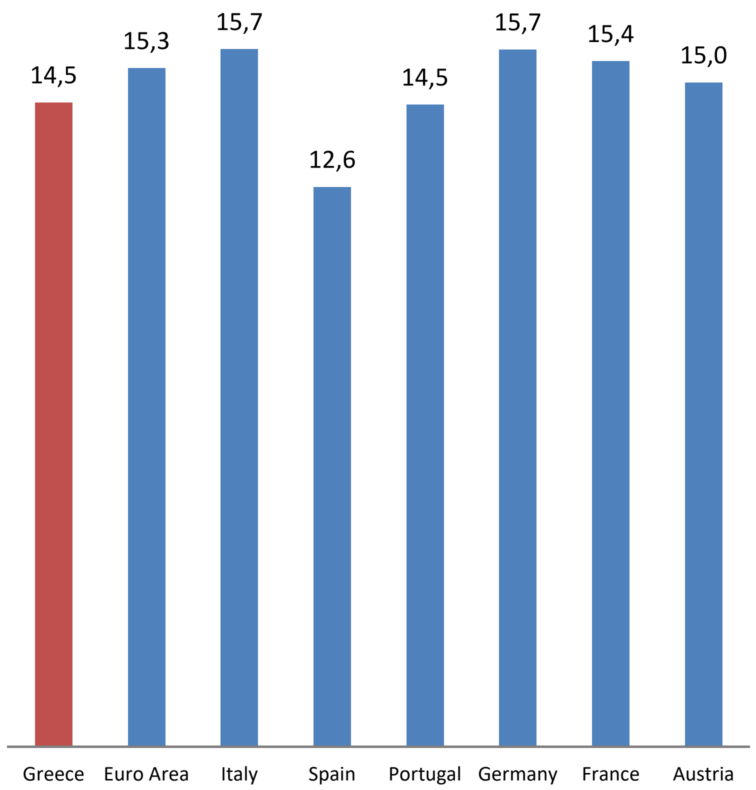
- The stock of NPLs remains higher than the NPL Euro area average.
- About 36% of NPLs are subject to forbearance measures.
- A high share of forborne loans fell back into arrears.
- New NPLs that may arise due to the impact of the energy crisis, but also as a result of High inflation.
- The stock of NPLs remains a burden for the real economy and excludes a large number of debtors from bank credit

Source: BoG, Governor’s Annual Report, April 2023

Capital ratio increased as a result of internal capital generation and issuance of additional capital instruments

- Capital adequacy indicators were improved in December 2022 in comparison to December 2021
- Both common equity (CET1) ratio and total capital ratio increased. However, both ratios were still below the euro area average
- CET1 ratio on a consolidated basis rose to 14.5% in December 2022, from 13.6% in December 2021
- Total Capital Ratio (TCR) rose to 17.5%, from 16.2%
- Taking into account the fully phased-in impact of IFRS 9, the fully loaded CET1 ratio of the Greek banking groups stood at 13.4% and the TCR at 16.4%.

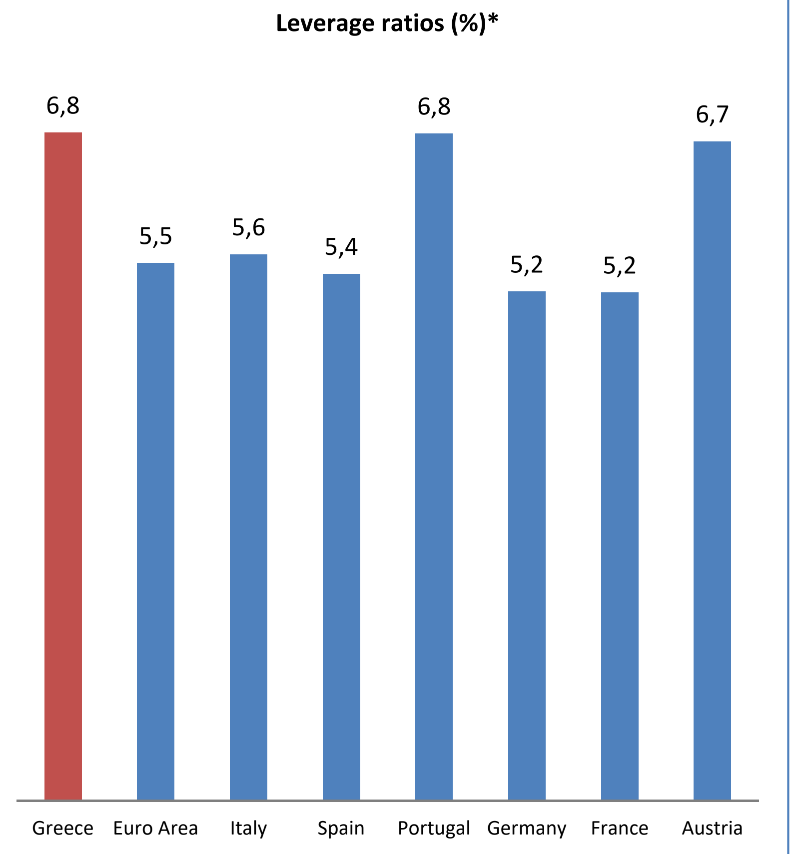
CET1 ratios (%)



Source: SSM data as at 4Q22, April 2023

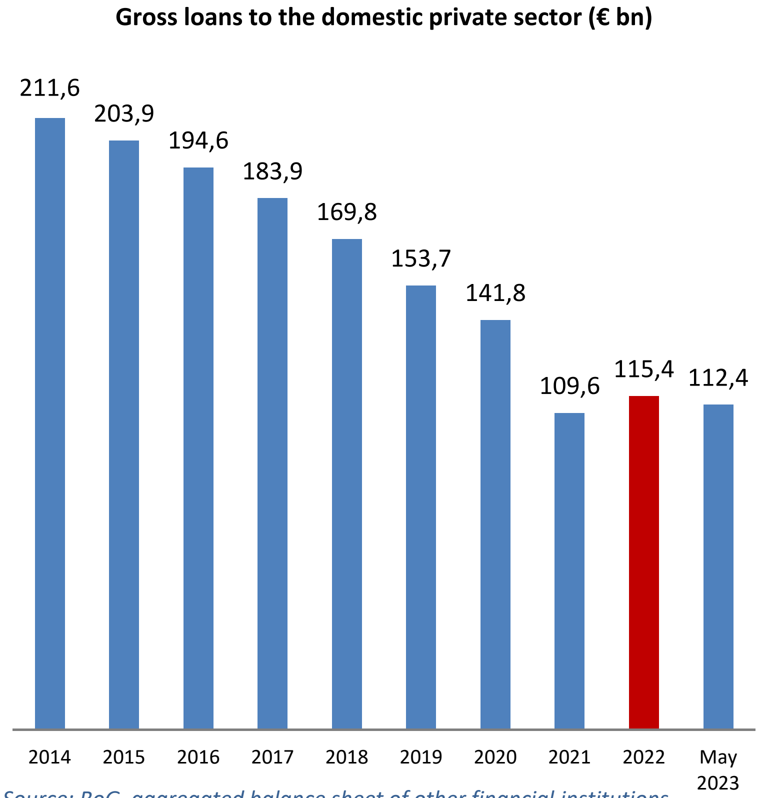
Leverage ratio higher than Euro Area average

In Q1 2023, Leverage ratio (fully phased-in definition) of the four Greek significant credit institutions was higher than the average of significant credit institutions in Austria, France, Germany, Italy, Spain and Euro Area



** Fully phased-in definition*
Source: SSM data as at 1Q23

Gross loans decrease as a result of NPL sales and securitisations but bank credit to the private sector continued to increase



Source: BoG, aggregated balance sheet of other financial institutions

- In 2022, bank credit to the private sector was significantly accelerated, continuing its upward trend
- The upturn in economic activity, the rise in inflation, the uncertainty caused by the war in Ukraine, as well as the withdrawal of COVID-19 support measures, contributed to the increase of the demand for bank loans
- On the supply side, bank credit was positively driven by the provision of liquidity by the Eurosystem, the increase of bank deposits, as well as the significant reduction in the percentage of NPLs

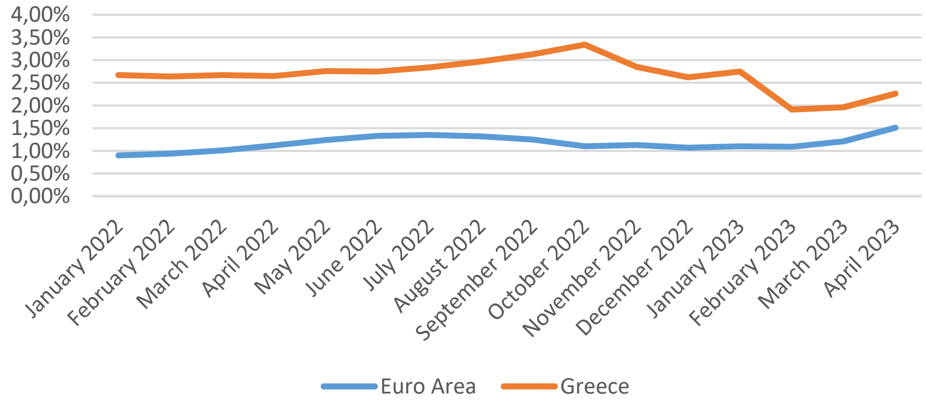
Interest rates on new loans and new time deposits

- The spread is narrowing significantly, mainly after the Q4 2022 and 2023 increases in interest rates on new time deposits by the Greek banking system

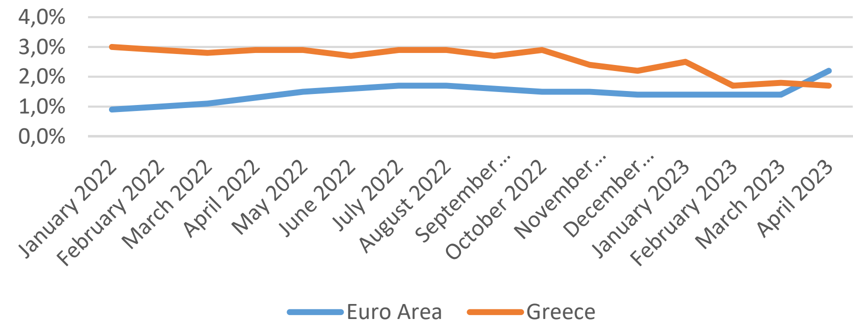
- The gap between Greece and the Eurozone is closing, both in terms of interest rates on new time deposits, and in the spread, even though the cost of borrowing from the capital markets is much higher for Greek banks than the equivalent of other Eurozone banks

- In April 2023, for the first time since January 2022, the margin of new mortgage loans in relation to new time deposits of more than 1 year, was 1.7% in Greece compared to 2.2% Eurozone average

Margin of New Loans for Individuals vs. New Time Deposits with an agreed duration > 1 year (April 2023)



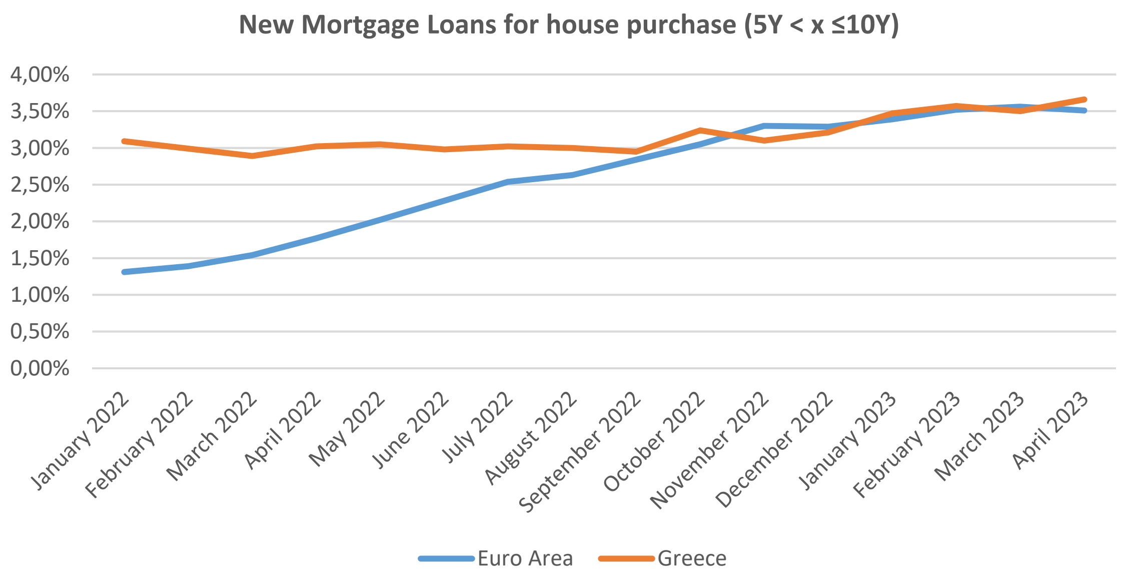
Margin of New Mortgage Loans for house purchase (5Y < x ≤10Y) vs. New Time Deposits with an agreed duration > 1 year (April 2023)



Interest rates on new loans and new time deposits

Since November 2022, the interest rate of new mortgage loans (5Y < x ≤10Y) at the same levels compared to Eurozone average

Recent (March 2023) decisions of many Greek banks to "freeze" for 12 months the increases of the floating interest rate on mortgage loans for their consistent borrowers



6 Appendix

The Hellenic Bank Association (HBA)

The Hellenic Bank Association (HBA) is a non-profit legal entity of private law representing Greek and foreign credit institutions operating in Greece. It was founded in 1928 and today has 18 members, of which 11 are regular and 7 associated. It is a member of the European Banking Federation.

The HBA seeks to:

- promote the Greek banking and financial system and to contribute to the development of the Greek economy,
- protect and represent the interests and rights of its member banks, and
- undertake the amicable and out-of-court settlement of disputes between its member banks and parties in transaction therewith.

Its statutory organs are the General Assembly, the Board of Directors, the Executive Committee and the General Manager, while the Legal Council and ten Steering Committees support its activities.

Its activities have, mainly**, three dimensions, i.e. institutional, developmental and social**. In its institutional role, the HBA contributes in a consultative capacity to regulatory issues, by participating in the formulation of legislative proposals or in technical committees at European and national level, **promotes the positions of its members to the competent authorities** and monitors the regulatory provisions concerning the operations of the Greek banking and, in general, financial system.

In its developmental role, it fosters bilateral and multilateral relations with other financial-sector associations in Greece and abroad, encourages the establishment of interbank bodies or other legal entities that aim at the promotion of the Greek banking system, is active in the development of training courses for its member banks and their clients. Additionally, it develops relations with local productive forces and contributes to the development of interbank payment systems and the expansion of electronic banking services. It also fosters participation in European Projects, **offers training through its Hellenic Banking Institute**, conducts surveys and research, produces a number of publications (including specialized studies on legal and economic issues relating to the banking system) and explores ways to improve physical securing of banking network and banking transactions.

In its social role, the HBA enhances public awareness vis-a-vis the Greek banking and financial system, promotes the concept of corporate social responsibility and takes initiatives in the field of business ethics.

Furthermore, it addresses problems related to consumer protection, creates and develops mechanisms for settling disputes out of court between private customers/investors and banks via the services offered by the **Hellenic Ombudsman** for Banking-Investment Services (**Banking Ombudsman**), encourages the contribution of the banking system to Sustainable Development and also keep banks informed of labour and social issues.

Disclaimer