

Greek Economy

A Brief History of the Greek Banking Universe

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Economic Research & Investment Strategy

Οι τέσσερις και μια εποχές του Ελληνικού Τραπεζικού Συστήματος

Η πορεία και η ευρωστία του ελληνικού τραπεζικού συστήματος είναι άρρηκτα συνδεδεμένη με την εξέλιξη της ελληνικής οικονομίας. Αυτό συμβαίνει γιατί η δυνατότητα ή μη των ελληνικών τραπεζών να χρηματοδοτήσουν τις επιχειρήσεις και τα νοικοκυριά, μετασχηματίζοντας τις εγχώριες αποταμιεύσεις σε δάνεια, διαδραματίζει καθοριστικό ρόλο τόσο για τα επίπεδα οικονομικής ανάπτυξης όσο και για τη διαδικασία συσσώρευσης κεφαλαίου στην εγχώρια οικονομία. Για το λόγο αυτό άλλωστε η πορεία τραπεζικών μεγεθών όπως η κεφαλαιακή επάρκεια, η πιστωτική επέκταση και οι καταθέσεις δεν αποτελούν αντικείμενο ενδιαφέροντος μόνο όλων όσων δραστηριοποιούνται στον τραπεζικό κλάδο. Αντίθετα- και πολύ ορθά- προσελκύουν το ενδιαφέρον μιας ευρύτερης μερίδας της ελληνικής κοινωνίας και του επιχειρηματικού κόσμου.

Ωστόσο, παρά τη φαινομενική ευκολία προσέγγισης του θέματος, η βαθύτερη κατανόηση της πορείας του τραπεζικού συστήματος και κυρίως της αλληλεπίδρασης μεταξύ πιστωτικής επέκτασης και επάρκειας καταθέσεων παρουσιάζει μια σειρά από προκλήσεις. Αρχικά, θα πρέπει να λάβουμε υπόψη τις τεκτονικές μεταβολές του ελληνικού τραπεζικού συστήματος. Κατά τη διάρκεια της ελληνικής κρίσης μεγάλα ποσά δανείων διαγράφηκαν, τιτλοποιήθηκαν, πωλήθηκαν σε ξένα και εγχώρια επενδυτικά funds, μεταφέρθηκαν σε εταιρείες διαχείρισης μη-εξυπηρετούμενων δανείων κ.ο.κ. Ταυτόχρονα, από την πλευρά των καταθέσεων είχαμε αρχικά σημαντικές μεταφορές κεφαλαίων στο εξωτερικό, στη συνέχεια μεγάλες αναλήψεις ποσών σε μετρητά και τα τελευταία χρόνια επιστροφές χρημάτων στις τράπεζες. Συνεπώς, οι μεταβολές των υπολοίπων, δηλαδή του συνολικού συσσωρευμένου αποθέματος δανείων και καταθέσεων, προσδιορίζονταν από ιδιοσυγκρασιακούς παράγοντες, πλήρως αποσυνδεδεμένους από την πορεία της οικονομίας. Για το λόγο αυτό, η ανάλυση και τα συμπεράσματα μας στηρίζονται στις μηνιαίες καθαρές ροές δανείων (δηλαδή νέες εκταμιεύσεις μείον αποπληρωμές υφισταμένων) και καταθέσεων (νέες καταθέσεις μείον αναλήψεις / μεταφορές) καθ' όλη την περίοδο 2002-2024.

Η δεύτερη πρόκληση αφορά στην αντιμετώπιση μιας πολύ διαδεδομένης παρανόησης αναφορικά με τη ροή αλληλεπίδρασης μεταξύ δανείων και καταθέσεων. Παρά το γεγονός ότι αρχικά η ύπαρξη καταθέσεων αποτελεί προϋπόθεση για τη χορήγηση δανείων, στα επόμενα στάδια ανάπτυξης είναι η χορήγηση δανείων αυτή που «δημιουργεί» το μεγαλύτερο ποσό καταθέσεων στην οικονομία. Με απλά λόγια κάθε φορά που μια τράπεζα χορηγεί ένα δάνειο, κάπου μέσα στην οικονομία δημιουργείται μια αντίστοιχη κατάθεση. Αυτή η διαδικασία έχει οδηγήσει πολύ κόσμο να μιλάει για τις «τράπεζες που δημιουργούν χρήμα» στην οικονομία. Εν κατακλείδι, στην ανάλυση μας εστιάζουμε την προσοχή μας στις καθαρές ροές δανείων και καταθέσεων και θεωρούμε ότι η αιτιότητα κινείται από τα δάνεια προς τις καταθέσεις.

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Οπλισμένοι με αυτές τις διευκρινήσεις, κοιτώντας την πορεία (καθαρών ροών) δανείων και καταθέσεων μπορούμε να ταυτοποιήσουμε 4 διακριτές περιόδους μέχρι το 2024 (βλ. Διάγραμμα) και την περίοδο μιας νέας κανονικότητας στο μέλλον:

1. Την περίοδο της παλιάς κανονικότητας (2002 – 2009).

Ξεκινώντας από πολύ χαμηλά επίπεδα μόχλευσης, η μείωση των επιτοκίων λόγω υιοθέτησης του Ευρώ οδήγησε σε ταχείς ρυθμούς πιστωτικής επέκτασης και αντίστοιχης αύξησης των καταθέσεων. Ως εκ τούτου υπήρχε έντονη θετική συσχέτιση μεταξύ δανείων και καταθέσεων, όπου κάθε ευρώ δανείου «δημιουργούσε» 0,95 ευρώ καταθέσεων. Ταυτόχρονα, ο λόγος δανείων προς καταθέσεις αυξήθηκε από 63% το Q1.2002 σε 105% το Q4.2009.

2. Την περίοδο της κρίσης (2010 - 2015)

Κατά τη διάρκεια της κρίσης παρατηρούμε την πλήρη αποσύνδεση της πορείας δανείων και καταθέσεων. Οι εκταμιεύσεις νέων δανείων παγώνουν και οι καθαρές ροές μετατρέπονται σε αρνητικές ως αποτέλεσμα των σταδιακών αποπληρωμών υφιστάμενων δανείων. Αντίθετα, στο πεδίο των καταθέσεων καταγράφονται βίαιες αναλήψεις κεφαλαίων σε δυο δόσεις: αρχικά την περίοδο 2010-2012 και στη συνέχεια την περίοδο Q4.14 – Q2.15. Η εκροή καταθέσεων διακόπτεται απότομα (και οριστικά) με την επιβολή των capital control στις 28 Ιουνίου 2015. Παρά την απομόχλευση, ο λόγος δανείων προς καταθέσεις στο τέλος της περιόδου (Q2.15) εκτινάσσεται στο 170%. Για να αντιμετωπισθεί η αναντιστοιχία μεταξύ δανείων και καταθέσεων υπάρχει έκτακτη χρηματοδότηση από την ΕΚΤ (ΕΛΑ) ύψους €87 δισεκ. Ταυτόχρονα καθίστανται αναγκαίες εισροές επιπλέον χαρτονομισμάτων από την ΕΚΤ ύψους € 19 δισεκ. Καθ' όλη την περίοδο, η μεταβολή της καθαρής ροής δανείων κατά €1 συνδέεται με τη μείωση των καταθέσεων κατά €2,46.

3. Την περίοδο ομαλοποίησης (2016 - 2019)

Η περίοδος μετά την υπογραφή του 3^{ου} μνημονίου και την οριστική αποσόβηση του λεγόμενου Grexit -σε συνδυασμό με την εφαρμογή των capital control- χαρακτηρίζεται από σταδιακή επιστροφή των καταθέσεων. Τα επιπλέον χαρτονομίσματα επιστρέφονται σταδιακά και μέχρι το τέλος της περιόδου η εξάρτηση από τον ΕΛΑ ουσιαστικά μηδενίζεται. Αντίθετα, η ροή δανείων εξακολουθεί και παραμένει οριακά αρνητική καθώς οι νέες εκταμιεύσεις δεν επαρκούν για να αντισταθμίσουν τις αποπληρωμές των παλαιών δανείων. Κατά συνέπεια ο συσχετισμός δανείων και καταθέσεων παραμένει μηδενικός ενώ ο λόγος δανείων προς καταθέσεις καταλήγει στο 107%.

4. Την Covid / μετά- Covid περίοδο (2020 - 2024)

Η διαδικασία ενίσχυσης της καταθετικής βάσης επιταχύνεται την περίοδο του Covid εξαιτίας των κοινωνικών μεταβιβάσεων από Ε.Ε. και κυβέρνηση σε επιχειρήσεις και νοικοκυριά. Με το πέρας της πανδημίας, οι εκταμιεύσεις των δανείων του Ταμείου Ανάκαμψης & Ανθεκτικότητας (ΤΑΑ) οδηγούν για πρώτη φορά μετά το 2009 σε θετικές καθαρές ροές πιστωτικής επέκτασης. Ωστόσο η δυναμική επιστροφής καταθέσεων είναι τόσο ισχυρή που κάθε ευρώ δανείου αντιστοιχεί σε 1,4 ευρώ καταθέσεων. Κατά συνέπεια ο λόγος δανείων προς καταθέσεις υποχωρεί στο 60%.

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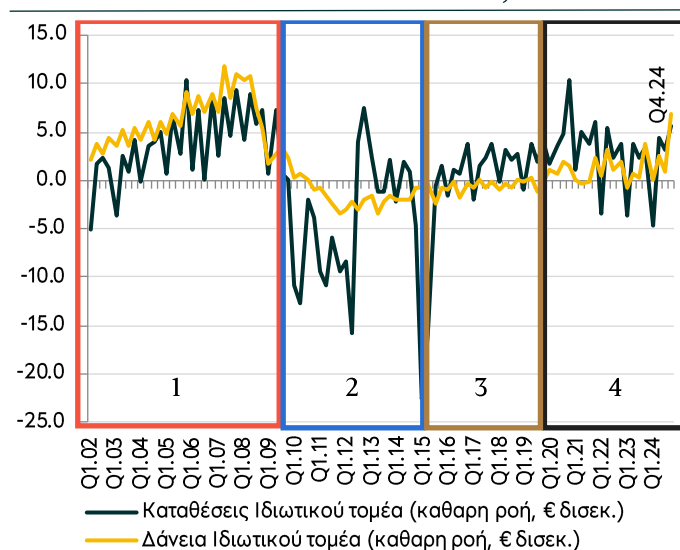
Έχοντας προβεί σε όλη αυτή την ιστορική ανασκόπηση, το ερώτημα που προκύπτει είναι ποια θα είναι η πορεία των τραπεζικών εξελίξεων στο άμεσο μέλλον.

Η εποχή της νέας κανονικότητας (2025 - ...)

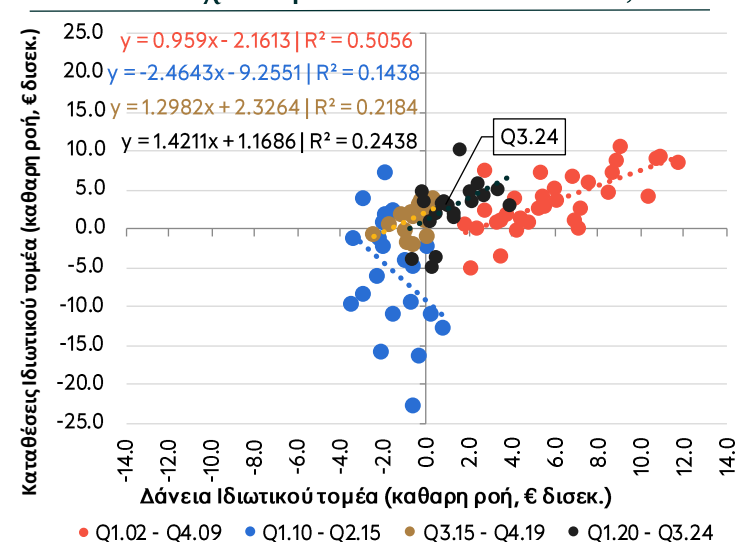
Η εκτίμηση μου είναι ότι η εποχή της νέας κανονικότητας θα είναι ένα αμάλγαμα χαρακτηριστικών από την εποχή της παλιάς κανονικότητας και της μετά-Covid εποχής. Όπως και στην παλιά κανονικότητα η σχέση μεταξύ δανείων και καταθέσεων θα συνεχίσει να εξομαλύνεται. Αυτό θα συμβεί επειδή η αυτόνομη πορεία των καταθέσεων θα περιοριστεί καθώς οι πόροι εκτός τραπεζικού συστήματος θα έχουν εξαντληθεί και οι κοινωνικές μεταβιβάσεις της πανδημίας δεν θα επαναληφθούν. Παράλληλα, η συνεχιζόμενη οικονομική ανάπτυξη θα απαιτήσει επιτάχυνση της μόχλευσης και του δανεισμού. Ωστόσο ένα χαρακτηριστικό της μετά-Covid εποχής που πιστεύω ότι θα «επιβιώσει» και στην εποχή της νέας πραγματικότητας θα είναι αυτό της ταχύτερης αύξησης των καταθέσεων έναντι των δανείων. Η αιτία της επιβίωσης του παράδοξου αυτού φαινομένου βρίσκεται στον τρόπο χρηματοδότησης των επενδύσεων που εντάσσονται στο ΤΑΑ. Οι επενδύσεις αυτές χρηματοδοτούνται κατά 50% από πόρους της ΕΕ, δηλαδή καταθέσεις που αρχικά βρίσκονταν εκτός ελληνικών τραπεζών. Κατά συνέπεια είναι πιθανό στο άμεσο χρονικό διάστημα οι ροές καταθέσεων να συνεχίσουν να υπερβαίνουν τις ροές δανείων.

Μετά λοιπόν από μια παρατεταμένη περίοδο μεταβλητότητας με απρόσμενες θετικές και κυρίως αρνητικές επιδράσεις, το τραπεζικό σύστημα σήμερα βρίσκεται στο μεταίχμιο μετάβασης και πάλι σε μια περίοδο ομαλότητας όπου θα είναι σε θέση να χρηματοδοτεί την ελληνική οικονομία κάτω από συνθήκες ισορροπίας και χρηματοπιστωτικής σταθερότητας.

Δάνεια vs Καταθέσεις



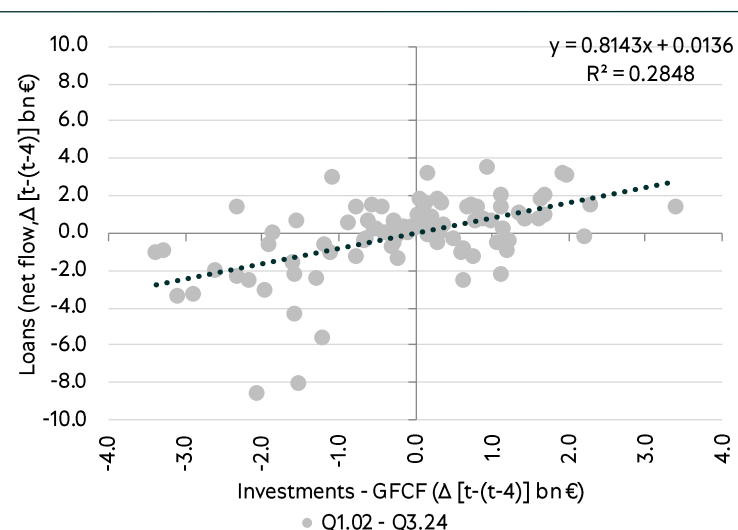
Συσχέτιση: Δάνεια vs Καταθέσεις



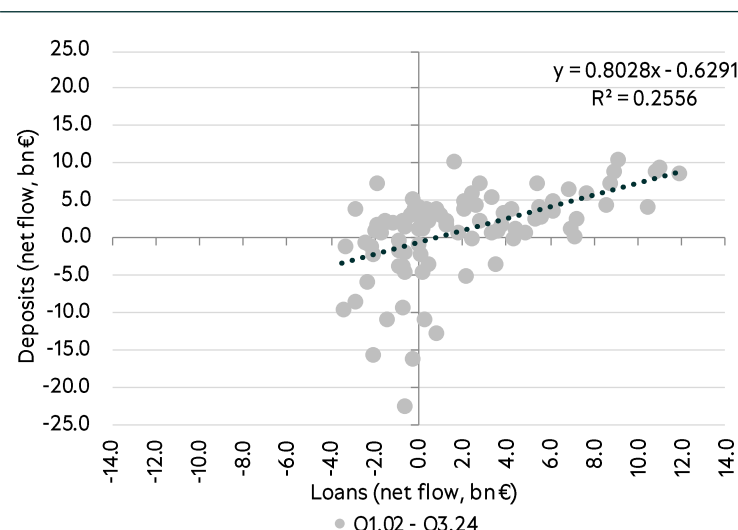
A Bird's Eye View: Banking Sector Developments Vs Economic Activity

Understanding the evolution of the Greek banking system especially the development of the loans (on the asset side) and deposits (on the liabilities side) presents a major challenge to say the least. This is because the Greek banking system has been buffeted by a series of negative but also positive shocks that at times have forced the two sides of its balance sheet to move (sometimes violently) in opposite directions. As a result, when we examine the statistical relationship (over the entire modern history of the Greek banking sector) of loans vs deposit or loans vs economic activity (especially investments), we cannot establish any meaningful statistical relationship.

Investments vs Credit Impulse (€ bn)



Loans vs Deposits (net flows, €bn)



Yet if - with the power of hindsight – decompose this entire era into 4 distinct sub-periods, then a much more meaningful sequence of events and patterns is revealed.

The Four plus One Eras of the Greek Banking System

The trajectory and resilience of the Greek banking system are inextricably linked to the evolution of the Greek economy. This is because the ability—or lack thereof—of Greek banks to finance businesses and households by transforming domestic savings into loans plays a pivotal role in both the levels of economic development and the process of capital accumulation within the domestic economy. For this reason, the estimation of banking metrics such as capital adequacy, credit expansion, and deposits are of interest not only to those active in the banking sector. On the contrary—and rightly so—they attract the attention of a broader segment of Greek society and the business community.

However, despite the apparent simplicity of the subject, gaining a deeper understanding of the banking system's trajectory, particularly the interaction between credit expansion and deposit adequacy, presents several challenges. First, one must consider the tectonic shifts within the Greek banking system. During the Greek crisis, large amounts of loans were written off, securitized, sold to foreign and domestic investment funds, or transferred to non-performing loan management companies, among other measures. Simultaneously, on the deposits side, there were significant capital transfers abroad, massive cash withdrawals, and, in recent years, a return of funds to banks. As a result, changes in balances—the total accumulated stock of loans and deposits—were driven by idiosyncratic factors, entirely disconnected from the economy's trajectory. For this reason, our analysis and conclusions are based on monthly net flows of loans (i.e., new disbursements minus repayments of existing loans) and deposits (new deposits minus withdrawals/transfers) throughout the period 2002–2024.

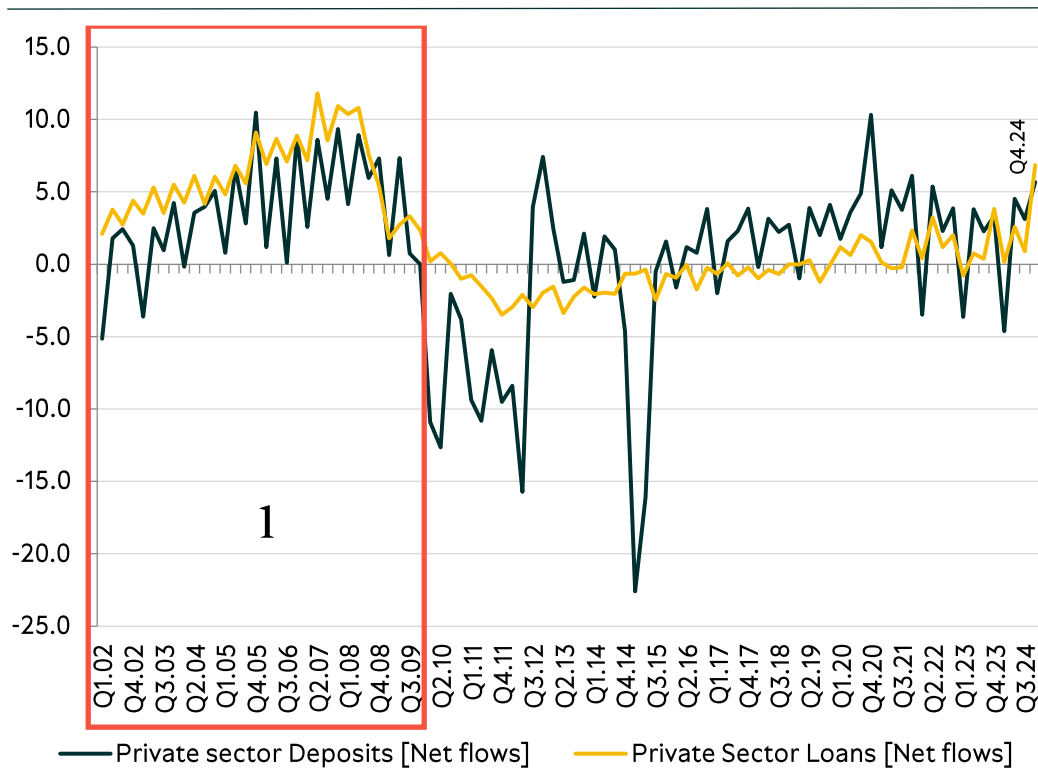
The second challenge involves addressing a widespread misconception regarding the direction of causality between loans and deposits. Although, at first, the existence of deposits is a prerequisite for granting loans, in later stages of development, it is the granting of loans that “creates” the largest portion of deposits in the economy. Simply put, every time a bank grants a loan, a corresponding deposit is created somewhere in the economy. This process has led many to talk about “banks creating money” in the economy. In conclusion, in our analysis, **we focus on the net flows of loans and deposits and assume that causality flows from loans to deposits.**

Armed with these clarifications by examining the trajectory of net flows of loans and deposits, we can identify four distinct periods up to 2024 and the period of a new normality in the future:

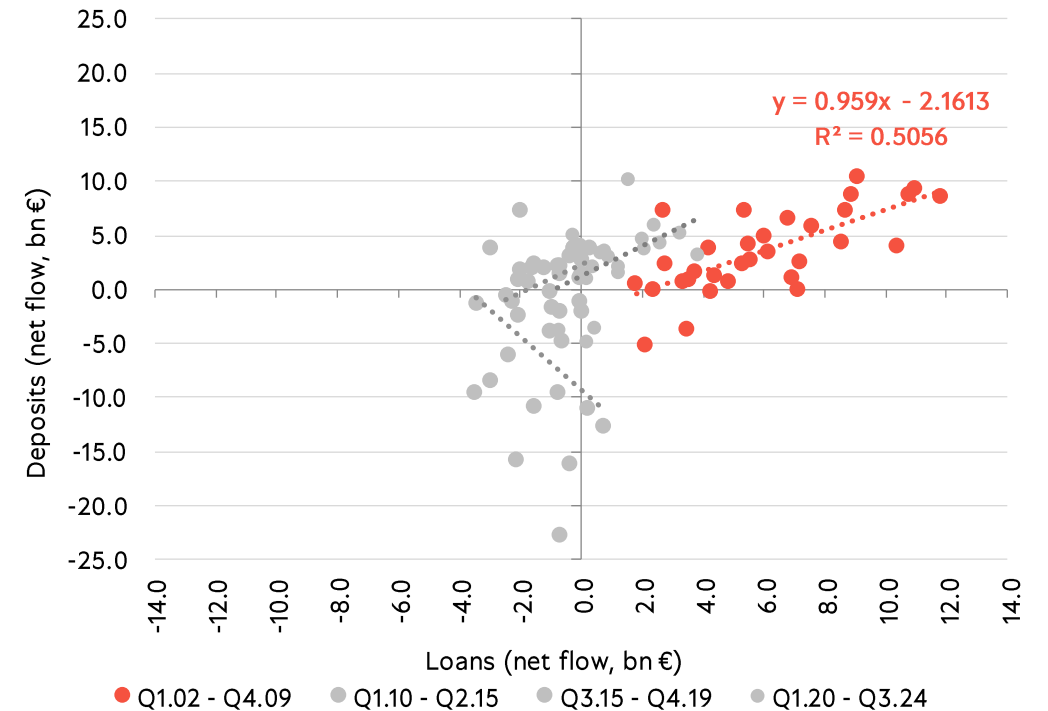
[1] The period of the old normal (2002–2009)

Starting from very low levels of leverage, the reduction in interest rates due to the adoption of the Euro, led to rapid credit expansion and a corresponding increase in deposits. Consequently, there was a strong positive correlation between loans and deposits, where every euro of loans “created” €0.95 in deposits. At the same time, the loans-to-deposits ratio increased from 63% in Q1 2002 to 105% in Q4 2009.

Loans vs Deposits



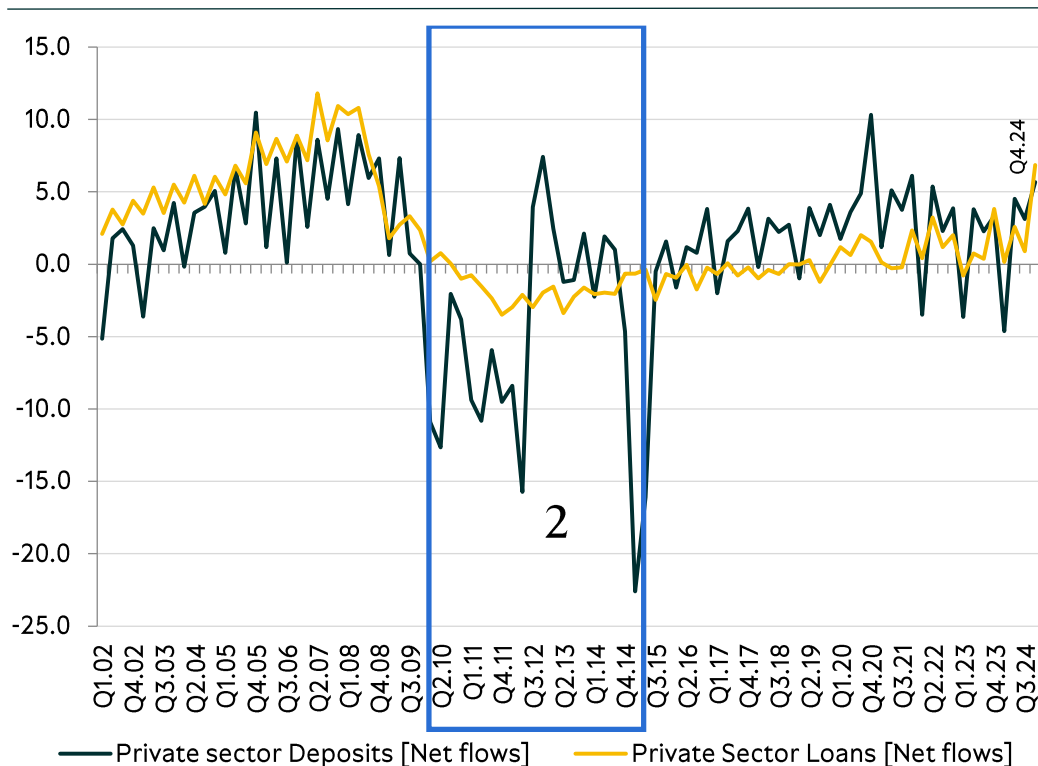
Loans vs Deposits relationship Q1.02-Q4.09



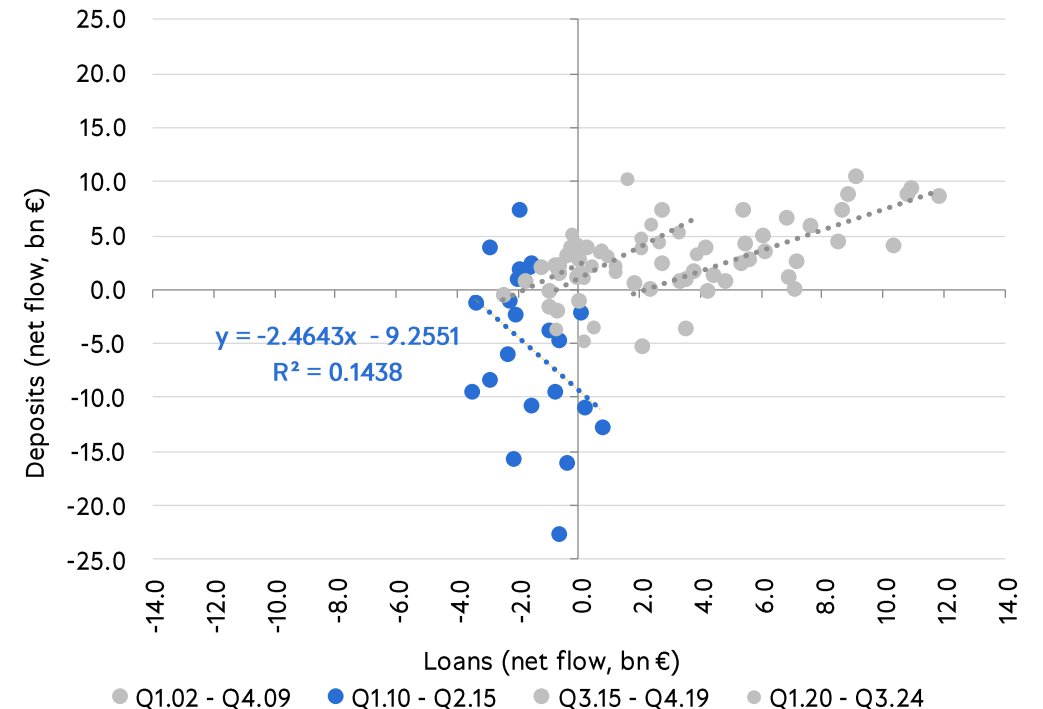
[2] The Crisis Period (2010–2015)

During the crisis years, we observe a complete decoupling of the trajectories of loans and deposits. New loan disbursements froze, and net flows turned negative as a result of the gradual repayment of existing loans. In contrast, the deposits side experienced violent capital withdrawals in two phases: initially during 2010–2012 and later from Q4 2014 to Q2 2015. Deposit outflows were abruptly (and permanently) halted by the imposition of capital controls on June 28, 2015. Despite deleveraging, the loans-to-deposits ratio at the end of the period (Q2 2015) surged to 170% due to the collapse of deposits. To address the mismatch between loans and deposits, emergency financing from the ECB (through ELA) amounting to €87 billion was provided. Simultaneously, additional cash inflows of €19 billion from the ECB were required. Throughout the period, the change of the net flow of loans by €1 coincided with the reduction of deposits by €2.46.

Loans vs Deposits



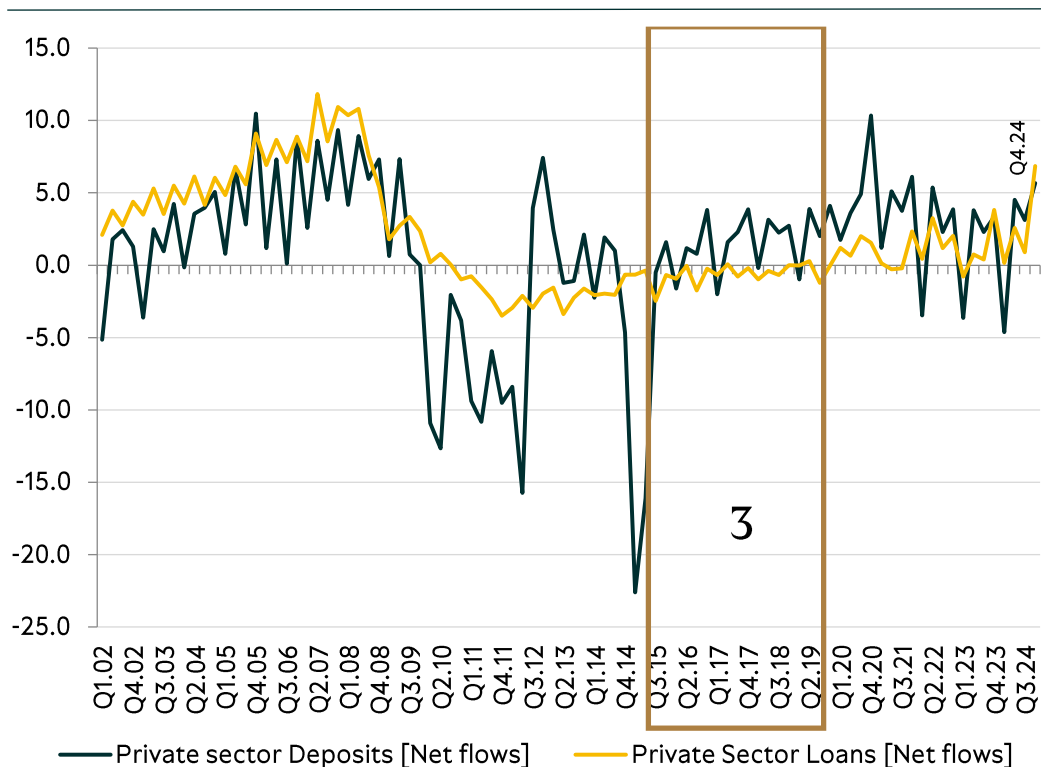
Loans vs Deposits relationship Q1.10-Q2.15



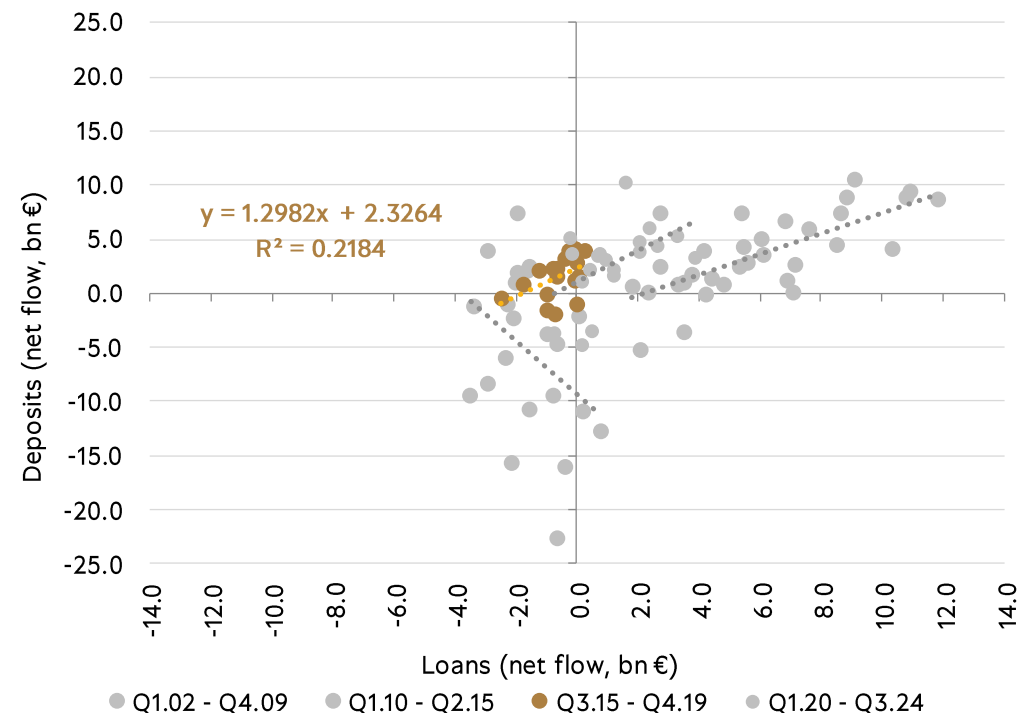
[3] The Normalization Period (2016–2019)

The period following the signing of the third bailout agreement and the definitive avoidance of the so-called Grexit—combined with the implementation of capital controls—was characterized by the gradual return of deposits. The superfluous cash was gradually returned, and by the end of this period, reliance on the ELA was essentially eliminated. In contrast, the flow of loans remained marginally negative, as new disbursements were insufficient to offset repayments of old loans. Consequently, the correlation between loans and deposits remained negligible, while the loans-to-deposits ratio settled at 107%.

Loans vs Deposits



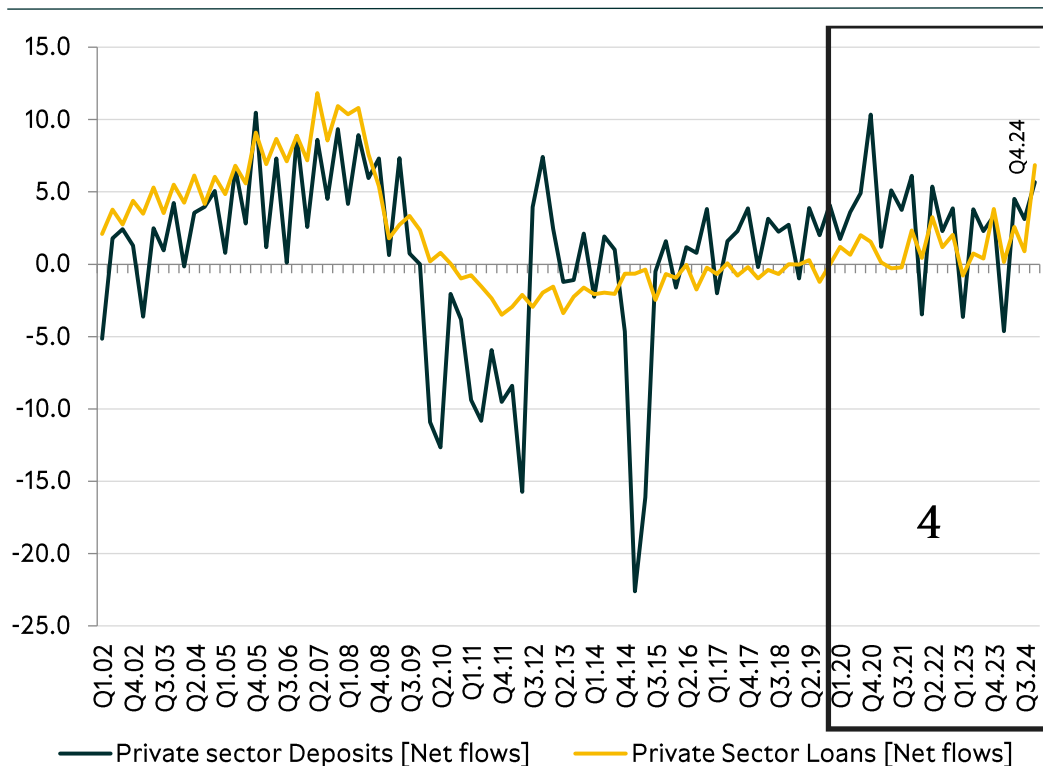
Loans vs Deposits relationship Q3.15-Q4.19



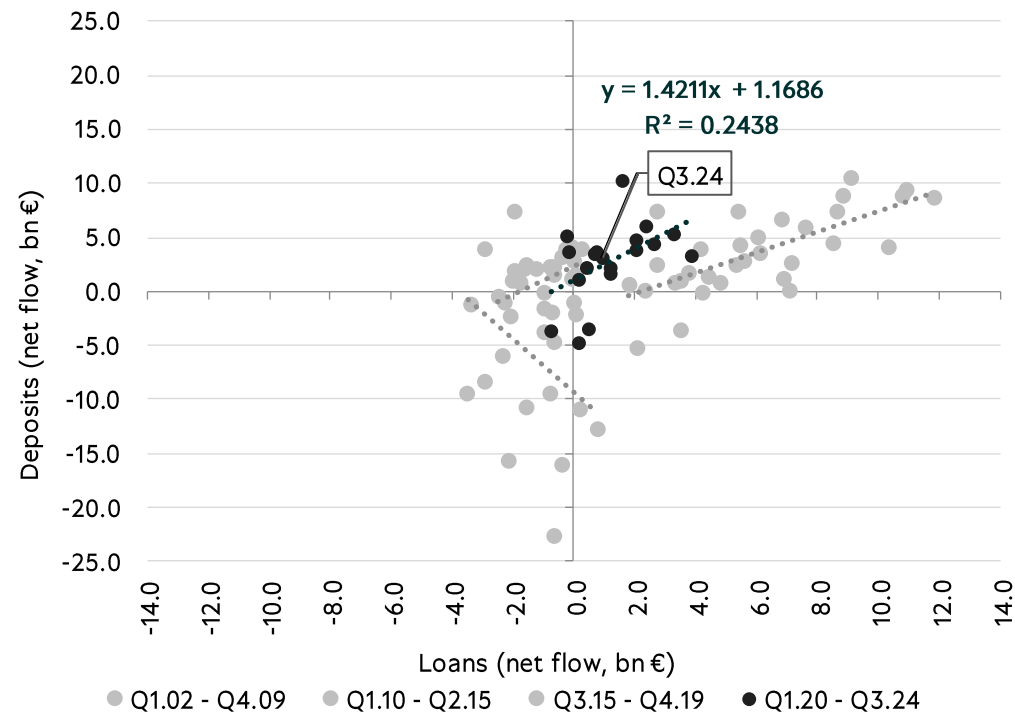
[4] The COVID/Post-COVID Period (2020–2024)

The process of strengthening of the deposit base accelerated during the COVID period due to social transfers from the EU and the government to businesses and households. After the pandemic, disbursements of loans from the Recovery and Resilience Facility (RRF) led to positive net credit expansion flows for the first time since 2009. However, the momentum of deposit returns was so strong that every euro of loans corresponded to €1.4 in deposits (until Q3.24). Consequently, the loans-to-deposits ratio fell to 60%.

Loans vs Deposits



Loans vs Deposits relationship Q1.20-Q3.24

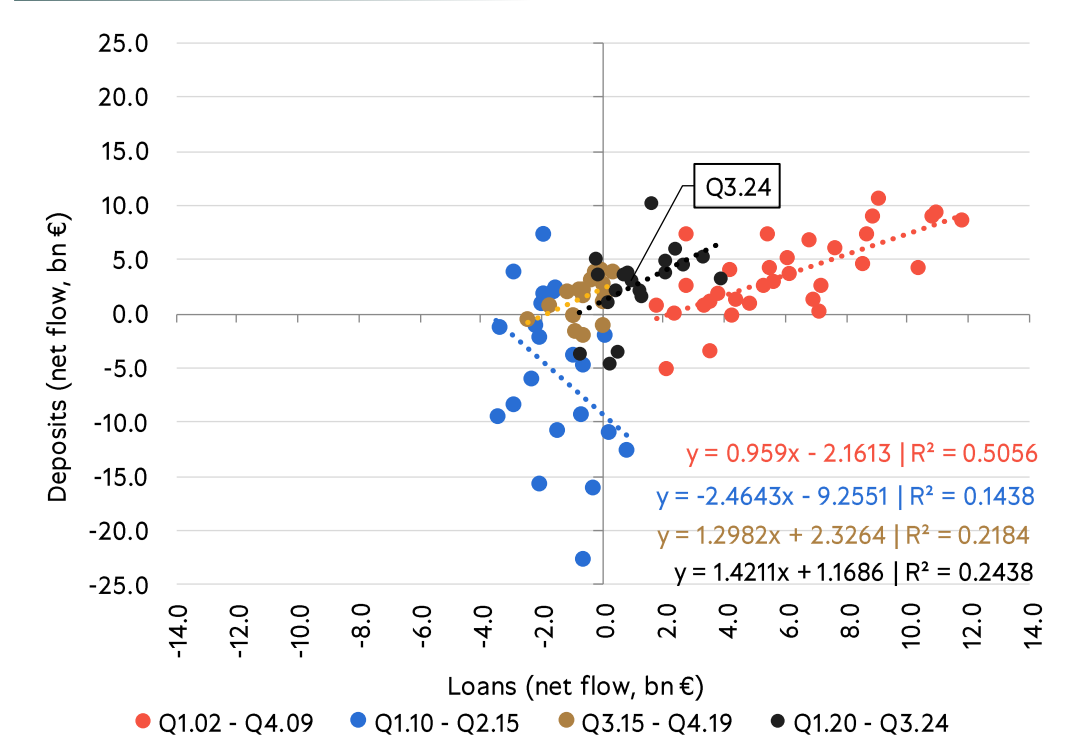
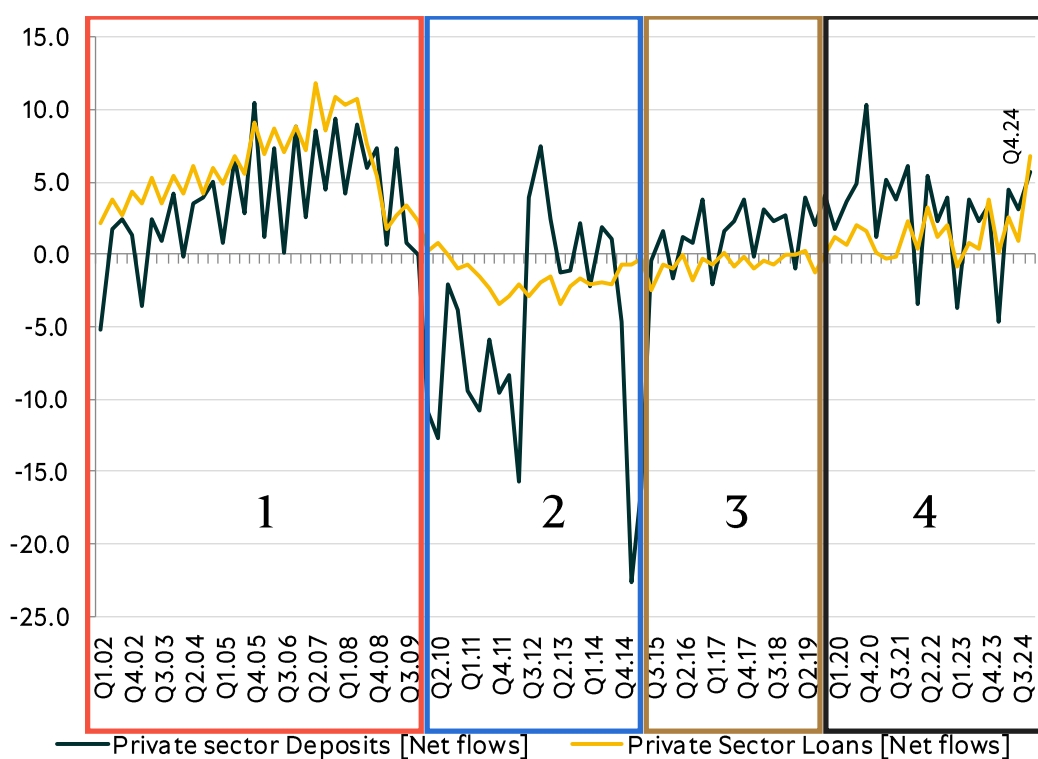


The Era of New Normality (2025 - ...): A gradual return to the “Old-Normal”

Having gone through this historical review, the question that arises is: what will the trajectory of banking developments look like in the near future.

The Era of New Normality (2025 - ...)

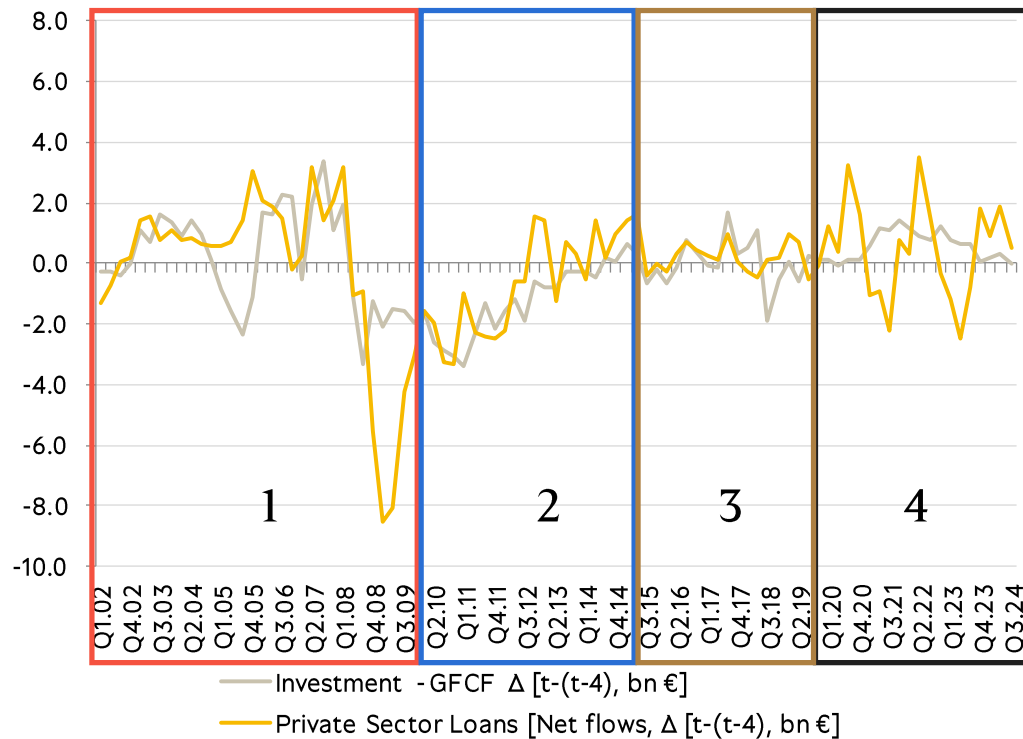
My estimation is that the era of new normality will be a blend of characteristics from the old normality and the post-COVID era. As in the old normality, the relationship between loans and deposits will continue to stabilize. This will occur because the independent growth of deposits will diminish as external resources outside the banking system become exhausted, and the social transfers from the pandemic will not be repeated. At the same time, continued economic growth will necessitate an acceleration in leverage and borrowing. However, one feature of the post-COVID era that I believe will "survive" into the new reality is the faster growth of deposits compared to loans. The reason for the persistence of this paradox lies in the method of financing investments included in the Recovery and Resilience Facility (RRF). These investments are financed 50% by EU resources, i.e., deposits that were initially outside the Greek banking system. Consequently, in the near term, it is likely that deposit flows will continue to exceed loan flows.



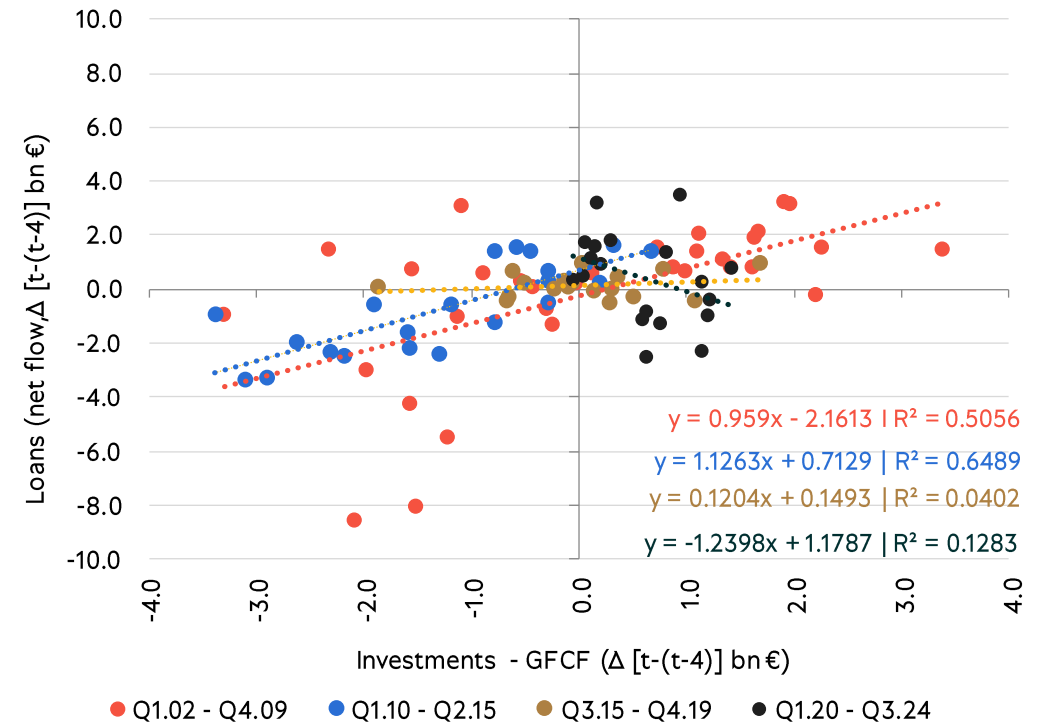
The Macro versus Banking Interconnection (I): Still no sign of “re-connection” between economic activity and new lending

Given the small share of consumer lending, during the period of the “Old - Normal” but even during the “Crisis” years, there has been a very strong and statistically significant link between investment growth and credit expansion. This link was broken at the event of capital controls and has even turned negative in the “Post Covid” era.

Credit Impulse vs Investment Activity



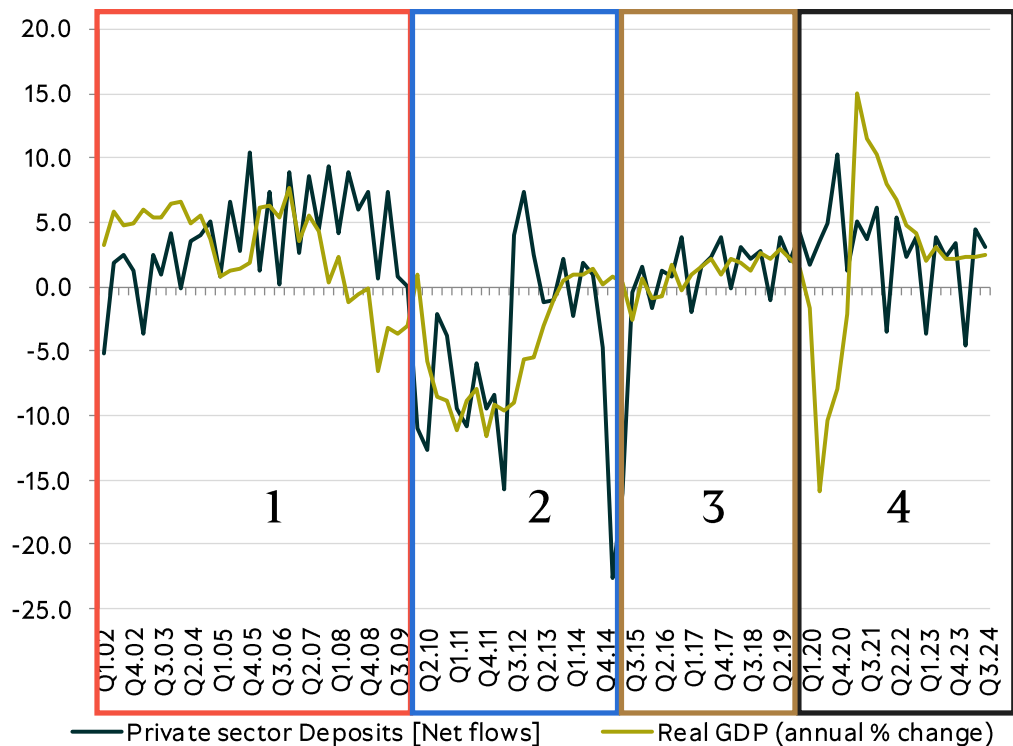
Credit Impulse vs Investment Activity



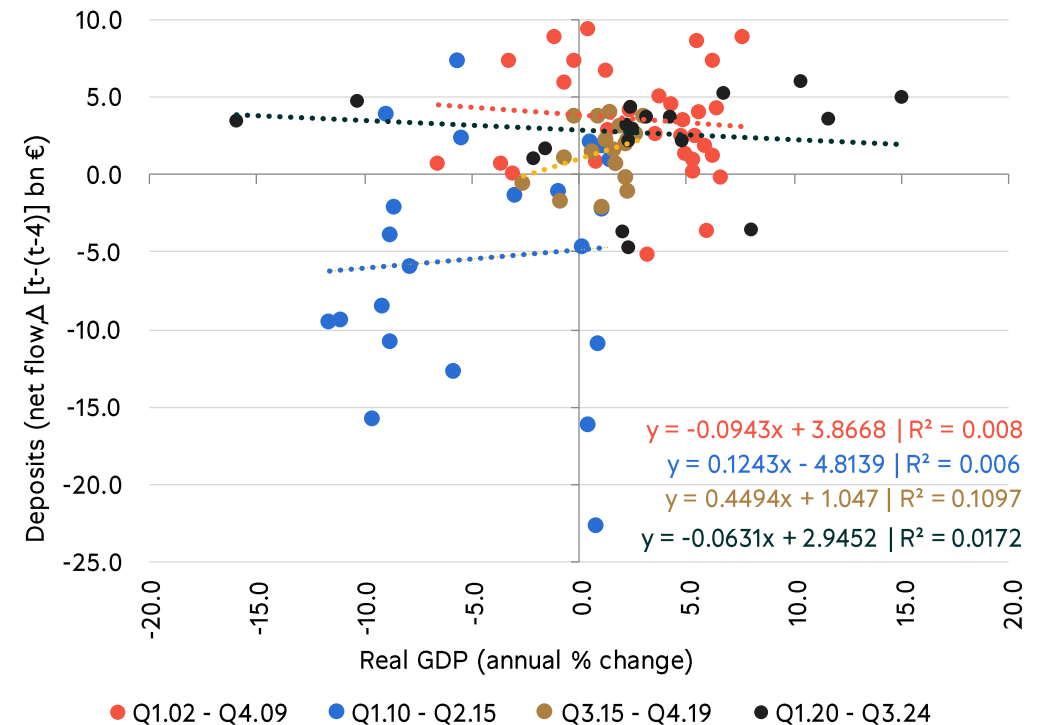
The Macro versus Banking Interconnection (II): Very weak connection between activity and deposits

Contrary to popular intuition, according to which economic growth creates savings and deposits, there has been a very weak link between deposits and GDP growth throughout the entire history of the Greek banking sector.

Deposits flows vs Economic Activity



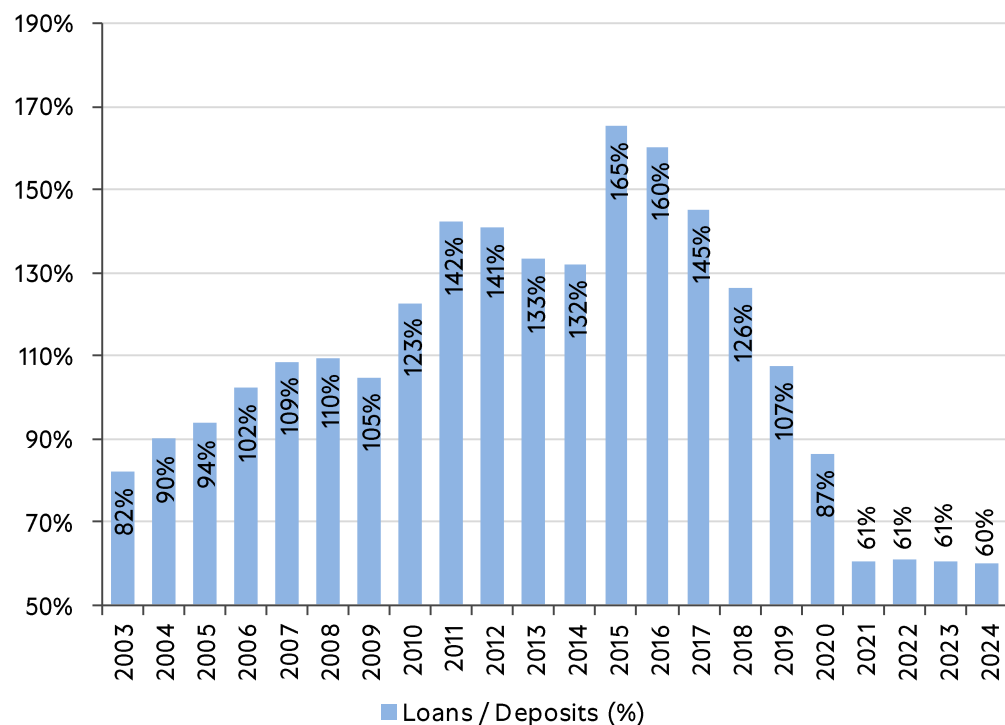
Private Sector Deposits vs Economic Activity



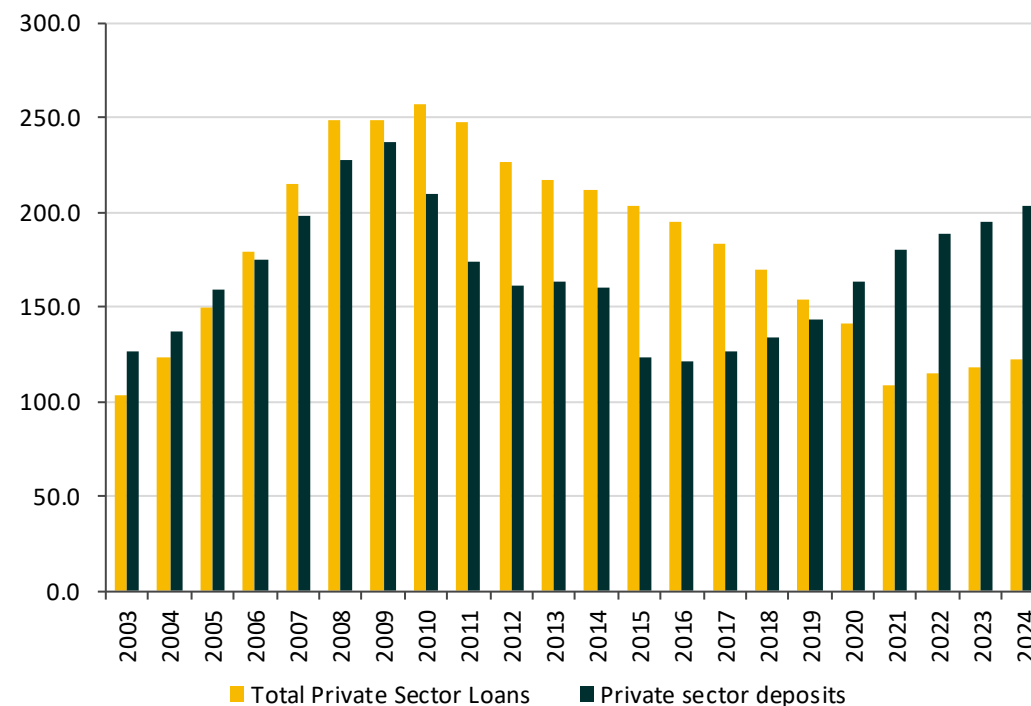
Stabilisation in loans to deposits in line with low levels of credit growth

Excess liquidity and the stabilization of loans to deposits at very low levels will be a feature of the Greek banking sector for the years to come.

Private Sector Loans to Deposits Ratio (%)



Private Sector Loans Vs Deposits^{1,2} (Outstanding amount, € bn)



Notes: 1. Excluding the Bank of Greece, including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. Growth rates are derived from the differences in outstanding amounts corrected for loan write-offs, exchange rate valuations and reclassifications. 2. Excluding the Bank of Greece. As of December 2016, deposits of the Consignment Deposits and Loan Fund are excluded from the domestic deposits as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, deposits and repos of shipping companies which have their registered office abroad, are no longer included in the deposits of the domestic economy, as they were reclassified to Other Countries. Growth rates are derived from changes in outstanding amounts corrected for foreign exchange valuations and reclassifications adjustments, i.e. from the sums of flows during the 12 months ending in the period indicated. Excluding liabilities of credit institutions to Special Purpose Vehicles related to securitisation operations

Credit Cycles Estimation

Even if we account for €70bn of non-performing loans, there is still room for €20bn of net credit expansion (or 8.7% of Nominal GDP)

Credit Cycles: Introduction

The aim of this section is to estimate the degree of over/under leverage of the Greek private sector. In order to accomplish that we need to estimate the appropriate (aka equilibrium) level of private sector credit in the Greek economy (relative to its nominal GDP) and to contrast that to the actual level of private sector indebtedness. The positive/negative outcome from this comparison will provide an indication of the degree of over/under leverage and hence the true capacity for credit expansion.

The necessary steps are:

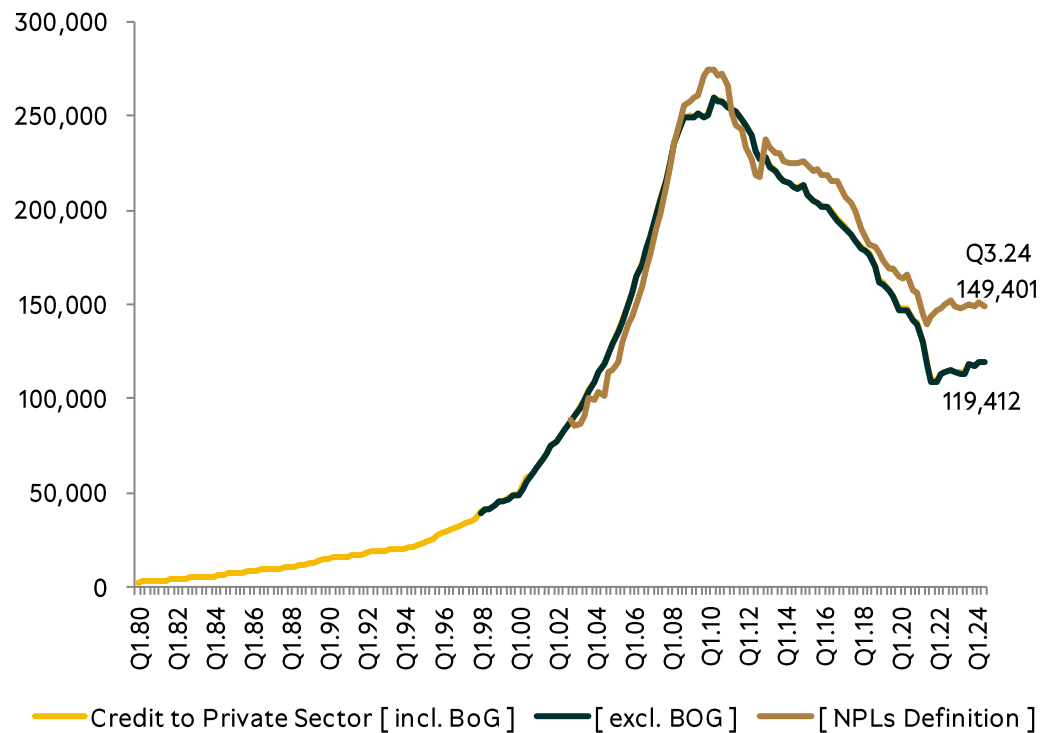
- Estimate the actual level of private sector debt (on and off balance-sheet) in the Greek economy.
- Estimate the trend of the Credit / Nominal GDP.
- Estimate the gap between actual and trend Credit / Nominal GDP.

Credit Cycles Step I: Estimating the correct level of private sector debt burden

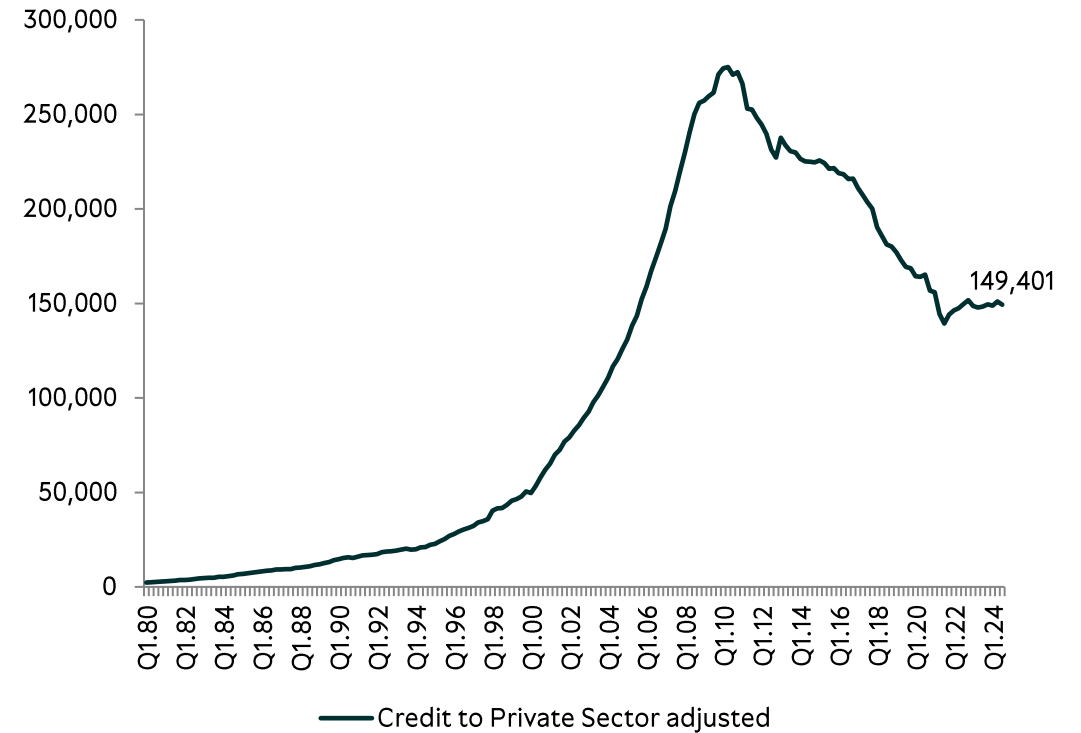
The first step is to estimate the on balance-sheet credit outstanding. In order to do that we collate 3 time series:

- a) the old credit to private sector data including Bank of Greece lending from Q1-1980 to Q4-1997,
- b) the credit to private sector excluding Bank of Greece lending from Q1-1998 to Q3-2024 and
- c) the private sector credit outstanding according to BoG's NPL definition from Q4-2002 to Q3-2024. This series includes both performing and non-performing (on balance-sheet) credit exposures adjusted for undrawn (but committed) amounts and various other contingent exposures.

Private Sector Credit (Outstanding amount, € mn)



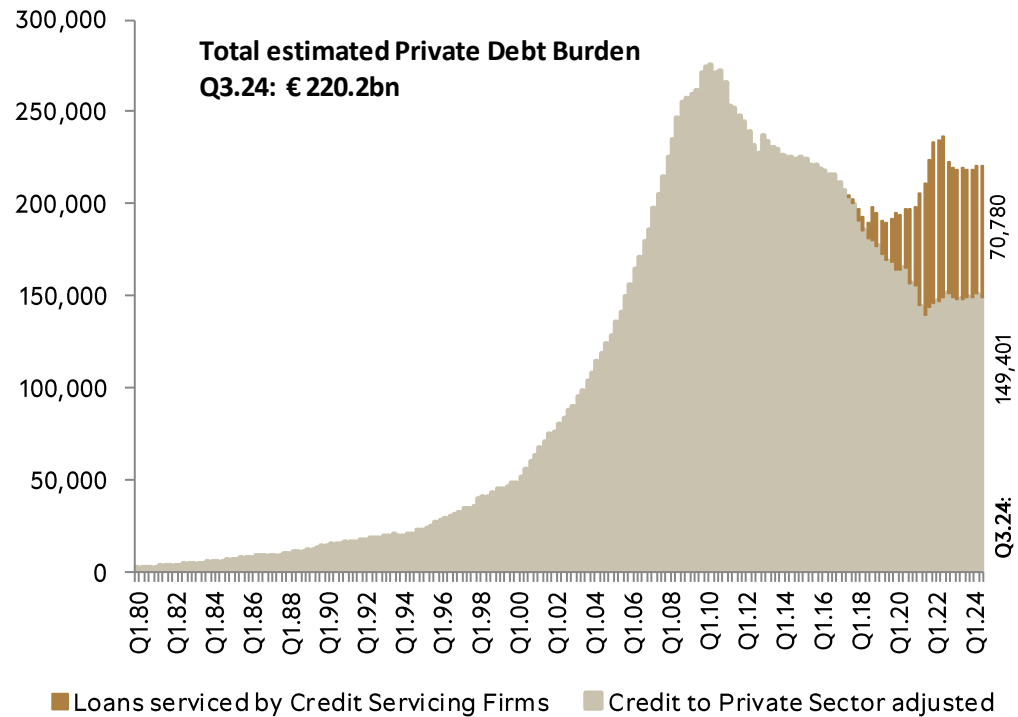
Private Sector Credit adjusted (Outstanding amount, € mn)



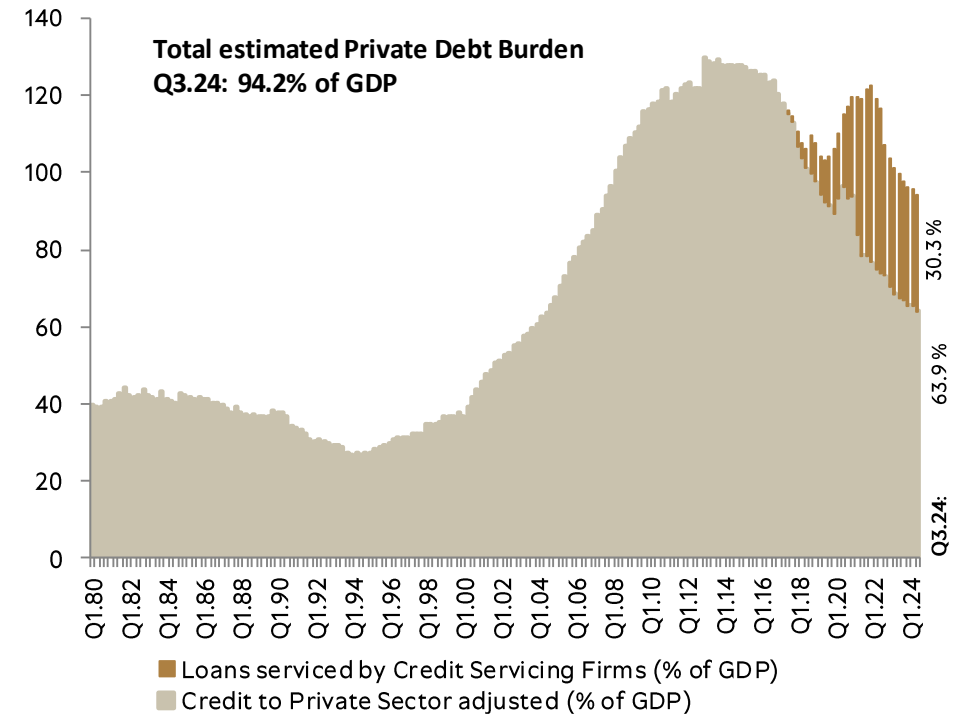
Credit Cycles Step II: Estimating the correct level of private sector debt burden

The second step is to estimate the off-balance sheet non – performing loans transferred to specialized financial institutions that are serviced by domestic Credit Servicing Firms (CSFs)

Private Sector Debt Burden (Outstanding amount, € mn)



Private Sector Debt Burden (% of GDP)

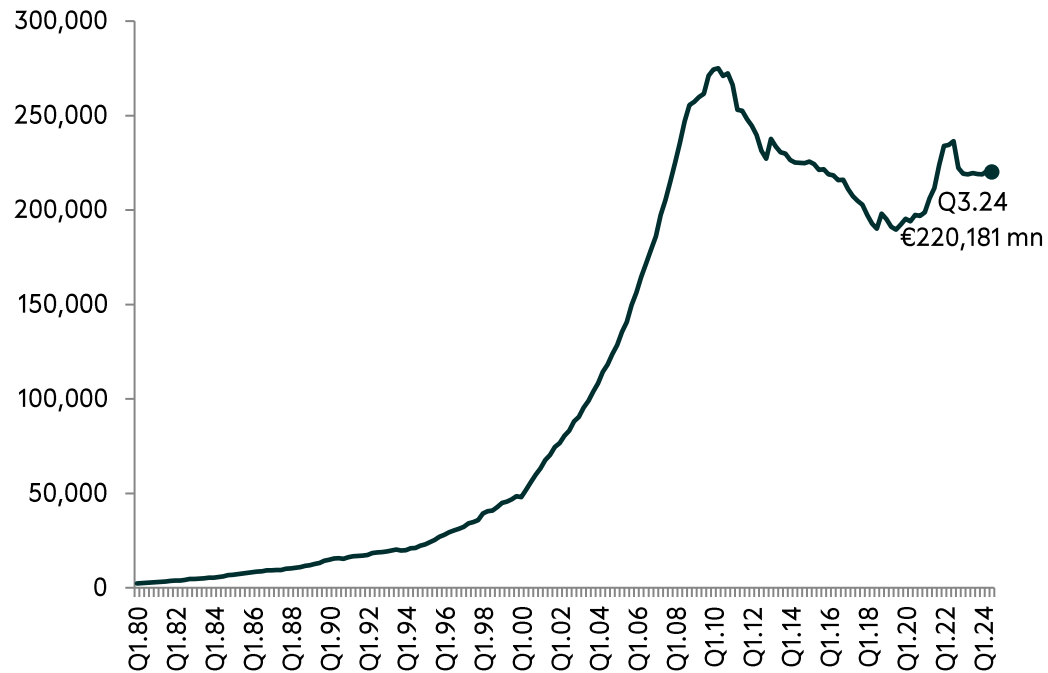


Credit Cycles Step III: Creating a long - term historical time series

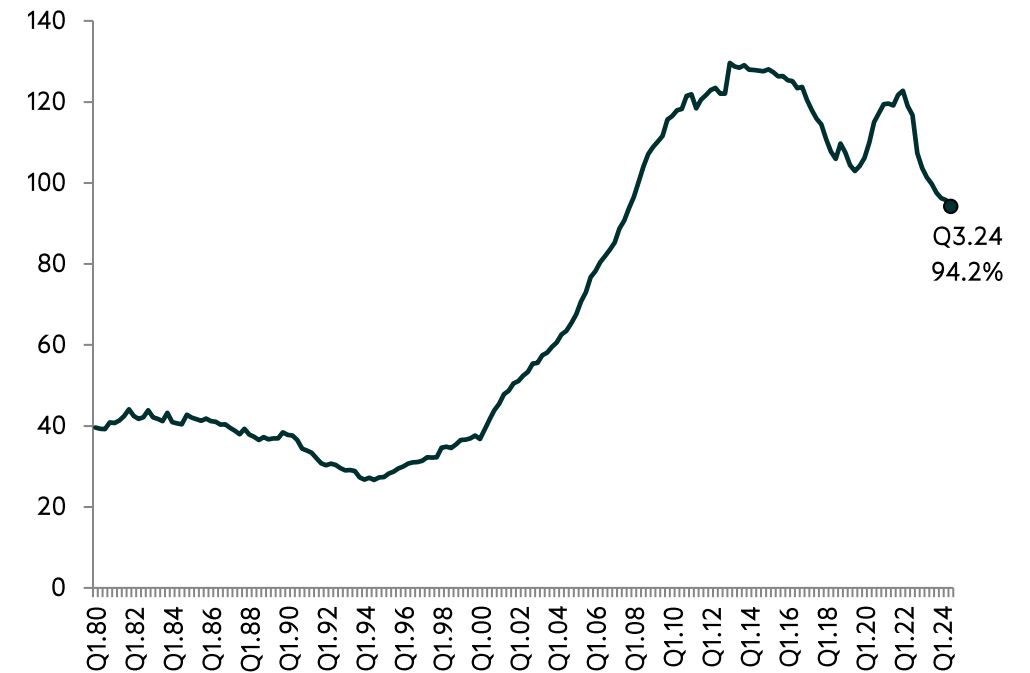
Collating of those time series together, we produce a long-term history of private sector debt in the Greek economy

Private Sector Debt Burden [Q1-1980 to Q3-2024]

(Outstanding amount, € mn)



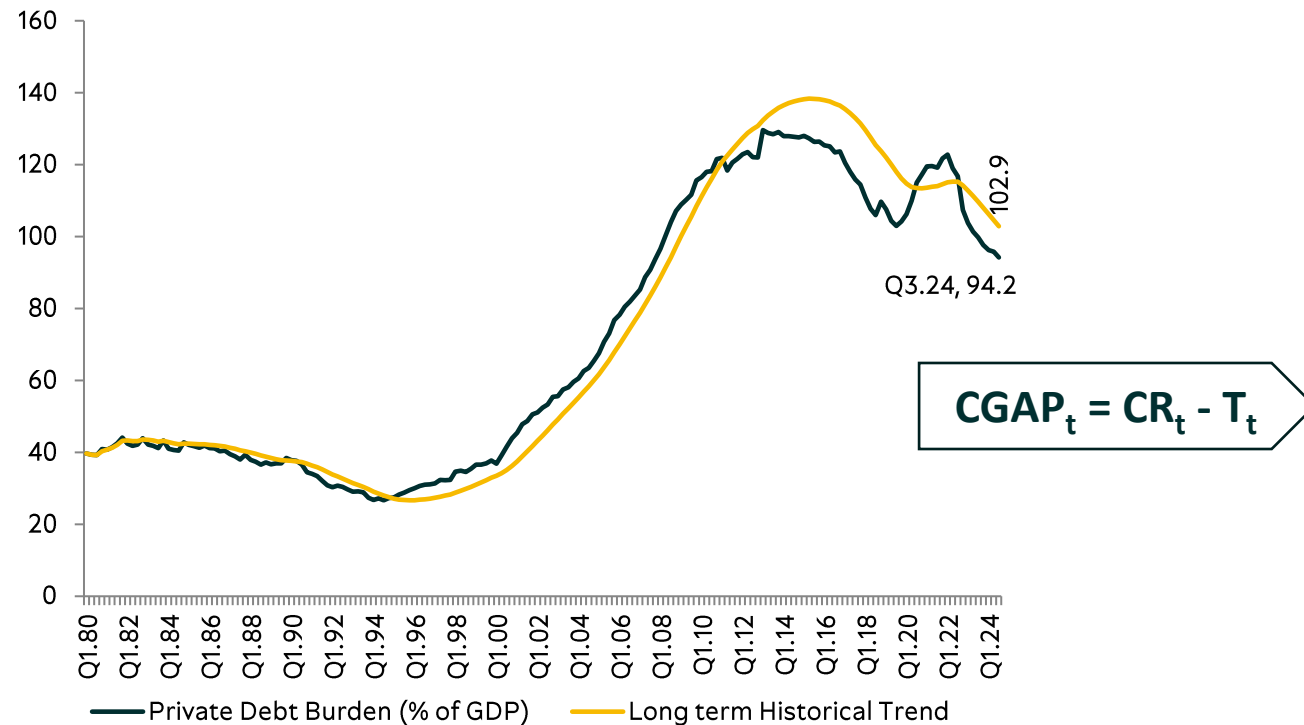
(% of GDP)



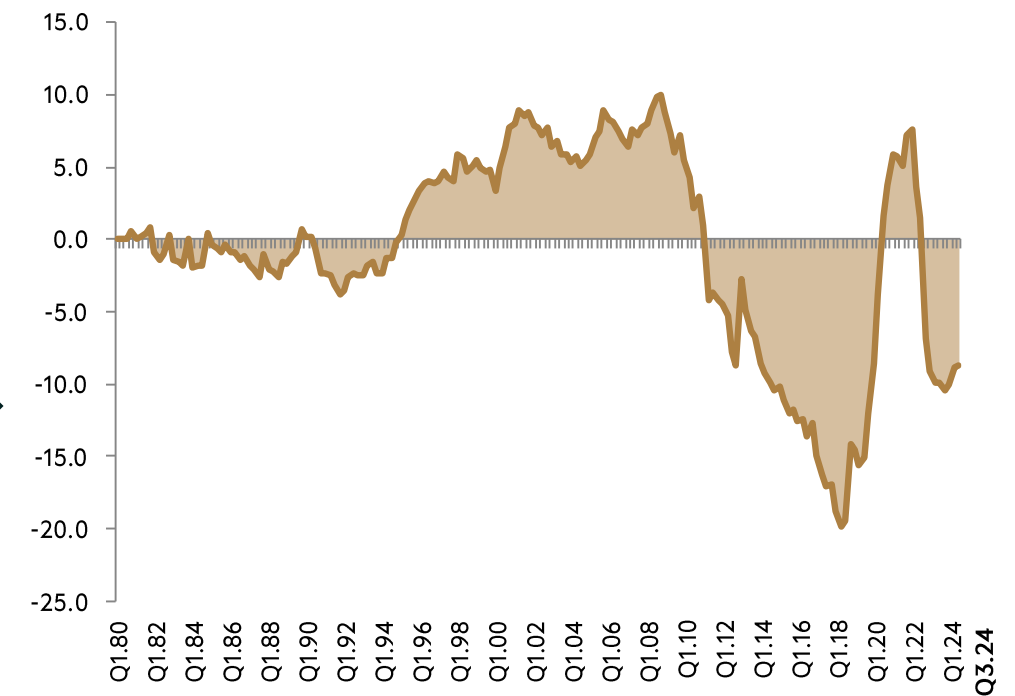
Credit Cycles Step IV: €20bn of net credit (8.7% of Nom. GDP) are needed to return to trend

In the final step of our analysis, we compare the trend versus actual evolution of Private Sector Credit to Nominal GDP. The negative gap between the two reveals a substantial underleverage of the Greek private sector to the tune of 8.7% of nominal GDP or €20bn of net credit expansion.

Private Sector Credit vs. Long-term Trend



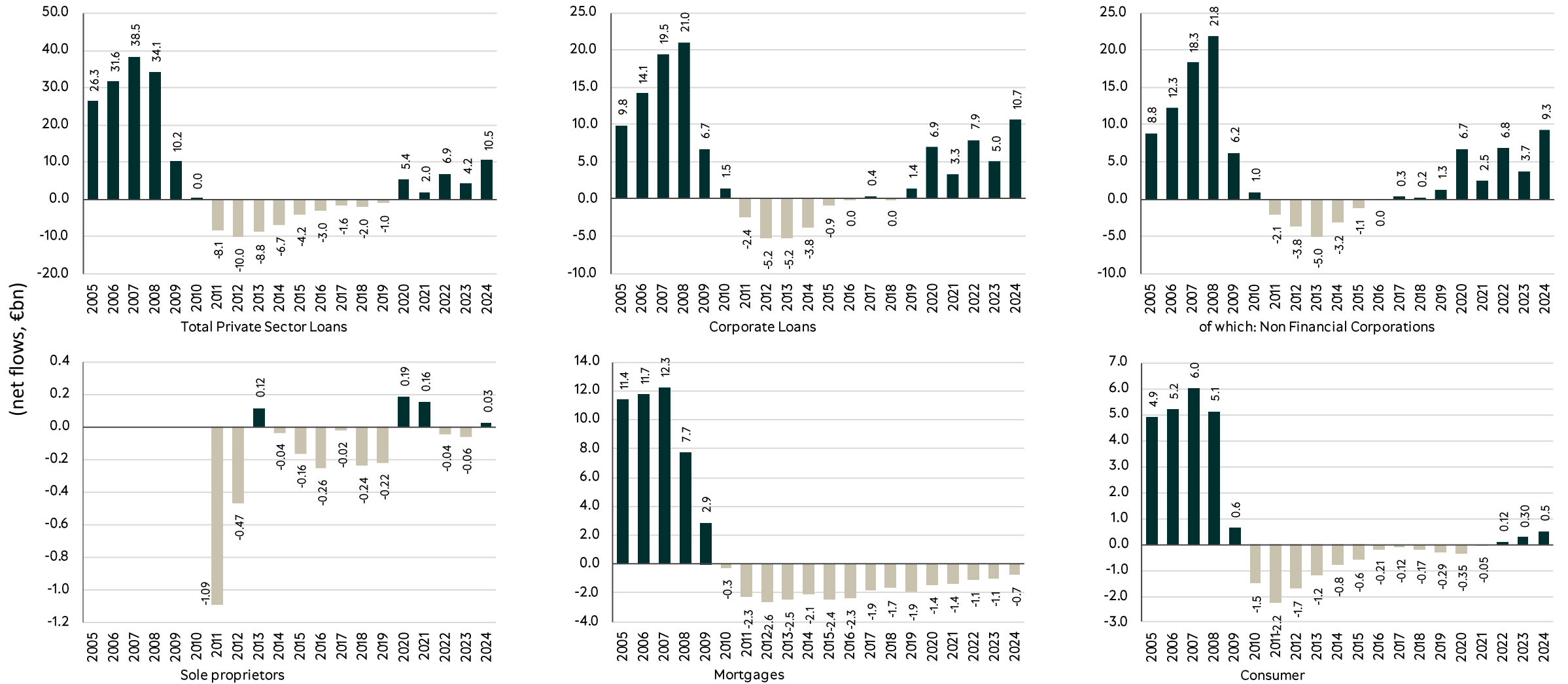
Credit to GDP gap stands at 8.7% of Nominal GDP



Current Banking Developments

Further acceleration of net credit expansion in 2024

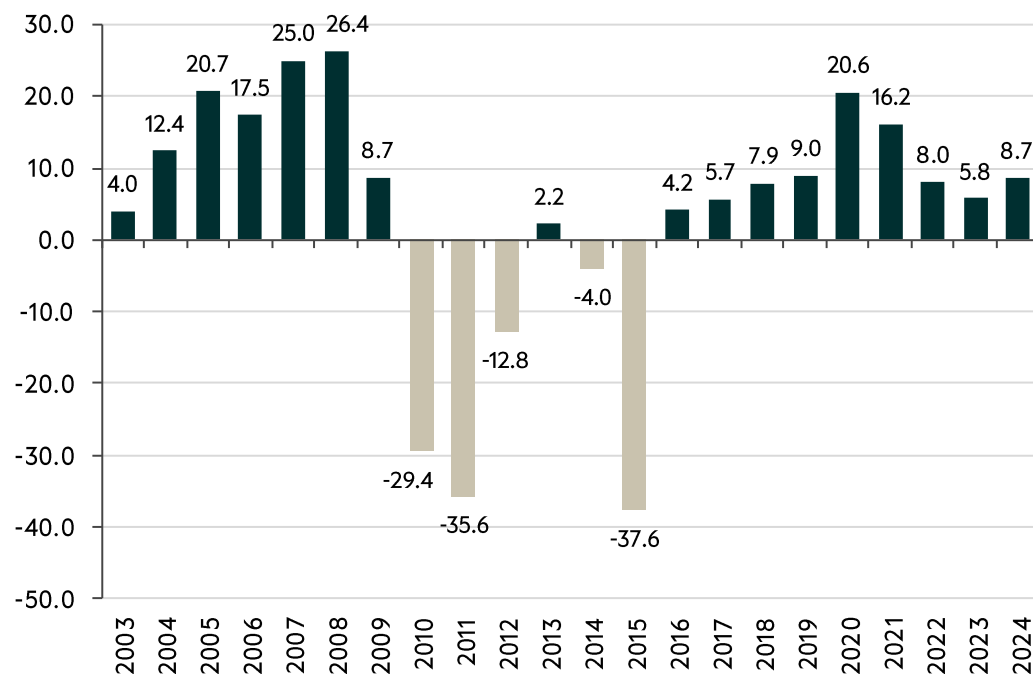
Private sector credit: Positive net credit flows, driven by Corporate loans



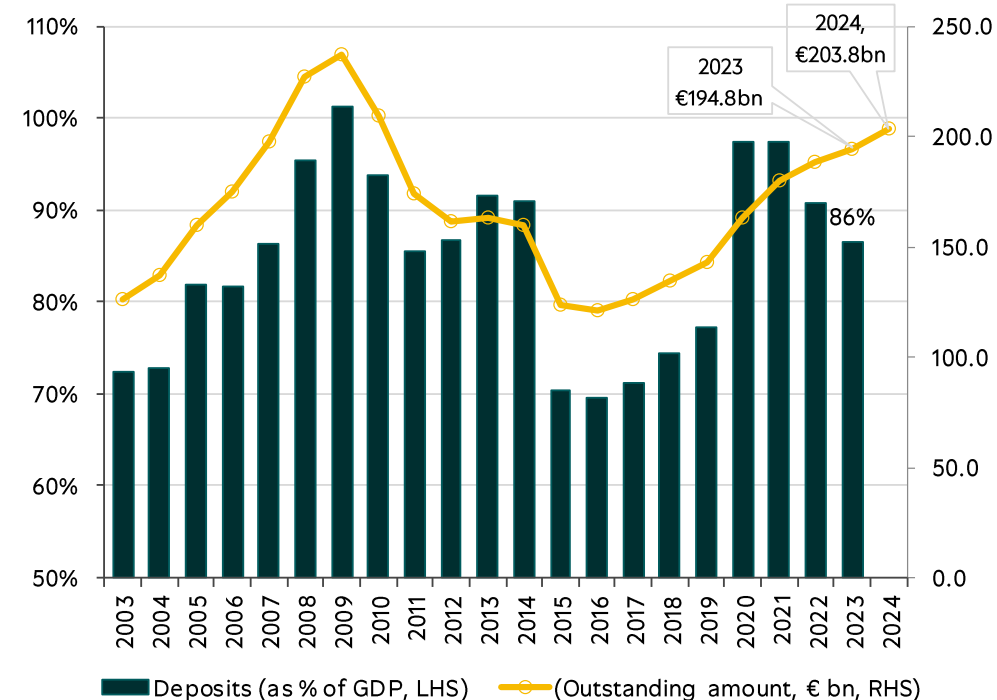
Notes: 1. Excluding the Bank of Greece. Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the domestic sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. 2. Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments.

Private sector deposits: ...with equivalent inflows for deposits...

Private Sector Deposits^{1,2} (net flows, €bn)



Private Sector Deposits¹ (% of GDP & €bn)



Notes:

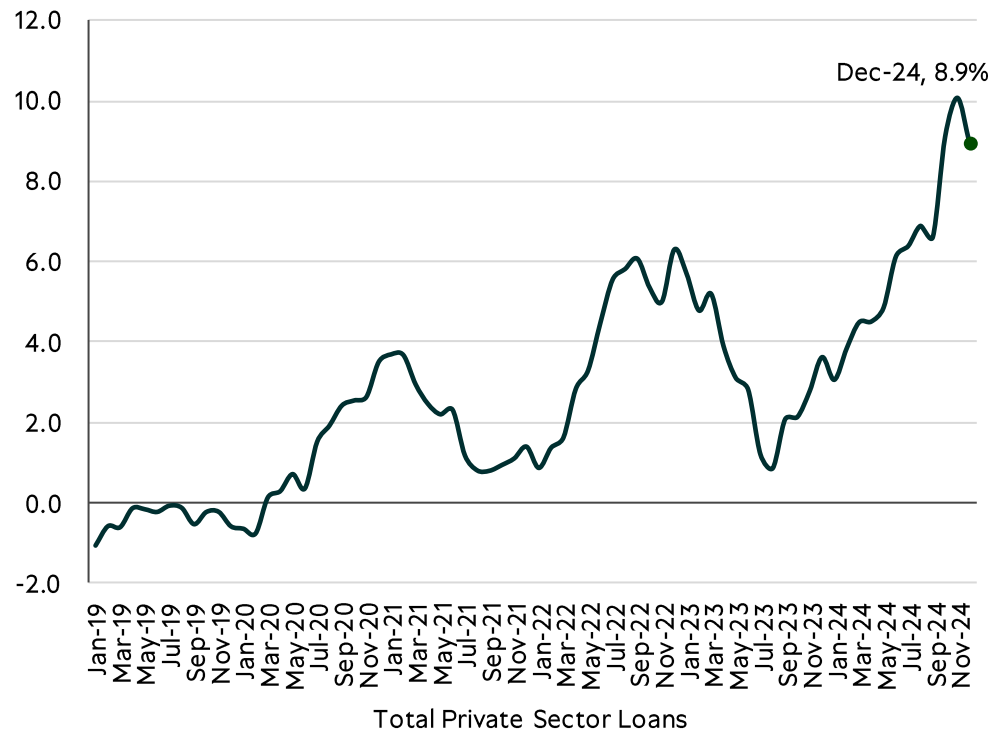
1. Excluding the Bank of Greece. As of December 2016, deposits of the Consignment Deposits and Loan Fund are excluded from the domestic deposits as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, deposits and repos of shipping companies which have their registered office abroad, are no longer included in the deposits of the domestic economy, as they were reclassified to Other Countries.

2. Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations and reclassifications adjustments. The flow of deposits does not include the accounting increase in deposits that is related to securitisation operations and represent liabilities of credit institutions to Special Purpose Vehicles.

Private sector Loans & Deposits :

Substantial acceleration in credit expansion feeds through to deposit growth

Private Sector Loans¹ (annual % change)



Private Sector Deposits² (annual % change)



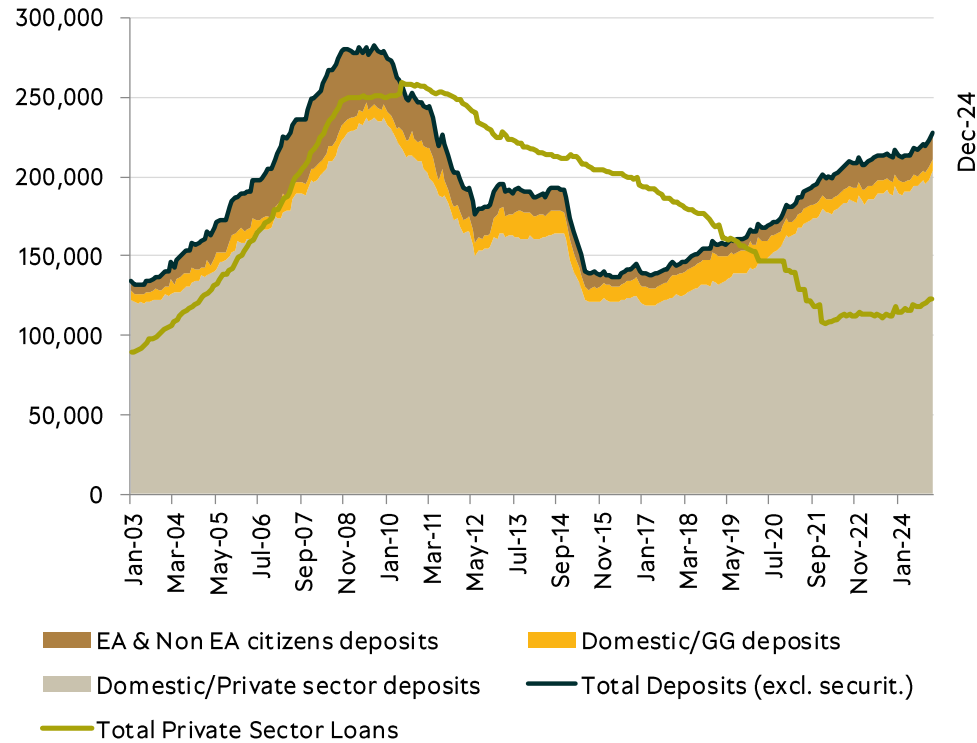
Notes:

1. Excluding the Bank of Greece, including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. Growth rates are derived from the differences in outstanding amounts corrected for loan write-offs, exchange rate valuations and reclassifications.

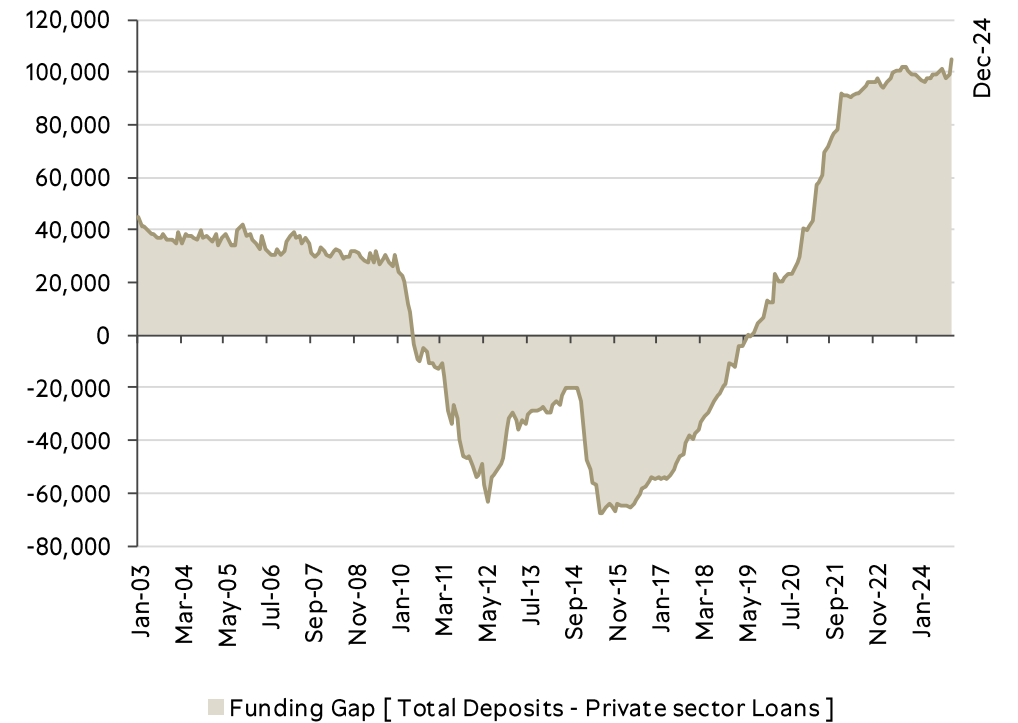
2. Excluding the Bank of Greece. As of December 2016, deposits of the Consignment Deposits and Loan Fund are excluded from the domestic deposits as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, deposits and repos of shipping companies which have their registered office abroad, are no longer included in the deposits of the domestic economy, as they were reclassified to Other Countries. Growth rates are derived from changes in outstanding amounts corrected for foreign exchange valuations and reclassifications adjustments, i.e. from the sums of flows during the 12 months ending in the period indicated. Excluding liabilities of credit institutions to Special Purpose Vehicles related to securitisation operations

Funding Gap: It's not a gap, rather a huge liquidity surplus

Loans & Deposits Gap (outstanding amount, €mn)

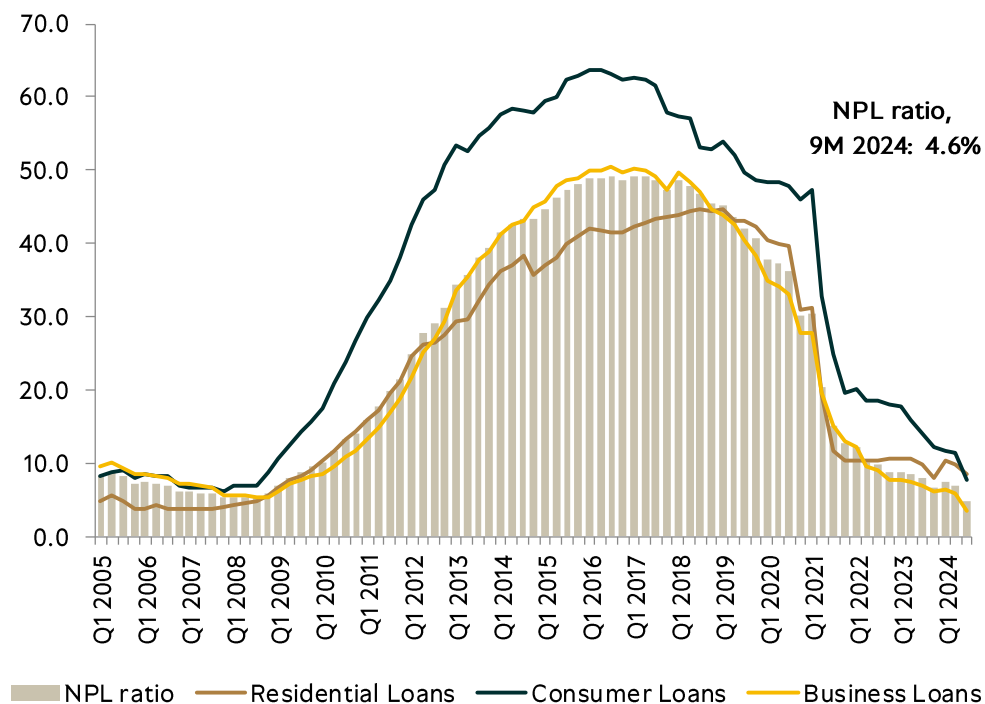


Funding Gap [Deposits - Loans, €mn]

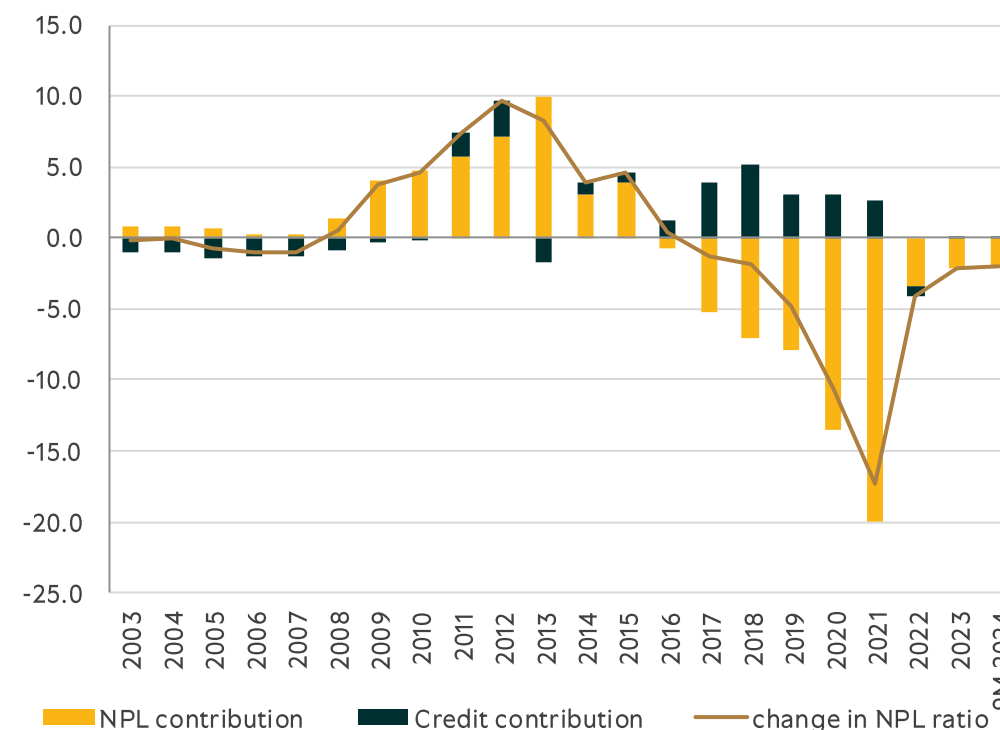


Drivers of the NPL ratio: The substantial decline in the Greek NPL ratio was – up until now- driven by a massive balance sheet clean - up operation. Further declines should be driven by credit growth.

Non-Performing Loans ratio on balance sheet gross loans¹ (%)



Contribution to the NPLs ratio change (%)



Notes : 1. (a) All items are on solo basis and refer to on-balance sheet gross loans and advances of Greek commercial and cooperative banks. (b) For 2014 onwards, the source is data from bank's submissions according to Act 42/2014 (as applicable) and European Banking Authority (EBA) rules and definitions. (c) For 2002 - 9M 2014, the source is data from banks' submissions according to Act 2442/1999 with the following assumption: Non-performing loans include also loans that have been restructured over the past 12 months. (d) Balance changes between some quarters may be affected by the restructuring of the Greek banking system (resolution of banks, sale of foreign branches e.t.c.) (e) All items refer to on-balance sheet loans and advances, in consistency with the operational targets for the reduction of non-performing loans. For that reason, balances and indicators may differ from previously published figures, where off-balance sheet items were also included in the perimeter.

Annex: Credit Cycles Data Sources

Credit Cycle: Data Sources

- ✓ The following time series are the main building blocks underlying the construction of the new total credit series:
- ❑ 1980 – 1997 (Monthly data) Credit to domestic private sectors by domestic Monetary Financial Institutions (MFIs). The data includes Bank of Greece. Corporate bonds held by MFI's are not included to credit.
- ❑ March 1998 – December 2000 (Quarterly data) Credit to domestic non-MFI residents by domestic MFIs excluding the Bank of Greece. Outstanding amounts at end of period in millions euro. Data for the period before the entry of Greece into the euro area.
- ❑ January 2001 – December 2018 (Monthly data) Credit to domestic non-MFI residents by domestic MFIs excluding the Bank of Greece. Outstanding amounts at end of period in millions euro. Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 loans to sole proprietors are no longer included in loans to corporations but as a separate subcategory of loans. Moreover loans to private non-profit institutions include loans to religious institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector.
- ❑ January 2019 – December 2024 (Monthly data) Credit to domestic non-MFI residents by domestic MFIs excluding the Bank of Greece. Outstanding amounts at end of period in millions euro. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries.
- ❑ December 2002 – September 2024 (Quarterly data) Total loans & non performing loans. Total banks (commercial & cooperatives). All items are on solo basis and refer to on-balance sheet gross loans and advances of Greek commercial and cooperative banks. For 2014 onwards, the source is data from bank's submissions according to Act 42/2014 (as applicable) and European Banking Authority (EBA) rules and definitions. For 2002 - 9M 2014, the source is data from banks' submissions according to Act 2442/1999 with the assumption that "Non-performing loans include also loans that have been restructured over the past 12 months". Balance changes between some quarters may be affected by the restructuring of the Greek banking system (resolution of banks, sale of foreign branches e.t.c.)
- ❑ September 2017 – September 2024 (Quarterly data) Loans serviced by Loan Servicing Firms. Concern loans that have been transferred by domestic credit institutions to foreign specialised financial institutions and that are serviced by the domestic CSFs. Included in these loans are loans that have been written off by credit institutions and were thus not reported on their balance sheet

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