

# Greek banks' asset quality will improve in 2020 but complete clean-up not in sight



Asset quality will represent a key credit challenge for Greek banks for several years, despite official attempts at supporting sector asset quality through public guarantees on NPL securitisations.

Greece's asset protection scheme is modelled upon the Italian GACS and will likely accelerate banks' de-risking, but the task of balance sheet clean-up is so daunting that Greek banks will continue to lag European peers for the foreseeable future.

**The starting point is discouraging.** The average NPL ratio in Greece is 37%, double the ratio in Cyprus and five times higher than in Italy. There has been some improvement in the last three years, but the decline in Greece's NPL ratio has lagged every other country in the euro area periphery.

**Banks have not been sitting still:** the limited headline decline in Greek banks' NPL ratios hides a meaningful 35% decline in the absolute amount of NPLs – from EUR 115bn in June 2016 to EUR 74bn in September 2019. But even when adjusted for shrinking loan books, the absolute decline compares unfavourably with the declines in other peripheral countries in the same period (Italy -52%, Portugal -61%, Ireland -69%).

**In 2020, the pace of de-risking will accelerate.** Towards the end of 2019, Greek authorities designed a scheme that allows banks to receive public guarantees on NPL securitisations, modelled on the Italian GACS. The scheme, nicknamed Hercules after the Greek demi-god who could complete tasks everyone else failed, had been cleared by the European Commission in October.

Several Greek banks had already planned large NPL disposals via securitisations. The availability of public guarantees on the senior tranches will reduce the capital absorption if banks decide to retain the senior tranches (the most likely scenario) or increase the range of potential buyers if they try to sell them.

**Hercules is not a panacea.** Major Greek banks published or updated their de-risking targets in 2019, often part of more comprehensive restructuring plans. The targets are ambitious and rife with execution risk. Meeting them will require a strong operating environment through 2023 – which is not a given. We look favourably at the banks' effort to clean up, but caution that current plans will be insufficient to bring Greek asset quality back into line with European peers. The debate will continue around the need of additional measures, including the creation of an asset management company, as proposed by the Greek central bank at the end of 2018.

**Even if everything goes according to (their own strategic) plans, Greek banks will remain laggards on asset quality.** Of the four largest banks, we believe that National Bank of Greece (not rated by Scope) has shown the best momentum in executing its de-risking plan, which gives reason for optimism. The bank is targeting a 5% NPE ratio by 2022. The success of the plan hinges in the bank's ability to restructure mortgage NPEs and avoid repeat defaults.

Eurobank and Alpha bank (not rated) look to be headed towards jumbo NPE securitisations, likely benefiting from government guarantees on senior tranches. The former is targeting an NPE ratio of 8.8% for 2021, while the latter's NPE ratio would be 10% in 2022. Despite significant efforts to de-risk in recent years, Piraeus Bank (not rated) still has an NPE ratio of 52%. The current targets, which include an NPE ratio of 25% in 2021 and 9% in 2023, are in our view not ambitious enough and will likely have to be reviewed.

## Analysts

Marco Troiano, CFA (author)  
[m.troiano@scoperatings.com](mailto:m.troiano@scoperatings.com)

Alessandro Boratti  
[a.boratti@scoperatings.com](mailto:a.boratti@scoperatings.com)

Alvaro Dominguez  
[a.dominguez@scoperatings.com](mailto:a.dominguez@scoperatings.com)

## Team Leader

Dierk Brandenburg  
[d.brandenburg@scoperatings.com](mailto:d.brandenburg@scoperatings.com)

## Media

Keith Mullin  
[k.mullin@scopegroup.com](mailto:k.mullin@scopegroup.com)

## Related Research

European banks' financial fundamentals: as good as it gets?  
Dec 2019

Greece sovereign outlook 2020  
Dec 2019

Conditions for securitisation of Greek non-performing residential mortgages improving

## Scope Ratings GmbH

Suite 301  
2 Angel Square  
London EC1V 1NY

Phone +44 20 3457 0444

## Headquarters

Lennéstraße 5  
10785 Berlin

Phone +49 30 27891 0  
Fax +49 30 27891 100

[info@scoperatings.com](mailto:info@scoperatings.com)  
[www.scoperatings.com](http://www.scoperatings.com)

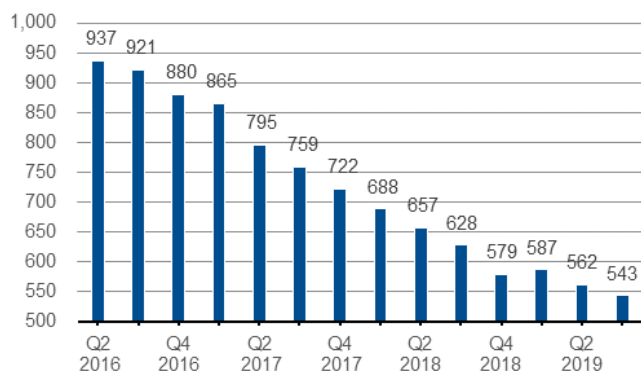


Bloomberg: SCOP

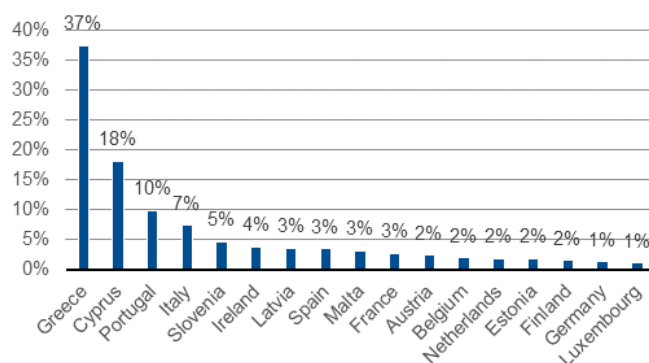
## Greek banks' asset quality continues to lag Southern European peers

European banks' asset quality has been improving fast: NPLs reached a new low of EUR 543bn in September 2019, declining EUR 19bn QoQ and EUR 85bn YoY. With Italian banks having halved their NPE ratios in three years, the focus is shifting to the other laggards in Europe's credit recovery.

**Figure 1: EU, total NPLs (bn)**



**Figure 2: Banks' NPLs by country**



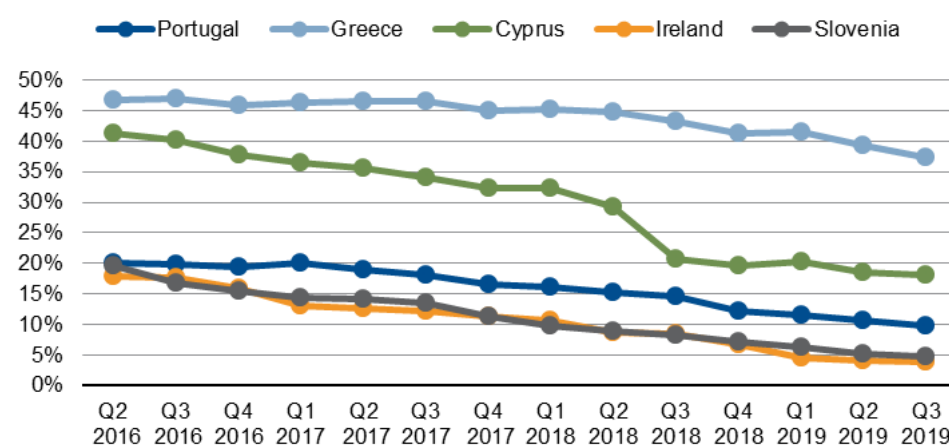
Source: ECB, Scope Ratings.

Source: ECB, Scope Ratings

**Greece remains an outlier in an otherwise much-improved asset-quality picture**

High NPL ratios continue to weigh on Greek, Cypriot and Portuguese banks, although the more supportive economic environment has led to some declines too. In Portugal, the NPL ratio has dropped from over 20% in June 2016 to 10% in September 2019. In Cyprus, it has more than halved, from 41.2% to 18%. By comparison, progress has been much slower in Greece, where the NPL ratio still stands at a high 37%, only 10 percentage points below levels of three years earlier.

**Figure 3: Gross NPL ratio by country as of Q3 2019**



Source: ECB, Scope Ratings

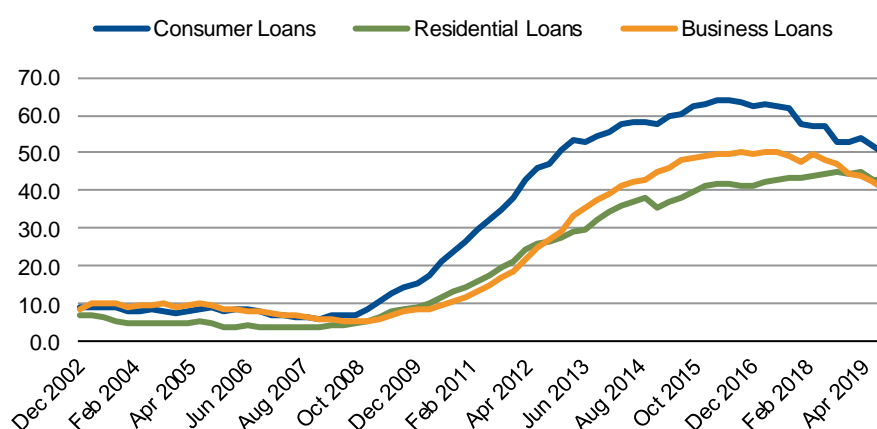
## Several idiosyncrasies explain the delay in tackling the Greek NPL problem more decisively

The NPL ratio of Greek banks fell under 40% for the first time in June 2019. The high ratio stands out as the highest in the Single Supervisory Mechanism (SSM), double the amount of the second highest country (Cyprus) and close to four times as high as the third highest ratio in the EU (Portugal).

Increase in NPLs reflects protracted economic crisis...

The increase in the level of NPLs is a direct consequence of the deep economic downturn in the country and its adverse impact on businesses and households, but also reflects a very weak performance in mortgage debt, an asset class that has proven more resilient in most other EU countries.

**Figure 4: Non-performing loans by category (EUR bn) - Greek banking sector**



Source: Bank of Greece, Scope Ratings

...but also structural causes

With NPLs having been a key supervisory priority for the SSM essentially since its establishment, the fact that the ratio has remained so high is partly explained by country-specific factors. These include:

- i) an under-developed domestic securitisation market,
- ii) the wide range of (inter-connected) asset types that are non-performing, including more problematic SME loans and a high level of protection from evictions afforded to mortgage borrowers,
- iii) a substantial sovereign-bank nexus resulting in a lack of flexibility on the capital front,
- iv) lengthy judicial processes with a high risk of strategic defaulters. These cyclical, country and portfolio-specific factors have prevented a more rigorous collection of claims against households and businesses.

Tax, accounting and administrative impediments to NPL resolution were tackled early on

As part of the 2015 Memorandum of Understanding (MoU), the Hellenic Financial Stability Fund (HFSF), in co-operation with the Greek central bank, had provided a study identifying several constraints and impediments to the development of a dynamic NPL market in Greece, grouping them into four broad categories (see Figure 4).

Swiftly, authorities started working towards addressing impediments to NPL resolution. In its progress report of June 2017, the HFSF reported that most tax-related, accounting and administrative impediments had either been addressed or were in the process of being addressed. By contrast, progress on resolving legal and judicial impediments was slower.

**Figure 5: Impediments to NPL resolution, June 2017**

	Total identified	Addressed	Partly addressed / No information available	Not addressed
Legal & judicial	41	18	5	18
Tax & accounting	9	1	7	1
Administrative	8	7	1	-
Other	3	1	1	1
Total	61	27	14	20

Source: Hellenic Financial Stability Fund, Scope Ratings

Legal and judicial roadblocks were harder to remove

Subsequent legislative work has included amendments to the so-called Katseli Law (designed to protect homeowners against losing their primary residences), the introduction of out-of-court work-out procedures, amendments to the Greek bankruptcy code to allow debt/equity swaps without shareholder consent, a more favourable fiscal regime for tax losses deriving from sales, and amendments to the Code of Civil procedure to introduce electronic auctions, among many others.

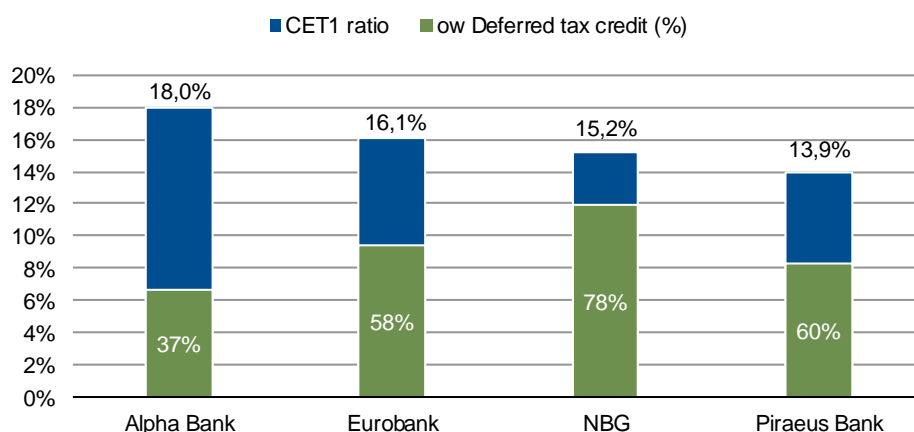
Limited capital flexibility to front-load loss-recognition

While headline capital levels look healthy, the fully-loaded CET1 ratios of Greek banks remains lower than the comparable ratio of banks in other EU countries. Moreover, the quality of Greek bank capital is low: as reported by the EU commission enhanced surveillance report of November 2019, deferred tax credits (DTCs) made up 57% of Greek banks' capital as of June 2019.

DTCs arose from the conversion of certain deferred tax assets (DTAs) arising from past credit losses and write-offs, but also from past restructurings of Greek public debt (Private Sector Initiative, or PSI). These tax credits can be offset against tax liabilities, or where the amount of tax credit in any given year is more than the tax liability, they result in a direct claim on the Greek State. This effectively allows DTCs to avoid being deducted from capital, as they do not rely on banks' future profitability.

However, in exchange for such claims, Greek banks would have to issue free conversion rights to the Greek State, which would convert into ordinary shares at a price based on a 30-day average market price. As such, any such conversion would dilute the banks' private shareholders and increase the government's stakes, potentially leading to full nationalisation.

**Figure 6: CET1 Ratio (transitional) and DTCs as % of total capital**



Source: Company data, Scope Ratings

Note: for NBG, Alpha Bank and Eurobank, data as of September 2019; for Piraeus, data as of June 2019

The lack of flexibility on the capital front has been a key limiting factor in the banks' ability to mark down and sell NPLs.

## New legislation will support derisking plans

In 2019, key pieces of legislation were passed, which we believe will support the de-risking process in Greece.

The corporate transformation law (4601/2019) codifies and systematises legal provisions related to corporate transformations in Greece, extending the range of options for companies and with the stated aim of facilitating mergers, acquisitions and divisions while enabling company continuity. The law should not only facilitate corporate borrowers' restructurings but has been instrumental, for example, in Eurobank's "hive-down" de-merger process in 2019, which in turn allowed the bank to follow through with its large NPE securitisation plans (Project Pillar and Project Cairo, see page 8 for details).

Reformed household insolvency law may lead to improved payment culture

The new household insolvency law (4605/2019), which revises the Katseli law (3869/2010), already sets tighter eligibility criteria for non-performing mortgage borrowers to seek debt settlement. If the criteria are met, an out-of-court restructuring is automatically granted, where the loan is haircut up to a maximum LTV of 120% and maturity extended to up to 25 years. In addition to the restructuring, the Greek State would then provide a further subsidy on instalments ranging from 20% to 50% of the newly-calculated instalment.

The previous legal framework established that debt settlement plans must be based on borrowers' ability to repay. Moreover, under the previous framework, legal protection against repossession was granted while the court case was being heard, a process that could extend for years. An applicant whose claim was dismissed could re-apply after an interval of one year, a provision which may have encouraged strategic defaults and essentially left creditors with very limited time windows to enforce their rights. We believe that the new household insolvency law is credit positive, as it could reduce strategic defaulters and help unjam the Greek courts (for more details see "[Conditions for securitisation of Greek non-performing residential mortgages improving](#)").

The newly-installed government is also looking at further reforming and simplifying the insolvency framework by April 2020, allowing for faster collateral enforcement times.

GACS-like plan for structured securitisation has been readied

At the end of 2019, an asset protection scheme similar to the Italian GACS emerged as the government's preferred solution for supporting the de-risking process. Under the scheme, nicknamed Hercules, banks will transfer portfolios of NPLs to special purpose vehicles, which will fund the purchases by issuing notes of different seniority.

Under certain conditions, which include assets to be managed by independent servicers and junior and mezzanine tranches to be sold to private investors, the Greek State will provide a guarantee to senior tranches, which can be sold or retained by the bank. The Greek Parliament has approved the scheme for up to EUR 12bn in guarantees over 18 months, which should allow the de-consolidation of roughly EUR 35bn in NPLs.

In October, the scheme was cleared by the European Commission, which ruled it free of State aid. Key to the decision was the assessment of a relatively limited risk to the State given the guarantee would only apply to the senior notes issued by the SPV, the fact that they will be rated by an independent rating agency, and that more than half of the riskier tranches would be sold to market participants (implicitly validating business-plan assumptions).

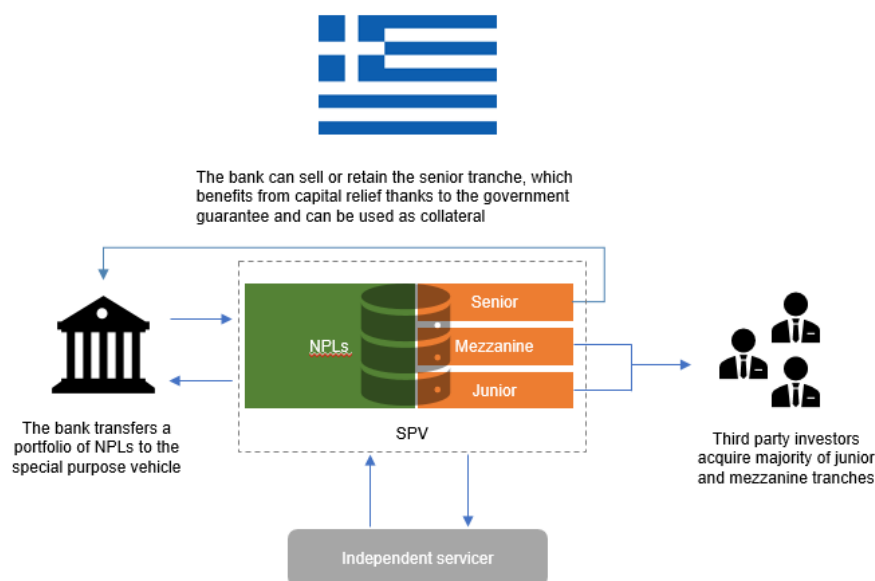
Lastly, the ruling confirmed that remuneration for the risk taken will be "market conform", i.e. reflect the risk of the senior tranche itself.

### The plan can add impulse to the banks' de-risking plans

We believe that the Hellenic Asset protection scheme (HAPS) will greatly support the banks' de-risking efforts and note that Eurobank has already put in place all the necessary steps to benefit from the scheme for its Cairo portfolio (see page 10 for more details). Other banks have announced that they also plan to apply the scheme to several portfolios.

While positive for the de-risking process, we note that the scheme further reinforces the already tight linkages between bank risk and sovereign risk in Greece, especially if senior tranches end up being retained by the banks, as we expect they will.

**Figure 7: Illustrative workings of Hellenic Asset Protection Scheme**



Source: Scope Ratings

### Greek banks' de-risking plans: execution risk is high; balance sheets still not clean in 2022

#### NBG and Eurobank seem best placed to de-risk in the short run

We believe that banks' current de-risking plans are ambitious, and require a continued strong underlying operating environment coupled with legislative and political support. NBG and Eurobank look best placed to achieve significant de-risking in 2020 and 2021, thanks to a more favourable starting point. The re-establishment of a credible threat of foreclosure could help NBG the most, as its NPL book is primarily composed of residential mortgages, while Eurobank is already at an advanced stage and should soon close project Cairo, a large NPL securitisation.

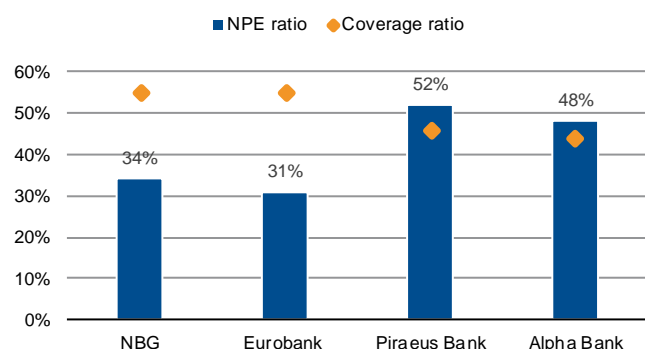
Successfully completing project Galaxy, a large NPL securitisation planned for 2020, would still see Alpha Bank head towards its 2022 target of 10% – though we note that so far, the bank has not achieved much momentum. The current plan at Piraeus still sees the NPL ratio at 25% in 2021, with a more marked de-risking only planned for later.

We note that the recent agreement with Intrum could pave the way to larger HAPS-assisted NPL deals in coming years at Piraeus and that the published targets are likely to be reviewed soon.

Even assuming all the targets are met, Greek banks' asset quality will still compare unfavourably with European peers in 2022.

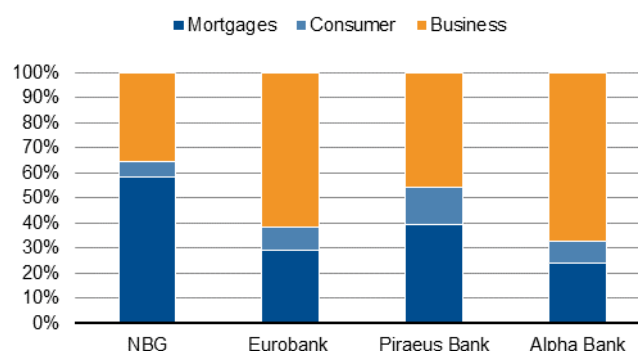


**Figure 8: Group NPE ratios and coverage comparison, Greek banks**



Source: Company data, Scope Ratings

**Figure 9: NPE book split comparison**



Source: Company data, Scope Ratings

## Ambitious plan targeting cleaned-up balance sheet by 2022

### National Bank of Greece (NBG) targeting NPE ratio of less than 5% in 2022 (34% currently)

NBG presented its derisking plan in May 2019. As of YE 2018, the bank still had EUR 16.3bn in NPEs, EUR 15.4bn of them domestic. The group's NPE ratio stood at 40.9%. According to the plan, NPEs will decline to EUR 1.6bn (NPE ratio of less than 5%) by the end of 2022.

The de-risking, which is part of a more comprehensive strategy aimed at restoring the bank's profitability, entails front-loaded sales of NPLs in the consumer, corporate and small-business segment; residential mortgage securitisations will be back-ended.

NBG has put in place a significant NPE management operation, consisting of over 1,500 people, including its own employees alongside external consultants. NPE management is segmented between retail collections and a Special Assets Unit, tasked with corporate and small-business NPEs. Foreclosed real estate collateral is managed by a separate group entity.

The plan assumed EUR 3.3bn in net cures and recoveries (20% of initial balance), EUR 2bn in debt forgiveness (13% of initial balance) and EUR 2.5bn in liquidations (16% of initial balance).

## Restructuring of mortgage debt key to success of the plan

In particular, the main avenue for reducing the stock of NPEs in retail mortgages is restructuring under the new legal framework. The restructuring will entail a degree of debt forgiveness and a reduction in strategic defaulters, with liquidations used as a signalling tool for non-co-operative and non-viable borrowers. A State subsidy (of up to 50% of the instalment) will further support the performance of restructured mortgages and discourage re-defaults.

Portfolio sales and securitisations of c EUR 2.6bn are also envisaged, though likely to be back-ended. Restructurings will also play a big part in the resolution of large corporate NPLs, alongside liquidations. For consumer, small businesses and SME loans, the main avenues will be portfolio sales and securitisations.

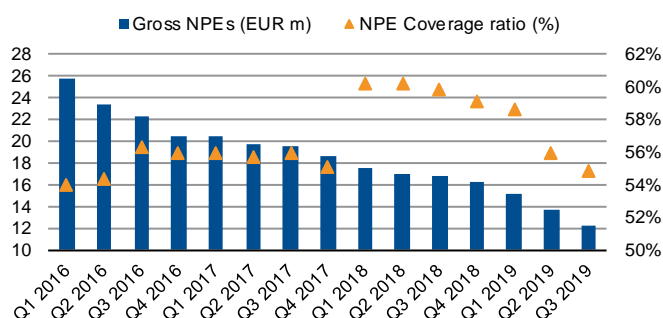
In the first nine months of 2019, the bank had already succeeded in reducing its stock of NPEs by EUR 4bn.

Key to the decline were Projects 'Symbol' in Q1 (c. EUR 900m in SME NPLs) and Project 'Mirror' in Q2 (c. EUR 1.2bn in consumer NPLs) and a further c. EUR 1.2bn of sales of NPEs in Q3 (Projects Icon and Leo). Further portfolio sales are planned for the remainder of 2019, encompassing corporate and retail loans in Romania and Cyprus.

**Strong momentum in NPE sales in 2019 make targets more credible**

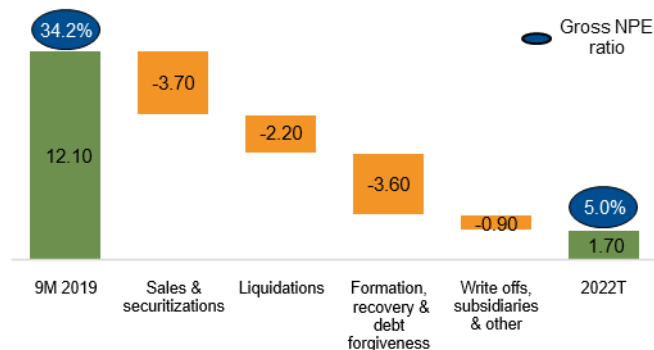
In our view, the plan is ambitious but credible. Its success rests on the ability to deliver successful restructurings in retail and corporate loans. The key factors to watch are the continued availability of State subsidies for restructured borrowers and the state of the job market in Greece. The plan did not include any assumptions around the passing of HAPS. Portfolio sales momentum in 2019 was good, which lends credibility to the overall de-risking roadmap.

**Figure 10: NBGs NPEs and coverage, historical**



Source: Company data, Scope Ratings

**Figure 11: NBG's derisking plan**



Source: Company data, Scope Ratings

**NPE ratio to hit 15% with Project Cairo**

**Eurobank Ergasias targeting NPE ratio of less than 10% by 2021 (31.1% currently)**

Eurobank presented its three-year transformational plan to investors in November 2018. Alongside the merger with real estate company Grivalia, an accelerated de-risking of the balance sheet was the key focus of the strategy. From a starting point NPE ratio of 39% in September 2018, Eurobank targeted a ratio of less than 10% by the end of 2021. In particular, the bank estimated the NPE ratio would drop to c. 15% by the end of 2019, marking a material acceleration on the NPE reduction plan it had submitted to the SSM in September 2018.

As of September 2019, Eurobank's gross NPE ratio stood at 31.1%. The decline was driven by negative new NPE inflows, and by Project Pillar, a EUR 1.8bn securitisation of mortgage NPEs, which was de-consolidated in Q2. By the end of 2019, Eurobank had been projected to close Project Cairo, a EUR 7.5bn multi-asset securitisation of NPEs. Subject to a successful execution of Project Cairo, we calculate that Eurobank's gross NPE ratio will indeed reach the high teens, just shy of the 15% target presented a little over a year ago.

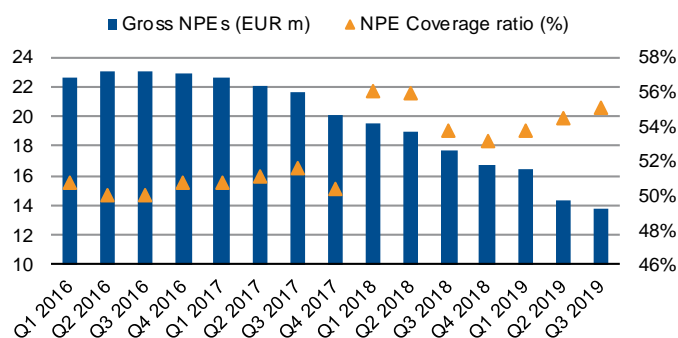
**But securitisation has been moving slower than planned**

Compared to the initial timeline, Project Cairo has suffered minor delays. However, at the end of December 2019, Eurobank announced it had signed binding agreements for the sale of junior and mezzanine tranches as well as FPS, the group's servicer, to Italian servicer and investor doValue. Under the agreement, doValue will acquire 20% of the mezzanine tranche and most of the junior tranche, while Eurobank will retain the senior tranche and apply for HAPS. The remaining portions of the mezzanine and junior tranches could be distributed to Eurobank's shareholders.

Guidance on mid-term targets is scheduled to be released in the second half of 2020.

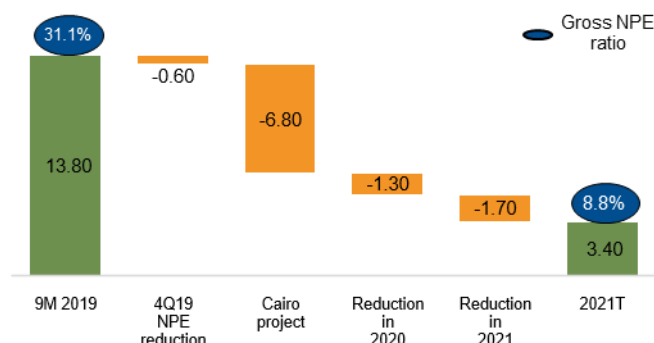


Figure 12: Eurobank's NPEs and coverage, historical



Source: Company data, Scope Ratings .

Figure 13: Eurobank's derisking plan



Source: Company data, Scope Ratings

## Piraeus Bank targets 9% NPE ratio by 2023 (52% currently)

In 2017, Piraeus released a three-year roadmap, forecasting a cut of EUR 12.3bn in NPEs by the end of 2019 and a subsequent reduction in 2020 to get below EUR 20bn of NPEs.

Despite significant efforts to de-risk the balance sheet in the previous two years (gross NPEs declined from over EUR 35bn at the beginning of 2017 to EUR 25.7bn as at September 2019), Piraeus's gross NPE ratio still stood at 52%.

Piraeus Bank presented an updated strategic plan in June 2019, but we believe the targets are already out-dated.

## New plan presented in July 2019 targets EUR 7bn in NPE sales and securitisations

The new plan envisages a further EUR 15bn reduction in NPEs by the end of 2021, including EUR 7bn in sales and securitisations. This represents something of a departure from the previous approach, which focused mostly on internal workouts. In 2018, Piraeus completed two portfolio sales: Project Amoeba consisted of the sale of EUR 1.4bn in gross book value of secured SME and corporate NPEs; Project Arctos consisted of EUR 400m in gross book value of unsecured consumer loans.

Piraeus is targeting a 9% gross NPE ratio by 2023 (net NPE ratio of 5%).

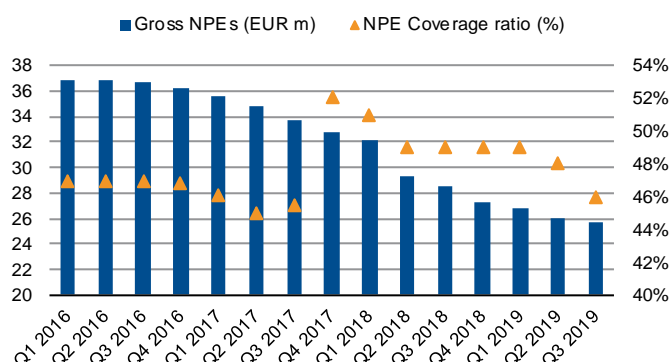
## Agreement with Intrum on independent servicer

In October 2019, Piraeus concluded a strategic agreement with Intrum to establish an independent NPE servicer that will manage both the bank's and third parties' non-performing assets. Piraeus retains 20% of the stake in the new servicer. This partnership should foster NPE sales not only for Piraeus, but also for other Greek banks.

Currently, the bank has EUR 4bn of NPE disposals underway, of which EUR 3bn (Project Phoenix and Project Bridge) possibly benefiting from the HAPS.

The bank is expected to give an update on NPE reduction in early 2020. We believe this may include an announcement of the bank's intention to apply for the HAPS programme and an acceleration of the de-risking originally planned for 2022 and 2023.

Figure 14: Piraeus Bank's NPEs and coverage, historical



Source: Company data, Scope Ratings

Figure 15: Piraeus Bank's derisking plan



Source: Company data, Scope Ratings

## Ambitious de-risking plan targeting 10% NPE ratio by 2022

### Alpha Bank targets NPE ratio of less than 10% by 2022 (44% currently)

As of Q3 2019, Alpha Bank looked to be running behind schedule on its 2019 de-risking target (EUR 5.5bn reduction in domestic NPLs), as disposals of NPEs in the Greek perimeter amounted to only EUR 2.8bn at the nine-month stage.

In November 2019, Alpha bank was out with a new strategic plan spanning 2020 through 2022. The plan envisages a gross NPE target for the Greek perimeter of less than 10% by 2022 (from 44% as of September 2019) and cost of risk dropping from c.200bp to less than 70bp in 2022. Alongside the de-risking, the plan foresees a decline in the cost/income ratio from 55% to 48% and increased cross selling, targeting a ROE of c. 9% in 2022.

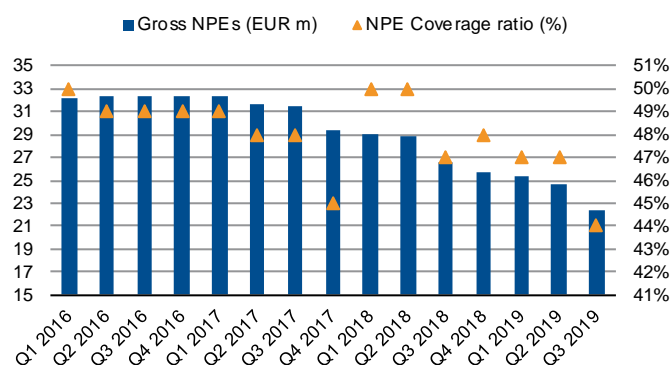
The derisking of the bank hinges on three key projects:

- **NPE securitisation.** Accelerating NPE reduction through Project Galaxy (EUR 12bn) to be launched in the first half of 2020. According to the plan, the project will be one of the largest NPE securitisations in Europe since the financial crisis. The programme will entail the issuance of fully-retained senior notes protected for up to EUR 3.7bn by HAPS, and the sale of 95% of mezzanine and equity notes to investors (which may include the bank's own shareholders). Further to Galaxy, Alpha expects to reduce the NPE stock by c. EUR 3.5bn through restructurings and liquidations.
- **NPE platform carve out.** Carving out the NPE servicer Cepal Hellas, which would service the Galaxy portfolio and the remaining NPE perimeter of c. EUR 7bn, as well as future Alpha's and third-parties' NPE portfolios.
- **Corporate hive-down.** Creation of a holding company with a hive down of banking business into a new entity, which will retain the core assets/liabilities of the current Alpha bank.

## Plan includes a corporate hive down and growth in performing business

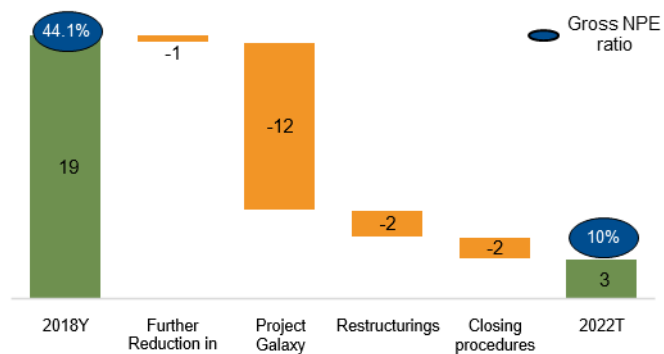
The combination of hive-down and NPE securitisation seems to be modelled after Eurobank's blueprint, though it is almost double the size, which in our view increases the execution risk to the project.

**Figure 16: Alpha Bank's NPEs and coverage, historical**



Source: Company data, Scope Ratings

**Figure 17: Alpha Bank's de-risking plan – Greek perimeter**



Source: Company data, Scope Ratings

Notes: the plan does not include the NPEs related to Alpha's foreign activities



## Greek banks' asset quality will improve in 2020 but complete clean-up not in sight

### Scope Ratings GmbH

#### Headquarters Berlin

Lennéstraße 5  
D-10785 Berlin

Phone +49 30 27891 0

#### London

Suite 301  
2 Angel Square  
London EC1V 1NY

Phone +44 20 3457 0444

#### Oslo

Haakon VII's gate 6  
N-0161 Oslo

Phone +47 21 62 31 42

#### Frankfurt am Main

Neue Mainzer Straße 66-68  
D-60311 Frankfurt am Main

Phone +49 69 66 77 389 0

#### Madrid

Paseo de la Castellana 95  
Edificio Torre Europa  
E-28046 Madrid

Phone +34 914 186 973

#### Paris

1 Cour du Havre  
F-75008 Paris

Phone +33 1 8288 5557

#### Milan

Via Paleocapa 7  
IT-20121 Milan

Phone +39 02 30315 814

[info@scoperatings.com](mailto:info@scoperatings.com)

[www.scoperatings.com](http://www.scoperatings.com)

### Disclaimer

© 2020 Scope SE & Co. KGaA and all its subsidiaries including Scope Ratings GmbH, Scope Analysis GmbH, Scope Investor Services GmbH and Scope Risk Solutions GmbH (collectively, Scope). All rights reserved. The information and data supporting Scope's ratings, rating reports, rating opinions and related research and credit opinions originate from sources Scope considers to be reliable and accurate. Scope does not, however, independently verify the reliability and accuracy of the information and data. Scope's ratings, rating reports, rating opinions, or related research and credit opinions are provided 'as is' without any representation or warranty of any kind. In no circumstance shall Scope or its directors, officers, employees and other representatives be liable to any party for any direct, indirect, incidental or other damages, expenses of any kind, or losses arising from any use of Scope's ratings, rating reports, rating opinions, related research or credit opinions. Ratings and other related credit opinions issued by Scope are, and have to be viewed by any party as, opinions on relative credit risk and not a statement of fact or recommendation to purchase, hold or sell securities. Past performance does not necessarily predict future results. Any report issued by Scope is not a prospectus or similar document related to a debt security or issuing entity. Scope issues credit ratings and related research and opinions with the understanding and expectation that parties using them will assess independently the suitability of each security for investment or transaction purposes. Scope's credit ratings address relative credit risk, they do not address other risks such as market, liquidity, legal, or volatility. The information and data included herein is protected by copyright and other laws. To reproduce, transmit, transfer, disseminate, translate, resell, or store for subsequent use for any such purpose the information and data contained herein, contact Scope Ratings GmbH at Lennéstraße 5 D-10785 Berlin.

Scope Ratings GmbH, Lennéstraße 5, 10785 Berlin, District Court for Berlin (Charlottenburg) HRB 192993 B, Managing Director: Guillaume Jolivet.