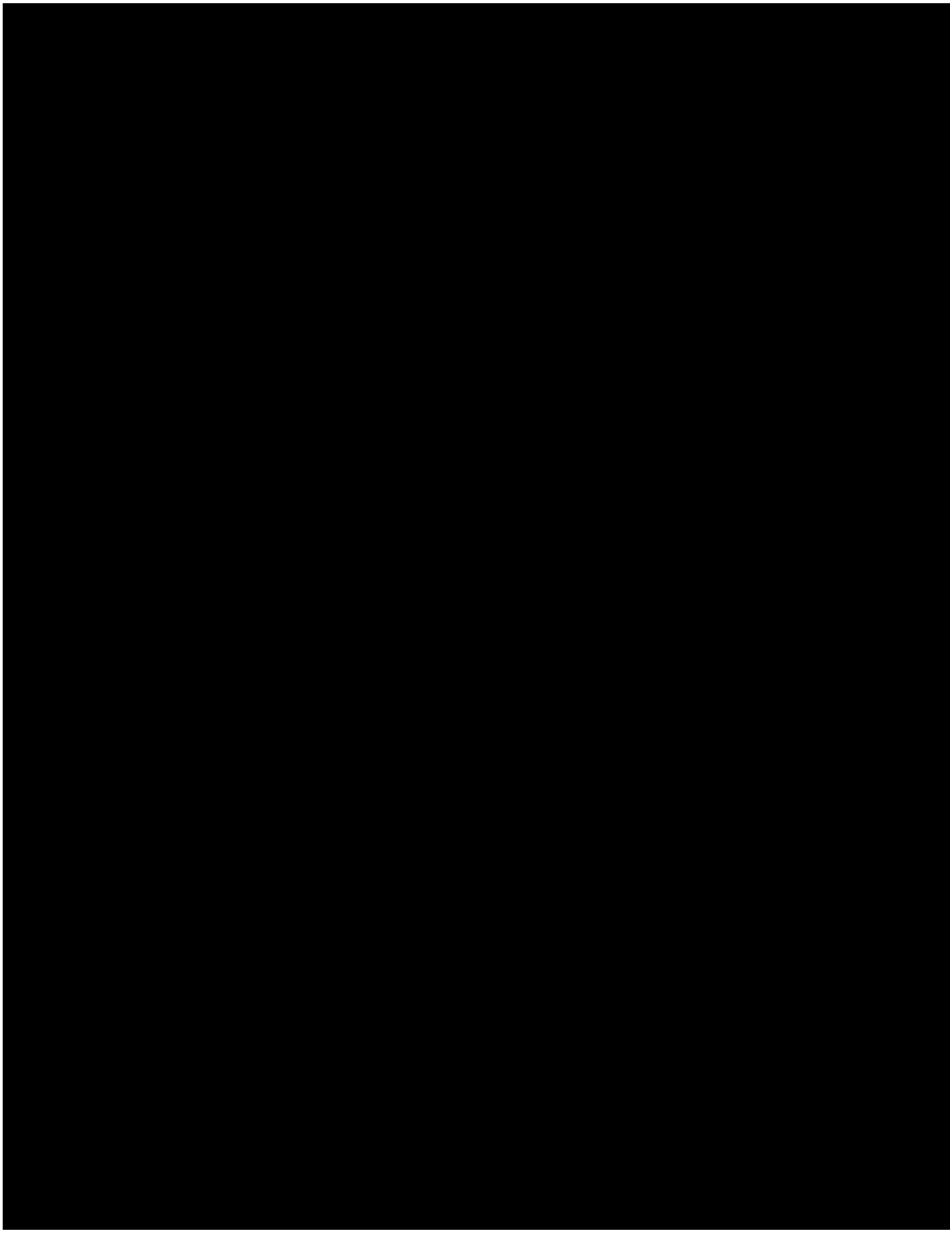

 WP/16/175

IMF Working Paper

European Department

Profitability and Balance Sheet Repair of Italian Banks[1]

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Authorized for distribution by Rishi Goyal

August 2016

Abstract

The profitability of Italian banks depends, among other factors, on the strength of the ongoing economic recovery, the stance of monetary policy, and the beneficial effects of current and past reforms, notably to address structural obstacles to resolving nonperforming loans (NPLs) and to foster banking sector consolidation. Improved profitability would enable banks to raise capital buffers and accelerate the cleanup of their balance sheets. This paper investigates quantitatively the current and prospective earnings capacity of Italian banks. A bottom-up analysis of the 15 largest Italian banks suggests that the system is on the whole profitable, but that there is significant heterogeneity across banks. Many banks should become more profitable as the economy recovers, but their capacity to lend depends on the size of their capital buffers. However, a number of smaller banks face profitability pressures, even under favorable assumptions. There is thus a need to push ahead decisively on cleaning up balance sheets, including through cost cutting and efficiency gains.

JEL Classification Numbers: G18, G28.

Keywords: banks, nonperforming loans, bank profitability.

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[1] We thank staff from the Supervisory and Economics Departments of the Bank of Italy as well as Rishi Goyal, Phakawa Jeasakul, Kenneth Kang, Dermot Monaghan, Hiroko Oura, and Camelia Minou for their helpful comments and suggestions. We are also grateful to staff from the Directorate General for Macro-Prudential Policy and Financial Stability and the Directorate General Micro-Prudential Supervision I–IV at the European Central Bank (ECB) for their feedback on parts of this analysis, which was used in the 2016 Article IV Consultation Staff Report for the Euro Area (IMF, 2016a). See Jobst and Weber (2016) for an earlier version.

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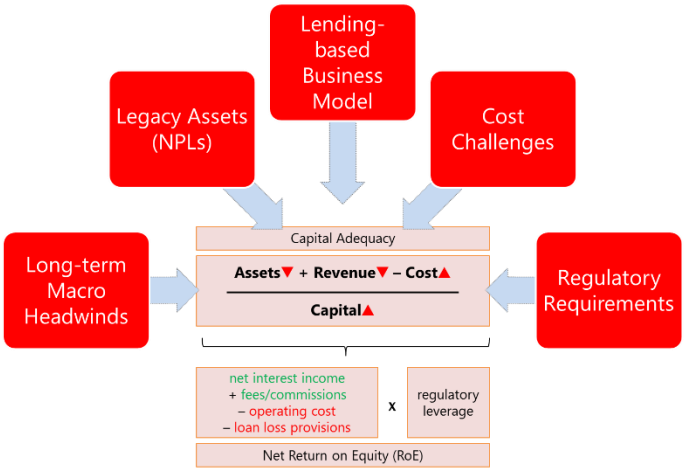
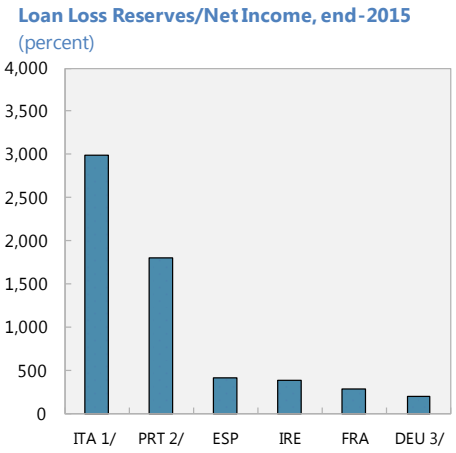
I. INTRODUCTION

A number of interrelated cyclical and structural challenges bear on the profitability outlook of Italian banks. These include long term macroeconomic headwinds such as low potential growth, a large stock of nonperforming loans (NPLs), which account for about one-third of those in the euro area, bank business models that are exposed to the SME sector and thus highly reliant on the growth outlook, and cost challenges, with cost-to-income ratios relatively high and above the EU average.[1] These factors have adversely impacted banks' profit and loss accounts and capital needs. There are also structural needs for more bank capital as a result of ongoing regulatory reform and supervisory actions at a time when operating profitability remains low.[2]



The large stock of NPLs has weighed on profitability and limited banks' ability to rebuild capital buffers. In 2015, total (gross) NPLs reached about 18 percent of total loans (over €360 billion), and profitability was relatively low compared to other EU banks with return on equity averaging 3.1 percent. Although recent data suggest that NPLs have stabilized and profitability has started improving, the high stock of impaired assets and the associated cost of risk[3] due to the need for continued provisioning



Sources: Haver. Note: 1/ 2015 Q2 2/ 2015 Q3. 3/ 2014.

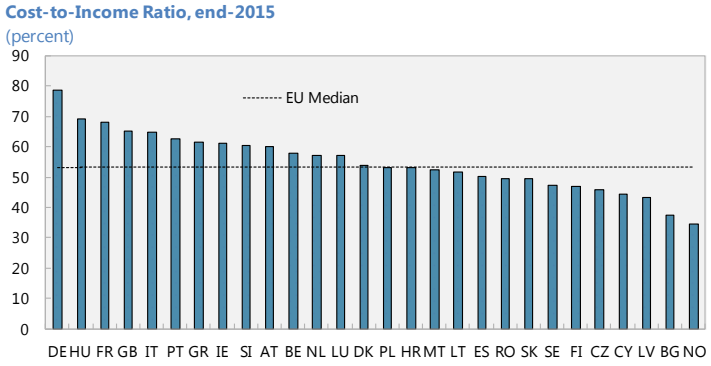
[1] A recent study by the small business association CGIA di Mestre (2016) finds that Italian banks have the highest structural costs among the 10 largest economies in Western Europe. Italian banks spent 1.8 percent of their assets as operating expenses in 2014, which is significantly above the spending in the other large economies in the euro area, Germany, France, and Spain (1.3-1.4 percent). Personnel expenses accounted for more than half of total operating expenses in 2014.

[2] Italian banks will need to raise their "bail-inable" liabilities to meet the requirements of the new bank resolution regime. Banks in resolution can only receive state funding after 8 percent of liabilities have been "bailed-in." In addition, banks are currently permitted more lenient risk-weights than under Basel rules, suggesting further capital needs when the more restrictive use of internal models for both credit and operational risk is finalized later this year.

[3] Italian banks have taken provisions on up to an average coverage ratio of about 60 percent, which implies a carrying value of merely 40 percent of the notional amount.

have dragged down banks' earnings capacity;[4] this, in turn, has limited the buildup of capital buffers and slowed the repair of balance sheets. Alongside anemic demand, impaired balance sheets have weighed down credit growth and the economic recovery. There is also a risk of amplifying asset quality challenges in instances where profitability of new lending is insufficient to offset the declining interest income from the existing loan book.

This paper evaluates quantitatively the current and prospective profitability of Italian banks against the backdrop of the various challenges highlighted above. Using granular bank-by bank data for the 15 largest banks that are supervised by the Single Supervisory Mechanism (SSM), the paper focuses on the flow component of profitability. It looks at the profitability of lending through the lens of the net return on equity, which in turn is a function of net interest income, operating cost, and loan loss provisions as well as regulatory leverage (see text figure above) and examines potential solutions that can restore credit growth and safeguard financial stability. It asks the following questions:



Sources: EBA Risk Dashboard.

- By how much would profitability of current lending improve if all of the 15 largest banks were able to achieve a cost structure similar to the EU average or median?

- What is the likely impact of the ECB's TLTRO II on funding and lending rates, and how does it affect or improve banks' prospects for profitability? What is the potential for the SSM banks to raise revenues through higher credit growth?

- Do banks for which lending is still profitable under conservative provisioning have enough capital to lend and support the recovery (and, thus, strengthen their own resilience as a result)? What is the scope for decisive NPL resolution to free up capital for lending?

- How will the profitability of new lending evolve under alternative growth projections given the lending-based business model of Italian banks?

Overall, the results show that the system is profitable overall, but that there is significant heterogeneity among banks. The larger of the SSM banks are already relatively profitable and could become more so through a reduction in costs and higher credit growth, but the amount of new lending is generally constrained by existing capital buffers. There

[4] The chart showing loan loss reserves is based on publicly available data reported by Haver Analytics. The heterogeneity of the banking sector in different countries and variations in country coverage influences the conclusions that can be drawn from a cross-country comparison.

are some banks in the sample that generate little or slightly negative profitability from lending under current conditions but are helped by monetary easing and cost cutting. However, some banks are likely to continue struggling to be profitable—even under favorable funding conditions due to the ECB's monetary easing and/or after considering improvements in operational efficiency—not least because the profitability of new lending is insufficient to offset the declining interest income and high provisioning cost associated with the existing loan book.

These findings point to a number of areas in which building on recent policy initiatives would be useful. Repairing bank balance sheets is a policy priority, not least to facilitate new lending and support the incipient economic recovery. The cross-country experience of growing out of a debt overhang is generally that the economy grows, e.g., from an export-led recovery that increases the capacity of borrowers to service their obligations or reduces the relative share of impaired assets on bank balance sheets; or the economy inflates, reducing the real value of impaired claims; or the public sector bails out the banking sector. Within the euro area, neither inflation nor public sector bail-outs appear feasible, putting the onus on other approaches to invigorate the "self-healing powers" of the banking system—such as facilitating bank consolidation and paving the way for cost-cutting, reforming insolvency regimes to enable workouts, and setting up other mechanisms to assist banks (e.g., GACS and Atlas, see Box 2).[5]

The remainder of the paper is organized as follows: Section B describes the data and methodology used. Section C presents the results, taking stock of the profitability of lending of Italian banks under current conditions and under alternative scenarios (reduced operating cost and ECB TLTRO II). It also examines available capital buffers for potential loan growth, the potential for NPL resolution to free up capital and presents some analysis of the profitability of new lending going forward under alternative growth scenarios. Section D offers policy considerations.

II. Data and Methodology

The paper uses publicly available data from the SNL database of S&P Global Market Intelligence for the 15 largest Italian banks that are supervised by the SSM. These banks account for about 60 percent of system-wide assets.[6] End-2015 quarterly data from SNL are used or, if not available, the latest available annual data.[7]

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[5] The legislative reforms introduced in August 2015 and May 2016 are important steps that can help speed up insolvency processes and enforcement, especially for new lending going forward (Garrido, 2016).

[6] Specifically, the following variables from SNL are used or constructed: net interest income/average assets, cost of funds, cost-income ratio, CAR ((Tier 1 capital +Tier 2 capital)/total risk-weighted assets), credit risk-weighted assets, fee and commission income/operating income, total gross loans, loan loss provisions/operating income, and net operating income.

[7] For the quarterly cost-to-income ratios, we use the minimum of Q3 2015 and Q4 2015 since profit and loss statement data for several banks in the sample had been impacted by extraordinary contributions to the national

- *Profitability measure*−For each of the 15 banks, profitability is calculated as the net return on equity (RoE)[8] based on net interest margins (NIMs), commissions/fee income, and operating expenses in the reported profit and loss statement of each bank, after accounting for firm-specific capitalization.[9] The net RoE in year *t* is thus calculated as

$$\frac{(1-\tau)}{\mathrm{CAR}_t \times \overline{\mathrm{RWA}_t}}\left(\left(\frac{\text{net interest income}_t + \text{fees and commissions}_t}{\text{average assets}_t}\right)\left(1-\frac{\text{operating cost}_t}{\text{net income}_t}\right) - \mathrm{LLP}^*_{t-1}\right),$$

  where τ is the tax rate, LLP* denotes the soon-to-be-adopted forward-looking provisioning standard[10] (based on expected rather than incurred losses)[11] implied by the average risk-weighted assets (RWA) reported by each bank for end-June 2015 in the recent *Transparency Exercise* of the European Banking Authority (EBA), and CAR denotes the capital adequacy ratio to determine the implicit regulatory leverage.

- *Sustainability of interest margins*−Using historical bank level data, we also compare lending spreads (derived from NIMs) and provisioning expenses contemporaneously to assess *ex post* whether banks would have been able to maintain their profitability under expected loss provisioning in the face of rapidly rising asset impairments over the last 10 years (between 2006 and 2015). Thus, we assess whether the actual lending rate is greater than the amount of after-tax net operating income required to cover recurrent provisioning costs and operating expenses

$$\text{actual lending rate}_t - \frac{1}{(1-\tau)}\underbrace{\left(\text{lending spread}_t + \frac{\text{fees and commissions}_t - (\text{operating cost}_t + \mathrm{LLP}^*_{t-1})}{\text{operating income}_t}\right)}_{\text{minimum lending rate}} \geq 0.$$ [12]

resolution fund in Q4 2015. For the time series analysis, we exclusively use annual data. The results from our analysis of bank profitability as of end-2015 are thus mildly influenced by the choice of data frequency with our annual estimates for net RoE for the largest Italian banks being a bit lower than if we used 2015 quarterly data, but the overall conclusions of the paper still hold.

[8] The term "return on equity" is used as a generic reference to leveraged income, with equity referring to CAR.

[9] A tax rate τ of 35 percent is assumed for all banks.

[10] The calculation of LLP is shown in Appendix, Box A1. We also perform the same calculation for reported LLP for robustness. For actual provisions, end-Q3 2015 was chosen where available (otherwise annual 2015 data were used) since most banks reported significant one-off increases in LLP due to the ECB's on-site requests or management decisions to increase coverage during the last quarter of 2015.

[11] Under the forthcoming IFRS 9 standard, for loans where no significant increase in credit risk has (yet) occurred, provisions are set to the expected losses in the next 12 months. However, if a "significant increase in credit risk" is deemed to have occurred, provisions increase such that losses expected from events over the lifetime of a loan are provisioned against.

[12] The lending spread is defined as the difference between the loan rate and the cost of funding; the RWAs underpinning the calculation of expected LLP were obtained from each bank's public accounts at end-2015 (rather than the EBA 2015 Transparency Exercise) in order to maintain data consistency relative to the previous years during which separate data on RWAs was not available.

Beyond the 15 banks, the latest system-wide data from the Bank of Italy (2014) are also used to draw lessons (as of end-2015, there were over 640 banks in the Italian banking system, of which 33 were cooperative banks and 365 were mutual banks). For the forward-looking analysis, lending rates are considered variable and adjust to the current marginal policy rate and the expected term spread compression consistent with the estimates in Elliott and others (2016).

Corresponding to the questions above, the following analyses are conducted to evaluate the impact of different variables on profitability:

- *Loan loss provisions (LLPs).* Current and prospective provisioning affect projections of banks' earnings. In the first analysis below, forward-looking LLPs that reflect expected losses are used, along with reported LLPs (using data from SNL on provisions relative to operating income).[13] Forward-looking LLPs are calibrated to the default risk of the overall loan portfolio (consistent with a forward-looking accounting approach according to the forthcoming IFRS 9 accounting standard), which was obtained from the granular firm-specific credit risk weights published by the European Banking Authority's latest Transparency Exercise (EBA, 2015) (with a cut-off of end-Q2 2015).[14] In most cases, the forward-looking LLPs are higher than reported LLPs.

- *Operating costs.* Recent reforms to consolidate banks would need to generate sizable cost savings. Italian banks have relatively high operating costs related, e.g., to their business models (they devote a larger part of their assets to lending to households and firms than in other countries) and the relatively high number of branches per capita.[15] Operating costs for the Italian banking system overall are marginally higher than the weighted average of EU banks (65 percent compared to 63 percent) (Bank of Italy, 2016) but significantly higher than the EU median (53 percent) (see chart on page 4). Moreover, there is considerable variability of cost structures with some sample banks reporting significantly higher operating costs than others. The paper investigates how profitability changes if the cost-to-income ratio for each of the 15 largest banks declined to (i) the EU weighted average or (ii) the EU median, with the exception of a small number of banks whose cost-to-ratios are already below that benchmark.[16]

[13] The IFRS 9 standard is not approved in the EU yet and decisions are pending on how to concretely manage the transition period from IAS 39 to IFRS 9 from a regulatory standpoint, which makes the actual impact of the new standard on capital adequacy ratios uncertain.

[14] If not available, the average for the Italian banks is used from the EBA's 2015 Transparency Exercise or reported provisioning from SNL, when the latter exceeds the estimated provisioning costs.

[15] According to 2015 ECB data on population per local branch, in Italy there are 1,979 individuals per branch, against an EU average of 2,111 individuals.

[16] Out of the 15 sample banks, this applies to 5 and 3 banks for the EU-weighted average and median, respectively.

- *ECB's TLTRO II.* To investigate the effect of credit easing on the profitability of lending, a scenario is constructed in which all Italian banks are assumed to participate in the ECB's new targeted longer-term refinancing operations (TLTRO II) as of June 2016. It is further assumed that all banks cease to remunerate deposits, reducing their funding cost to as low as the ECB's marginal refinancing rate (MRO) of zero percent.[17] At the same time, lending rates are considered variable that adjust in response to the decline of the marginal policy rate (i.e., ECB deposit rate) and the historical pass-through of term premia to NIMs. These effects are estimated to lower the NIMs of Italian banks by 11 basis points on average (Elliot and others, 2016).[18]

- *Macroeconomic conditions.* Three alternative macro assumptions are considered for assessing the impact of changes to the growth outlook on bank profitability: (i) staff's *baseline scenario;*[19] (ii) a *severe downturn scenario*, in which real GDP growth declines by more than 2 percentage points over the first two years (but recovers above baseline after that); and (iii) a *stagnation scenario* in which annual GDP growth is one-half of that in the baseline scenario (Appendix, Figure A3). This forward-looking analysis is completed for the main components of net operating income (net interest margins) and asset impairments of the overall banking system keeping all other profit and loss elements unchanged, using the latest (2014) system-wide data from the Bank of Italy. The historical sensitivity of loan default probabilities to nominal growth is used to forecast changes in expected loss provisions,[20] consistent with staff estimates of the relevant macro scenarios for Italy.[21] Future lending rates and funding costs are aligned to projected changes in short- and long-term interest rates over a five-year forecast horizon,

[17] Realigning the cost of refinancing to the marginal policy rate under TLTRO II (if banks meet a defined minimum rate of net lending growth) facilitates the pass-through of bank funding conditions to the real economy by encouraging more lending; it also helps maintain bank profitability, especially in countries where banks face high cost of risk and have refrained from lowering lending rates to preserve profit margins without jeopardizing their deposit base.

[18] This assumption generalizes changes in the cost of funding, which might overstate the actual benefit from improved funding conditions in some countries. For instance, in the case of Italy, only the largest banks in the sample can access capital markets, and many (smaller) banks are faced with a relatively more challenging liquidity situation.

[19] This corresponds to staff projections in the 2016 Article IV Consultation Staff Report for Italy (IMF, 2016b). These do not take into account potential effects from the U.K. referendum.

[20] However, the impact of low (real) interest rates on the debt repayment capacity of borrowers is not considered in the current environment of low inflation and monetary accommodation. A decline in the default rates could actually reduce the flow of provisions due to a decline in the credit risk of new lending underpinning the calculation of risk weights (Appendix, Box A1), which would help stabilize the amount of LLP.

[21] Probabilities of default (PDs) are taken from Garrido and others (2016). The correlation of nominal growth with corporate PDs is estimated at 72 percent. The estimated corporate loan PD for 2014 is 1.8 percent.

accounting for the funding mix of Italian banks at end-2015,[22] while a gradual phase-in of TLTRO as a funding source is assumed.

- *Capital.* Finally, the paper investigates the amount of new bank lending that can be supported by available capital buffers. Even if lending were profitable, capital buffers may be adequate for only a certain quantum of new lending. To this end, the available capital buffer is calculated, taking into account Pillar I and II capital requirements under the recent ECB's *Supervisory Review and Evaluation Process* (SREP). Potential net loan growth is then calculated assuming unchanged CAR and overall credit quality of the loan portfolio and a minimum capital buffer of 2 percentage points over the minimum of 12.7 percent. [23]

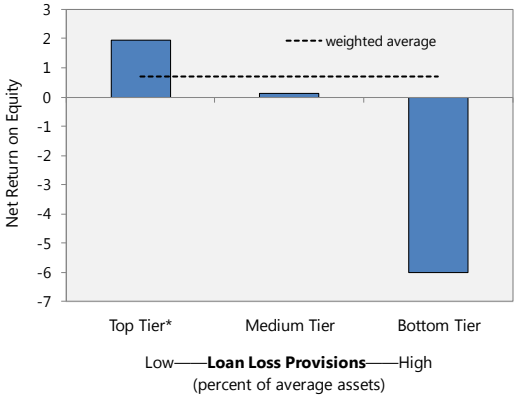
III. RESULTS

Profitability of Current Lending and Provisioning Levels

Current lending is profitable for the larger sample banks—including under the assumption of forward-looking provisions[24]—but some smaller banks are likely to continue generating losses, owing to low interest earnings (including from high NPLs) and high operating costs.

- *Under expected LLP, current lending by about half of the banks in the sample—about 83 percent of the banking sector in terms of total outstanding loans—generate profits amounting to a system-wide weighted-average annual net return on equity (RoE) of 0.7 percent at end-2015.* However, a disaggregated analysis reveals that a number of smaller banks (representing about one-eighths of total loan volume of all banks in the sample) are likely to experience losses. While the cost of funding is broadly comparable to those in other euro area countries, the high level of LLPs in relation to net income

Italy: Estimated Net Return on Equity of Current Lending and Expected Loss Provisions
(percent), end-2015 1/



Sources: Bloomberg L.P., SNL and IMF staff calculations. Note: */ The sample was split into three tiers (of 5 banks each), ordered by expected loss provisions (end-Q3 2015), weighted by total loans.

[22] Staff also assumes that, in the stagnation and downturn scenarios, spreads are 75 bps wider than in the baseline scenario.

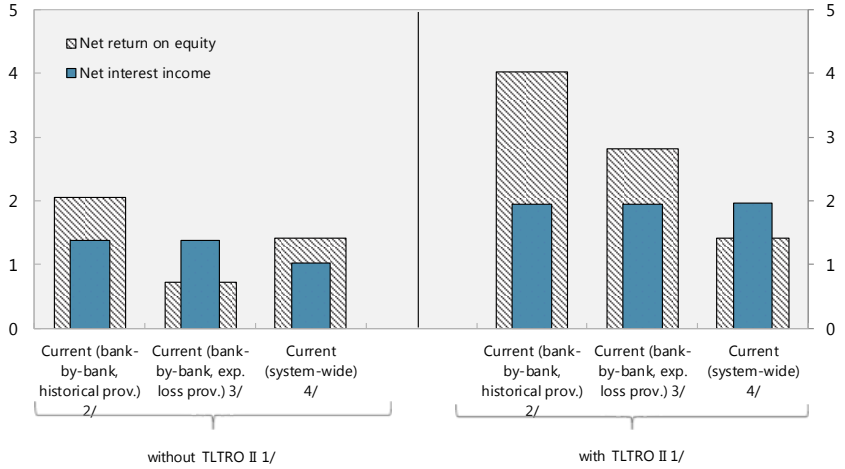
[23] The threshold of 12.7 percent comprises the CET1 capital requirement of 4.5 percent under Pillar I, a capital conservation buffer of 2.5 percent, and Pillar 2A and 2B requirements of 2.7 percent and 3.0 percent, respectively.

[24] This reflects expected losses extrapolated from the default risk of the current loan portfolio (consistent with the forthcoming accounting standard IFRS 9). The assumption of forward-looking provisions using past loan performance reflected in RWs assumes that (i) banks do not change their loan origination to improve the average credit risk of their banking book, and (ii) the debt service capacity of borrowers remains unchanged relative to the historical experience.

reveals the fundamental problem of lack of profitability in core business caused by high provisioning expenses and operating costs.

- *The calculations above are robust to the use of reported provisioning according the existing accounting standard (IAS 39), and confirm that several smaller banks face particular challenges.* For the 15 largest banks, the weighted average net RoE improves to 2.1 percent, but three smaller banks (accounting for about 5 percent of the outstanding stock of loans in Italy) still generate losses from current lending (Figure A2). For the system of a total of over 640 banks, the net RoE is somewhat lower at –1.6 percent in 2014 according to the latest available data published by the Bank of Italy (and rises to 1.4 percent if projected to 2015 consistent with the performance of the 15 SSM banks in the sample).[25] These results highlight that there are a number of smaller banks in the system with weaker asset quality and lower profitability than the 15 SSM banks.

Italy: Estimated Net Return on Equity from Current Lending (with and without funding benefit from TLTRO II) 1/
(percent/percent of total assets)



Sources: SNL and IMF staff calculations. Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elasticity of NIMs banks maintain their capital ratio as of end-2015; 2/ end-2015 and historical prov.=backward-looking provisioning (IAS 39); 3/ expected loss provisioning (consistent with IFRS 9); and 4/ based on aggregate data reported by Banca d'Italia for end-2014, projected for 2015 as starting point for the scenario-based analysis.

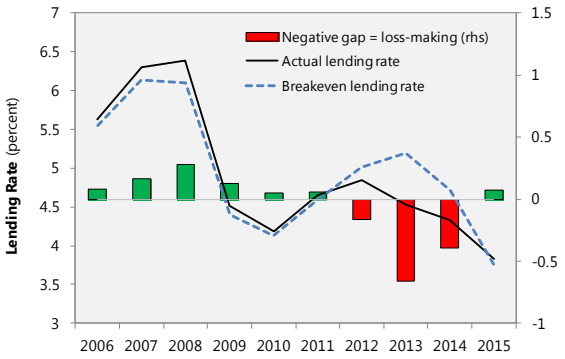
In that regard, in recent years, the deterioration of asset quality in the Italian banking sector seems to have outpaced banks' ability for adequate provisioning. Extending the analysis to historical data for the 15 sample banks—and assuming that banks would set aside provisions according to expected losses[26]—suggests that, since 2012, lending rates on

[25] 2015 is an estimate based on 2014 system-wide data and 2015 data for the SSM banks in order to support a statistically accurate data input for scenario analysis in the paper. The actual RoE of the system amounted to 2.6 percent in 2015 according to recently released data.

[26] Note that the application of expected loss provisioning is not permitted under current accounting principles but helps illustrate how a rapid decline of loan performance could result in sizable adjustments to provisioning rates ex post, putting increasing pressure on interest rate margins from new lending.

average were far below what would have been required for banks to fund sufficient loan loss reserves *ex post*. Or put differently, and acknowledging the limits of such an analysis based on comparative statics if credit conditions reflected subsequent loan performance, the rise of NPLs (and resultant provisioning needs) in the past would have implied a higher minimum lending rate for banks to maintain their profitability.[27] The picture looks somewhat better based on reported provisioning, although the general trend is the same (Figure A2). Past lending growth seems to have been associated with higher NPLs and, thus, lower net RoE for smaller banks on average (Garrido and others, 2016). A high degree of banking sector competition in an environment of excess supply might also have contributed to lower lending rates than what would have been warranted by banks' existing cost structure and risk tolerance.

Italy: Difference between *Actual* and Breakeven Lending Rates for Sample Banks (Expected Loss Provisioning)
(percent, weighted average) 1/

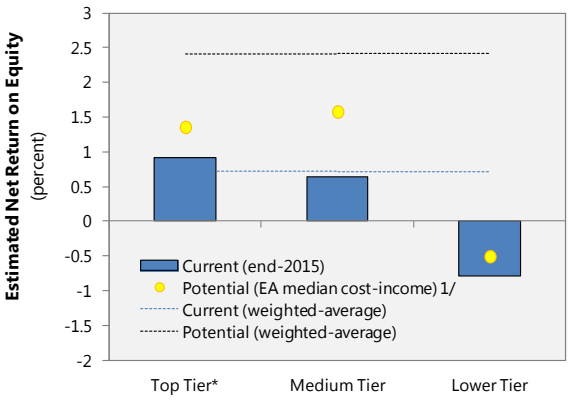


Sources: Haver, SNL and IMF staff calculations. Note: 1/ weighed by total loans (as of end-2015); expected loss provisions derived from risk-weighted assets (RWAs) as per methodology described in Annex, Box A1.

Potential Impact of a Reduction in Operating Costs

Greater operational efficiency and incentives to raise loan loss reserves during periods of higher profitability would help enhance the resilience of the banking sector. The conclusion of this partial equilibrium analysis is not that raising lending rates or tightening credit standards would have solved the profitability problem, as doing so would have dragged down real economic activity, in turn further worsening bank asset quality and raising funding costs. Rather, alternative solutions are needed, such as significantly lowering costs. Improving the operational efficiency of all 15 SSM banks to the euro area weighted average cost-to-

Italy: Estimated Net Return on Equity of Current Lending (with and without improvement in cost efficiency)
(percent), end-2015



Sources: SNL and IMF staff calculations. Note: The sample was split into three tiers (of 5 banks each), ordered by RoE and weighted by total loans; 1/ assuming that all banks improve their cost-income ratio to the euro area median (53 percent).

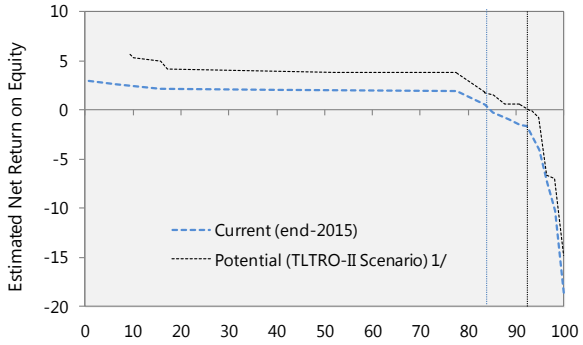
[27] This analysis of a "break-even lending rate" assumes a contemporaneous relationship between lending rates and loan performance. In reality, the assessment of whether lending rates are adequate to break even requires a comparison of them with the (ex post) default rate of the underlying loans. Since repayment arrears (and corresponding provisioning expenses) in a given year are largely attributable to loans that were originated much earlier, a cohort analysis for different loan vintages (at different maturity tenors) would acknowledge the inherent time lag of how loan origination affects provisioning. However, given that both actual lending rates and asset quality of most Italian banks have continuously declined over the last four years, the application of contemporaneousness is analytically expedient and consistent with a medium-term assessment of profit sustainability.

income ratio of 63 percent would result in a significant improvement of banks' earnings capacity from current (and future) lending, improving the weighted average net RoE by more than 40 percent. If Italian banks were able to improve operational efficiency to that of the EU median (53 percent), the weighted average net RoE would triple.

Potential Impact of Monetary Easing

Credit easing would improve overall bank profitability, but it is not expected to materially alter the negative earnings outlook for some smaller Italian banks. The ECB's TLTRO II facilitates the pass-through of lower bank funding costs to credit supply while mitigating the potentially adverse impact of negative rates on banks' profitability. We find that the weighted-average net RoE improves to 2.8 percent under expected loss provisioning, assuming sufficient loan demand. However, for one-third of the banks in our sample, current lending would still be unprofitable. Using reported provisioning improves overall system profitability to a weighted-average net RoE of 4.0 percent, but there are still some banks with weak profitability and three banks that generate sizable negative returns from current lending (Figure A2).

Italy: Estimated Net Return on Equity of Current Lending under Expected Loss Provisioning (with and without funding benefit due to TLTRO II)
(percent), end-2015 1/



Sources: SNL and IMF staff calculations. Note: Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elastivcity of NIMs banks maintain their capital ratio as of end-2015.

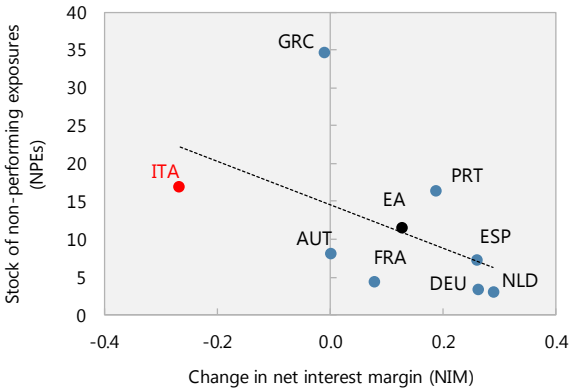
These results suggest that there is significant heterogeneity among Italian banks in our sample. There are some relatively profitable banks both under current conditions and TLTRO II; some banks that generate little or slightly negative profitability from lending under current conditions but may be helped by monetary accommodation (e.g., TLTRO II) and improvements in operational efficiency; and some banks that would experience very negative profitability even under optimal funding conditions.[28]

In addition, the impact of impaired assets on banks' expected profitability raises the cost of capital raising (to complement low (and potentially insufficient) profitability). Compared to other euro area countries, the high level of impaired assets also weighs on the capacity of banks to maintain their NIM. While the ECB's monetary easing has reduced the

[28] Carpinelli and Crosignani (2015 who analyzed the impact of the LTRO on Italian banks' credit supply also detect significant heterogeneity among banks. They find that only a handful of banks that were highly dependent on wholesale funding took liquidity under this program and increased lending; while other banks used the liquidity to increase their securities holdings.

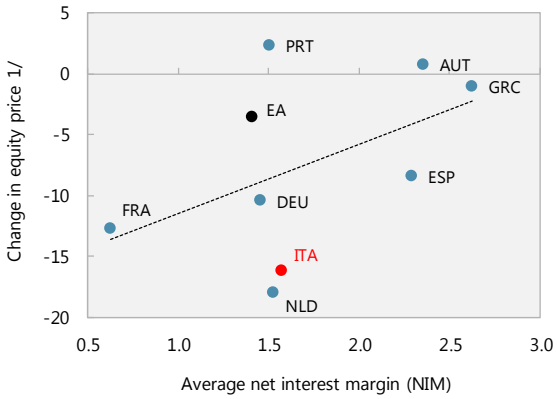
cost of borrowing, since Q3 2015 the equity risk premium of Italian banks has risen and price-to-book ratios have declined, with the average cost of equity now exceeding the return on equity. This largely reflects market expectations of deteriorating future profitability, and limits the extent to which capital-constrained banks with would reduce credit (in absence of sufficiently high-yielding but less capital-intensive lending opportunities).

Change in Net Interest Margin and Nonperforming Exposures 1/
(percent change/percent of total exposure)



Sources: Bloomberg LP, EBA Transparency Exercise (2015) and IMF staff calculations. Note: NPEs as of end-June 2015; change of NIM between June 2014 and March 2016.

Change in Equity Price and Net Interest Margins
(percent change/percent of average assets)

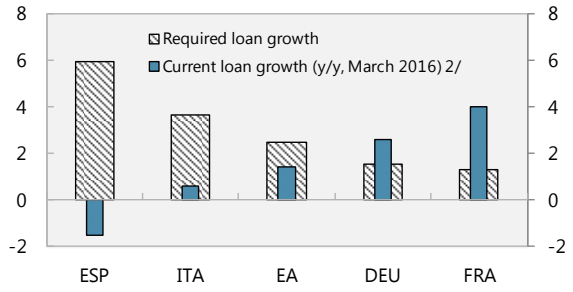


Sources: Bloomberg, L.P.; and IMF staff calculations. Note: 1/ Change in equity price between Sept. 2015 and March 2016.

Credit Growth and Capital Buffers

For larger, more profitable banks, higher credit growth is crucial to improve bank profitability in an environment of declining interest rates. Given the wide deposit base of Italian banks and the high proportion of variable rate loans, the extent to which deposit rates are sticky has a direct impact on how the low interest rates affect bank profitability. Thus, even if Italian banks were to fund themselves increasingly via money markets, lower wholesale funding costs will benefit mostly new lending (due to banks' heavy reliance on deposit funding) and does not offset the negative impact of lower rates on existing loans if credit growth is insufficient. As noted earlier, the ECB's recently expanded asset purchase program and the negative marginal policy rate have flattened the yield curve and are estimated to lower the NIM of Italian banks by 11 basis points on average

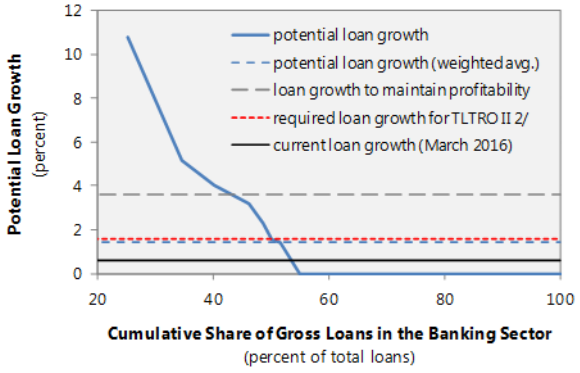
Annual Loan Growth Required to Maintain Current Net Interest Margin, end-2015
(y/y percent change) 1/



Sources: Bloomberg L.P., EBA Transparency Exercise (2015), ECB, SNL, and IMF staff calculations. Note: 1/ based on the historical pass-through of policy rates and the elasticity of net interest margins to changes in term premia between Jan. 2010 and Feb. 2016; total mortgage and corporate loans at end-2015 to EA residents.; scenario is based on the estimated impact of the increase of monthly asset purchases (until Sept. 2017) by the ECB and a reduction of the deposit rate by 10 bps (as per ECB decision on March 10).

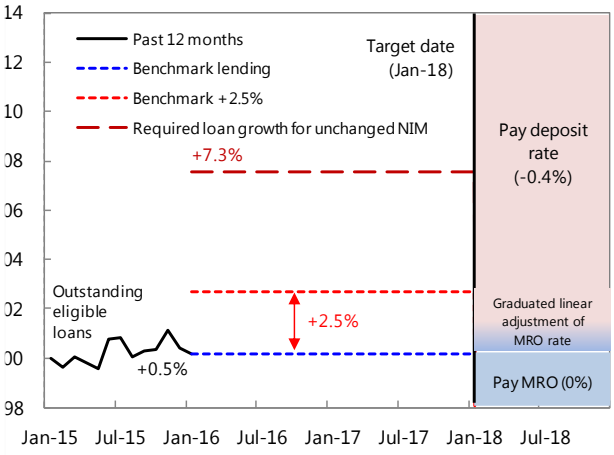
(Jobst and Lin, 2016).[29] For banks to maintain profitability over the amortization period of their current loan book, this potential reduction in the NIM implies *ceteris paribus* a need for higher lending growth by at least 3.6 percent annually (or about 3.0 percentage points above current credit growth).[30] Hence, lower profitability from financial intermediation—amplified by current structural challenges affecting bank performance—might override possible mitigating effects from higher asset prices and pricing frictions.

Italy: Potential Loan Growth Exhausting Available Capital Buffer
(percentage share of total loans), ordered by relative share, end-Q3 2015 1/



Sources: Bloomberg L.P., EBA, ECB, SNL and IMF staff calculations. Note: 1/ assumes unchanged capital adequacy ratio (CAR) and overall credit quality of loan portfolio, subject to a capital buffer of 2 percentage points over the minimum of 12.7% (based on Pillar I (4.5%), capital conservation buffer (2.5%), and Pillar IIA and IIB requirements of 2.7% and 3.0%, respectively); 2/ lending growth needs to be 2.5% (or higher) over a two-year period for banks to access TLTRO II funding from the ECB at the marginal policy rate (i.e., deposit rate).

Italy: Required Lending for TLTRO-II Benchmark
(Jan. 2015=100)



Sources: Deutsche Bank, ECB, and IMF staff calculations.

However, capital and/or credit demand may not be high enough to allow sizable new lending to help banks maintain profitability. Banks generally exceed the regulatory capital adequacy requirements; thus, from a prudential viewpoint, there is no need for further capital. But while most banks would generate profits from current lending, capital buffers may suffice to support only a limited amount of new lending,[31] constraining the capacity of viable

[29] A conservative estimate of the pass-through suggests that a 10-basis-point decline in the effective policy rate (overnight EONIA) results in 2-basis-point decline in aggregate NIM, and about half (50.9 percent) of the expected compression of the term spread (based on its historical elasticity to central bank asset purchases) translates into a reduction of aggregate NIM in the Italian banking sector.

[30] Note that this analysis assumes that other sources of income as well as operational and provisioning costs remain unchanged. Lower interest rates increase the debt repayment capacity of borrowers and might actually reduce provisioning costs going forward. Similarly, increasing asset prices banks' investment portfolios can result in valuation gains that help improve NIM. However, given the large share of lending in total banking sector assets, the re-pricing effect from a decline in policy rates (and its impact on term spreads) is likely to be the dominant factor determining changes in bank profitability.

[31] Banks maintain a capital adequacy ratio (CAR) above the minimum regulatory requirements (defined by the ECB's SREP and a discretionary (management) capital buffer of two percentage points). In general, EU banks are required to comply with a minimum Pillar 1 capital ratio of 8 percent of risk-weighted assets (comprising 4.5 percent CET1 capital, 1.5 percent additional Tier 1 capital and 2 percent Tier 2 capital). In addition, banks have to hold Pillar 2 capital on a bank-by-bank basis to cover shortcomings in the measurement of RWA and to mitigate risks identified by supervisors. Moreover, banks have to hold further capital buffers (capital

banks to increase profitable lending and rebuild their capital buffers in order to enhance their *ex ante* resilience to shocks. Indeed, assuming no change to the current capitalization or credit quality of loan portfolios (under the benign assumption that banks exhaust available capital buffers, including any managerial buffers above the regulatory minimum), only a few banks are actually in a position to lend, i.e., they generate profits from current lending also hold sufficient surplus capital in excess of the regulatory minimum to extend new loans (text figure). Also banks that are more profitable seem to hold higher capital buffers to support a larger credit expansion. On average, potential loan growth across all sample banks would amount to (only) 1.4 percent, which is close to the benchmark lending rate required to access TLTRO II funding (see text figure) at most favorable terms (i.e., at the ECB's deposit rate of currently –0.4 percent). However, this theoretical maximum remains far below the rate of 3.6 percent needed to maintain current profitability in light of declining NIMs due to the re-pricing of existing loans and declining lending rates as deposit rates remain sticky.[32] Moreover, the continued lack of sufficient credit demand[33] could further delay the improvement of banks' earnings capacity, especially for those banks that struggle with high levels of impaired assets weighing on profits (text figures below).

Several factors, which we have not considered explicitly, can reduce this estimate, such as the impact of TLTRO II, improvements in asset quality and capital gains from investments; however, the potential for "self-healing" through credit growth will be limited to profitable lending only, placing greater burden on only a few banks to support the aggregate estimate of potential loan growth. The Bank of Italy's recent *Survey on Industrial and Service* firms also indicates that the share of companies that could not obtain the whole amount of required loans dropped from 8 per cent in 2014 to 6 per cent in 2015 (it was 12 percent in 2012). The recent ECB Survey on the Access to Finance of Enterprises in the euro area (SAFE) confirms the decrease of "credit rationed" Italian companies indicating a weakening of financial constraints.

A decisive reduction of NPLs over the medium-term—combined with structural reforms to reduce foreclosure times by strengthening debt enforcement and insolvency frameworks—could free up regulatory capital to support new lending (Box 1).[34]

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conservation and counter-cyclical buffers) to be met by CET1. Note that the average CET 1 requirement (excluding systemic buffers) of euro area significant institutions is around 9.9 percent (see https://www.bankingsupervision.europa.eu/ecb/pub/pdf/ssm_srep_methodology_booklet.en.pdf, p. 34).

[32] Also current lending growth remains low and falls below the required benchmark to access TLTRO II funding at more favorable terms (i.e., below the ECB's MRO rate). Moreover, lower funding costs through TLTRO II would benefit only new lending and cannot fully offset the negative impact of asset re-pricing on existing loans.

[33] Survey data indicate that weak demand from non-financial firms is playing a major role in credit developments. According to the recent *Survey on Industrial and Service* firms run by the Bank of Italy, the net percentage of firms with an increase in the demand of new loans is at the lowest level since 2008. Real investment is still at a historically low level and firms' liquidity is high, especially among very large firms. On aggregate, liquid assets to GDP are at 19.2 percent, the highest value since 1999.

[34] Box 1 updates already published material with the latest data (Aiyar and others, 2015).

Considering the high loan restructuring costs and the track record of low effectiveness of debt enforcement in Italy, distressed debt investors demand a high rate of return. Under conservative assumptions, banks would register significant losses if they were forced to dispose of their current NPLs at an expected foreclosure time of 4 ½ years. Current insolvency reforms, when fully implemented, are expected to significantly shorten the recovery time of new loans. However, reforms that dramatically lower the time to resolve the existing stock of NPLs would go a long way toward addressing concerns related to losses.

However, higher loan growth will not solve the profitability challenge of a number of smaller banks in Italy. As noted earlier, high expected provisions against the backdrop of low interest earnings and high operating costs imply that new lending is unlikely to ameliorate losses or cost pressures, under the given conservative provisioning standards going forward. Indeed, the market pressures witnessed since early 2016 appear to reflect along with global factors investor discomfort with prospects of some banks to be able to get ahead of their profitability challenge, barring strong action, such as for instance on accelerating the disposal of the high stocks of NPLs.

Box 1. Capital Relief and New Lending from NPL Disposal[1]

This Box provides illustrative calculations of the costs and benefits from NPL disposal. At present, an immediate and large reduction of NPLs would not be expected to result in capital relief. However, under an enhanced debt enforcement and insolvency framework, NPL disposal might free up regulatory capital.

The market price of NPLs depends inter alia on the effectiveness of the debt enforcement and insolvency regime and determines whether the outright disposal of impaired assets is a viable option for banks. It reflects the expected time to recover the residual value of distressed assets (being lower where foreclosure times are longer and debt enforcement regimes weaker) and the expected return on investment consistent with general profit expectations in distressed debt markets. In this exercise, we assume that Italian banks reduce the current stock of NPLs (end-Q3 2015) by selling their distressed loans. This decreases the regulatory capital charge of their loan book in proportion to the share of (partially provisioned) NPLs (and their applicable credit risk weight). We calculate bank-by-bank the amount of capital that would be released by removing NPLs from bank balance sheets at net book value.

A shortfall of the market price below the net book value of NPLs is commonly referred to as the "pricing gap" (which can also be expressed as a "haircut" on the net book value). The sale of loans results in a loss (gain) on disposal if the selling price lies below (above) the net book value (i.e., the gross value after deducting the current level of specific loan loss reserves). The pricing gap can vary significantly across countries depending on whether provisioning levels (which determine the net book value) are sufficient relative to the effectiveness of the insolvency regime and the return expectations of investors on the market prices of NPLs. Notwithstanding cross-country variations, pricing gaps arise from differences in valuation and accounting. Since the distressed debt investors have a lower financial leverage than banks, they require a higher rate of return to discount the expected cash flows from NPLs. In contrast, banks tend to discount the net book value of NPLs using the original effective interest rate instead, which is consistent with international accounting principles but results in a higher market price. In addition, banks are required to account for the indirect costs of managing NPLs in their financial statement of the year in which they are incurred, whereas potential acquirers of NPLs would deduct these costs immediately from the assessed net book value, which further reduces the potential purchase price (Ciavoliello and others, 2016).

Calculations of the "pricing gap" require a detailed assessment of the robustness of loan loss provisions and of the various factors affecting the market price of NPLs. Thus, the selling price of NPLs represents the reported net loan value less the country-specific haircut, and is calculated as the net present value of the loan after accounting for the usual servicing/legal fees and management costs (of 10 and 2 percent, respectively). We assume that the unsecured portion of each loan (15 percent of the principal value) is fully provisioned; the recovery value of the secured portion depreciates at discount rate consistent with the annual expected return of distressed debt investors after accounting for some fixed collateral deterioration. Thus, the pricing gap (in percent of each unit of NPLs) is defined as the difference between the implied coverage ratio (i.e., loan loss reserves relative to NPLs) and the reported coverage ratio

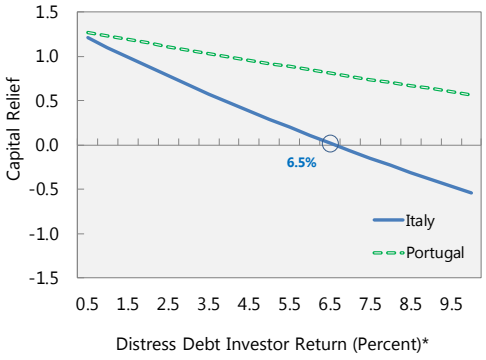
$$\underbrace{\left[0.15 + \left(1 - \left((0.85(1 - r_c)e^{-rt}(1 - L)) - M\right)/0.85\right)\right]}_{implied\ coverage\ ratio} - actual\ coverage\ ratio,$$

where L and M are the servicing/legal fees and management costs (in percent), respectively, r represents the assumed interest rate to discount future cash flows (equivalent to the internal rate of return (IRR) of 10 percent commonly expected by distressed investors), r_c is the rate of collateral decay (5 percent), and time t is measured in number of years (consistent with the expected country-specific asset recovery time of collateral, which in the case of Italy is assumed to be 4.5 years). This calculation approach reflects one the inherent causes of the pricing gap arising from the tact that banks are required to provision using an incurred loss approach, while investor valuations of NPLs are usually driven by calculations of expected recovery value.

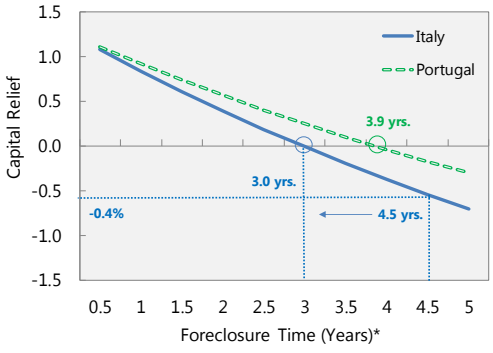
The pricing gap determines the bank-specific capital impact of removing NPLs from bank balance sheets at net book value. We assume that banks reduce their NPLs to a level consistent with historical averages (i.e., 3.6 percent of gross loan book on average), meet a target capital adequacy ratio of 16 percent, and offer a 10 percent IRR on investment.[2] It should be noted that the capital relief estimations are highly dependent on the assumption on IRR, which significantly impacts the results (charts below).

Box 1. Capital Relief and New Lending from NPL Disposal (continued)

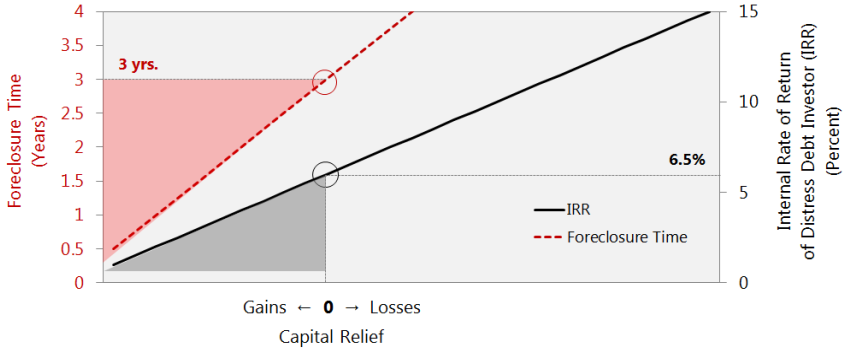
Capital Relief from NPL Reduction
(end-2015, country-specific haircut, percent of total assets)



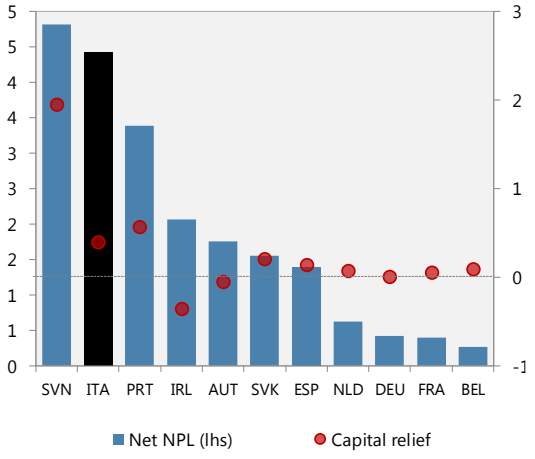
Capital Relief from NPL Reduction
(end-2015, country-specific haircut, percent of total assets)



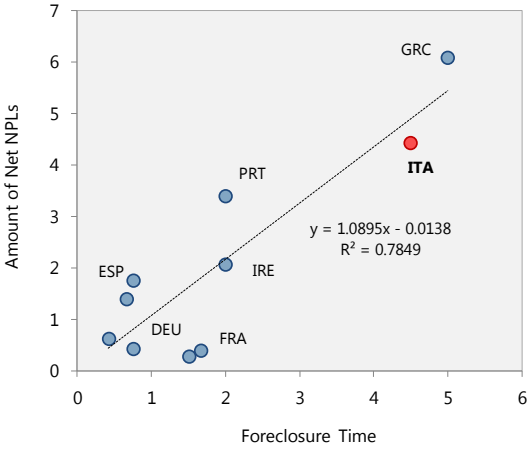
Italy: Breakeven Capital Relief from NPL Reduction
(country-specific haircut)



Euro Area: Net NPLs and Capital Relief from NPL Reduction
(percent of total assets, improved foreclosure times),2015



Euro Area: Net NPLs and Foreclosure Time
(percent of total assets/years), 2015



Sources: Bankscope; EBA; ECB; Haver Analytics; national central banks; and IMF staff calculations. Note: calculations based on bank-by-bank data from the EBA Transparency Exercise (2015), with NPLs reduced to historical average and capital adequacy ratio (CAR) of 16.0 percent.

Box 1. Capital Relief and New Lending from NPL Disposal (concluded)

At present, the immediate disposal of NPLs would not be expected to result in capital relief. Under conservative assumptions, these illustrative calculations suggest that banks would register losses of up to €22 billion (or 1.1 percent of GDP) at an expected valuation haircut of 31.5 percent[3] should they dispose of their current NPLs.[4] This would outweigh any potential reduction in capital requirements as the removal of NPLs reduces the risk density of the existing loan portfolio of banks.

Reducing NPLs significantly over the medium-term coupled with enhanced debt enforcement should reduce the pressure on bank capital. Shorter expected foreclosure times would help close the pricing gap. In fact, reducing the expected foreclosure time to 3 years—on both legacy as well as new NPLs—or lowering return expectations of distressed debt investors to 6.5 percent would notably reduce the losses to the banks (charts above). Reducing the expected foreclosure time to 2.5 years, which is admittedly very optimistic, and without changing return expectations could result in some capital relief and unlock new lending (provided there is corresponding demand for new loans), assuming that each new loan is capitalized at a CAR of 16 percent and carries a credit risk weighting of 56 percent.[3] The extent of capital relief would vary significantly across banks owing to the uneven distribution of NPLs and their capital intensity (depending on the relevant credit risk measurement methodology).[5] Potential capital relief and attending lending capacity could be lower if banks face larger haircuts on NPL sales; (ii) do not use all of their freed-up capital for new lending (which also depends on demand for loans); and (iii) do not keep their capitalization unchanged. Moreover, banks that follow the internal ratings-based approach (IRB) for determining credit risk-weights might experience a much smaller capital relief for the disposal of NPLs that are sufficiently provisioned under current accounting standards based on occurred losses (IAS 39).

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[1] The analysis represents an update of the estimates presented in Aiyar and others (2015) based on euro area banks under direct supervision by the ECB, which represent more than 80 percent of the euro area banking sector. However, the results were applied to the total NPL stock of each banking sector in order to determine the approximate amount of aggregate capital relief from NPL disposal. Thus, the numeric result(s) might not fully reflect the impact of the high heterogeneity of coverage ratios and risk mitigation techniques—especially among smaller banks—within the sector.

[2] For comparison, the same analysis was performed for other countries as shown in the last row of the panel chart.

[3] The recent announcement of Italian bank Banca Monte dei Paschi di Siena (MPS) to reduce a significant share of its current stock of impaired assets confirms that valuation haircut implied by this analysis. On July 29, MPS announced a private-sector plan to move off balance sheet €27.7 billion of gross NPLs. This will transfer the worst impaired assets *(sofferenze)* to a special purpose vehicle at a transfer price of about €9.2 billion (or 33 percent of gross book value). The riskiest equity tranche worth €1.6 billion will be retained by MPS, €1.6 billion in mezzanine notes will be purchased by the Atlante Fund (Box 2), and the remaining €6 billion of senior notes will be sold to private investors, once a government guarantee is put in place via the authorities' GACS mechanism that was announced earlier this year. Since the transaction is expected to result in reduction of capital of about €4.8 billion, the announced NPL disposal implies a valuation haircut to net book value of about 34 percent.

[4] Based on more stringent assumptions (using an IRR of 15-25 percent), a recent study by the Bank of Italy (2016) confirms that a two-year reduction in recovery times would reduce the pricing gap by approximately 10 percentage points. In addition, the estimated pricing gap supports findings in a recent survey conducted by the Bank of Italy (Carpinelli and others, 2016) indicating that average recovery rates on *sofferenze* loans are slightly above 40 percent, which implies that Italian banks may have to further shore up loan loss reserves for NPLs.

[5] It is assumed that fully provisioned loans are simply written-off. Hence, capital relief is only generated for partially provisioned NPLs (which represent the overwhelming majority of impaired exposures). This example abstracts from benefits that may be accruing to banks that write off fully provisioned NPLs (including any recoveries, potentially lower funding costs due to a reduction in gross NPLs, and lower market risk due to a reduction in exposure to real estate collateral).

Profitability of New Lending Under Different Scenarios

Current profitability challenges reflect the structural challenges of the Italian banks' business model. Banks devote a large part of their assets to lending to household and firms; among the latter, small and medium-sized enterprises (SMEs) play a more important role than in other countries, which imposes a more rigid cost structure and limits the extent to which banks can seize scale economies. Thus, the lending-based business model causes profitability to be highly cyclical, with banks performing worse in recessions. Conversely, improvements in the growth outlook might change the profitability for Italian banks considerably—and potentially more so than for peers in more heterogeneous financial systems.

A scenario-based assessment of profitability suggests profitable new lending in the near term, but only a significant reduction of NPLs and robust growth would make banks more resilient (Figure A3). A forward-looking perspective reveals how the ongoing modest cyclical recovery will affect the profitability of new lending of the system overall through its beneficial effects on asset quality, focusing again on the supply side under three scenarios (without consideration of feedback effects)—a *baseline scenario* and two adverse scenarios (downside and stagnation). While the *downside scenario* comprises a severe negative shock to growth resulting a cumulative output loss of more than 5 percent over the medium term followed by a dynamic recovery, the *stagnation scenario* halves current growth over a five year forecast horizon. In both adverse scenarios, the change in default risk is the key determinant in the projection of bank profitability.

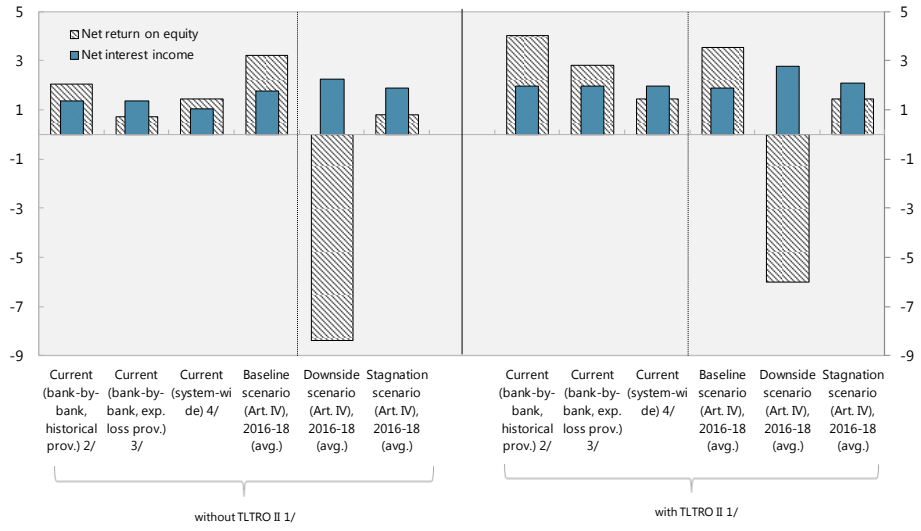
- Results under the *baseline scenario* show that banks would, on average, make profits from new lending over the next five years (even under conservative (expected loss) provisioning). The projected average annual net RoE of 3.2 percent over the next three years would, however, remain far below the pre-crisis average of 13.8 percent. Since these estimates are based on macroeconomic projections before the U.K. referendum on leaving the European Union, spillover effects weighing on both growth and inflation outturns in Italy might result in lower bank profitability over the next three years than these estimates might suggest. While banks' NIMs are likely to decline due to the large positive duration gap under a scenario of prolonged period of negative rates, higher asset prices (due to lower term and credit risk premia) are likely to raise future income and strengthen borrowers' debt servicing capacity, lowering banks' expected provisioning costs and write-off charges NPLs (Jobst and Lin, 2016).

- Under the *downside and stagnation scenarios*, the projected average annual net RoE for the banking sector would decline to –8.4 and 0.8 percent, respectively, over the next three years. Default risk would overwhelm any benefit from risk mitigation over the short and medium terms. Improvements in funding cost through the impact of the ECB's TLTRO II improve RoE estimates by about one-third (but this estimate might be too optimistic given the heterogeneity of the sample and the rising asset encumbrance of Italian banks).

Combining the forward-looking analysis with the conjunctural assessment of profitability underscores the importance of economic recovery and the resolution of legacy costs for Italian banks to overcome current challenges. High provisioning expenses hamper sustainable profitability and the way a healthy banking sector can restore credit growth and support the cyclical recovery, with lower bank profitability inhibiting a timely repair of balance sheets through retained earnings. While the reduction in operating and funding costs (supported by monetary easing) can enhance profitability, the evolution of interest income from new lending will be an important driver of sustainable bank performance going forward (Figure 1).[35]

Figure 1. Estimated Profitability of Italian Banks under Different Assumptions

Italy: Estimated Net Return on Equity from Current Lending and New Lending under Baseline Scenario (with and without funding benefit from TLTRO II) 1/
(percent/percent of total assets)

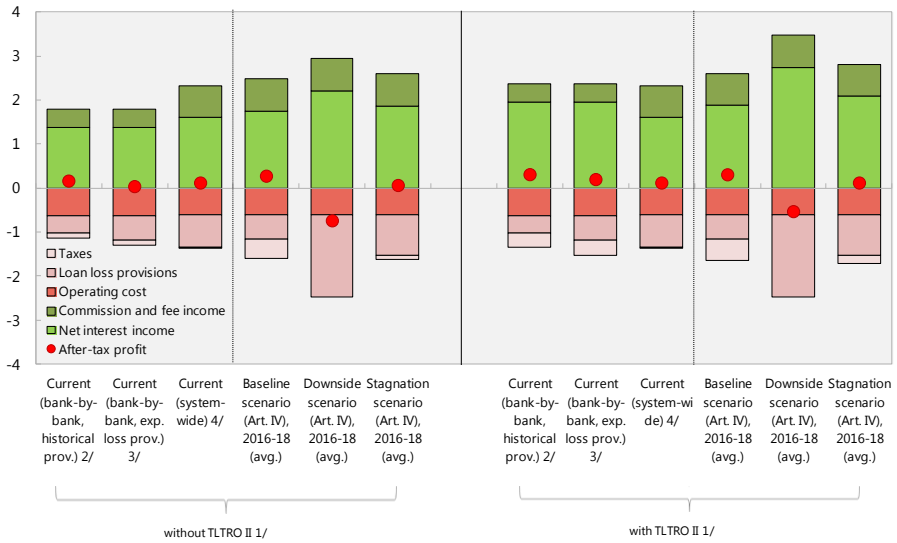


Sources: SNL and IMF staff calculations. Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elasticity of NIMs banks maintain their capital ratio as of end-2015; 2/ end-2015 and historical prov.= backward-looking provisioning (IAS 39); 3/ expected loss provisioning (consistent with IFRS 9); and 4/ based on aggregate data reported by Banca d'Italia for end-2014, projected for 2015 as starting point for the scenario-based analysis.

[35] While consolidation can also play an important role in this, we do not analyze its scope and potential effects.

Figure 1. Estimated Profitability of Italian Banks under Different Assumptions (continued)

Italy: Decomposition of Estimated Net Operating Profits from Current Lending and New Lending under Different Scenarios (with and without funding benefit from TLTRO II) 1/
(percent of total assets)



Sources: SNL and IMF staff calculations. Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elasticity of NIMs banks maintain their capital ratio as of end-2015; 2/ end-2015 and historical prov.= backward-looking provisioning (IAS 39); 3/ expected loss provisioning (consistent with IFRS 9); and 4/ based on aggregate data reported by Banca d'Italia for end-2014, projected for 2015 as starting point for the scenario-based analysis.

IV. CONCLUSION

The results in this paper point to significant heterogeneity among banks in the face of significant cyclical and structural challenges. While the banking sector is somewhat profitable overall, the amount of potential credit expansion required to offset the impact of declining lending spreads is generally constrained by existing capital buffers (together with a lack of sufficient demand). Especially smaller banks are likely to continue struggling to be profitable—even under extremely favorable funding conditions due to the ECB's monetary easing and/or after considering improvements in operational efficiency—not least because profitability of new lending remains too low relative to the high provisioning cost associated with impaired assets in the existing loan book.

Without countervailing policy measures, the combination of high NPLs and low profitability in Italy will continue to weigh on the recovery. Even if demand for credit were to be lifted from its currently subdued levels, banks' capacity and willingness to lend are likely to remain modest, particularly as needed provisioning could continue to exert notable downward pressure on profitability going forward. Thus, the impact of the high cost of risk affecting lending behavior would weigh on the pace of economic recovery. Reducing NPLs significantly might therefore be instrumental to spur lending, especially to SMEs that are more reliant on bank financing. Resolving impaired loans would also encourage corporate restructuring and allow the debt of viable firms to be restructured, while accelerating the winding-down of non-viable firms. However, there is still a significant

pricing gap between the net book value and the market price of NPLs due to a depressed housing market and structural deficiencies that slow the recovery of collateral for distressed assets (Box 1). The lengthy foreclosure process has made it difficult for Italy's banks to sell NPLs because investors value loans by discounting future cash flows from asset recovery (with larger haircuts required the longer the average time for foreclosure) rather than imputing interest payments; this has been amplified by the absence of a developed market for distressed debt providing a benchmark for pricing NPLs. This raises a number of areas in which further policy intervention and building on government initiatives would be needed.

The authorities are taking steps to address structural obstacles to NPL resolution to enhance the resilience of the banking sector. A recently issued decree law aims to reduce the long average foreclosure time by simplifying bankruptcy procedures and speeding up the recovery of collateral, although this is likely to impact only new NPLs and thus would be expected to have its full impact only gradually over time. Shortening the time period for the tax deductibility of write-offs and provisions from five years to just one year increases banks' incentives to provision in a timely fashion (EBA, 2016). In addition to reforms in the areas of insolvency, especially in out-of-court resolution,[36] and bank corporate governance, the establishment of an industry-sponsored backstop fund for the recapitalization of troubled banks and for investment in distressed assets (Atlante) and the agreement of the Italian authorities with the European Commission on a scheme for NPL securitization (GACS) can help overcome some of the obstacles to resolving current asset quality challenges (Box 2).[37]

Reducing NPLs noticeably over the medium term and further improving operating efficiency can help raise bank profitability, stimulate lending, and improve banks' resilience. Supervisors should engage banks to provide credible plans to reduce significantly the NPL overhang over the medium term and closely collaborate with the ECB's NPL Task Force to incentivize NPL resolution. Other complementary measures can support these efforts and enhance the resilience of the banking sector to shocks. Enhanced supervision, further advancing insolvency and enforcement reforms (beyond recent policy measures), and the facilitation of distressed debt markets will help tackle the high level of impaired assets in the system. In particular, the insolvency framework for corporates and households should be improved further. Lengthy court procedures should be shortened, and out-of-court arrangements encouraged as an alternative. Such reforms would shorten the time of asset recovery by creditors and make it easier to restructure loans, reducing corporate and household debt burdens and facilitate de-leveraging.

The weak underlying profitability points to the continuing need for a broad restructuring and consolidation strategy. Building on recent reforms of large cooperative

[36] See Carcea and others (2015) on the important role of efficient pre-insolvency frameworks in supporting corporate and household deleveraging.

[37] In addition, the ECB-Banking Supervision's Task Force on NPLs has concluded its data collection effort and is expected to provide detailed guidance on the asset impairment challenges of directly supervised banks, including Italian institutions. Furthermore, the Bank of Italy has recently launched a new periodic survey to gather detailed information on the stock of bad debts, the related collateral and guarantees, and recovery procedures.

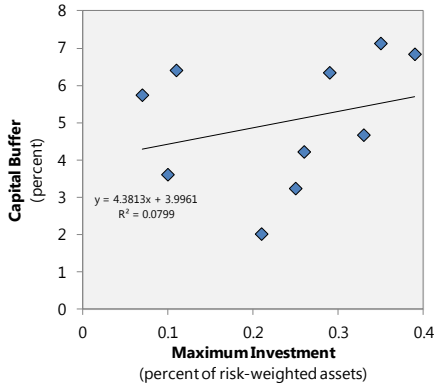
and mutual banks, the viability of banks not subject to the ECB's Comprehensive Assessment should be examined, with follow-up actions in line with regulatory requirements. Since growth and inflation outturns remain subdued, structural reforms are needed to invigorate the "self-healing powers" of the banking system—such as facilitating bank consolidation and paving the way for cost-cutting; banks' business models need to become more efficient through streamlining branch networks and exploiting other synergies realized through consolidation. However, only banks that are already profitable (or have a reasonable chance of becoming profitable over the near term would be able to absorb the cost of reforms and build the necessary capital buffers to sustain lending suggesting a realistic assessment of viability.

Box 2. Italian NPLs: Recent Government Initiatives

The Italian authorities recently launched a mechanism, called GACS, to guarantee investment-grade NPL securitization transactions; while private sector actors created an investment fund, called Atlante, to backstop capital issuance of smaller (distressed) banks and possibly buy junior tranches of NPL securitization transactions. In addition, the authorities also adopted a series of measures aimed at expediting foreclosures on NPLs to corporate and small and medium-sized enterprises (SMEs).

Garanzia Cartolarizzazione Sofferenze (GACS). In late January 2016, the Italian Ministry of Economy and Finance agreed with the European Commission on a mechanism for government guarantees to the securitization of impaired assets. The mechanism provides government guarantees for the securitization of impaired assets. The authorities had initially sought to create a system-wide asset management company (AMC), but were unable to overcome concerns related to EU State aid restrictions on public sector support to banks that are not in resolution or restructuring outside stress periods. Under GACS, banks can sell their impaired assets at market values to special purpose vehicles for their eventual sale to markets. They can buy public guarantees for the senior tranches of securities issued against these impaired assets, as long as these tranches are rated as investment grade. Since the guarantees are priced at market terms based on expected losses, they do not imply any public support subject to EC approval under EU State aid regulations. The full impact of the agreed mechanism is unclear at this moment. Market participants (JP Morgan, 2016; Deutsche Bank, 2016) expect it to have a positive though modest impact. This is because the transfer price for securitizing NPLs with government guarantees via GACS does not seem sufficient to close the pricing gap between the market value and their carrying value in banks' books (market participants estimate the pricing gap to be around 20 percent, while GACS is expected to close this gap by around 2–3 percentage points only). This highlights the importance of some of the additional reforms in the insolvency framework and other economic measures (Aiyar and others, 2015).

Italy: Contribution to Atlas Fund and Capital Buffer 1/
(percent), end-March 2016



Sources: SNL and IMF staff calculations. Note: 1/ Capital buffer is approximated as the difference between CAR and SREP.

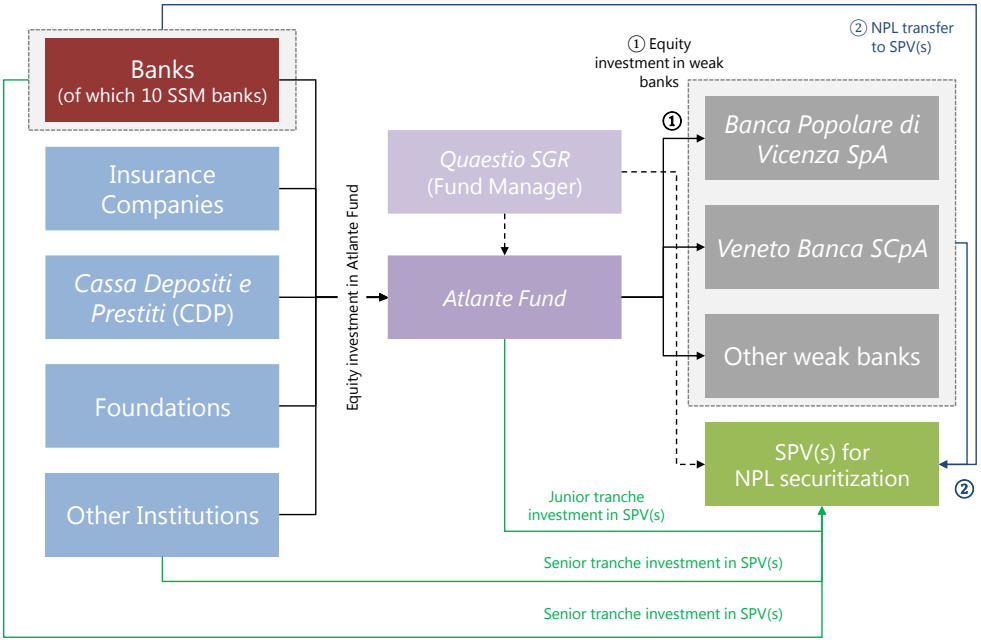
Overview of Contributions to the Atlas Fund

	Maximum investment				
		In percent of			Cost of
Sample firms	*In EUR mln.*	*RWAs*	CAR	SREP 1/	funds
Intesa Sanpaolo SpA	1,000	0.35	16.6	9.50	1.0
UniCredit SpA	1,000	0.26	14.2	10.00	1.0
Unione di Banche Italiane SpA	200	0.33	13.9	9.25	0.8
Banca Popolare dell'Emilia Romagna SC	100	0.25	12.5	9.25	0.8
Banca Popolare di Milano Scarl	100	0.29	15.4	9.00	1.2
Credito Valtellinese Società Cooperativa	60	0.39	15.1	8.30	0.9
Banca Monte dei Paschi di Siena SpA	50	0.07	16.0	10.20	1.2
Banca Popolare di Sondrio SCpA	50	0.21	11.3	9.25	0.8
Banco Popolare Società Cooperativa	50	0.11	15.9	9.50	1.1
Banca Carige SpA	20	0.1	14.9	11.25	1.3
Banca Popolare di Vicenza SpA	—	—	8.1	—	1.2
Credito Emiliano SpA	—	—	14.8	—	0.6
Iccrea Holding SpA	—	—	13.0	—	0.8
Mediobanca	—	—	16.1	—	1.6
Veneto Banca SCpA	—	—	9.1	—	1.4
Subtotal	**2,630**				
Non-sample firms					
Cassa Depositi e Prestiti (CDP)	500				
Societa per La Gestione di Attivita S.G.A.	500				
Poste Vita	300				
Generali	200				
Allianz	100				
Other firms (not confirmed)	1,900				
Total	**6,000**				

Source: Autonomous Research, Bloomberg L.P., ECB, Moody's Investor Service, and IMF staff calculations. Note: CAR=capital adequacy ratio. 1/ The Supervisory Review and Evaluation process (SREP) refers to bank-specific capital requirement defined by the ECB as part of the SSM. UniCredit's SREP figure includes a capital buffer of 25 bps as global, systemically important bank (G-SIB).

Box 2. Italian NPLs: Recent Government Initiatives (continued)

Atlante Fund. In April 2016, the largest Italian banks, nonbank financial institutions and banking foundations, with minority participation (8 percent) by the mostly publicly-owned Cassa Depositi e Prestiti (CDP) created a fund to backstop ongoing banks' capital increases. That is, the fund acts as a buyer of last resort, and could also purchase non-investment grade tranches of NPL securitization transactions, while senior tranches might be more easily sold to the other institutional investors. The fund can also invest in real estate assets. The fund managed to collect €4.25 billion by April 29, 2016. Unicredit SpA and Intesa Sanpaolo Spa disclosed that they would each take a €1 billion stake in the fund, the largest among the participating banks (see table below). Note that the capital impact of contributions scales to the available capital buffer after application of SREP requirements (see chart). Atlante invested €1.5 billion of its resources in the capital raising by Banco Popolare di Vicenza, taking over 99 percent stake in the bank in May 2016. As a result, available resources in the Atlante fund dropped to €2.7 billion. Banks are requested to deduct the amount invested in Atlante from regulatory capital; however, the impact on capital ratios is estimated to be modest.



Enhanced debt enforcement. On April 29, the Italian authorities adopted a series of measures aimed at expediting foreclosures on NPLs to corporate and smaller and medium-sized enterprises (SMEs). The three main changes to the current foreclosure process comprise (i) a new type of loan contract that will allow banks to sell real estate collateral even if borrowers are subject to insolvency proceedings (so creditors do no longer have to wait for the completion of a lengthy insolvency process before repossessing collateral); (ii) creditors and borrowers can renegotiate existing loan agreements so that this new provision applies to outstanding loans; and (iii) bankruptcy hearings can be done remotely via the internet. The government estimates that it will take less than a year to collect collateral under the new framework.

Appendix

Box A1. Calculating Forward-Looking Provisions Based on Risk-Weighted Assets

We estimate forward-looking (expected loss) provisioning *LLP** by aligning loan loss provisions (relative to operating income) to the average risk density of the current loan portfolio, so that

$$\frac{loan\ loss\ provisions}{net\ operating\ income} = (0.00092 \times RWA^2 - 0.06 \times RWA + 1.662) \times \frac{loss\ given\ default}{100}.$$

For the historical analysis of provisioning rates (and as benchmark for reported loan loss reserves), we obtain the RWA of performing credit exposures as of end-June 2015 from the recent EBA Transparency Exercise (with the exception of Banca Monte dei Paschi di Siena SpA and Banco Popolare Società Cooperativa for which data from the SNL database were used). For the forward-looking analysis under different macroeconomic scenarios, we calculate the RWAs of the aggregate loan portfolio of each bank for a given probability of default (PD) using the credit risk assessment for loans under the internal ratings-based approach (IRB) of the Basel III framework (BCBS, 2005) based on[1]

$$RWA = K \times 12.5 \times EAD$$

where

$$K = LGD \times \left[N\left(\sqrt{\frac{1}{1-R}} \times G(PD) + \sqrt{\frac{R}{1-R}} \times G(0.999)\right) - PD\right] \times \frac{1+(M-2.5)b}{1-1.5b} \qquad (1)$$

$$b = \left(0.11852 - 0.05478 \times ln(PD)\right)^2$$

and

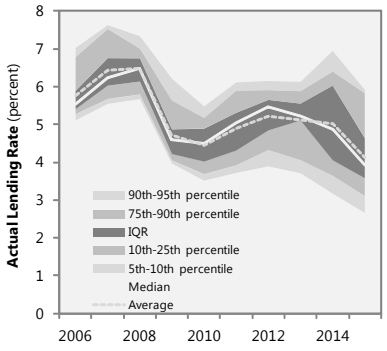
$$R = AVC \times \left(0.12 \times \frac{1-e^{-50*PD}}{1-e^{-50}} + 0.24 \times \left(1 - \frac{1-e^{-50*PD}}{1-e^{-50}}\right)\right).$$

N(•) and G(•) denote the cumulative distribution function and the quantile function of the standard normal distribution, respectively; LGD is the loss given default; EAD is the exposure at default; AVC is the asset value correlation, takes the value AVC = 1.25 if the company is a large regulated financial institution (total asset equal or greater to US$100 billion) or an unregulated financial institution regardless of size; else AVC=1. For our analysis, we set AVC=1 and LGD=45 percent. For simplicity (and due to data constraints regarding the weighted-average maturity of the loan portfolio), we ignore the maturity adjustment in the specification above by removing the term $\frac{1+(M-2.5)b}{1-1.5b}$ (which transforms the formula in equation (1) to that used for the assessment of residential mortgage exposures but retains the AVC term for the determination of the correction factor *R*).

[1] Owing to the absence of granular data on the maturity of the loan portfolio, this simplified approach was chosen (without loss of generality).

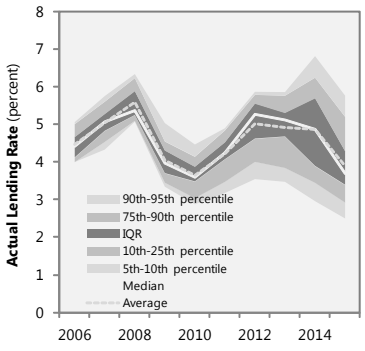
Figure A1. Italy: Estimated Actual and Break-even Lending Rates

Italy: Dispersion of Breakeven Lending Rate of Sample Banks (Expected Loss Provisioning)
(percent) 1/



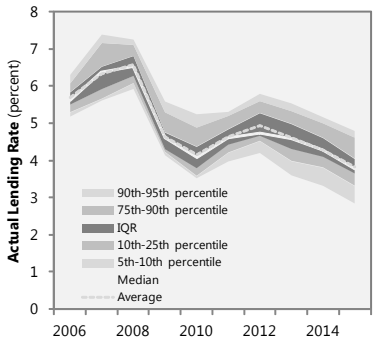
Sources: Haver, SNL and IMF staff calculations. Note: 1/ expected loss provisions derived from risk-weighted assets (RWAs) as per methodology described in Annex, Box A1.

Italy: Dispersion of Breakeven Lending Rate of Sample Banks (Reported Provisioning)
(percent)



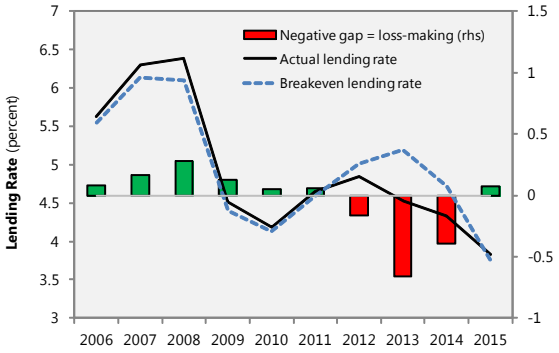
Sources: Haver, SNL and IMF staff calculations.

Italy: Dispersion of Actual Lending Rate of Sample Banks
(percent)



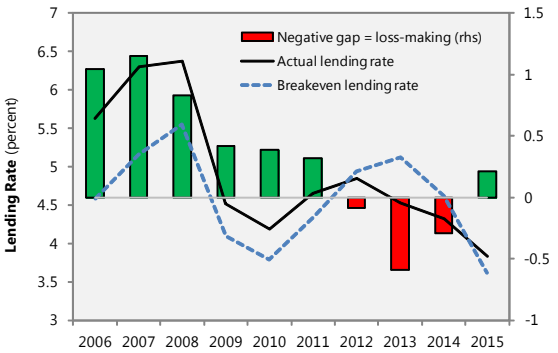
Sources: Haver, SNL and IMF staff calculations..

Italy: Difference between Actual and Breakeven Lending Rates for Sample Banks (Expected Loss Provisioning)
(percent, weighted average) 1/



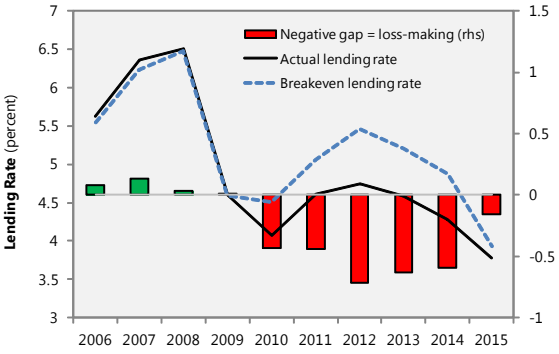
Sources: Haver, SNL and IMF staff calculations. Note: 1/ weighed by total loans (as of end-2015); expected loss provisions derived from risk-weighted assets (RWAs) as per methodology described in Annex, Box A1.

Italy: Difference between Actual and Breakeven Lending Rates for Sample Banks (Reported Provisioning)
(percent, weighted average) 1/



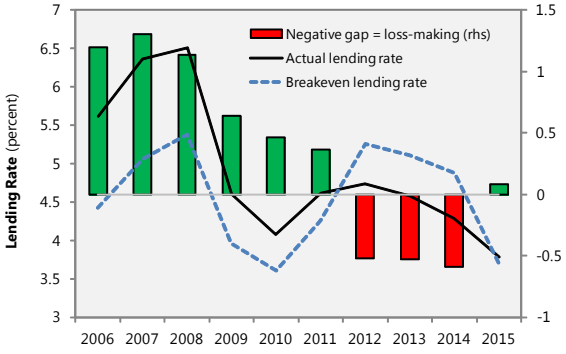
Sources: Haver, SNL and IMF staff calculations. Note: 1/ weighted by total loans (end-2015).

Italy: Difference between Actual and Breakeven Lending Rates for Sample Banks (Expected Loss Provisioning)
(percent, median) 1/



Sources: Haver, SNL and IMF staff calculations. Note: 1/ expected loss provisions derived from risk-weighted assets (RWAs) as per methodology described in Annex, Box A1.

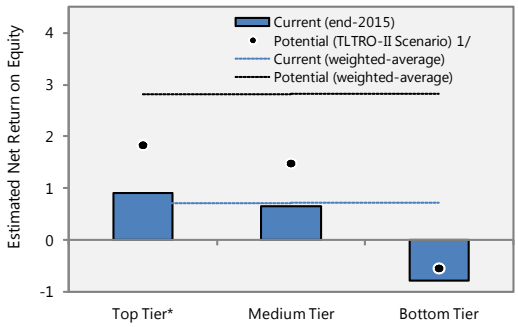
Italy: Difference between Actual and Breakeven Lending Rates for Sample Banks (Reported Provisioning)
(percent, median)



Sources: Haver, SNL and IMF staff calculations.

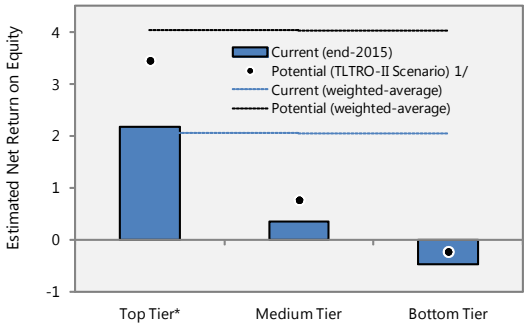
Figure A2. Italy: Profitability under Reported and Forward-looking Provisioning

Italy: Estimated Net Return on Equity of Current Lending under Expected Loss Provisioning (with and without funding benefit due to TLTRO II)
(percent), end-2015



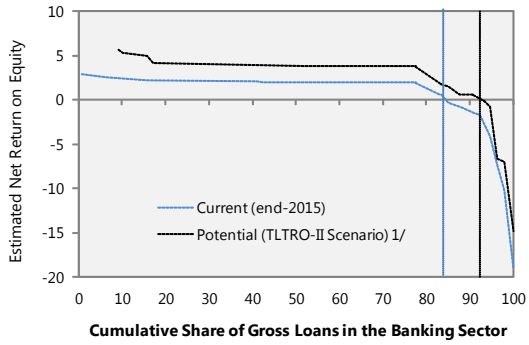
Sources: SNL and IMF staff calculations. Note: */ The sample was split into three tiers (of 5 banks each), ordered by RoE and weighted by total loans; 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elastivcity of NIMs banks maintain their capital ratio as of end-2015.

Italy: Estimated Net Return on Equity of Current Lending under Reported Provisioning (with and without funding benefit due to TLTRO II)
(percent), end-2015



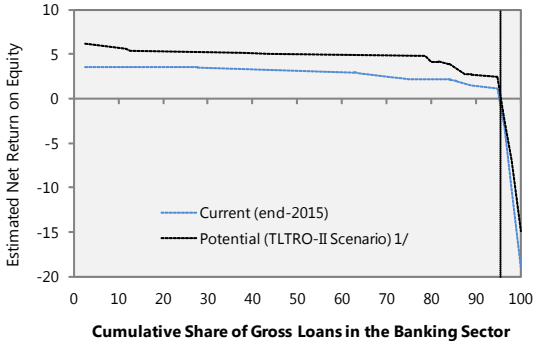
Sources: SNL and IMF staff calculations. Note: */ The sample was split into three tiers (of 5 banks each), ordered by RoE and weighted by total loans; 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elastivcity of NIMs banks maintain their capital ratio as of end-2015.

Italy: Estimated Net Return on Equity of Current Lending under Expected Loss Provisioning (with and without funding benefit due to TLTRO II)
(percent), end-2015 1/



Sources: SNL and IMF staff calculations. Note: Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elastivcity of NIMs banks maintain their capital ratio as of end-2015.

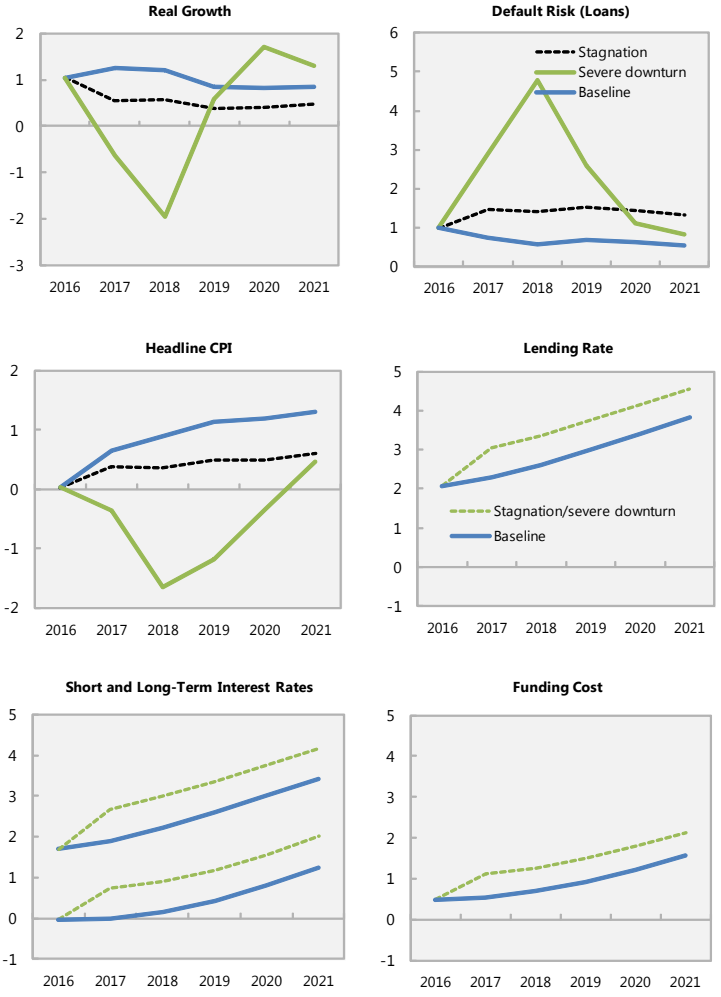
Italy: Estimated Net Return on Equity of Current Lending under Reported Provisioning (with and without funding benefit due to TLTRO II)
(percent), end-2015 1/



Sources: SNL and IMF staff calculations. Note: 1/ Funding rate at MRO (0%) via TLTRO II (and full rollover of existing TLTRO); any new deposits at 0%; lending rates adjust according to marginal policy rate (since end-2015: -20 bps) and expected pass-through from term spread compression at historical elastivcity of NIMs banks maintain their capital ratio as of end-2015.

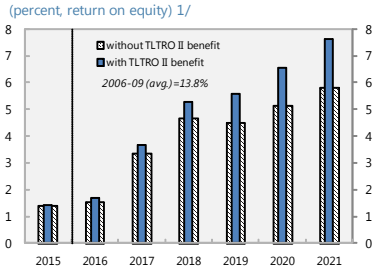
Figure A3. Italy: Aggregate Profitability under Different Macro Scenarios

Italy: Macro Scenario Assumptions
(percent), end-2015



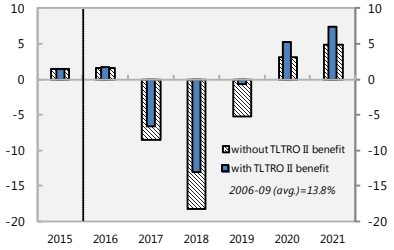
Sources: IMF staff calculations.

Aggregate Profitability from New Lending with Expected Loss Provisioning under the Baseline Scenario
(percent, return on equity) 1/



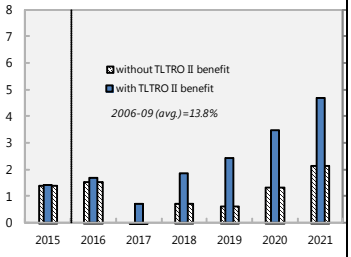
Sources: Bloomberg L.P., EBA Transparency Exercise (2015), ECB, SNL, and IMF staff calculations. Note: 1/ The lending rate, funding costs and the provisioning rate are calibrated to the baseline scenario; TLTRO II is assumed to lower funding costs to 0% and NIMs are reduced by 11 bps due to the recent ECB easing measures.

Aggregate Profitability from New Lending with Expected Loss Provisioning under the Downside Scenario
(percent, return on equity) 1/



Sources: Bloomberg L.P., EBA Transparency Exercise (2015), ECB, SNL, and IMF staff calculations. Note: 1/ The lending rate, funding costs and the provisioning rate are calibrated to the adverse scenario; TLTRO II is assumed to lower funding costs to 0% and NIMs are reduced by 11 bps due to the recent ECB easing measures.

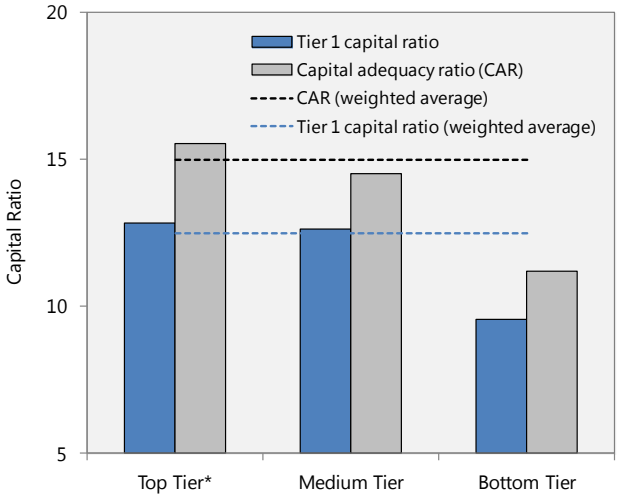
Aggregate Profitability from New Lending with Expected Loss Provisioning under the Stagnation Scenario
(percent, return on equity) 1/



Sources: Bloomberg L.P., EBA Transparency Exercise (2015), ECB, SNL, and IMF staff calculations. Note: 1/ The lending rate, funding costs and the provisioning rate are calibrated to the adverse scenario; TLTRO II is assumed to lower funding costs to 0% and NIMs are reduced by 11 bps due to the recent ECB easing measures.

Figure A4. Italy: Bank Capital Ratios and Profitability

Italy: Bank Capitalization
(percent), end-2015



Sources: SNL and IMF staff calculations. Note: */ The sample was split into three tiers (of 5 banks each), ordered by the capital adequacy ratio (CAR), weighted by total loans.

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