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The Long-Term Debt Proposal and Bank Profitability

Haelim Anderson, Francisco Covas and Felipe Rosa | Dec. 7, 2023

The federal banking agencies have proposed a rule that would mandate U.S. banking organizations with $100 billion or more in total assets that are not GSIBs to issue long-term debt (LTD). To calculate the costs of the proposal, the agencies used two methods: "the incremental-shortfall approach," which accounts for existing outstanding LTD towards the requirement; and the "zero-baseline approach," which calculates the costs based on the full estimated amount of debt issuance, without considering existing debt outstanding.

Using the incremental-shortfall approach, the agencies estimated a $70-billion shortfall between the existing LTD and the amount required under the proposed rule: $20 billion for Category II and III banks, and $50 billion for Category IV banks. Based on the requirement and shortfall estimates, the agencies evaluated the effect of long-term debt requirements on bank funding costs arising from the shift in their funding structures. They found that these shortfalls could result in an increase in pre-tax funding costs of $1.5 billion: $400 million for Category II and III banks, and $1.1 billion for Category IV banks. This rise in pre-tax funding costs is expected to cause a permanent decrease of 3 basis points in aggregate net interest margins (NIMs): 2 basis points for Category II-III banks and 5 basis points for Category IV banks.[1]

In this post, we expand the cost analysis in the NPR by incorporating five other factors that would significantly increase the estimated impact of the LTD proposal on bank funding costs. The **first factor** examines the effects of complying with the requirement at the subsidiary bank level, particularly the effects when a parent company provides funding to its subsidiary bank in the form of LTD. The **second factor** considers the necessity of replenishing the liquidity coverage ratio at the holding-company level due to the change of intercompany funding arrangements.[2] The **third factor** addresses the possible rise in risk-weighted assets stemming from the Basel proposal, which would, in turn, raise the LTD requirements. The **fourth factor** incorporates the need for banks to maintain management buffers to avoid dipping below minimum requirements due to business-as-usual fluctuations in balance-sheet size or composition as well as during market downturns, especially when banks need to refinance debt approaching maturity. And finally, the **fifth factor** uses individual bond spreads instead of CDS spreads to avoid an underestimation of bank funding costs as a result of credit and liquidity risks.

The first four factors would lead to an increase in the quantity of the debt required, whereas the last factor would raise the funding cost for each dollar issued. Overall, funding costs would rise due to the higher amount of required debt issuance and the increased funding cost per dollar of issuance. Moreover, during times of market stress, bond spreads for Category IV banks tend to rise more sharply than those of Category II and III banks, leading to significantly increased costs for these firms when they access the bond market in such periods.

[1] The banking agencies also offer the cost estimates when existing long-term debt is not counted toward meeting the requirement. Under this scenario, the agencies estimate that the proposal would increase funding costs by approximately $5.6 billion, representing a permanent eleven-basis point decline in aggregate NIMs.

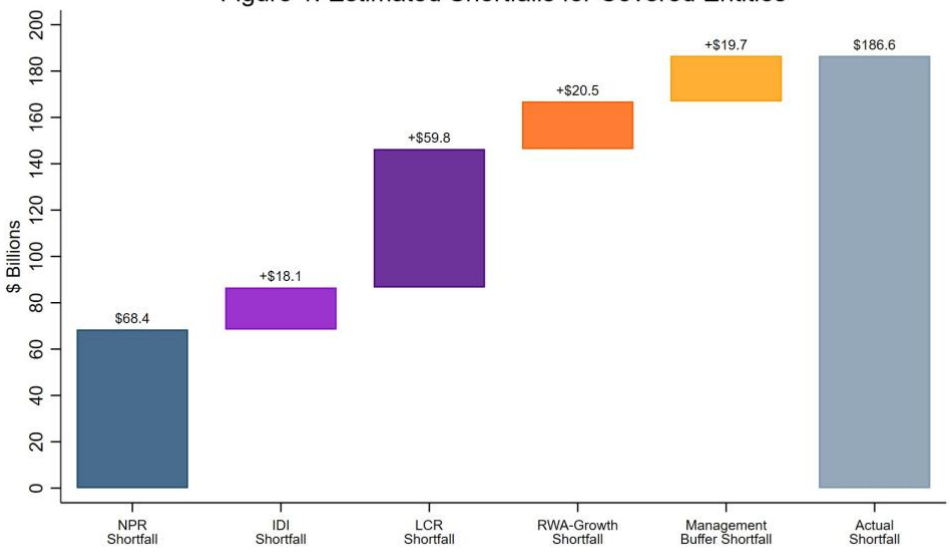
[2] See Haelim Anderson, Francisco Covas, and Felipe Rosa, "The Long-Term Debt Shortfall and the Liquidity Coverage Ratio," (October 23, 2023), available at https://bpi.com/the-long-term-debt-shortfall-and-the-liquidity-coverage-ratio/

In our previous post, we demonstrated that the failure to account for the shortfall at the bank-subsidiary level and the effects on the bank holding company's liquidity coverage ratio (LCR) led to a massive underestimation of the LTD shortfall. Accounting for the LCR effects at the holding-company level would significantly increase the overall shortfall because banks would need to issue double the LTD projected by the banking agencies. Although the other factors meaningfully contribute to the agencies' underestimation of the LTD shortfall, the need to restore the LCR remains the most significant contributor to the increase in overall banking funding costs and decrease in profitability.

LTD Requirements and Estimated Shortfalls

Figure 1 shows the shortfall for Category II–IV banks. Based on the proposal's assumptions (that is, without accounting for the other factors we will discuss), we estimate a shortfall of $68.4 billion for Category II–IV banks. This figure is close to the agencies' estimated shortfall of $70 billion. The shortfall for Category II–IV banks rises by $18.1 billion due to shortfalls at the subsidiary-bank level.[3] This shortfall is further increased by $59.8 billion to restore the level of the LCR at the bank holding-company level, due to adjustments in intercompany funding arrangements. Moreover, an anticipated average 10-percent increase in risk-weighted assets, as contemplated by the agencies' impact analysis in the Basel III Endgame proposal, amplifies the shortfall by another $20.5 billion. If banks also establish a buffer of LTD over the minimum requirements to manage day-to-day balance-sheet fluctuations and refinancing risk, this will translate into a further increase in LTD of $19.7 billion.[4]

Figure 1: Estimated Shortfalls for Covered Entities



Source: Bloomberg, FR Y-9C, FR Y-9LP, FFIEC 101, NIC, Call Report.

[3] In our previous post, we showed why bank subsidiaries may have shortfalls. See Haelim Anderson, Francisco Covas, and Felipe Rosa, "The Long-Term Debt Shortfall and the Liquidity Coverage Ratio," (October 23, 2023), available at https://bpi.com/the-long-term-debt-shortfall-and-the-liquidity-coverage-ratio/

[4] In our analysis, we focus on the management buffers needed to handle refinancing risk related to outstanding eligible long-term debt. We specifically estimate the buffers each bank should maintain to comfortably navigate a 6-month period while remaining in compliance, without the need to issue new LTD. This estimation is derived from the ratio of the bank's amount of outstanding LTD to the bank's weighted average maturity. Additionally, we adjust the calculation by multiplying the denominator by 4, to consider the entire maturity of the debt and the 6-month period. It is likely that banks with lower levels of debt outstanding will prefer to maintain an LTD buffer exceeding 6 months.

When taking these factors into account in the cost estimates of the LTD proposal, the projected total shortfall for Category II–IV banks is expected to reach $186.6 billion. This figure is approximately 2.7 times greater than the initially estimated $70 billion shortfall under the incremental shortfall approach. While the market is likely capable of absorbing the newly issued debt, it might come at a significantly higher cost, particularly in terms of increased bond spreads.

The Use of CDS Spreads Understates the Increase in Bank-Funding Costs

The agencies estimate the funding cost spread as the difference between yields on five-year debt and the post-2008 average of the national non-jumbo three-month CD rate. To calculate yields on five-year debt for each firm, the agencies add the post-2008 averages of the five-year senior CDS spread referencing the individual bank and the five-year Treasury yield. However, CDS pricing data is available for only six entities among the 20 consolidated entities covered in the proposal. As a result, the agencies use the average of a basket that includes six single-name CDS spreads and the single-name CDS spreads for GSIBs for the remaining 14 entities that do not have individual CDS pricing data.

In contrast, our analysis utilizes a more comprehensive dataset, comprising individual bonds-credit spreads, to improve the accuracy and detail of credit-cost estimates. We estimate the funding credit cost for individual banks by constructing a covered-entity-specific bond credit spread index covering the post-2008 period for 17 of the 20 covered entities in the scope of applicability of the proposal.[5] For the three banks lacking a sufficient time-series history of long-term debt outstanding, we utilize the arithmetic average of credit spread indices corresponding to the relevant bank category. These indices include bonds with a remaining tenor of four to six years and cover both the holding company and the bank subsidiary.[6]

LTD Requirements, Bank Funding Costs and Profitability

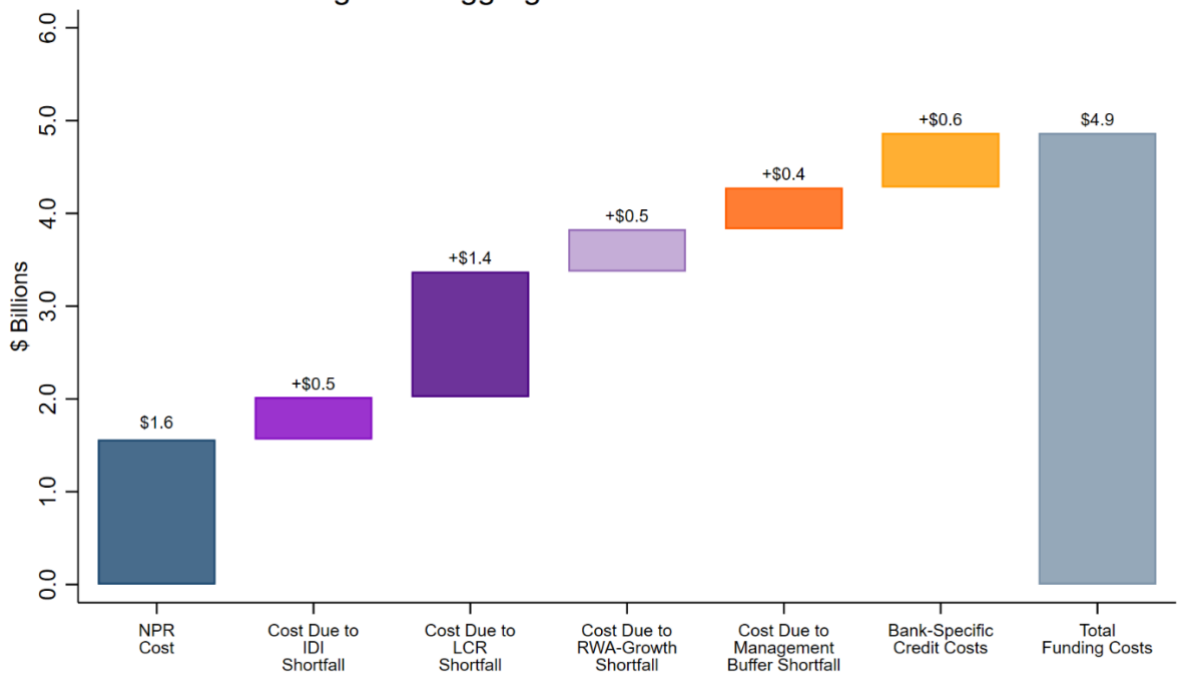
Based on estimates for LTD requirements, shortfalls, and spreads, we have calculated the pre-tax funding costs for Category II–IV banks following the implementation of these requirements using the incremental-shortfall approach. As shown in Figure 2, pre-tax funding costs are estimated to increase by $0.5 billion due to the shortfall incurred by meeting the debt requirement at the bank-subsidiary level. The funding costs increase further by $1.4 billion to meet the LCR at the bank holding-company level. In addition, increases in risk-weighted assets and extra issuance for management buffers add nearly $1 billion to bank funding costs. Moreover, by refining the measure of funding cost per dollar of issuance using a more precise measure of credit spreads for each bank, bank funding costs rise by an additional $0.6 billion.

Taking all these factors into account, the total bank funding costs for Category II–IV banks are projected to reach $4.9 billion, three times the proposal's estimated costs of $1.6 billion.

[5] Specifically, each index is a bond-amount-outstanding-weighted average of the z-spread of every legacy-like bond issued by the covered entity that is outstanding with a remaining tenor of 4 to 6 years as of each date in the post-2008 period.

[6] For calculating the remaining maturity of each individual bond, we use the earliest of (1) the bond's scheduled maturity date and (2) the earliest date on which the bond is callable at its par value, if any. In addition, we remove a bond from the set of index constituent bonds on the earliest date on which the issuer expresses interest in the bond, through mechanisms such as an exchange, tender offer, consent solicitation, or open market purchase, among others.

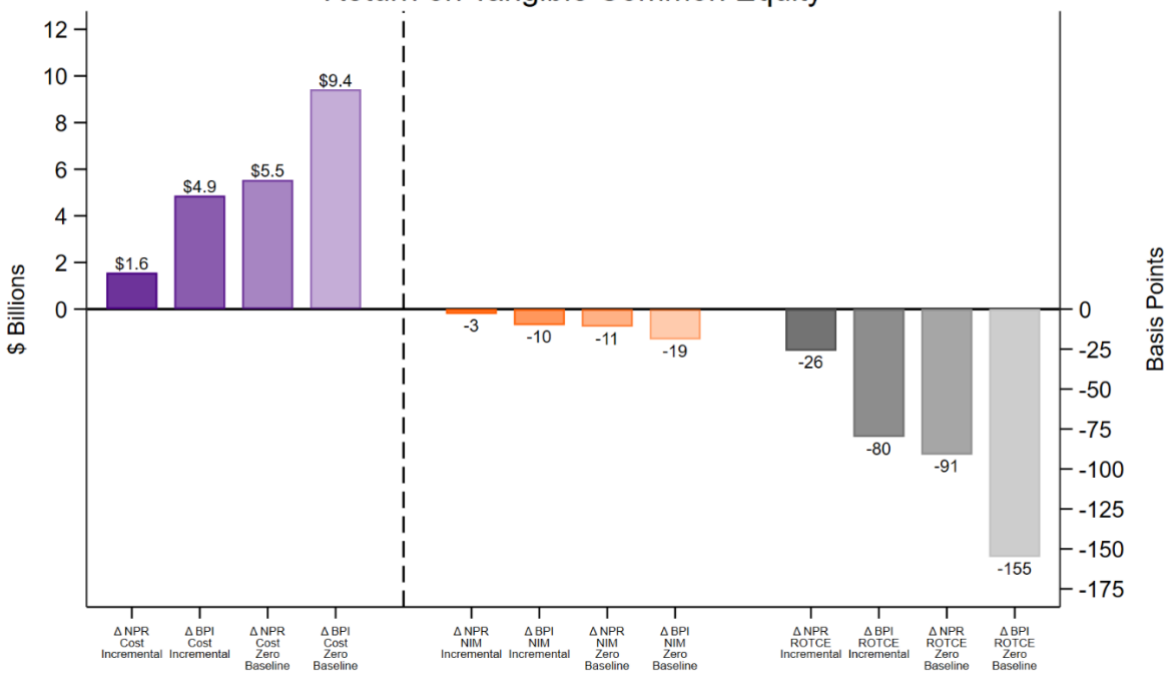
Figure 2: Aggregate Cost for Covered Entities



Source: Bloomberg, FR Y-9C, FR Y-9LP, FFIEC 101, NIC, Call Report.

Next, we estimate the impact of LTD requirements on bank profitability. Figure 3 presents estimates of pre-tax funding costs, net interest margins (NIMs), and the return on tangible common equity (ROTCE) using both the incremental-shortfall approach and the zero-baseline approach. The agencies primarily use NIMs to evaluate the impact of LTD on bank profitability. They estimate that an increase in pre-tax funding costs would reduce aggregate NIMs by 3 basis points under the incremental-shortfall approach, and by 11 basis points under the zero-baseline approach. In contrast, our estimates indicate a significantly larger decrease in NIMs—10 basis points under the incremental-shortfall approach and 19 basis points under the zero-baseline approach. As a result, the decline in NIMs is three times greater under the incremental approach than initially projected by the agencies.

Figure 3: Net Interest Margins and Return on Tangible Common Equity



Source: FR Y-9C, FR Y-9LP, FFIEC 101, NIC, Call Report, FRED, Bloomberg.

While the proposal does not consider it, we have estimated the impact of the LTD proposal on ROTCE. This metric is commonly used by investors and therefore offers a relevant benchmark to gauge the effects of the LTD proposal. According to the proposal's assumptions, the LTD requirement would result in a 26-basis-point reduction in ROTCE under the incremental-shortfall approach and a 91-basis-point reduction under the zero-baseline approach. However, after incorporating the factors the agencies did not account for, our estimates indicate a decrease in ROTCE of 80 basis points under the incremental-shortfall approach and 155 basis points under the zero-baseline approach. As a result, the effect of the proposal on bank profitability could be significantly higher than suggested by the NIM analysis performed by the agencies.

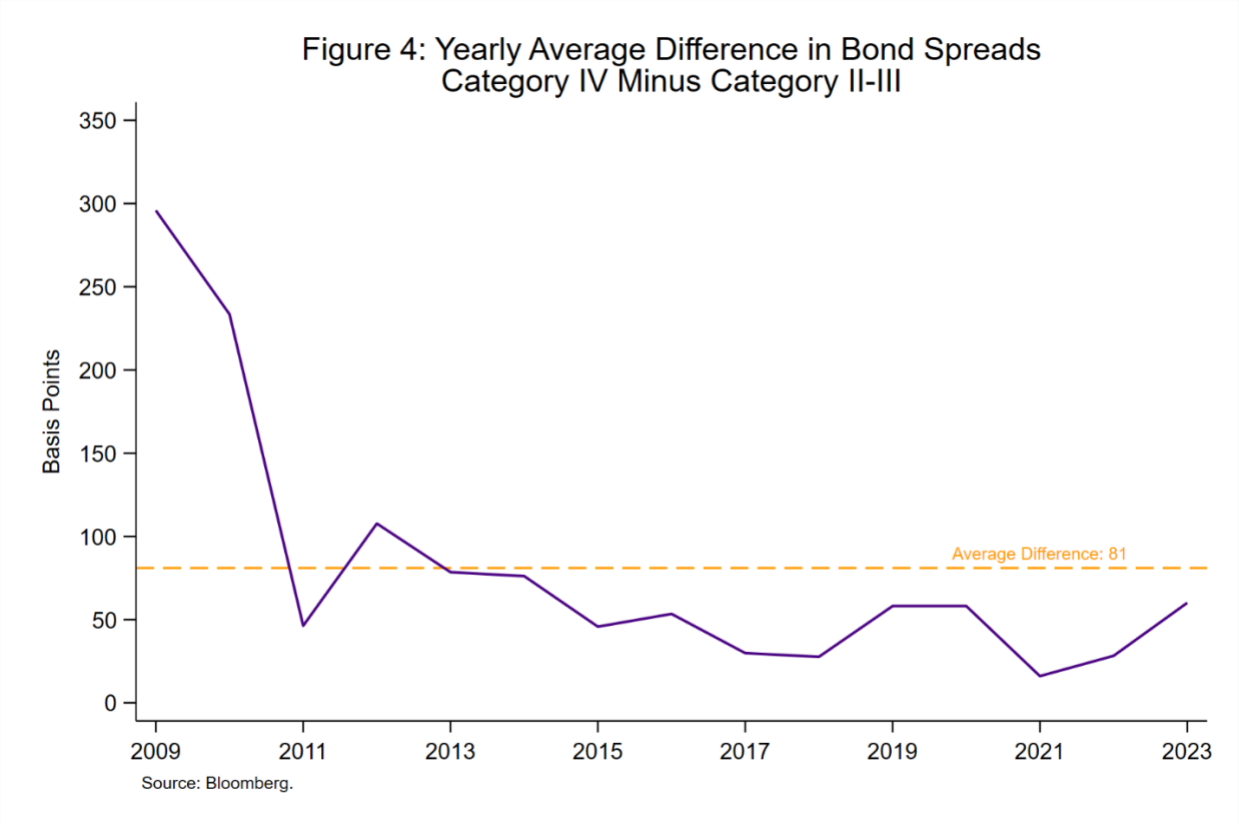
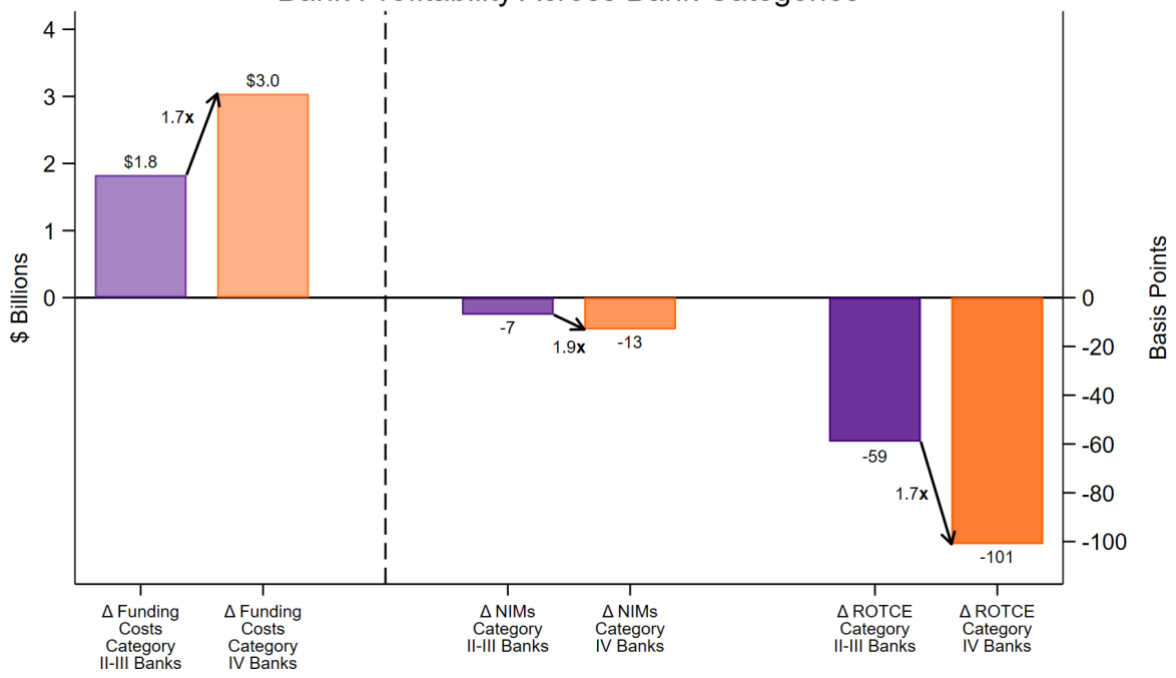


Figure 4 plots the difference in bond spreads between Category II-III banks and Category IV banks. On average, investors demand a spread that is 81 basis points higher from Category IV firms compared to Category II and III firms. Moreover, during times of market stress, bond spreads for Category IV banks tend to rise more sharply than those of Category II and III banks, leading to significantly increased costs for these firms when they access the bond market in such periods.

Higher bond spreads result in elevated funding costs and reduced profitability. Figure 5 demonstrates how the LTD proposal impacts bank funding costs and profitability, comparing Category II and III banks with Category IV banks. The implementation of the LTD proposal is anticipated to notably increase funding costs, especially for Category IV banking organizations, primarily due to the higher costs incurred per dollar of debt issued. Category II and III banks are facing a long-term debt shortfall of $83 billion, while the shortfall for Category IV banks is $104 billion. Overall, the LTD requirement is expected to escalate pre-tax annual funding costs by $3.0 billion for Category IV banking organizations, a more significant increase compared to the $1.8 billion for Category II and III organizations, when evaluated using the incremental shortfall approach.

Figure 5: Effect of Proposal on Bank Funding Costs and Bank Profitability Across Bank Categories



Source: FR Y-9C, FR Y-9LP, FFIEC 101, NIC, Call Report, FRED, Bloomberg.

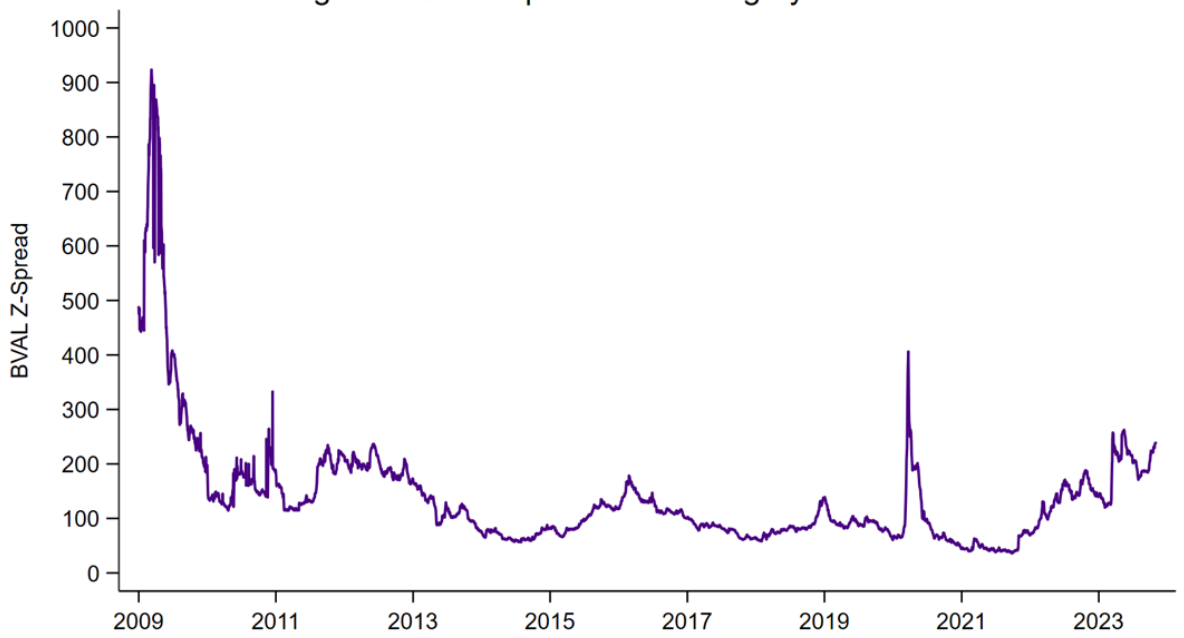
The projected increase in pre-tax annual funding costs would reduce the profitability of Category IV banking organizations considerably more than that of Category II and III banks. Our analysis indicates that the implementation of LTD requirements would reduce NIMs by approximately 7 basis points for Category II-III banking organizations and by 12 basis points for Category IV banks. Furthermore, ROTCE is expected to fall by 59 basis points for Category II and III banking organizations and by a substantial 101 basis points for Category IV banks.

Fluctuations in Bond Spreads Over Business Cycles

Figure 6 illustrates the variability in bond spreads throughout business cycles, indicating that using an average of credit spreads from the post-2008 period could yield an imprecise estimate of bank funding costs. Therefore, to achieve a more accurate calculation, we have computed the minimum and maximum levels of pre-tax bank funding costs for both the incremental-shortfall and zero-baseline approaches. We examined bond spreads at their lowest and highest points and provided a range for pre-tax bank funding costs based on individual bank bond spreads.[7]

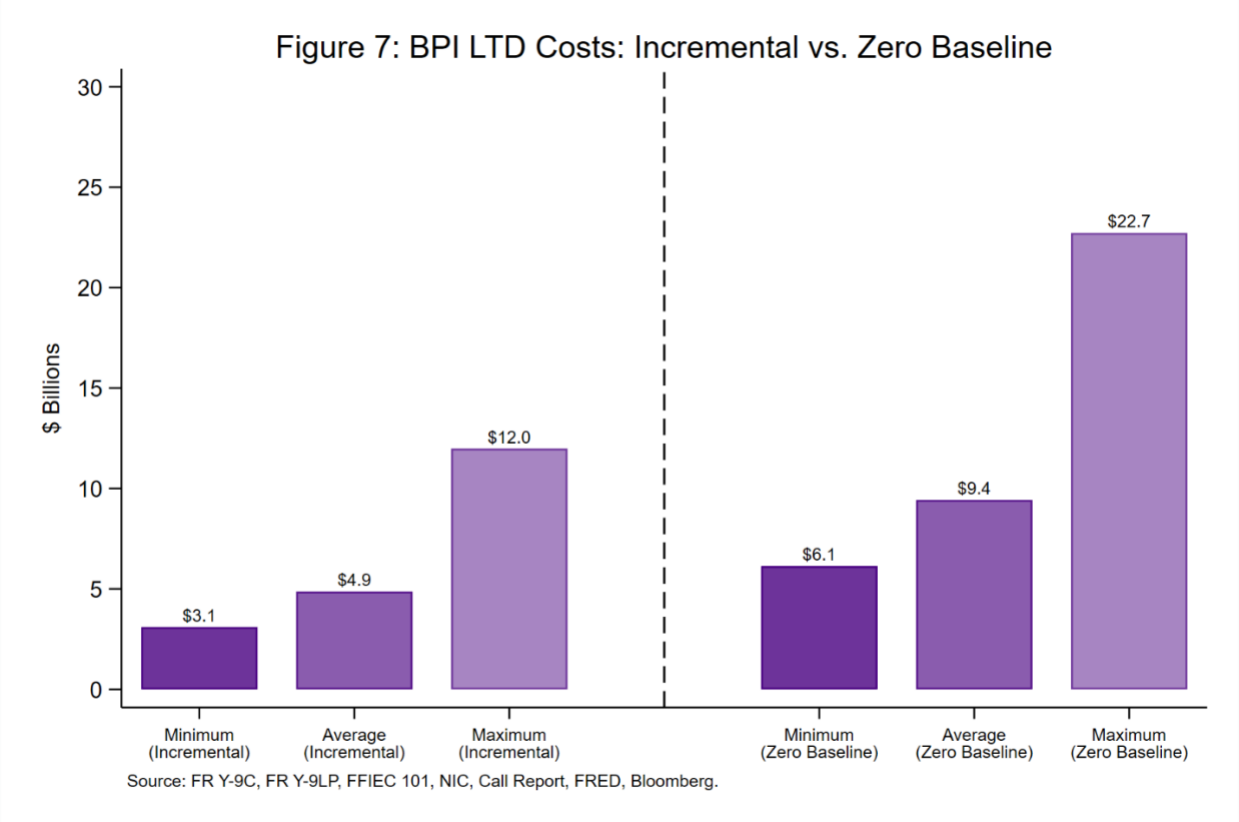
[7] We take the issuance window averages at the lowest and highest points between 2009 and 2023. The issuance window is defined as the 60-day period between the 15th of the first month and the 15th of the third month of a given calendar quarter.

Figure 6: Bond Spreads for Category II — IV Banks



Source: Bloomberg.
Note: The Category II-IV bond index includes bonds with remaining maturities between 4 and 6 years.
The chart plots the spread over swaps as the constant spread that makes the price of a security equal to the present value of its cash flows when added to the yield at each point on the swap curve where cash flow is received.
Data frequency is daily and ranges between January 1, 2009 and November 1, 2023

Figure 7 shows significant variation in bank funding costs when considering the fluctuations in bond spreads. We project that pre-tax bank funding costs could range from $3.1 billion to $12.0 billion under the incremental-shortfall approach, and from $6.1 billion to $22.7 billion under the zero-baseline approach. Given the uncertainty in the macro-economic environment, bond spreads may widen, underscoring the importance of including bond spread variability in the cost analysis. This variability affects not only the funding cost per dollar of issuance but also the total funding costs.



The banking agencies need to recognize that regional banks may face increased funding costs in complying with LTD requirements. Our analysis highlights the necessity of considering the banks' capacity to meet these requirements at both the subsidiary and holding-company levels and the ability to satisfy the LCR at the holding-company level, among other factors. Although some regional banks with more LTD outstanding may meet any new LTD requirement more easily than those with less LTD outstanding, the total LTD shortfall of approximately $186.6 billion—about 2.7 times the agencies' estimate—should require the agencies to rethink the design, application and calibration of the proposed LTD requirements. Moreover, to alleviate the negative financial impact of the LTD proposal on Category IV banks, it is recommended that the Federal Reserve tailor the LTD requirement for those firms.

The banking agencies should also consider the volatility in credit spreads for regional banks, which are expected to stay elevated in the near future. These requirements come at a time when regional banks might be reluctant to rely on the debt market due to expensive borrowing conditions. This situation has been aggravated by the rising interest rate environment; the failures of Silicon Valley Bank, Signature Bank and First Republic Bank; and the ensuing downgrades in credit ratings. Although risk premiums for regional banks have narrowed significantly since the bank failures in the spring of 2023, spreads are still wider than their historical averages. This indicates that banks may consider postponing their debt issuances until conditions improve.

Lastly, regional banks are facing challenges with revenue and funding costs, exacerbated by the possibility of higher loan losses in the commercial real estate sector. Moreover, the proposed changes to capital regulations present an additional threat to these banks' ability to yield strong future profits. The requirement for these banks to issue a substantial amount of LTD would further jeopardize their profitability prospects.

Conclusion

Our analysis indicates that the LTD proposal significantly underestimates the costs associated with meeting those requirements. Two main factors contribute to this underestimation. The first is the requirement that banks maintain the LCR at the holding-company level, which would necessitate a substantial issuance of LTD, sharply increasing funding costs. The second is the method of measuring credit risk to determine the change in funding cost per dollar of issuance. Recently, bond spreads have been wider than historical norms, resulting in higher costs for regional banks when issuing new bonds to comply with the requirements.

Furthermore, banks with lower levels of outstanding debt may opt to maintain an LTD buffer exceeding six months, which is not included in our assumptions. Lastly, to mitigate the adverse financial impact of the LTD proposal, particularly on Category IV banks, we recommend that the Federal Reserve tailor the LTD requirements for these specific firms.

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