# Banks as Patient Fixed-Income Investors

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# Banks as patient fixed-income investors*

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## A. Estimating the Profitability of Narrow Banking

We estimate the profitability of narrowing bank using

$$\Pi = \left(R_F - R_{DEP}\right) + \frac{NONINTINC}{DEP} - \frac{NONINTEXP}{DEP}. \qquad \text{(A1)}$$

The text describes the computation of all the components of (A1) for the US commercial banking industry, except for the noninterest expense associated with deposit-taking *NONINTEXP*/*DEP*. This term is not directly available from Call Reports: banks report their total noninterest expense, but we are only interested in those expenses attributable to deposit-taking.

To get an estimate of the expenses associated with deposit-taking, we adopt a simple hedonic approach. Specifically, each year we run a cross-sectional regression of $NONINTEXP_{it}/ASSET_{it}$ on asset shares, liability shares, and other controls:

$$\frac{NONINTEXP_{it}}{ASSET_{it}} = \alpha_t + \sum_{k=1}^{K} \beta_t^{(k)} \cdot \frac{ASSET_{it}^{(k)}}{ASSET_{it}} + \sum_{j=1}^{J} \gamma_t^{(j)} \cdot \frac{DEPOSIT_{it}^{(j)}}{ASSET_{it}} + \boldsymbol{\theta}'\mathbf{x}_{it} + \varepsilon_{it}. \qquad \text{(A2)}$$

We choose the independent variables so that the intercept term for year $t$, $\alpha_t$, can be interpreted as the operating expenses associated with a "mutual-fund-like" bank that owns a portfolio of long-term marketable securities and finances these securities using only wholesale funding and equity. The slope coefficients in (A2) are interpretable as unit noninterest expenses associated with various activities.

We use cross-sectional variation in banks' asset mix to identify the $\beta_t^{(k)}$. We control for real estate loans ($RELOAN_{it}/ASSET_{it}$), C&I loans ($CILOAN_{it}/ASSET_{it}$), consumer loans ($CONLOAN_{it}/ASSET_{it}$), other loans ($OTHLOAN_{it}/ASSET_{it}$), and trading assets ($TRADING_{it}/ASSET_{it}$).

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Liquid assets (cash, interbank loans, and securities) and other assets are the omitted categories absorbed in $\alpha_t$. To identify the $\gamma_t^{(j)}$, we control for transaction deposits ($TRANSDEPOSIT_{it}/ASSET_{it}$), savings deposits ($SAVEDEPOSIT_{it}/ASSET_{it}$), and foreign deposits ($FORDEPOSIT_{it}/ASSET_{it}$). Time deposits and other borrowed money are the omitted liability categories that are absorbed in $\alpha_t$. Finally, we control for bank size ($\ln(ASSET_{it})$) and noninterest income not associated with deposit-taking or credit intermediation ($OTHNONINTIC_{it}/ASSET_{it}$).[1]

The coefficients for transaction deposits and saving deposits are of primary interest for our cost attribution analysis and are shown in Fig. A1. These coefficients are interpretable as the unit noninterest expenses associated with various types of deposit-taking. For instance, the coefficient of 3.4% for transaction deposits in 1984 means that a bank which was 100% funded with transaction deposits had an expense ratio 3.4 percentage points higher than an entirely wholesale-funded bank.[2]

Fig. A1 shows that estimated unit cost of transaction deposits has fallen steadily over time, from 3.4% to 1984 to only 0.5% in 2012. This downward trend makes sense in light of the numerous technological developments, primarily information technology, that have reduced the costs of deposit-taking. In contrast, Fig. A1 shows that the unit cost of savings deposits hovered around 2% from the late 1980s to 2008. However, the costs of savings deposits has fallen sharply in the past four years, arguably because banks have benefited from large deposit inflows due to the low-interest rate environment and expanded FDIC guarantee programs.

Using these cross-sectional regression coefficients as our proxies for the relevant unit costs, we estimate the aggregate noninterest expense associated with deposit-taking activities as

$$\frac{NONINTEXP_t^{DEP}}{DEPOSIT_t} = \frac{ASSET_t}{DEPOSIT_t} \times \begin{pmatrix} \hat{\gamma}_t^{(TRANS)} \cdot \dfrac{TRANSDEPOSIT_t}{ASSET_t} \\ +\hat{\gamma}_t^{(SAVE)} \cdot \dfrac{SAVEDEPOSIT_t}{ASSET_t} \\ +\hat{\gamma}_t^{(FOR)} \cdot \dfrac{FORDEPOSIT_t}{ASSET_t} \end{pmatrix}. \tag{A3}$$

[1] This exercise can be seen as a simple way of estimating bank cost functions. There is a vast technical literature on this subject. See, for instance, Hughes and Mester (2010) for a recent review.

[2] The dashed lines are standard error bands and indicate that the parameters are precisely estimated. This is to be expected because there are thousands of banks in each cross-section

In other words, to come up with an estimate of deposit-related operating costs, we apply our estimated unit costs to the deposit mix of the aggregate banking industry.

Fig. A2 shows the time series of estimated profits from deposit-taking from 1984 to 2012. We first show the gross deposit spread, $R_F - R_{DEP}$, which is the net interest income associated with narrow banking. The interest rates paid on transactional and savings deposit accounts embed a significant convenience premium relative to short-term market rates. As a result, the gross deposit spread averages 0.87% of deposits over our 29 year sample.[3] We next add noninterest income associated with deposit-taking, *NONINTINC*/*DEP*, which has averaged 0.49% of deposits.

Finally, we subtract our estimate of the noninterest expense associated with deposit-taking. While estimated deposit-taking expenses have trended down steadily over time, these expenses are substantial, averaging 1.30% of deposits. Combining these pieces as in equation (A1), we arrive at our estimates of the profits generated by narrow banking. Between 1984 and 2012, these profits average 0.06% of deposits.

This 0.06% figure is an upper bound on the profitability of narrow banking. Specifically, as noted above, our attribution of noninterest expenses includes an unallocated fixed overhead cost which is not attributed to deposit-taking or lending at the margin. These overhead costs are significant and average 0.63% of deposits from 1984 to 2012. Thus, one needs to ask how much of these fixed overhead costs should be allocated to deposit-taking. If 50% of these fixed costs are allocated to deposit-taking, the estimated profitability of narrow banking falls to -0.25% on average.

### B. Cross-section of Intermediary Types and Cross-section of Assets

We assemble data on the financial assets and liabilities of various intermediary types from the Federal Reserve's Financial Accounts of the United States (formerly the Flow of Funds Accounts). We examine data on commercial banks, property and casualty (P&C) insurers, life insurers, money market funds (MMFs), government sponsored enterprises (GSEs), finance companies, real estate investment trusts (REITs), and security broker-dealers.

[3] As shown in Fig. A2, the net interest income generated by deposit-taking is positively related to the level of short-term interest rates. This is because the rates on transaction and savings deposits adjust very sluggishly to movement in short-term market rates. See Neumark and Sharpe (1992) and English, Van den Heuvel, and Zakrajsek (2012).

We exclude a handful of financial sectors included in the Financial Accounts. First, we exclude the Federal Reserve (L.108), taking the view that it should be consolidated with the Federal Government from the standpoint of financial intermediation. Second, we exclude pension funds (L.116), mutual funds (L.121), and closed-end funds and ETFs (L.122) on the theory that these "real money" intermediaries are essentially just veils for the household sector. Third, to avoid double-counting issues we do not treat MBS and ABS issuers as separate sectors. Finally, we exclude Holding Companies (L.129) and Funding Corporations (L.130).

For each financial intermediary type, we construct an aggregate balance sheet using data from the Financial Accounts. This requires some straightforward manipulation of the Financial Accounts Data. There are three minor subtleties. First, we do not count GSE-backed MBS—which were consolidated onto their balance sheets following the implementation of FASB 140 in December 2010—as GSE assets. Second, to operationalize Equation (18) for banks' market share in each asset class, we compute banks' holdings as a share of all assets held by the domestic Financial Business sector in Table L.107. In other words, we compute banks' share of intermediated assets holdings. Third, for each category of loans (home mortgages, commercial mortgages, multifamily mortgages, consumer loans, and C& loans), we adjust the amount of outstanding loans to net out securitized loans. Thus, holdings of these assets represent intermediaries' holdings of (whole) loans, whereas holdings of securitizations are accounted for separately as either holdings of GSE-backed MBS or as corporate bonds for private securitizations.

Next we need to choose values for $ILLIQUID_j$, $MATURITY_j$, and $STICKY_j$. Our approach is to choose values based on the liquidity risk measurement proposal set forth under Basel III. We use parameter values associated with the BCBS (2010) proposal for the Net Stable Funding Requirement (NSFR) and the final BCBS (2013) Liquidity Coverage Requirement (LCR). First, using BCBS (2010), we use the NSFR's Required Stable Funding factor as a first guide for assigning $ILLIQUID_j$ and the Available Stable Funding factor as guide for $STICKY_j$. Second, using BCBS (2013), we used the LCR's haircut factor for the computation of High Quality Liquid Assets as a second guide for $ILLIQUID_j$ and the assumed percentage outflow factor as second guide for $STICKY_j$. The inputs from the NSFR and LCR are summarized in Table A1.

Our approach is to use these BCBS factors whenever possible. In general, the NFSR and LCR factors paint a similar picture of asset illiquidity and liability maturity and stickiness.

However, when the two are in conflict, we lean towards the LCR weights, reasoning that they represent the most up-to-date consensus among policy-makers and market participants.

There are some categories such as GSE-debentures and corporate bonds where it does not make sense to assume *STICKY* = 1 and *MATURITY* = 1: some of these bonds are short-term and are prone to run. Therefore, we assume *STICKY* = *MATURITY* = 0.4 in both cases.

We also need to assign values for liability types issued by nonbanks that are not considered by BCBS (2010, 2013). We are forced to fill in these assumptions. However, we have made every attempt to do so in a way that is consistent with the spirit of Basel III and is motivated by existing empirical evidence wherever possible. The main question here concerns the length and stickiness of the policy-related operating liabilities of life and P&C insurers. We assume that both life and P&C policies are fairly illiquid assets with *ILLIQUID* = 0.4. In the case of life policy liabilities, we assume *STICKY* = *MATURITY* = 0.9, so the liabilities of life insurers are comparable to retail bank deposits. For P&C insurers, we assume that *STICKY* = *MATURITY* = 0.6, so the liabilities of P&C insurers are equivalent to corporate bonds. Our final parameter choices are shown in Table A2.

## C. Optimal Haircuts

### *C.1. Determination of the Fire-Sale Discount*

The key reduced-form properties we have assumed for the fire-sale discount are that $\partial k(\mu_i,\varphi_i)/\partial\mu_i \le 0$, so demand is downward-sloping, and $\partial^2 k(\mu_i,\varphi_i)/\partial\mu_i\partial\varphi_i \le 0$, so more illiquid assets have steeper demand curves. These properties can be micro-founded following Stein (2012). For each asset $i$, we assume that there is a separate group of $n_i$ specialist buyers, who can step in and buy the asset if it is liquidated at time 1. Assets with low values of $n_i$ correspond to those with high values of $\varphi_i$. In other words, asset illiquidity ultimately derives from the fact that there are relatively few specialist buyers available to absorb a given asset.

Specialist buyers are also owned by households: all their profits accrue to households at time 2. Each individual specialist buyer has resources of $0 < W \le 1$ available at time 1, which can be used either to buy up fire-sold assets at a discount or to invest in new real projects. Each specialist buyer's investment of $K_i$ in a new project yields a gross return of $g(K_i) = \log(K_i)$. Recall that liquidated assets sell at a discount $k_i$ to their fundamental value of $F_i = qR + (1-q-\varepsilon)z_i$ and thus yield a gross expected return of $1/k_i$ to a specialist buyer who purchases them at time 1. Because the total volume of liquidations in asset $i$ is $\mu_i k_i F_i$, and because these liquidations must be absorbed by $n_i$ specialist buyers, each buyer must absorb $\mu_i k_i F_i/n_i$ of the liquidation, investing $K_i = W - \mu_i k_i F_i/n_i$ in new projects. At an interior optimum, the expected return to buying fire-sold assets must be equal to the expected return to investment in the new project, which implies:

$$1/k_i = g'(W - \mu_i k_i F_i / n_i). \tag{C1}$$

Given our functional form assumption that $g(K_i) = \log(K_i)$, this expression boils down to:

$$k_i = \frac{W}{1 + \mu_i F_i / n_i}. \tag{C2}$$

Because $n_i$ is nothing more than an inverse measure of asset illiquidity $\varphi_i$, we now have a micro-founded expression for the fire-sale discount $k_i$ with the desired properties that $\partial k(\mu_i, \varphi_i)/\partial \mu_i \leq 0$ and $\partial^2 k(\mu_i, \varphi_i)/\partial \mu_i \partial \varphi_i \leq 0$. (The former always holds and the latter holds so long as $n_i \geq \mu_i F_i$ which we henceforth assume). Furthermore, we have

$$\eta_i = \frac{-k_i'(\mu_i)\mu_i}{k_i(\mu_i)} = \frac{\mu_i F_i}{\mu_i F_i + n_i}, \tag{C3}$$

so, all else equal, the elasticity of the fire-sale price with respect to $\mu_i$ is greatest for illiquid assets with few specialist buyers $n_i$.

### *C.2. Optimal Haircuts*

We assume that any deposit insurance payout in the disaster state is financed with distortionary taxes and, therefore, imposes an additional cost on households. Specifically, we assume that an insurance payout of $X$ gives rise to distortionary fiscal costs of $(\lambda/2)X^2$. The payout associated with asset $i$ in the disaster state is $X = (1-\mu_i)z_i$, which is borne with probability $(1-p)\varepsilon$, implying that traditional banking gives rise to an expected fiscal cost of $(1-p)\varepsilon(\lambda/2)[(1-\mu_i)z_i]^2$.

Since households own shadow banks, traditional banks, and specialist buyers, the household utility associated with asset $i$ equals the value of all shadow and traditional banking claims backed by $i$, plus the expected profits earned by associated specialist buyers, less the expected fiscal cost:

$$\begin{aligned} U_i = \mu_i V_i^S(\mu_i) + (1-\mu_i)V_i^B + \beta n_i \left( E[g(K_i) - K_i] + (1-p)(\mu_i k_i F_i / n_i)(1/k_i - 1) \right) \\ - (1-p)\varepsilon(\lambda/2)[(1-\mu_i)z_i]^2. \end{aligned} \tag{C4}$$

As shown in (C3), the expected profits earned by each specialist buyer are the sum of their expected net return on new real investment, $E[g(K_i)-K_i]$, plus their expected net return on asset purchases in the pessimistic-news state, $(1-p)(\mu_i k_i F_i / n_i)(1/k_i - 1)$.

However, since the fire-sale losses incurred by shadow banks represent a gain for specialist buyers, the terms of trade between these intermediaries cancel out from the standpoint of household welfare. As a result, the relative size of the traditional banking and shadow banking sectors only impacts household welfare in three ways: the initial amount of monetary services enjoyed by households, the magnitude of the fire-sale problem as captured by the amount of specialist buyer output following pessimistic news at time 1, and the expected fiscal costs. One can think of specialist output as a stand-in for the severity of the collapse in real output if pessimistic news arrives at time 1, triggering a financial crisis. Specifically, ignoring irrelevant constants, initial household utility is given by:

$$\begin{aligned} U_i &= \gamma M_i + \beta(1-p)n_i[g(K_i)-K_i] \; -(1-p)\varepsilon(\lambda/2)[(1-\mu_i)z_i]^2. \\ &= \gamma[\mu_i k_i F_i + (1-\mu_i)z_i] + \beta(1-p)n_i[g(W-\mu_i k_i F_i/n_i)-(W-\mu_i k_i F_i/n_i)] \\ &\qquad -(1-p)\varepsilon(\lambda/2)[(1-\mu_i)z_i]^2. \end{aligned} \tag{C5}$$

The second line of equation (C5) follows from the fact that the total amount of money created by shadow banks and traditional banks using asset *i* as backing is $M_i = \mu_i k_i F_i + (1-\mu_i)z_i$ plus the fact that each specialists' investment in new real projects following pessimistic news is $K_i = W - \mu_i k_i F_i / n_i$.

Since intermediaries pick $\mu_i$, *taking* $k_i$ *as given and ignoring the external fiscal costs*, the private market equilibrium studied in the text corresponds to

$$\max_{\mu_i \in [0,1]} \left\{ \gamma[\mu_i k_i^* F_i + (1-\mu_i)z_i] + \beta(1-p)n_i[g(W-\mu_i k_i^* F_i/n_i)) - (W-\mu_i k_i^* F_i/n_i)] \right\}, \tag{C6}$$

where we use one star to denote the private market solution. Recalling that $1 = k_i g'(W-\mu_i k_i F_i/n_i)$, the first order condition for (C6) implies that an interior private market equilibrium $\mu_i^*$ satisfies

$$\overbrace{[\gamma k_i(\mu_i^*) - (1-p)\beta(1-k_i(\mu_i^*))]F_i}^{\substack{\text{Net private benefit} \\ \text{shadow banking}}} = \overbrace{[\gamma z_i]}^{\substack{\text{Net private benefit} \\ \text{traditional banking}}}, \tag{C7}$$

which is equivalent to equation (6) in the main text.

At the social optimum $\mu_i$ maximizes household utility (C5). Relative to the private market equilibrium described in the text, the social optimum also reflects the fact that $k_i'(\mu_i) < 0$ as well as the fiscal costs associated with deposit insurance. The first order condition for this problem implies that an interior social optimum $\mu_i^{**}$ must satisfy

$$
\begin{aligned}
&(1-\overbrace{[-k_i'(\mu_i^{**})\mu_i^{**}/k_i(\mu_i^{**})]}^{\eta_i \,=\, \text{Elasticity of fire-sale price}})\times\overbrace{[\gamma k_i(\mu_i^{**})-\beta(1-p)(1-k_i(\mu_i^{**}))]F_i}^{\text{Net private benefit shadow banking}} \\
&\quad = \underbrace{\overbrace{\gamma z_i}}_{\text{Net private benefit traditional banking}} - \overbrace{(1-p)\varepsilon\lambda(1-\mu_i^{**})[z_i]^2}^{\text{Marginal fiscal cost of traditional banking}}.
\end{aligned} \tag{C8}
$$

Relative to (C7), the net private benefit of shadow banking is reduced by a factor that depends on the elasticity of the fire-sale price with respect to $\mu_i$, $\eta_i = -k_i'(\mu_i)\mu_i / k_i$. Furthermore, the net private benefit of traditional banking is reduced by the marginal fiscal cost of the associated deposit insurance payouts.

The social optimum $\mu_i^{**}$ can be implemented as a decentralized equilibrium by imposing an additional haircut requirement on the amount of repo that shadow banks can issue to MMFs. A haircut requirement of $h_i$ means that shadow banks can only create $(k_i^{**}-h_i^{**})F_i < k_i^{**}F_i$ of safe repo using asset $i$ as collateral. A shadow bank subject to a regulatory haircut requirement of $h_i$ has value

$$V_i^S(k_i,h_i) = \overbrace{\gamma(k_i-h_i)F_i}^{\text{Money premium}} + \beta\overbrace{[pR+(1-p)k_iF_i]}^{\text{Expected cash flows}}. \tag{C9}$$

Because private agents will set $V_i^S(k_i,h_i) = V_i^B = \gamma z_i + \beta[pR+(1-p)F_i]$ in a decentralized equilibrium, (C8) implies that the social optimum can be implemented by imposing an additional haircut of

$$
\begin{aligned}
h_i^{**} &= \frac{[\gamma k_i^{**}-(1-p)\beta(1-k_i^{**})]F_i-[\gamma z_i]}{\gamma F_i} \\
&= \frac{\eta_i}{1-\eta_i}\times\frac{z_i}{F_i}-\frac{1}{1-\eta_i}\times\frac{(1-p)\varepsilon\lambda(1-\mu_i^{**})[z_i]^2}{\gamma F_i}.
\end{aligned} \tag{C10}
$$

Equation (25) in the text is just the special case of (C10) when there are no fiscal costs associated with deposit insurance, i.e., when $\lambda = 0$.

## References


Basel Committee on Banking Supervision, 2010. *Basel III: International framework for liquidity risk measurement, standards and monitoring*. http://www.bis.org/publ/bcbs188.pdf.

Basel Committee on Banking Supervision, 2013. *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*. http://www.bis.org/publ/bcbs238.pdf.

English, W. B., Van den Heuvel, S. J., Zakrajsek, E., 2012. Interest rate risk and bank equity valuations. Federal Reserve Board of Governors, FEDS working paper 2012-26.

Hughes, J. P., Mester, L. J., 2010. Efficiency in banking: Theory, practice and evidence," in *The Oxford Handbook of Banking, Oxford University Press*: Oxford, UK, Berger, A., Molyneux, P., Wilson, J. eds., 463-485.

Neumark, D., Sharpe, S. A., 1992. Market structure and the nature of price rigidity: Evidence from the market for consumer deposits. Quarterly Journal of Economics 107(2): 657-680.

Stein, J. C., 2012. Monetary policy as financial-stability regulation. Quarterly Journal of Economics 127(1): 57-95.

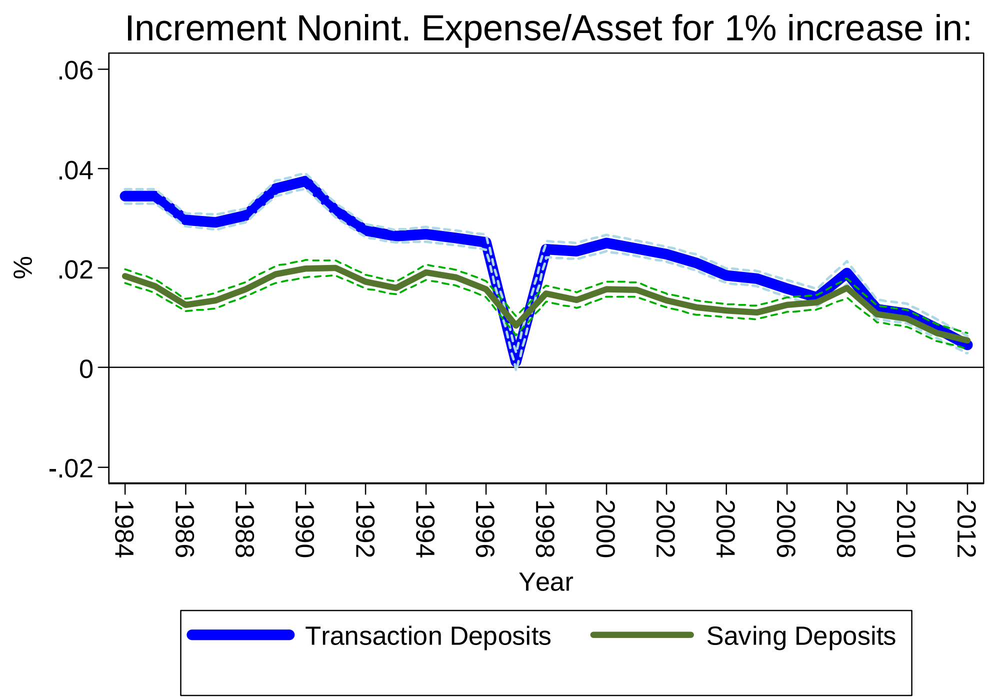


**Fig. A1: Noninterest Expense Attribution Regressions.** Estimates of unit costs for transaction and saving deposits from 1984 to 2012.

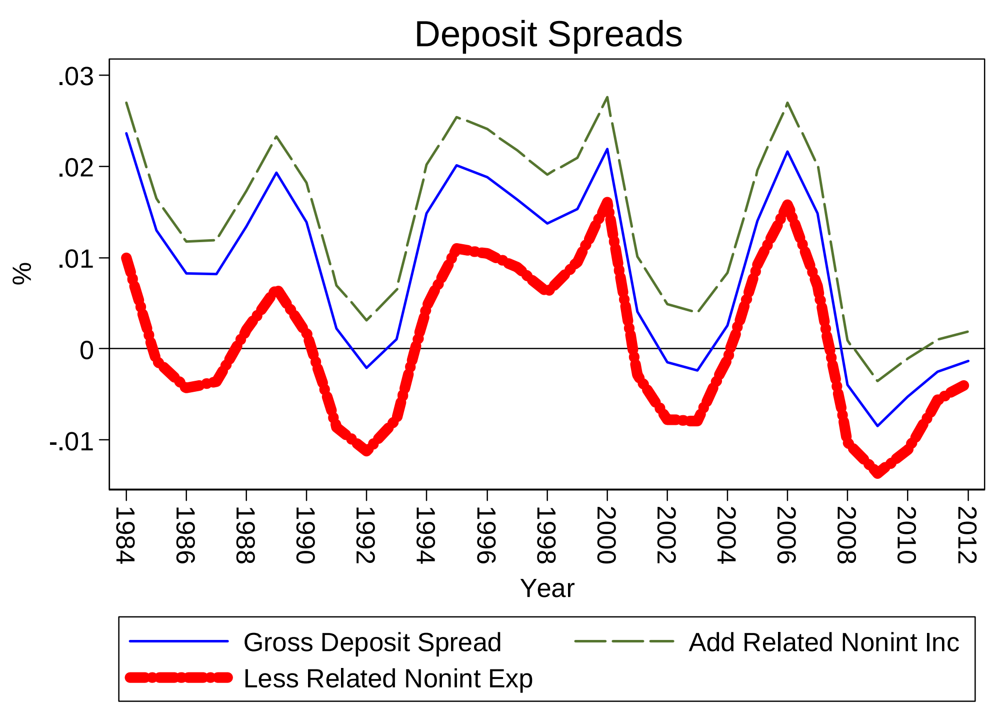


**Fig. A2: Estimating the Profitability of Narrow Banking.** This figure shows our decomposition of the aggregate profitability of commercial bank deposit-taking from 1984–2012.

**Table A1: Parameters Drawn from the Basel III NFSR and LCR Liquidity Requirements:** The Net Stable Funding Ratio (NSFR) factors are based on BCBS (2010). The Liquidity Coverage Ratio (LCR) factors are based on BCBS (2013). Long-term means having a contractual maturity greater than 1 year.

| | Net Stable Funding Ratio factors | | | Liquidity Coverage Ratio factors | | |
|---|---|---|---|---|---|---|
| **Instrument** | ***ILLIQUID*** | ***STICKY*** | ***LENGTH*** | ***ILLIQUID*** | ***STICKY*** | ***LENGTH*** |
| Common Equity | | 100% | 100% | | 100% | 100% |
| Preferred Stock | | 100% | 100% | | 100% | 100% |
| Long-term debt and all long-term time deposits | | 100% | 100% | | 100% | 100% |
| Insured retail demand deposits and short-term (< 1 yr) retail time deposits | | 90% | 0% | | 97% | 0% |
| Uninsured retail demand deposits and short-term (< 1 yr) retail time deposits | | 80% | 0% | | 90% | 0% |
| Short-term wholesale funding, including wholesale deposits. | | 50% | 0% | | | |
| Other Liabilities | | 0% | 0% | | | |
| Short-term unsecured whole-sale funding from small business cutomers | | | | | 90% | 0% |
| Short-term unsecured whole-sale funding from clearing, custody, and cash-management | | | | | 75% | 0% |
| Short-term unsecured whole-sale funding from large business customers (insured) | | | | | 80% | 0% |
| Short-term unsecured whole-sale funding from large business customers (uninsured) | | | | | 60% | 0% |
| Short-term secured whole-sale funding (depends on collateral) | | | | | | |
| Money market instruments (short-term low default risk debt) | 0% | | | 0% | | |
| Long-term Treasuries | 5% | | | 0% | | |
| GSE-backed MBS and debt | 20% | | | 15% | | |
| Corporate bonds rated AA- or higher | 20% | | | 15% | | |
| RMBS | | | | 25% | | |
| Equity: must be large-cap index and listed on a public exchange | 50% | | | 50% | | |
| Corporate bonds rated A- or higher for NFSR (BBB- or higher for LCR) | 50% | | | 50% | | |
| Commercial and industrial loans | 100% | | | 100% | | |
| Residential mortgage loans | 65% | | | 100% | | |
| Other loans | 65% | | | 100% | | |
| Consumer loans | 85% | | | 100% | | |
| Other assets | 100% | | | 100% | | |

**Table A2: Instrument Parameters Values Used in Our Exercise:** This table lists the instrument names found in the Financial Accounts and the values of *ILLIQUID*, *LENGTH*, and *STICKY* assigned to those instruments.

| Instrument Name in the Financial Accounts | *ILLIQUID* (assets) | *LENGTH* (liabilities) | *STICKY* (liabilities) |
|---|---|---|---|
| Agency- and GSE-backed securities | 15% | 60% | 60% |
| Bank loans not elsewhere classified | 100% | 100% | 100% |
| Bankers' Acceptances | 0% | 0% | 0% |
| Checkable deposits | 0% | 0% | 90% |
| Checkable deposits and currency | 0% | 0% | 90% |
| Commercial mortgages | 100% | 100% | 100% |
| Consumer credit | 75% | 100% | 100% |
| Consumer leases | 75% | 100% | 100% |
| Corporate and foreign bonds | 50% | 60% | 60% |
| Corporate equities | 50% | 100% | 100% |
| Currency | 0% | 0% | 0% |
| Customers' liability on acceptances outstanding | 0% | 0% | 0% |
| Depository institution reserves | 0% | 0% | 80% |
| Deposits at Federal Home Loan Banks | 0% | 0% | 80% |
| Direct investment | 100% | 100% | 60% |
| Equity in government-sponsored enterprises (GSEs) | 100% | 100% | 100% |
| Farm mortgages | 100% | 100% | 100% |
| Federal funds and security repurchase agreements | 0% | 0% | 0% |
| Government-sponsored enterprise (GSE) loans | 15% | 60% | 60% |
| Holding companies net transactions with subsidiaries | 100% | 100% | 100% |
| Home mortgages | 75% | 100% | 100% |
| Large time deposits | 0% | 10% | 70% |
| Life insurance reserves | 80% | 90% | 90% |
| P&C insurance reserves | 80% | 60% | 60% |
| Money market mutual fund shares | 0% | 0% | 0% |
| Multifamily residential mortgages | 100% | 100% | 100% |
| Municipal securities and loans | 50% | 100% | 100% |
| Mutual fund shares | 50% | 100% | 100% |
| Net interbank transactions | 20% | 0% | 0% |
| Nonfinancial business loans | 100% | 100% | 100% |
| Open market paper | 0% | 0% | 0% |
| Other loans and advances | 100% | 100% | 100% |
| Pension entitlements | 80% | 90% | 90% |
| Private foreign deposits | 0% | 10% | 20% |
| Securities borrowed (net) | 0% | 10% | 20% |
| Security credit | 0% | 10% | 20% |
| Small time and savings deposits | 0% | 0% | 80% |
| Syndicated loans to nonfinancial corporate business | 100% | 100% | 100% |
| Taxes payables | 0% | 0% | 0% |
| Total miscellaneous assets | 100% | 100% | 100% |
| Total miscellaneous liabilities | 100% | 100% | 100% |
| Total time and savings deposits | 0% | 0% | 80% |
| Trade payables | 60% | 0% | 0% |
| Trade receivables | 60% | 0% | 0% |
| Treasury securities | 0% | 0% | 0% |
| U.S. government loans | 0% | 0% | 0% |
| Unidentified miscellaneous assets | 100% | 100% | 100% |
| Unidentified miscellaneous liabilities | 100% | 100% | 100% |