

An Oversight in Accounting for the Fair Value Option

CASE

Larkin Bank started as a small local bank in southeastern United States in the early 1900s. Larkin grew through the years and, with approximately \$650 billion in total assets at the end of 2019, is a top five bank in the U.S. Larkin Bank has historically been a healthy, well-capitalized publicly traded bank listed on the NYSE and has confident and loyal investors who have enjoyed consistent dividends and attractive stock returns for over a decade. With 2,580 financial centers throughout 35 states, Larkin Bank's focuses on satisfying retail, corporate, and institutional customers through its multiple lines of financial services, including retail banking and brokerage, mortgage lending, wealth management as well as corporate banking products and services.

The Financial Accounting Standards Board (FASB) issued an accounting standard permitting the fair value election (FVO) in 2007 (FASB 2007). The FVO allows companies to fair value (i.e. mark-to-market) certain financial assets and liabilities and record changes in fair values as unrealized gains/losses in current earnings (ASC 825). Upper management of Larkin Bank assigned a technical team consisting of managers in accounting policy and securities traders to initially implement the FVO into its accounting information systems and internal and external reporting functions for managerial and regulatory reporting purposes. This team also helped develop internal controls to properly monitor the related accounting and reporting functions. The technical team researched the proper accounting treatments for financial and regulatory reporting purposes to avoid errors that may contribute to investor and lender concerns about reliability of information and financial stability. Management believes their internal accounting system as it relates to the FVO is therefore operating properly.

Larkin has a substantial portfolio of investments in debt securities and uses debt instruments as a funding source. Larkin has elected the FVO for a number of its investment and debt financial instruments. The following two sections summarize two important topics for Larkin – regulatory capital and the fair value option. This is followed by the current situation at Larkin with respect to the FVO and the issues the bank faces.

Regulatory Capital

Regulatory capital enables bank regulators to monitor the safety and soundness of bank operations in order to identify deficiencies. Regulation of banks is necessary because bank failures can have systematic effects on the economy due to the prominent role that banks play in holding consumer deposits and facilitating borrowing and lending activities between consumers. A bank with low regulatory capital may be turned over to regulators who then pursue a recovery of the bank or manage a termination in an orderly and timely manner.¹ Therefore, banks are required to report a number of periodic filings with the Federal Reserve and other regulatory bodies.

Banks classified as bank holding companies (BHC) with consolidated assets of \$1 billion or more must file the FR Y-9C, which includes schedules supporting the determination of Tier 1 capital, a primary measure of the financial health of a BHC. While reported earnings are a metric for assessing financial performance for both banks and non-banks, Tier 1 capital is a

¹ The following website for statutory minimums for categories of various regulatory capital group descriptions: http://www.fdic.gov/deposit/insurance/risk/rfps_ovr.html. Assume thresholds for Tier 1 capital ratios set by regulators for “well capitalized and “adequately capitalized” are 6% and 4%, respectively, for this case.

critical financial reporting objective among bank managers and subject to management influence and manipulation.²

The importance of equity to investors is well-known but why regulatory capital might influence investors' perceptions as well is less clear. Similar to equity for a non-bank entity, regulatory capital is a measure of residual values representing owners' claims to bank resources upon liquidation. What is different about Tier 1 capital is it incorporates the riskiness of assets held in part because the opacity of bank assets; that is, valuing financial assets is difficult due to concerns about the fair value and marketability of underlying collateral. Any significant changes to regulatory capital, especially unexpected changes, influence how investors value a bank's future cash flows available to shareholders.

Regulators have established both minimum capital ratio requirements and well capitalized thresholds for Tier 1 capital for monitoring purposes and because it sheds light on the ability of banks to offer returns to shareholders through dividends and share repurchases. When banks approach minimum Tier 1 capital levels and draw concern about liquidity, regulators may exercise their oversight responsibilities and reduce a bank's ability to make distributions to shareholders. In the event of material misstatements and violations of regulatory capital, a bank may experience additional regulatory intervention including financial penalties, increased monitoring, being placed into receivership, and eventual seizure. For these reasons, among others, investors pay close attention to significant events relating to regulatory capital.

Tier 1 capital is measured as the ratio of regulatory capital (i.e. BHC equity capital, which is similar to total equity for non-banks) to risk-weighted assets (RWA). RWA is a

² The banking literature explores empirical relations between earnings and regulatory capital management, firm value, and accounting standards. See Beatty and Liao (2014) for an in-depth summary of this literature.

measure of banks' assets and is sensitive to the risk level of each asset category. Risk weights range from 0 to 100 percent: Assets such as cash (0 percent) and government guaranteed treasury securities held as investments (20 percent) receive a lower weight than consumer loans and commercial loans (50 percent), which tend to be riskier. All other assets not assigned to these categories receive a 100 percent risk weight. The sum of weights multiplied by the balance of its respective asset category represents RWA.

To demonstrate the application of RWA in a regulatory capital calculation, consider a bank with Tier 1 capital of \$2 million and three assets: Cash of \$5 million, Treasury Securities classified as Available-for-Sale of \$15 million, and Consumer Loans of \$34 million, each of which has a risk weight of 0%, 20%, and 50%, respectively. The RWA measure for this bank would be \$33 million ($\$5,000,000 \times 0\% + \$15,000,000 \times 20\% + \$34,000,000 \times 50\%$) and thus the Tier 1 capital ratio for this bank would be 9.01% ($\$2,000,000 / \$20,000,000$). Due to estimates and operational decisions motivated by accounting choices (i.e. earnings management), both the numerator (i.e. regulatory capital) and denominator (i.e. RWA) are susceptible to accidental or intentional errors and managerial influences through timing of transactions. Moreover, Tier 1 capital is sensitive to economic risks associated with both regulatory capital and a bank's portfolio of assets.

Accounting information is directly linked to regulatory capital. While complex, guidelines for determining regulatory capital generally follow the accounting treatments under U.S. GAAP. One exception is the exclusion of some changes in fair value from Tier 1 capital calculations. Regulatory capital calculations exclude cumulative changes in fair value of liabilities recorded at fair value under the FVO (see following section on the FVO). Specifically, any unrealized gains/losses on liabilities elected under the FVO resulting from the bank's own

credit risk are excluded from Tier 1 capital. However, upon redemption or maturity, any realized gains/losses on FVO liabilities are included in Tier 1 capital.³

Fair Value Option

The banking industry drives much of the accounting standards that involve recognition and disclosure of fair value estimates. Two of the more important fair value standards are those codified in ASC 320, which provides the accounting for certain investments in debt securities, and ASC 825, which permits a company to elect the FVO.⁴ These two standards were originally approved in part in response to criticisms among regulators and bank managers over the lack of relevance of accounting for asset securities.

The FVO allows companies to elect to fair value (i.e. mark-to-market) eligible financial assets and liabilities and record changes in fair values as unrealized gains/losses in current earnings. This treatment is similar to the accounting for trading securities under ASC 320. Upon an election to use a FVO starting in the initial adoption period of the accounting standard (first fiscal year beginning after November 15, 2007), a FVO adopter records a cumulative-effect adjustment to the opening balance of retained earnings and an accompanying adjustment to the fair value adjustment account on the balance sheet. After the initial adoption period, the FVO election is made on the permitted election date (generally, the date the eligible item is first

³ See Schedule HC-R in the FR Y-9C. Forms and Instructions for the FR Y-9C are available at: <https://www.federalreserve.gov/apps/reportforms/repothistory.aspx?sOoYJ+5BzDal8cbqnRxZRg==>

⁴ ASC 320 for the accounting of investments in debt securities is based on Statement of Financial Accounting Standards No. 115, *Accounting for Certain Instruments in Debt and Equity Securities* (FASB 1993) and ASC 825, the fair value option, is based on Statement of Financial Accounting Standards No. 159, *The Fair Value Option for Financial Assets and Liabilities* (FASB 2007).

recognized). Once the election is made, it may not be changed for that financial asset or liability. Further, banks that adopt the FVO are in some cases allowed to include unrealized gains/losses on elected instruments in regulatory capital. However, realized securities gains/losses recognized under ASC 320 are always included in regulatory capital.

The accounting for the FVO on liabilities is somewhat controversial because of its effects on the income statement and balance sheet. Fair values of liabilities fluctuate due to companies' own creditworthiness (i.e. credit risk) and overall interest, liquidity, and market risks. For example, the fair value of a 30 year long-term note paying a fixed rate will decrease if its market rate (or yield) increases relative to the fixed rate. The accounting for this fair value adjustment results in a lower note payable by debiting a contra liability account (e.g., debt valuation adjustment) and crediting an unrealized gain account that flows through current earnings. The rationale for this treatment is because if the bank were to redeem this note at the current market rate, then it would pay less than the carrying value of the note. The opposite occurs if the market rate decreases relative to the fixed rate. In regard to regulatory capital, which aims to serve as a prudent monitoring mechanism especially in economic downturns or recessionary periods, it is counterintuitive that a bank's regulatory capital increase due to a decrease in its own credit risk. As mentioned previously, regulatory capital calculations therefore exclude cumulative changes in unrealized gains/losses related to liabilities recorded under the FVO that are the result of changes in the bank's own creditworthiness.

Early redemption poses a complication as banks seek to improve their balance sheets during both stable and volatile times. Like any company, banks monitor economic risks and make business and accounting choices accordingly. Early redemptions of liabilities may be used as an earnings management mechanism and banks may therefore find it advantageous to pursue

early redemptions of long-term debt obligations. The effect on earnings and regulatory capital is contingent on whether the liability instruments in question are accounted for under the FVO.

For non-FVO adopters, the liability is removed at carrying value and a realized gain/loss is recorded for the difference in the carrying value and the fair value (i.e. redemption price). For FVO adopters, early redemptions have less an impact on current earnings because the disparity between the carrying value and fair value of the liability is reduced. Specifically, a realized gain/loss is recorded for the difference between the carrying value and the fair value, however, any related balances in a debt valuation adjustment and unrealized gain/loss accounts are reversed. This treatment limits the net earnings impact to changes in fair value between the last financial statement reporting date and redemption date.

Larkin Bank and the Financial Crisis

Larkin diversifies its liquidity, credit, interest, and other market risks with portfolios of financial asset and liability instruments. Like most large banking institutions, Larkin Bank carries significant amounts of available-for-sale securities (\$81 billion or 12 percent of total assets as of December 31, 2019) and long-term debt instruments (\$122 billion or 18 percent of total assets as of December 31, 2019), representing the bank's second largest asset and liability, respectively.

The investing and financing strategy at Larkin Bank follows a traditional banking model that invests in U.S. Treasury bonds, mortgage-backed securities, and government bonds and issues notes with fixed or floating rate features for meeting borrowing needs. Larkin Bank's steady return on assets of two percent and prudent growth over three decades demonstrates that its investing and financing strategies are successful even in volatile market conditions.

Unfortunately, a nationwide financial crisis stemming from high unemployment, rising inflation, and increasing levels of delinquent loan payments deeply impacted Larkin Bank in 2018 and early 2019.⁵ As this crisis significantly affected several other multinational banks, the Federal Reserve Bank, the primary regulator for BHCs, responded with significant reductions to borrowing rates and providing liquidity assistance. However, the volatile market conditions also required government intervention in monitoring and maintaining the financial health of substantially all U.S. banking institutions.

Tables 1 and 2 report preliminary balances pertaining to long-term debt, including fair value amounts under the FVO election at the conclusion of year 2019 but before considering the impact of early redemptions. Tier 1 capital and RWA information based on the preliminary balances is reported in Table 3. Upon further investigation, more than just market factors may have prolonged concerns about Larkin Bank's financial condition. Specifically, Larkin Bank's Tier 1 capital ratio decreased significantly at the start of the financial crisis, dropping from 10.5% when the FVO was adopted in 2008. While Larkin Bank stabilized after significant concern about its financial condition and Tier 1 capital ratio, the bank's Tier 1 capital ratio is almost below the threshold for a well-capitalized bank at 6.3% as of December 31, 2019.

Epilogue

Since the financial crisis, bank regulators have been closely monitoring Larkin Bank along with many other large national banks to ensure that proper risk and capital management decisions allow for a sustained recovery.

⁵ The micro- and macro-economic factors faced by Larkin Bank in this case are similar to those that resulted in the financial crisis of the late 2000s.

On April 18, 2020, Larkin Bank reported to the Federal Reserve a misstatement in reporting on the early redemption of a bond payable accounted for under the FVO. Due to the negative impact on Larkin's regulatory capital, the Federal Reserve not only rescinded its prior approval of a share repurchase plan, but also restricted Larkin Bank from issuing a cash dividend to shareholders. On April 23, 2020 Larkin's market value dropped almost 6 percent - the largest change since the start of the financial crisis – after publicly announcing the misstatement and the Federal Reserve's decision to restrict planned cash distributions to shareholders.

In the following weeks as more details concerning the misstatement were disclosed, Larkin's stock price recovered to a level reached just prior to the announcement. Reasons for this increase include improved investor confidence that Larkin Bank was forthcoming and transparent about the error, the error was an isolated incident, and no upper-level management in the accounting and reporting functions have been ousted as a result of the misstatement, indicating that subsequent internal investigations yield no evidence of fraud or opportunistic behavior. Moreover, while the error impacted regulatory capital, the financial statements reported under U.S. GAAP were not affected. Larkin Bank is currently working with the Federal Reserve to restore future share repurchases and cash dividends.

Requirements

1. Prepare journal entries for the Senior Debt Facility Fixed Rate – Series A bond issued on January 1, 2005 with a stated coupon rate of 3.75% (payable annually) when the market rate was 3.97%. This bond matures in 20 years on December 31, 2025. As part of your response, prepare an amortization schedule for the bond.
2. On January 1, 2008, Larkin Bank elected the FVO for the Senior Debt Facility Fixed Rate – Series A bond (regular adopter) when the bond's fair value is \$10.302 billion.

- a. Prepare the journal entries necessary to implement the FVO on Senior Debt Facility Fixed Rate – Series A bond (assume any difference between the unpaid principal balance and fair value is due to Larkin Bank’s own creditworthiness and ignore tax affects if any).
 - b. Determine the effect of this election on the bank’s regulatory capital.
3. Assume Senior Debt Facility Fixed Rate – Series A was redeemed on December 31, 2019 when its fair value was \$12.662 billion.
- a. Prepare the journal entries to properly record the debt valuation adjustment and corresponding unrealized gain/loss for 2019 (ignore tax affects if any).
 - b. Prepare the journal entries to properly record the early redemption of this bond after the annual coupon has been paid and all fair value amounts have been updated through a debt valuation adjustment account (3a above). Assume this is the only instrument redeemed in 2019 and ignore tax affects if any. Any adjustments to unrealized gains/losses and debt valuation adjustment accounts should be made based on the remaining instruments in the portfolio.
 - c. What is the effect of this redemption on Larkin Bank’s Tier 1 capital ratio (assume a dollar for dollar impact of the redemption on any effect on regulatory capital and ignore tax affects if any)?
 - d. Assume Larkin Bank improperly accounted for the regulatory capital impact of the realized gain/loss in (3c above) above as if it were an unrealized gain/loss. How might this improper treatment impact your answer in 3c?
 - e. It is possible that the improper treatment in 3d resulting in an accounting error was motivated by an effort to manage regulatory capital (Tier 1 capital). Do you believe

management would intentionally misreport realized losses related to debt accounted for under the FVO? Why or why not?

4. Why might the banking industry motivate the accounting standard setters to continue to move toward a more fair value oriented accounting framework?
5. Provide insight on why the FASB made the FVO irrevocable.
6. With shareholders and lenders (i.e. investors in bonds issued by a bank) in mind, what are potential explanations for the FVO requiring the seemingly counterintuitive accounting treatment for fluctuations in fair values of financial liabilities.
7. Why might bank regulators prevent Larkin Bank from pursuing a stock repurchase program?
A detailed answer will articulate the use of Tier 1 capital in assessing Larkin Bank's financial stability.

Table 1 – Long-term Debt

Aggregate Long-term Debt Balances (amounts in millions)

	12/31/2019	12/31/2018
Senior debt		
Fixed	86,276	84,550
Floating	21,917	21,697
Subordinated debt		
Fixed	9,781	9,682
Floating	4,527	4,351
Total ^(a)	<u>122,501</u>	<u>120,280</u>

(a) Includes \$19.567million and \$19.456 million of long-term debt accounted for at fair value at 12/31/2019 and 12/31/2018, respectively.

Note: The aggregate long-term debt balances as of December 31, 2019 and 2018 include fair value adjustments where applicable, but exclude the impact of early redemptions that the bank may undertake at year-end.

Table 2 – Fair Value Option Information

**Panel A – Aggregate Unpaid Principal and Fair Value under Fair Value Option Election
(amounts in millions)**

	12/31/2019			12/31/2018		
	Aggregate unpaid principal	Fair value	Fair value over/(under) aggregate unpaid principal	Aggregate unpaid principal	Fair value	Fair value over/(under) aggregate unpaid principal
Senior debt						
Fixed	14,894	14,811	(83)	14,759	14,348	(411)
Floating	2,922	2,447	(475)	2,519	2,655	136
Subordinated debt						
Fixed	1,711	1,734	23	1,780	1,763	(17)
Floating	409	575	166	532	690	158
Total	19,936	19,567	(369)	19,590	19,456	(134)

Note: The fair value information as of December 31, 2019 excludes the impact of early redemptions that the bank may undertake at year-end.

Table 2 – Fair Value Option Information (continued)**Panel B – Details of Long-term Debt Instruments under the Fair Value Option Election
(amounts in millions)**

Instrument type	CUSIP	Description	12/31/2019		
			Par	Unpaid principal	Fair value
Senior debt facility	9XXXXXX101	Fixed Rate – Series A	12,000	11,882	12,662
Senior debt facility	9XXXXXX102	Fixed Rate – Series B	1,600	1,569	1,399
Senior debt facility	9XXXXXX103	Fixed Rate – Series C	1,500	1,443	750
Senior debt facility	9XXXXXX104	Floating Rate – Series U	1,500	1,498	1,188
Senior debt facility	9XXXXXX105	Floating Rate – Series V	1,200	1,355	1,187
Senior debt facility	9XXXXXX106	Floating Rate – Series W	80	69	72
Subordinated debt facility	9XXXXXX107	Fixed Rate – Series D	1,100	1,108	1,066
Subordinated debt facility	9XXXXXX108	Fixed Rate – Series E	530	535	590
Subordinated debt facility	9XXXXXX109	Fixed Rate – Series F	70	68	78
Subordinated debt facility	9XXXXXX110	Floating Rate – Series X	200	213	198
Subordinated debt facility	9XXXXXX111	Floating Rate – Series Y	100	109	277
Subordinated debt facility	9XXXXXX112	Floating Rate – Series Z	90	87	100
			<u>19,970</u>	<u>19,936</u>	<u>15,567</u>

Note: The fair value information as of December 31, 2019 excludes the impact of early redemptions that the bank may undertake at year-end.

Table 3 – Selected Bank Information (amounts in millions)

	12/31/2019	12/31/2018	1/1/2008
Total assets	650,967	637,501	630,768
Risk-weighted assets	298,118	288,213	401,704
Tier 1 capital	18,001	17,544	26,641

Note: The balances include fair value adjustments where applicable, but exclude the impact of early redemptions that the bank may undertake at year-end.

References

Beatty, A., and Liao, S. 2014. Financial accounting in the banking industry: A review of the empirical literature. *Journal of Accounting and Economics* 58: 339-383.