

Bethari Bethari

The Implementation of SFAS 71, Bank Equity Valuation, and

 Financial 4

Document Details

Submission ID

trn:oid:::3618:124140338

Submission Date

Dec 10, 2025, 3:14 AM UTC

Download Date

Dec 10, 2025, 3:25 AM UTC

File Name

The Implementation of SFAS 71, Bank Equity Valuation, and.pdf

File Size

613.9 KB

24 Pages

7,869 Words

43,053 Characters

11% Overall Similarity

The combined total of all matches, including overlapping sources, for each database.





Filtered from the Report

- Cited Text




Exclusions

- 23 Excluded Matches

Match Groups

-  **14 Not Cited or Quoted 11%**
Matches with neither in-text citation nor quotation marks
-  **0 Missing Quotations 0%**
Matches that are still very similar to source material
-  **0 Missing Citation 0%**
Matches that have quotation marks, but no in-text citation
-  **0 Cited and Quoted 0%**
Matches with in-text citation present, but no quotation marks

Top Sources

- 11%  Internet sources
- 10%  Publications
- 10%  Submitted works (Student Papers)

Match Groups

- 14 Not Cited or Quoted 11%**
Matches with neither in-text citation nor quotation marks
- 0 Missing Quotations 0%**
Matches that are still very similar to source material
- 0 Missing Citation 0%**
Matches that have quotation marks, but no in-text citation
- 0 Cited and Quoted 0%**
Matches with in-text citation present, but no quotation marks

Top Sources

- 11% Internet sources
- 10% Publications
- 10% Submitted works (Student Papers)

Top Sources

The sources with the highest number of matches within the submission. Overlapping sources will not be displayed.

1	Internet	
	ijar-iaikapd.or.id	10%
2	Internet	
	www.ijar-iaikapd.or.id	1%
3	Internet	
	garuda.kemdikbud.go.id	<1%

The Implementation of SFAS 71, Bank Equity Valuation, and the Moderating Effect of Bank Size

IMAN SOFIAN SURIAWINATA

Sekolah Tinggi Ilmu Ekonomi Indonesia, Indonesia

Abstract: *This study is the first that investigates the value relevance of SFAS 71 within the banking sector, especially relating to the role of the new accounting standards in reducing the problem of information asymmetry due to bank asset opacity. Using samples consisting of 41 listed banking firms from 2016 to 2020, this study shows that the empirical relationship between the initial implementation of SFAS 71 and bank equity value is inverse U-shaped or concave and that bank size has a negative moderated effect on the relationship between the initial implementation of SFAS 71 and bank equity value. These findings indicate that: (i) at low levels of retained earnings adjustments due to the initial implementation of SFAS 71, the disclosure effect brought by the new accounting standards has a positive relationship with bank equity valuation, (ii) at higher levels of adjustments beyond those previously anticipated by capital market investors, the substantial effect of the new accounting standards has a negative relationship with bank equity valuation, and (iii) larger banks have more opaque assets and therefore suffer more significant valuation discounts due to the substance effect.*

Keywords: *SFAS 71, Allowance for Impairment Losses, Bank Asset Opacity, Bank Equity Valuation.*

Abstrak— *Studi ini merupakan yang pertama yang meneliti relevansi nilai PSAK 71 pada sektor perbankan, khususnya terkait dengan peran standar akuntansi baru tersebut di dalam mengurangi permasalahan asimetri informasi yang disebabkan oleh opasitas aset bank. Dengan menggunakan sejumlah sampel yang terdiri dari 41 perusahaan perbankan yang terdaftar di pasar modal selama periode 2016-2020, studi ini menunjukkan bahwa hubungan empiris antara penerapan PSAK 71 dengan nilai saham perbankan memiliki bentuk huruf U-terbalik atau konkaf, dan ukuran bank memoderasi secara negatif hubungan antara penerapan PSAK 71 dengan nilai saham perbankan. Hasil ini menunjukkan bahwa: (i) pada tingkat penyesuaian laba ditahan yang rendah sehubungan dengan penerapan PSAK 71, dampak pengungkapan dari standar akuntansi baru tersebut berhubungan positif dengan valuasi saham perbankan, (ii) pada tingkat penyesuaian yang lebih tinggi dari yang diantisipasi sebelumnya oleh para investor pasar modal, dampak substansi dari standar akuntansi baru tersebut berhubungan negatif dengan valuasi saham perbankan, dan (iii) bank-bank besar memiliki opasitas aset yang lebih besar sehingga nilai sahamnya terdiskon lebih besar sebagai akibat dari dampak substansi.*

* Corresponding Author: iman.suriawinata@stei.ac.id

Kata Kunci: SFAS 71, Cadangan Kerugian Penurunan Nilai, Opasitas Aset Bank, Valuasi Saham Perbankan.

1. Introduction

SFAS (PSAK) 71, which replaces SFAS (PSAK) 55, is the adoption of IFRS 9 Financial Instruments and has been effective for implementation on the 1st of January 2020, though early adoption was permitted. Much discussion occurred before the implementation of this standard, especially relating to the banking sector, where banks are required, among others, to create an allowance for impairment losses in credit assets based on the 12-month expected credit losses (ECLs), or lifetime ECLs if a significant increase in credit risk occurs. A noticeable impact of implementing the new standards is a decrease in retained earnings related to the initial implementation of SFAS 71 on the 1st of January 2020. The total reduction in retained earnings due to the initial implementation of SFAS 71 of all 41 sample banks utilized by this study is Rp. 74.48 trillion approximately or, on average, Rp. 1.82 trillion per bank. Another substantial impact is the potential reduction in bank profitability due to increases in the allowance for impairment losses determined based on expected credit losses rather than incurred credit losses.

The fact that the SFAS 71 negatively impacts banks' beginning retained earnings and reported income during the Year of its initial implementation is well understood. However, the benefit of implementing the new standard for the banking industry needs to be further explored. As asserted by Morgan (2002), Flannery et al. (2004), Cao and Juelsrud (2022), bank loans are informationally opaque, which means that investors in the capital market do not know the risks associated with and the quality of bank loan portfolios. Therefore they have difficulty in adequately valuing bank equity prices. A study by Jones et al. (2012) suggests that investors have a problem assessing the value of banks. Consequently, they rely on the valuation of merger banks to adjust their valuations of non-merger banks. To be more specific, Jones et al. (2012) show that announcements of bank mergers not only affect the stock prices of the target banks but

also affect the stock prices of non-merger banks as investors adjust their valuations on other banks using the information from these merger announcements.

Bank opaqueness or opacity is associated with the degree of information asymmetry between bank insiders (i.e., managers) and outsiders (i.e., investors, depositors, and creditors) as well as the quality of bank financial disclosure (Flannery et al., 2013; Jones et al., 2013). Blau et al. (2017) find evidence that bank opacity is positively associated with price delay, which indicates that opacity adversely affects the efficiency of bank stock prices. Another related study by Jones et al. (2013) finds that banks with more opaque assets have more significant valuation discounts than those with transparent assets. Last but not least, utilizing the famous Akerlof's (1970) paper on "the market for lemons", Dye (2017) argues that due to this lemons problem - that is, bank managers know more about the quality of bank loan portfolios than do the investors - bank loan portfolios will be underpriced.

To summarize, due to bank assets opacity and lack of adequate financial disclosure on the related bank assets, investors either need time (Blau et al., 2017), rely on other sources – such as merger announcements (Jones et al., 2012), or imposed higher valuation discounts (Jones et al., 2013) to value bank stock prices. Following the assertion that accounting standards are essential for the proper functioning of the economy in optimally allocating resources by using reliable and understandable decision-relevant information (Khan et al., 2017), this study argues that SFAS 71 provides more disclosure about the nature and quality of bank assets. Therefore its implementation by the banking industry reduces bank assets' opacity. Furthermore, Fontes et al. (2018) argue that using fair value measurement on bank assets reduces information asymmetry and has provided capital market investors with relevant financial information for equity valuation purposes. An empirical work by Avdjiev and Jager (2022) provides evidence that public releases of information that reduce uncertainty arising from banks' asset opacity significantly increase banks' equity prices. Lastly, Nichols and Wahlen (2022) demonstrate and provide evidence on the essential role of accounting information in the equity capital markets.

Using panel data from a sample of 41 banks listed on the Indonesia Stock Exchange (IDX) from 2016-2020, this study is the first to explore the value relevance of the initial implementation of SFAS 71 in the banking industry. As an additional analysis, this study investigates the moderating effect of bank size on the relationship between the initial implementation of SFAS 71 and bank equity valuation. This study also includes other factors deemed to affect bank equity value, i.e., allowance for impairment losses (Elnahass et al., 2014; Niu, 2016; Guerry & Wallmeier, 2017; Simoens & Vennet, 2021), net interest margin (Mommel, 2014; Simoens & Vennet, 2021), core deposits (Sheehan, 2013; Bogdanova & Fender, 2018; Saif-Alyousfi, 2020), equity multiplier (Saunders et al., 2021), capital adequacy ratio (Huizinga & Laeven, 2012; Velasco, 2021), institutional ownership (Caprio et al., 2007; Elyasiani & Jia, 2008; Ni, 2019), and bank size (Fang et al., 2014; Niu, 2016; Guerry & Wallmeier, 2017; Avramidis et al., 2018; Minton et al., 2019; Sakawa et al., 2020). The factors mentioned above are treated as control variables.

This study presents three essential findings. First, SFAS 71 increases bank transparency and reduce information asymmetry and bank opacity so investors can better value bank equity. With SFAS 71, investors have become more informed about the quality of banks' asset portfolios. Therefore, they adjust their valuation of banks' equity based on the disclosure of the effect of the initial implementation of SFAS 71.

Second, the relationship between the initial implementation of SFAS 71 and bank equity valuation is inverted U-shaped or concave. This finding indicates that at low levels of the effect of the initial implementation of SFAS 71, the relationship between the initial implementation of the new accounting standard and bank equity valuation is positive. However, the relationship becomes negative for much higher levels of the effect of the initial implementation of SFAS 71. This study asserts that when the impact of the initial implementation of SFAS 71 is relatively low, investors positively value the "*disclosure or transparency effect*" brought by the new standard. But as the effect of the initial implementation of SFAS 71 becomes more extensive, the "*substance effect*" dominates the "*disclosure or transparency effect*". It seems that investors do not expect that the effect of the initial implementation of the new standard would be as high

as reported in the respective banks' financial statements. Consequently, the relationship between the initial implementation of SFAS 71 and bank equity valuation turns negative at high levels of the initial effect of the new accounting standard.

Third, this study finds that bank size negatively modifies the relationship between the initial implementation of SFAS 71 and bank equity valuation. This finding indicates that larger banks have more opaque assets - due to their relatively more diverse and complex banking products and transactions than smaller banks and therefore have more significant valuation discounts.

2. Theoretical Framework and Hypothesis Development

2.1. Information Asymmetry, Bank Opacity, and Valuation Impact of SFAS 71

Information asymmetry is a condition in which one party possesses more information than the other party in connection with a particular business transaction or relationship (e.g., principal-agent or seller-buyer relationships), which could lead to adverse selection, moral hazard, or a monopoly of knowledge (Akerlof, 1970; Lofgren et al., 2002; Rosser, 2003). According to Morgan (2002) and Tran and Ashraf (2018), banks are black boxes in which depositors put money. Bank managers lend part of the same money (after deducting for reserve requirements) to generate a net interest margin. However, the risks involved in the process of intermediation are difficult to be observed for outsiders. In short, bank outsiders lack information on the nature and quality of bank asset portfolios. This information asymmetry increases if banks manipulate information about the quality of their asset portfolios.

Based on Flannery et al. (2004), Kladakis et al. (2020), and Zheng (2020), bank opacity means that bank outsiders - such as capital market investors - cannot value bank assets accurately. Bank opacity is closely associated with the degree of information asymmetry, in the sense that as information asymmetry between bank outsiders and insiders increases, bank opacity increases. Information asymmetry in the banking industry may also result from banks' ability to keep both loans and other financial assets off the balance sheet and hold complicated financial assets that only bank insiders know or those with special knowledge understand (Tran et al., 2019). Thus, making it harder

for capital market investors to monitor and correctly value bank assets as reflected in banks' equity prices.

Following Jones et al. (2013), bank opacity in the capital market results from information uncertainty on bank asset portfolios that may arise due to: (i) the absence or lack of information or disclosure, (ii) the interpretation of available information in contradictory ways by unsophisticated investors, or (iii) fundamental complexity of bank assets that makes accurate valuation difficult or nearly impossible.

The asset composition of banks is an essential determinant of bank opacity (Morgan, 2002; Kladakis et al., 2020; Avdjiev & Jager, 2022). Two main categories of bank assets generate revenues to compensate fund providers, i.e., depositors, creditors, and equity holders. The first and primary source of bank revenue is bank loans, which are the primary opaque assets for most banks. Bank loans are privately negotiated financial transactions between a bank and its borrowers, and there are two sides of opaqueness to bank loans. Firstly, banks are positioned to have privileged information that investors do not have about the nature of the loan contracts and the creditworthiness of their borrowers (Jones et al., 2013).

Based on Diamond (1984), banks' ability to act as delegated monitors is a primary reason for their existence. Secondly, banks do not know precisely the quality of their borrowers' investment projects that they finance. Therefore, banks are investing in opaque assets, which are riskier than transparent assets – such as government securities – but provide comparatively higher returns. To resolve risks associated with investments in opaque assets (i.e., bank loans), banks conduct various risk mitigation techniques, ranging from individual-based and portfolio-based loan monitoring to loan diversifications, among others. However, according to Jones et al., 2013, risk-based pricing for higher returns on opaque assets does not resolve the agent-principal conflicts between bank managers and equity holders (i.e., investors) on the optimal level of investments in opaque assets. Therefore, information asymmetry or uncertainty associated with investments in opaque assets necessitates a higher rate of returns for investors, which translates into lower valuation, and hence lower equity price.

Marketable securities – such as government and corporate bonds - represent another important source of bank opacity. Depending on each bank’s fund allocation strategy, marketable securities may be bought for trading purposes or held until maturity. While government bonds are relatively transparent and default-risk-free, it is not the case with corporate bonds. Even triple-A corporate bonds bear some default risks, and the bond ratings may change if business circumstances change. Additionally, according to Morgan (2002) and Jones et al. (2013), marketable securities are generally liquid and move on and off the trading books quickly, making them “slippery” and difficult for capital market investors to monitor. Investors’ difficulties in effectively monitoring bank placements and trading activities in marketable securities may provide managers with opportunities to deviate from value-maximizing placement and trading strategies and expropriate wealth through various ways to maximize personal managerial benefits.

In short, opaqueness in bank loans and marketable securities has caused difficulties for capital market investors to value bank assets. Furthermore, Cao and Juelsrud (2022) show that bank asset opacity positively correlates with realized bank risk. Therefore, as Jones et al. (2013) suggested, investors, respond to bank assets' opaqueness by requiring higher rates of return that cause valuation discounts on bank equity prices. Split rating among credit rating agencies is positively associated with bank asset opacity. Kladakis et al. (2020) provide evidence that poor bank asset quality is associated with bank uncertainty and opacity and that the probability of greater credit rating disagreements increases as bank opacity increases.

The implementation of SFAS 71 is believed to increase financial disclosure and reduce bank assets’ opacity, especially concerning the nature and quality of bank loans and marketable securities. The new accounting standard relating to the recognition and measurement of impairments in loans and marketable securities that are measured based on the “expected losses” model rather than the “incurred loss” model has provided capital market investors with more information about the quality of bank assets. Barth et al. (2022) argue that the value relevance of accounting information evolves in line with economic developments and transitions. Therefore, following Barth et al. (2022), it might be the case that the value relevance of the "incurred loss" model in valuing bank

assets has declined due to increased volatility and complexity in financial markets and that the "expected loss" model has provided better information to capital market investors on the nature and riskiness of bank assets. Consequently, with the effective implementation of SFAS 71 by the banking industry on or after the 1st of January 2020, investors can better value bank assets, reduce the required rate of returns, and adjust their valuations on bank equity accordingly.

Avdjiev and Jager (2022) develop a theoretical model that generates two predictions relating to the impact of public information disclosures (that reveal a bank's assets exposures) on the bank's equity price. The first prediction states that any new information about a bank's assets quality that reduces uncertainty will increase the bank's equity price. However, the second prediction states that if the new information reveals that the bank's asset quality is lower than that previously estimated by the capital market investors, the bank's equity price will decrease.

Based on the theoretical predictions developed by Avdjiev and Jager (2022), the initial implementation of SFAS 71 should positively impact banks' equity prices. This means that investors will upwardly adjust their valuation on banks' equity because the new information revealed by the initial implementation of SFAS 71 (in the form of adjustments in retained earnings) reduces uncertainty about banks' asset quality. Nevertheless, if the adjustments in bank retained earnings due to the initial implementation of SFAS 71 are sufficiently large to indicate much lower banks' assets quality than previously anticipated. The valuation discounts surpass the informational benefits of additional disclosure on banks' assets. This means that at low levels of retained earnings adjustments, the initial implementation of SFAS 71 has a positive effect on bank equity valuation. However, as the magnitude of the retained earnings adjustments increases beyond what capital market investors expect, the relationship between the two becomes negative.

To summarize, the initial implementation of SFAS 71 has two opposing effects on bank equity valuation. The first effect is called the "*disclosure or transparency effect*," which positively impacts bank equity valuation. DeFond (2019) asserts that disclosure is a characteristic that makes accounting numbers matter to capital market investors.

The measurement of impairment losses based on the expected model has provided equity investors with more meaningful information about the quality of bank asset portfolios. As a consequence, investors upwardly adjust banks' future cashflows and equity valuations which were previously - due to the "lemons problem" associated with bank asset portfolios - overly underpriced. In other words, the expected loss model has enabled capital market investors to forecast better banks' future cashflows and value banks' equity more fairly. The second effect is called the "*substance effect*," which has a negative impact on bank equity valuation. Much higher retained earnings adjustments (due to the initial implementation of SFAS 71) indicate lower bank assets' or loans' quality than those previously reported and anticipated before SFAS 71. As the value of the retained earnings adjustment increases beyond the levels previously expected by capital market investors, it is predicted that the substance effect dominates the disclosure effect, with a net result of decreasing bank equity value.

Therefore, based on the above discussions and arguments, it is asserted that there is an inverse U-shaped relationship between the initial implementation of SFAS 71 and bank equity valuation, and this study hypothesizes the following:

H1. The relationship between the initial implementation of SFAS 71 and bank equity valuation is concave or inverse U-shaped because, at low (high) levels of retained earnings adjustments, the informational benefits of additional disclosure of bank assets' quality are higher (lower) than the detrimental substance effect of the adjustments.

2.2. The Moderating Effect of Bank Size on the Valuation Impact of SFAS 71

Bank size plays a vital role in the banking industry. Based on the concept of "too-big-to-fail" (TBTF), it is commonly viewed that banks gain from becoming bigger, and this gain comes from having access to a stronger regulatory safety net (Minton et al., 2019). Having the status of systematically important banks, sufficiently large and complex banks will not be allowed to fail by the government. In other words, large banks enjoy some subsidy because the government will intervene by bailing out troubled, systematically important large banks. Ueda and Weder di Mauro (2013) claim

that subsidies arising from size and complexity incentivize banks to become even larger and more complex.

However, as banks become more complex, their assets' opacity also increases. Larger banks have more complex and diversified activities than their smaller counterparts. For example, large banks often involve complex and sophisticated banking and financial transactions such as loan syndication, securitization, and structured finance. These complex and sophisticated banking products are harder to value than plain-vanilla bank loans. It is asserted that the implementation of SFAS 71 reveals to “true” nature of larger banks’ assets’ riskiness, and capital market investors downwardly adjust their valuation on larger banks’ equity accordingly. Therefore, based on the preceding arguments and analyses, this study hypothesizes the following:

H2. Bank size has a negative moderating effect on the relationship between the initial implementation of SFAS 71 and bank equity valuation.

2.3. Control Variables

While this study intends to investigate the impact of the initial implementation of SFAS 71 on bank equity, it is widely known that other essential factors also affect bank valuation. To control for these other factors that are empirically known to affect bank equity value, this study includes allowance for impairment losses, net interest margin, core deposits, equity multiplier, capital adequacy ratio, institutional ownership, and bank size.

Allowance for impairment losses is expected to negatively affect bank value because a higher allowance for impairment losses will result in lower profitability and expected future dividends and, therefore, will negatively impact bank value. On the other hand, the net interest margin is expected to positively affect bank equity value (Simoens & Vennet, 2021). The proportion of core deposits (i.e., checking and savings accounts) to total deposits is included because core deposits are regarded as cheaper funding sources and have considerable value to banks (Sheehan, 2013); therefore, the proportion of core deposits-to-total deposits is expected to have a positive impact on bank equity value. Based on Saunders et al. (2021), a positive effect on bank equity

value is expected because the equity multiplier (asset-to-equity ratio) levers up the return on equity. The capital adequacy ratio is expected to positively impact bank equity value because a larger risk-based capital ratio indicates a bank's ability to invest in risky loans. It is assumed that higher returns from risky loans exceed the costs of loan monitoring. According to Caprio et al. (2007), ownership structure plays a vital role in governing banks. Therefore, since institutional shareholders have the ability and incentive to monitor bank performance, it is expected that the proportion of institutional ownership positively affects bank value. Finally, the present study includes the natural log of total assets to control for size-related effects (Minton et al., 2019; Sakawa et al., 2020; Simoens & Vennet, 2021).

Figure 1.
The Research Conceptual Framework

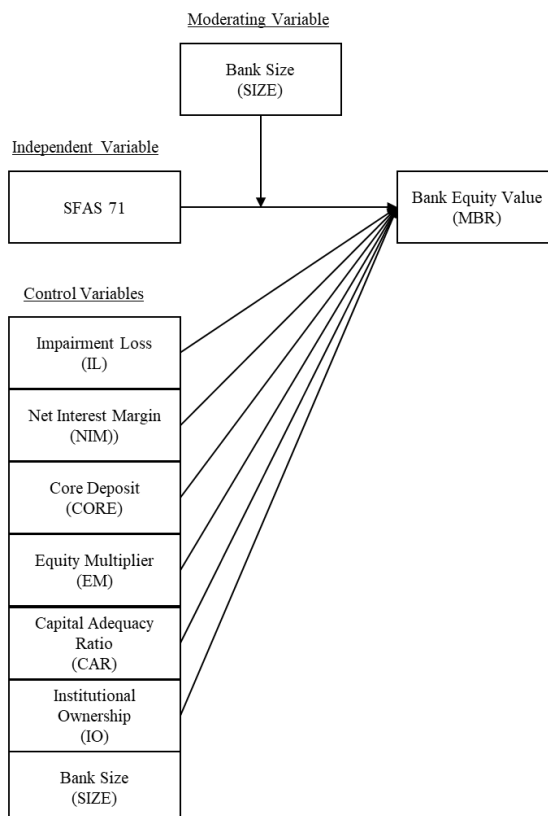


Figure 1 shows the conceptual research framework of this study that focuses explicitly on (i) the value impact of the initial implementation of SFAS on bank equity valuation and (ii) the moderating effect of bank size on the relationship between the initial implementation of SFAS and bank equity valuation. As shown in Figure 1, this study also employs 7 (seven) control variables that are deemed to affect bank equity value, i.e., allowance for impairment losses, net interest margin, core deposits, equity multiplier, capital adequacy ratio, institutional ownership, and bank size.

3. Research Method

The present study employs a purposive sampling method. The initial sample includes all banking firms listed on the Indonesia Stock Exchange from 2016 to 2020. To be included in the final sample, a banking firm must: (i) be listed during all periods of the study, (ii) have a complete set of audited financial statements, including the notes to financial statements, and (iii) have adequate disclosure on the effect of the initial implementation of SFAS 71.

Imposing the above criteria results in a total sample of 41 banking firms, with 205 firm-year observations covering the five years of 2016-2020. Information about the initial implementation of SFAS 71 is obtained from the Statement of Changes in Equity under the title of "*Impact/Effect of implementation SFAS 71 – net*" and the related notes to financial statements for a detailed explanation. All other variables are obtained from the relevant accounts in the financial statements and the accompanying notes to financial statements.

3.1. Variable Definitions and Measurements

As in Bertsatos and Sakellaris (2016) and Simoens and Vennet (2020), this study utilizes the market-to-book value of equity ratio (*MBR*) as a proxy for bank equity value, defined as the ratio of the bank's market value of equity to the book value of equity.

As previously mentioned, the initial effect of the implementation of SFAS 71 (*SFAS71*) is obtained from the Statement of Changes in Equity under the title of "*Impact/Effect of implementation SFAS 71 – net*". Two measures of SFAS are developed, i.e.: (i) *SFAS71_L* calculated as *SFAS71* divided by total loans, and (ii)

$SFAS_A$ calculated as $SFAS71$ divided by total assets. The main reason for developing these two measurements is to explore the effect of loans and assets normalization on the relationship between the implementation of SFAS 71 and bank equity value. Traditionally, loans dominate banks' asset composition. Yet, recent developments in financial markets have attracted banks to invest and gain from marketable securities placement and trading activities. Therefore the composition of marketable securities in bank assets has been increasing over time.

As mentioned above, to control for other factors that empirically affect bank equity valuation, this study also includes: (i) allowance for impairment losses (IL) as measured by the allowance for impairment losses divided by total loans, (ii) net interest margin (NIM) as measured by interest income less interest expense divided by interest income, (iii) core deposits ($CORE$) as measured by the sum of checking and saving accounts divided by total deposits, (iv) equity multiplier (EM) as measured by total assets divided by the total book value of equity, (v) capital adequacy ratio (CAR) as reported in the notes to financial statements, (vi) institutional ownership (IO) as measured by the proportion of institutional equity ownerships, and (iv) bank size ($SIZE$) as measured by the natural logarithm of total assets. The purpose is to consider the influence of those variables, which, based on empirical banking research, play an essential role in determining bank value. Hence, with the inclusion of those control variables, a more valid causal relationship between the implementation of SFAS 71 and bank equity value could be reliably established.

3.2. Model Specification

To examine the effect of the implementation of SFAS 71 on bank equity value, the present study employs the following moderated panel data regression model:

$$MBR_{it} = \alpha + \beta_1 SFAS71_{it} + \beta_2 SFAS71_{it}^2 + \beta_3 (SFAS71_{it} * SIZE_{it}) + \beta_4 IL_{it} + \beta_5 NIM_{it} + \beta_6 CORE_{it} + \beta_7 EM_{it} + \beta_8 CAR_{it} + \beta_9 IO_{it} + \beta_{10} SIZE_{it} + \varepsilon_{it} \quad (1)$$

where all the variables are defined and calculated as described in the previous section.

4. Results and Discussion

4.1. Descriptive Statistics

Table 1 presents descriptive statistics for the dependent, independent, and control variables. As shown in Table 1, MBR has a mean value of 1.6988, indicating that, on average, observed market values of equity of sample banking firms exceed their book values of equity. SFAS_L has a mean value of 0.0035 or 0.35% of the total loans. On the other hand, SFAS_A has a mean value of 0.0021 or 0.21% of total assets. While the average amount of the retained earnings adjustments due to the initial implementation of SFAS 71 is Rp. 1.82 trillion per bank; these numbers indicate that the magnitude of the adjustments is less than 1% of either total loans or total assets. Allowance for impairment losses (IL) has a mean value of 0.0196, meaning that, on average, the amount of value impairment is 1.96% of total loans. Net interest margin (NIM) has a mean value of 6.1283%, and the proportion of core deposits to total deposits (CORE) has a mean value of 0.3664 or 36.64%, which is more than one-third of the total deposits. The equity multiplier (EM) has a mean value of 7.0247, indicating that, on average, sample banks' total assets are seven times their book equity values.

Table 1
Descriptive Statistics

Variables	Mean	Max	Min	Std. Dev.
MBR	1.6988	31.4147	0.2093	2.3719
SFAS71_L	0.0035	0.1772	0.0000	0.0150
SFAS71_A	0.0021	0.1258	0.0000	0.0099
IL	0.0196	0.2715	-0.0651	0.0330
NIM	6.1283	14.4047	0.3031	2.6374
CORE	0.3664	1.0000	0.0924	0.2085
EM	7.0247	31.4712	1.7689	3.1685
CAR	23.5677	148.2800	9.0100	12.9299
IO	73.8713	99.9700	0.0000	21.6652
SIZE	31.1792	34.9521	27.2226	1.8205

The capital adequacy ratio (CAR) has a mean value of 23.5677%, indicating that, on average, banks' CARs far exceed the minimum capital requirements set by the

regulator, which is around 9 – 11%, depending on the risk profiles of the respective bank assets. Institution equity ownership (IO) has a mean value of 73.8713%, which means that institutional investors dominate share ownership in the Indonesian banking industry. Lastly, the natural logarithm of bank size (SIZE) has a mean value of 31.1792.

Table 2 reports the results of the multicollinearity test using the variance inflation factor (VIF) measure, which shows that each independent variable has a VIF value of less than 10. Therefore, the results of the VIF test indicate that the regression model in equation (1) does not have the problem of multicollinearity.

Table 2
Variance Inflation Factor

Variables	Coefficient Variance	Centered VIF
SFAS_L	119.6842	1.0804
IL	27.4555	1.1996
NIM	0.0053	1.4683
CORE	0.9151	1.5923
EM	0.0042	1.6797
CAR	0.0002	1.6475
IO	0.0001	1.1011
SIZE	0.0126	1.6771

4.2. Regression Results

To test the hypothesized relationship between the initial implementation of SFAS 71 and bank equity value, this study develops two regression models using two measurements of the effect of SFAS 71 implementation, i.e., *SFAS71_L* and *SFAS71_A* as previously defined. Based on the Chow, LM, and Hausman tests that are not reported here, the most appropriate panel regression model is the fixed-effect model (FEM). However, additional diagnostics show that there are problems of autocorrelation, cross-section dependence, and cross-section heteroskedasticity¹. Therefore, the empirical

¹ The residual cross-section dependence test using the Breusch-Pagan LM test shows a value of 1238.633, which is significant at the 1% level. The calculated value of the chi-square White's heteroscedasticity test

models developed based on equation (1) are regressed using the estimated generalized least squares or EGLS (Greene, 2018) with cross-section weights and white-corrected robust standard errors.

Table 3
Regression Results for Bank Equity Value (Dependent Variable = MBR)

Independent Variables	Model 1 (<i>SFAS_L</i>)		Model 2 (<i>SFAS_A</i>)	
	Coefficient	Standard Error	Coefficient	Standard Error
<i>Constant</i>	-26.534***	2.235	-23.478***	1.921
<i>SFAS 71</i>	158.992***	24.964	219.227***	46.762
<i>SFAS 71</i> ²	-59.532**	25.402	-107.283**	42.762
<i>SFAS 71</i> * <i>SIZE</i>	-5.010***	0.812	-6.995***	1.486
<i>Impairment Loss (IL)</i>	-4.263**	2.107	-4.134**	2.101
<i>Net Interest Margin (NIM)</i>	0.102***	0.025	0.090***	0.025
<i>Core Deposit (CORE)</i>	0.445*	0.252	0.472*	0.261
<i>Equity Multiplier (EM)</i>	0.059***	0.021	0.061***	0.018
<i>Capital Adequacy Ratio (CAR)</i>	0.019***	0.006	0.020***	0.007
<i>Institutional Ownership (IO)</i>	0.007**	0.003	0.006**	0.003
<i>Bank Size (SIZE)</i>	0.838***	0.065	0.743***	0.055
<i>No. of Observation</i>	205		205	
<i>No. of Banks</i>	41		41	
<i>DW-Statistic</i>	1.5689		1.5854	
<i>Adj. R-squared</i>	0.8918		0.8751	
<i>F-statistic</i>	34.6217		29.5864	
<i>Prob.(F-statistic)</i>	0.0000		0.0000	

***, **, and * indicate statistical significance at the 1%, 5% and 10% levels respectively.

Table 3 reports the results of the two regression models, where Model 1 uses the effect of SFAS71 divided by total loans (*SFAS71_L*), while Model 2 uses SFAS71 divided by total assets (*SFAS71_A*). Both the linear (*SFAS_L* and *SFAS_A*) and the second order (*SFAS_L*² and *SFAS_A*²) effects of the implementation of SFAS 71 on bank equity value are statistically significant. To be more specific, the positive linear

is 43.2575, while the critical chi-square value at the 5% significance level is 18.3070. Therefore, both test results indicate the problems of cross-dependence and heteroskedasticity, respectively.

effect ($p < 1\%$) and the negative quadratic effect ($p < 5\%$) confirm the concavity of the effect of the initial implementation of SFAS 71 on bank equity value.

Additionally, the regression results also show that interaction variables $SFAS71_L*SIZE$ and $SFAS71_A*SIZE$ negatively and significantly affect bank equity value at a 1% significance level. Therefore, the results of this study support the hypotheses that: (i) the relationship between the initial implementation of SFAS 71 and bank equity valuation is inverse U-shaped, and (ii) bank size has a negative moderating effect on the relationship between the initial implementation of SFAS 71 and bank equity valuation.

At low levels of retained earnings adjustments relating to the effect of the initial implementation of SFAS 71, capital market investors respond positively to the additional disclosure brought by the new accounting standard. This is called the “*disclosure or transparency effect*,” which is positively valued by investors as evidenced by the positive relationship between the effect of the initial implementation of SFAS 71 and bank equity valuation. However, when the level of retained earnings adjustments relating to the effect of the initial implementation of SFAS 71 increases beyond what is expected by the capital market, the magnitude of the retained earnings adjustments negatively affects bank equity valuation. This is called the “*substance effect*,” which refers to the negative effect of additional impairment losses relating to the initial implementation of SFAS 71 on bank equity valuation.

The finding of a negative moderating effect of bank size on the relationship between the initial implementation of SFAS 71 and bank equity valuation is consistent with the view that larger banks are more opaque compared to smaller banks. As bank size increases, the bank becomes more diversified and complex, thus more opaque (De Jonghe et al., 2015; Tran et al., 2019). As a consequence, compared to smaller banks, larger banks suffer larger valuation discounts relating to the “*substance effect*” of the initial implementation of SFAS 71.

Regarding the effect of control variables on bank equity value, the results from the two regression models generally show that the allowance for impairment losses (IL) is negative and significant (at a 5% level of significance in Model 1; at a 10% level

significance in Model 2), which indicates that as the quality of bank assets declines, bank equity value decreases. Net interest margin (*NIM*) is positive and significant at 1%, which means that a higher net interest margin increases bank equity value.

As expected, the proportion of checking and saving accounts to the total deposits (*CORE*) – which represents the proportion of cheap funds within the total deposit fundings - is positive and significant in affecting bank equity value, albeit only at a 10% level of significance. The equity multiplier (*EM*) has a positive and significant effect on bank equity value at a 1% significance level in both Model 1 and Model 2. This empirical finding provides evidence that banks economize on their equity capital by optimally expanding their total assets to increase bank equity value. Capital adequacy ratio (*CAR*) has a positive and significant effect (at a 1% significance level in both Model 1 and Model 2) on bank equity value. It seems that capital market investors value a larger capital adequacy ratio as a source for bank assets expansion or a measure of a bank's capacity to absorb potential losses.

Institutional ownership (*IO*) has a positive and significant effect (at a 5% level of significance in both Model 1 and Model 2) on bank equity value, which indicates the effectiveness of institutional investors' share ownership in monitoring bank performance as asserted by Caprio et al. (2007). Finally, bank size (*SIZE*) is found to be positive and significant in affecting bank equity value, supporting the economies of scale and cost efficiency hypotheses of large banks as proposed by (Sapci & Miles 2019).

5. Conclusion, Implication, and Limitations

5.1. Conclusion

The implementation of SFAS 71 reduces the asymmetry of information and bank asset opacity in the capital market regarding the true value of bank asset portfolios. With more meaningful financial disclosure by SFAS 71 on the nature and quality of bank assets, capital market investors can correctly value bank equity prices. However, the empirical evidence provided by this study also suggests that larger banks' assets are more opaque than their smaller counterparts. This is due to the anecdotal evidence that

larger banks are usually involved in complex and sophisticated banking and other financial transactions in which risks are more complicated to assess than plain-vanilla banking products.

5.2. Implication and Limitation

The results of this study point to a couple of important implications relating to the nature of accounting standards and the potential impact of larger banks' asset opacity. Firstly, to maintain the fundamental qualitative characteristics of financial reports, i.e., relevance and faithful representation, accounting standards must evolve in line with the economic and business world developments. This study shows that the implementation of PSAK 71 – based on the expected model - helps capital market investors better value banks' assets that are both inherently opaque and becoming more complex as more innovative financial products are introduced in the banking sector of the economy. Secondly, further research is suggested to examine the potential impact of larger banks' assets' opaqueness in times of financial crisis on the financial system's stability and the government's ability to bail out troubled larger banks that are generally viewed as systematically important.

Admittedly, this study also suffers from a couple of limitations. Firstly, this study uses annual data in analyzing factors that affect bank equity value, while in actuality, bank managers make more frequent decisions (e.g., daily, weekly, or monthly) on the nature, quality, and composition of bank assets as well as their funding sources (e.g., deposits and borrowings). Therefore, this study cannot entirely capture the dynamics of banks' activities relating to their lending and funding decisions affecting their daily balance sheets. Secondly, this study normalizes the allowance for value impairment losses with the total loans and does not consider impairment losses resulting from loan (credit) assets and marketable securities separately. Consequently, the effects of value impairment losses on bank equity value might be biased toward loan assets.

References

- Akerlof, G. A. (1970). The market for “lemons”: Quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84(3), 488–500. <https://doi.org/10.2307/1879431>
- Avdjiev, S., & Jager, M. (2022). *Bank opacity - patterns and implications* (No. 992; BIS Working Papers).
- Avramidis, P., Cabolis, C., & Serfes, K. (2018). Bank size and market value: The role of direct monitoring and delegation costs. *Journal of Banking and Finance*, 93, 127–138. <https://doi.org/10.1016/j.jbankfin.2018.05.016>
- Barth, M. E., Li, K., & McClure, C. (2022). Evolution in value relevance of accounting information. *The Accounting Review*, forthcoming. <https://doi.org/10.2308/TAR-2019-0521>
- Bertsatos, G., & Sakellaris, P. (2016). A dynamic model of bank valuation. *Economics Letters*, 145, 15–18. <https://doi.org/10.1016/j.econlet.2016.05.014>
- Bogdanova, B., & Fender, I. (2018). The ABCs of bank PBRs. *BIS Quarterly Review*, March.
- Cao, J., & Juelsrud, R. E. (2022). Opacity and risk-taking: Evidence from Norway. *Journal of Banking and Finance*, 134(January), 106010. <https://doi.org/10.1016/j.jbankfin.2020.106010>
- Caprio, G., Laeven, L., & Levine, R. (2007). Governance and bank valuation. *Journal of Financial Intermediation*, 16(4), 584–617. <https://doi.org/10.1016/j.jfi.2006.10.003>
- De Jonghe, O., Diepstraten, M., & Schepens, G. (2015). Banks' size, scope, and systemic risk: What role for conflicts of interest? *Journal of Banking & Finance*, 61, S3–S13. <https://doi.org/10.1016/J.JBANKFIN.2014.12.024>
- DeFond, M. L. (2019). Why accounting matters: Evidence from accounting's “Big Bang.” *Journal of International Accounting Research*, 18(3), 87–96. <https://doi.org/10.2308/jiar-52568>
- Diamond, D. W. (1984). Financial intermediation and delegated monitoring. *Review of Economic Studies*, 51(3), 393–414. <https://doi.org/10.2307/2297430>
- Dye, R. A. (2017). Some recent advances in the theory of financial reporting and disclosures. *Accounting Horizons*, 31(3), 39–54. <https://doi.org/10.2308/acch-51717>
- Elnahass, M., Izzeldin, M., & Abdelsalam, O. (2014). Loan loss provisions, bank valuations, and discretion: A comparative study between conventional and Islamic banks. *Journal of Economic Behavior & Organization*, 103, S160–S173. <https://doi.org/10.1016/J.JEBO.2013.08.018>

- Elyasiani, E., & Jia, J. J. (2008). Institutional ownership stability and BHC performance. *Journal of Banking & Finance*, 32(9), 1767–1781. <https://doi.org/10.1016/J.JBANKFIN.2007.12.010>
- Fang, Y., Hasan, I., Marton, K., & Waisman, M. (2014). Bank valuation in new EU member countries. *Economic Systems*, 38(1), 55–72. <https://doi.org/10.1016/J.ECOSYS.2013.07.002>
- Flannery, M. J., Kwan, S. H., & Nimalendran, M. (2004). Market evidence on the opaqueness of banking firms' assets. *Journal of Financial Economics*, 71(3), 419–460. [https://doi.org/10.1016/S0304-405X\(03\)00185-5](https://doi.org/10.1016/S0304-405X(03)00185-5)
- Fontes, J. C., Panaretou, A., & Peasnell, K. V. (2018). The impact of fair value measurement for bank assets on information asymmetry and the moderating effect of own credit risk gains and losses. *The Accounting Review*, 93(6), 127–147. <https://doi.org/10.2308/accr-52070>
- Greene, W. H. (2018). *Econometric analysis* (8th ed.). Pearson Education, Inc.
- Guerry, N., & Wallmeier, M. (2017). Valuation of diversified banks: New evidence. *Journal of Banking & Finance*, 80, 203–214. <https://doi.org/10.1016/J.JBANKFIN.2017.04.004>
- Huizinga, H., & Laeven, L. (2012). Bank valuation and accounting discretion during a financial crisis. *Journal of Financial Economics*, 106(3), 614–634. <https://doi.org/10.1016/J.JFINECO.2012.06.008>
- Jones, J. S., Lee, W. Y., & Yeager, T. J. (2013). Valuation and systemic risk consequences of bank opacity. *Journal of Banking & Finance*, 37(3), 693–706. <https://doi.org/10.1016/J.JBANKFIN.2012.10.028>
- Khan, U., Li, B., Rajgopal, S., & Venkatachalam, M. (2017). Do the FASB's standards add shareholder value? *The Accounting Review*, 93(2), 209–247. <https://doi.org/10.2308/accr-51840>
- Kladakis, G., Chen, L., & Bellos, S. K. (2020). Bank asset and informational quality. *Journal of International Financial Markets, Institutions, and Money*, 69(November), 101256. <https://doi.org/10.1016/J.INTFIN.2020.101256>
- Lofgren, K., Persson, T., & Weibull, J. W. (2002). Markets with asymmetric information: The contributions of George Akerlof, Michael Spence, and Joseph Stiglitz. *The Scandinavian Journal of Economics*, 104(2), 195–211. <https://doi.org/10.1111/1467-9442.00280>
- Mommel, C. (2014). Banks' interest rate risk: The net interest income perspective versus the market value perspective. *Quantitative Finance*, 14(6), 1059–1068. <https://doi.org/10.1080/14697688.2011.630326>

- 1 Minton, B. A., Stulz, R. M., & Taboada, A. G. (2019). Are the largest banks valued more highly? *The Review of Financial Studies*, 32(12), 4604–4652. <https://doi.org/10.1093/RFS/HHZ036>
- Morgan, D. P. (2002). Rating banks: Risk and uncertainty in an opaque industry. *American Economic Review*, 92(4), 874–888. <https://doi.org/10.1257/00028280260344506>
- Ni, Y. (2019). Research on the ownership structure and market value of Chinese listed commercial banks. *American Journal of Industrial and Business Management*, 09(11), 1995–2007. <https://doi.org/10.4236/ajibm.2019.911131>
- Nichols, D. C., & Wahlen, J. M. (2022). The essential role of accounting information in the capital markets: Updating seminal research results with current evidence. *Accounting Horizons*, forthcoming. <https://doi.org/10.2308/HORIZONS-18-075>
- Niu, J. (2016). Loan growth and bank valuations. *The Quarterly Review of Economics and Finance*, 61, 185–191. <https://doi.org/10.1016/J.QREF.2016.02.001>
- Rosser, J. B. (2003). A Nobel Prize for asymmetric information: The economic contributions of George Akerlof, Michael Spence, and Joseph Stiglitz. *Review of Political Economy*, 15(1), 3–21. <https://doi.org/10.1080/09538250308445>
- Saif-Alyousfi, A. Y. H. (2020). Determinants of bank shareholder value: evidence from GCC countries. *International Journal of Managerial Finance*, 16(2). <https://doi.org/10.1108/IJMF-05-2019-0170>
- Sakawa, H., Watanabel, N., Sasaki, H., & Tanahashi, N. (2020). Bank valuation and size: Evidence from Japan. *Pacific Basin Finance Journal*, 63(October), 101403. <https://doi.org/10.1016/j.pacfin.2020.101403>
- Sapci, A., & Miles, B. (2019). Bank size returns to scale and cost efficiency. *Journal of Economics and Business*, 105, 105842. <https://doi.org/10.1016/J.JECONBUS.2019.04.003>
- Saunders, A., Cornett, M., & Erhemjamts, O. (2021). *Financial institutions management: A risk management approach* (10th ed.). McGraw-Hill Education.
- Sheehan, R. G. (2013). Valuing core deposits. *Journal of Financial Services Research*, 43(2), 197–220. <https://doi.org/10.1007/s10693-012-0130-6>
- Simoens, M., & Vennet, R. Vander. (2021). Bank performance in Europe and the US: A divergence in market-to-book ratios. *Finance Research Letters*, 40, 101672. <https://doi.org/10.1016/J.FRL.2020.101672>
- Tran, D. V., & Ashraf, B. N. (2018). Dividend policy and bank opacity. *International Journal of Finance & Economics*, 23(2), 186–204. <https://doi.org/10.1002/IJFE.1611>

- Tran, D. V., Hassan, M. K., & Houston, R. (2019). Activity strategies, information asymmetry, and bank opacity. *Economic Modelling*, 83(December), 160–172. <https://doi.org/10.1016/j.econmod.2019.02.008>
- Ueda, K., & Weder di Mauro, B. (2013). Quantifying structural subsidy values for systemically important financial institutions. *Journal of Banking and Finance*, 37(10), 3830–3842. <https://doi.org/10.1016/j.jbankfin.2013.05.019>
- Velasco, P. (2021). Is bank diversification a linking channel between regulatory capital and bank value? *The British Accounting Review*, 101070. <https://doi.org/10.1016/J.BAR.2021.101070>
- Zheng, Y. (2020). Does bank opacity affect lending? *Journal of Banking & Finance*, 119, 105900. <https://doi.org/https://doi.org/10.1016/j.jbankfin.2020.105900>

intentionally blank