

An Examination of Mortgage Loan Servicing Rights in the Aftermath of the Subprime Mortgage Crisis of 2006

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Abstract

This study examines whether mortgage servicing firms are capitalizing mortgage loan servicing rights (MSRs) consistent with the FASB's objective of fair value accounting. The FASB issued SFAS No. 156, "Accounting for Servicing of Financial Assets - an Amendment of FASB Statement No. 140," and SFAS No. 157, "Fair Value Measurements," which clarified that MSRs be capitalized at their fair value. Fair value would imply that only market-related value assumptions influence the capitalization of MSRs. A previous study examined this issue prior to the 2006 financial crisis. That study found that non-market, firm-specific characteristics consistent with Positive Accounting Theory (PAT), that should have no effect on the value of MSRs, did have a statistically significant influence on the capitalization of MSRs. This issue has not been examined post-SFAS No. 156 and 157 or the financial crisis of 2006. We reexamine the issue with data gathered from 2007 through 2010. The evidence suggests that the PAT characteristics that influenced the capitalization of MSRs prior to the accounting clarification and the financial crisis do not influence the capitalization of MSRs during the post-crisis period under examination, as predicted by PAT. However, the data do present some evidence suggesting that achieving the objective of "fair value" may not be happening.

Keywords: SFAS No. 156, SFAS No. 157, Accounting choice, Earnings management, Fair value, Mortgage loan servicing rights, Positive accounting theory

1. Introduction

The financial crisis of the mid-2000s profoundly impacted the mortgage industry, where high-risk subprime mortgages increased from 8% of new home loans in 2003 to 20% in 2005 (Joint Center for Housing Studies 2008). These loans were packaged and sold as mortgage-backed securities, a class of asset which comprises a significant portion of investment banks' balance sheets prior to the mortgage crisis. The subprime loans that originated in 2006 and 2007 went into delinquency at astronomical rates; approximately 30% of hybrid subprime loans originated in 2006 were delinquent after 17 months as were 35% of those originated in 2007 (Demyanyk & Van Hemert, 2011). The result of increased delinquency was an immediate and severe devaluation of mortgages and mortgage-backed securities. While the impact on mortgages and mortgage-backed securities was visible and mostly understood, the impact on capitalized mortgage loan servicing rights (MSRs) has not been documented and is not as well understood. This study focuses on MSRs.

The mortgage crisis forced the federal government, professional policymakers and standard setters to reexamine the regulatory structure and the accounting rules related to the mortgage industry. Major regulatory deficiencies in the mortgage industry concerning subprime loans contributed to the crisis by allowing loan originators to extend credit to unqualified borrowers. The Department of the Treasury found in its comprehensive analysis of the financial crisis that "Most critically in the run-up to the financial crisis, mortgage companies and other firms outside of the purview of bank regulation exploited [the] lack of clear accountability by selling mortgages and other products that were overly complicated and unsuited to borrowers' financial situation" (United States Department of the Treasury, 2009). The report also found that Financial Accounting Standards Board (FASB) standards related to the valuation of financial instruments needed clarification, specifically, the concept of fair value: "We recommend that the accounting standard setters clarify and make consistent the application of fair value accounting standards, including the impairment of financial instruments, by the end of 2009." (United States Department of the Treasury, 2009).

Although the Department of the Treasury report was referring to financial instruments such as mortgage-backed securities, issues over the determination of fair value are not limited to financial instruments in the mortgage industry. Fair value practices for MSRs are a continuing problem for the mortgage industry because the process for determining an MSR's fair value retains a degree of subjectivity (Cochran, Coffman & Harless, 2004). MSRs are a poorly understood asset outside of the mortgage banking industry. As a result, they have largely avoided public scrutiny following the financial crisis despite their considerable impact on the balance sheets of mortgage lending institutions.

This paper will define MSRs, describe the applicable accounting rules, and determine the role that positive accounting theory plays in their valuation. We analyze the capitalization of MSRs of a random sample of firms whose primary business includes mortgage servicing.

2. Background and Review of Prior Research

2.1 Accounting for MSRs

MSRs are an intangible asset recorded on the balance sheet of mortgage companies that service mortgage loans for others. Servicing loans for others means these companies collect and account for monthly mortgage payments for loans they do not own and remit the funds to the owner of the loans on a systematic basis. The servicer remits the funds collected, less a fee for the services rendered, to the owner of the loans. MSRs arise when the mortgage company that originates a loan chooses to sell the loan to another party, simultaneously entering into a contract with the other party to continue to collect the monthly mortgage payments on their behalf. The borrower is unaware that the ownership of the loan has changed hands. Currently, Generally Accepted Accounting Principles (GAAP) require the servicer to estimate the value of the right to perform these services in the future and record the estimated value on their balance sheet as an intangible MSR. MSR valuation is currently governed by Statement of Financial Accounting Standard (SFAS) No. 157 – Fair Value Measurements.

It is important to understand that the valuation of MSRs has changed significantly in the past twenty years. Currently, the measurement principle for MSRs is fair value. SFAS No. 157 defines fair value as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date” (SFAS No. 157). Prior to the issuance of SFAS No. 157, the fair value of MSRs was determined by the dictates of SFAS No. 122 - Accounting for Mortgage Servicing Rights, an Amendment of FASB Statement No. 65 (as amended), and was considered a “value in place” value. In theory, this allowed for the reality that a given portfolio of servicing rights would have a different value depending on who owned the servicing rights and who was doing the servicing. Firm specific servicing related characteristics that differ among firms would affect the value of the MSRs. SFAS No. 157 clarified that fair value for MSRs is to be the market, or sale price measurement.

Prior to the issuance of SFAS No. 157, MSR valuation was entity specific. This meant that the same mortgage servicing rights could have different book values depending on who was servicing the loans. This was because different firms made different assumptions as to the nature of MSRs and their specific costs and cash flows over time. The entity-specific nature of MSR book values existed because servicers adjusted the book value of the MSRs based on variables which were unique to that particular servicer (Cochran, 2008). An example of such a variable would be the cost a firm expects to incur in servicing the loan, which differs among servicers due to varying levels of efficiency. Accounting practices regarding the determination of fair value for MSRs were somewhat vague under pre-SFAS No. 157 guidelines and allowed managers a fair degree of discretion over how they chose to capitalize MSRs on their balance sheets (Cochran et al., 2004).

The entity-specific nature of pre-SFAS No. 157 accounting guidance contributed to significant variation in the valuation of MSRs between firms. While this was totally acceptable and expected since characteristics related to MSR value did, in fact, vary among firms, variation should not exist due to differences among firms for characteristics that should have no bearing on MSR value. Prior statistical analysis showed that certain firm-specific characteristics which should not have influenced the fair value determination of MSRs were playing a significant role in how a firm chose to capitalize their MSRs (Cochran et al., 2004). It was found that MSR capitalization was statistically and significantly correlated to the bonus percentage of upper-level management compensation plans, firm size and the debt/equity ratio of the firm (Cochran et al., 2004). Cochran et al. (2004) found strong evidence to suggest that the amount of choice managers were afforded under pre-SFAS No. 157 allowed them to account for MSRs in a way that suited their own individual self-interests.

2.2 Positive Accounting Theory

Under GAAP, managers are often given a choice between alternative accounting methods which can have a material impact on the balance sheet and the income statement. Positive Accounting Theory (PAT) seeks to explain accounting choices by positing that managers will consistently choose alternatives which maximize their own benefit (Watts & Zimmerman, 1990). Specifically, PAT suggests the following: (1) larger firms will choose income-decreasing accounting alternatives in an effort to escape regulatory scrutiny, (2) firms with higher debt/equity ratios will choose income-increasing accounting alternatives in an effort to avoid triggering debt covenants, and (3) firms that rely on incentive based compensation packages will choose income-increasing accounting alternatives to maximize bonus compensation (Watts & Zimmerman, 1990). PAT has been tested extensively in the accounting literature with consistently supportive results. With respect to the capitalization of MSR, a higher level of capitalization is an income increasing choice while a lower level of capitalization is an income decreasing choice. The three firm characteristics identified by PAT have no theoretical relationship to the value of MSR, but Cochran et al. (2004) found all three variables to have a statistically significant influence on the level at which firms chose to capitalize MSR and in the direction predicted.

With respect to the findings in Cochran et al. (2004), it should be noted that two of the variables examined were income-decreasing and one was income-increasing. The results of that study, while problematic, do not conclude as to whether the MSR are over or under capitalized. There is no way to determine from the study which of the three variables dominate or what the appropriate level of capitalization should be.

Also, among the firms examined, the level of capitalization measured in basis points (BP or 1/100th of one percent) varied from as low as 0.00 BP (i.e., a firm did not recognize any value for MSR) to as high as 380 BP (i.e., a firm would recognize \$3,800 as an intangible MSR for a \$100,000 loan serviced) (Cochran et al. 2004). Pre-SFAS No. 157 accounting allowed for this variation as the fair value was a “value in place” value so firm-specific servicing related characteristics that vary among firms would cause variations in the fair value recognized.

2.3 Fair Value Determination of MSR under SFAS No. 157

The issuance of SFAS No. 157 clarified the definition of fair value for financial assets and liabilities. The FASB, after much deliberation and participant input, concluded that fair value is a market value. Not only did the FASB address the market nature of fair value, the FASB also took the time to reject the notion that any other measurement principle could be appropriate. As such, real differences among firms, such as one firm being more efficient at servicing loans or having a more efficient MSR-hedging strategy than another firm, should no longer impact the value of the MSR as all firms were to determine what “the market” would pay for the asset in an orderly, willful transaction. There are certain problems with applying SFAS No. 157 to certain assets and liabilities as some assets and liabilities are not traded on active liquid markets. MSR are one such asset. Hence, firms are still in the position of having to make assumptions about a wide array of variables that correlate to the value of MSR. Now, however, instead of determining the value of these variables for themselves, firms must determine what the market would use as the value of these variables. For example, a firm no longer determines what it costs them to service a loan, rather they need to determine what it would cost “the market” to service a loan. Not only are these market assumptions unknown, Cochran (2008) argues these assumptions are unknowable. If these variables were knowable, then all firms would value their MSR the same (just as all firms will value any given marketable equity security the same). Because these assumptions are unknowable, they are not easily determined by the firms. As a result, firms still exercise a degree of discretion in determining the market value of correlated variables and, therefore, the value of their MSR (Cochran, 2008). The result is that different firms will make different assumptions. Each firm may have valid reasons for the assumptions they make. In addition, due to the lack of liquidity in the MSR market, there is no good way to determine which firm’s assumptions are most reflective of the market’s assumptions (Cochran, 2008). However, it is not possible for different firms to make different assumptions and both be correct. While unknowable, any given variable can have only one “market value.”

While the FASB may have achieved the desired degree of uniformity with respect to the recording of some assets’ fair value (those with well-defined markets), there is reason to question whether it has achieved its goal with respect to MSR (or any asset or liability for which there is no well-defined market). This issue has not been examined since the Cochran 2004 study. Due to the significant change in GAAP with respect to MSR and the increased involvement of regulatory bodies in the aftermath of the financial crisis, the PAT issues examined in Cochran et al. (2004) warrant reexamination and should be of interest to regulators, standard setters and industry participants (particularly CPAs who audit and certify the financial statements of mortgage firms).

3. Hypothesis Development, Model Development and Data Collection

3.1 Hypothesis Development

The primary objective of this study is to reexamine the PAT issues examined in Cochran et al. (2004). We will examine the impact of SFAS No. 157 on MSR capitalization and determine if it achieved its goal of market valuation. In making this assessment, we will test the following hypotheses suggested by PAT as discussed in section 2.2:

Hypothesis 1: Mortgage lenders with greater total assets tend to decrease net income relative to those with less total assets by capitalizing MSRs at a lower level.

Hypothesis 2: Mortgage lenders with higher debt to equity ratios tend to increase net income relative to those with lower debt to equity ratios by capitalizing MSRs at a higher level.

Hypothesis 3: Mortgage lenders who reward upper level management with a higher percentage of bonus compensation tend to increase net income by capitalizing MSRs at a higher level.

These three hypotheses will give us a sense as to whether or not PAT has an impact on MSR capitalization practices. In theory, SFAS No. 157 should have eliminated the ability for managers to engage in behavior predicted by PAT by substituting market valuation principles over firm-specific economic principles. The effectiveness of SFAS No. 157 can be accurately analyzed by evaluating whether the industry still engages in behavior predicted by PAT.

3.2 Model Development

This study will use the same model specification as that used in Cochran et al. (2004):

$$MSR_BP_{it} = \alpha_0 + \sum \alpha_\gamma YR_{it} + \alpha_1 \ln SERVPORT_{it} + \alpha_2 (\ln SERVPORT_{it})^2 + \alpha_3 \ln TOTASSETS_{it} + \alpha_4 DE_{it} + \alpha_5 BONUS\%_{it} + \varepsilon_{it} \quad (1)$$

The impact of positive accounting choices on MSR capitalization will be isolated through the use of a continuous dependent variable, MSR_BP, which is equal to the book value of MSRs divided by the principal balance of the servicing portfolio (x 100 which will yield a basis point measure). To control for year-by-year variation in economic conditions, the model will include a dummy variable based on the filing year of the financial statements (2007 through 2010).

PAT suggests that the absolute size of the firm (as measured by total assets) will impact the capitalization decision in a negative direction. However, larger firms are likely to benefit from economies of scale that could influence the capitalization decision in a positive direction. Two additional control variables are necessary to capture the positive influence of size so that the competing influences of size are separated. Those variables are SERVPORT and SERVPORT² (measured as a log function) which measure the size of the servicing portfolio that the firm services but does not own (and, as such, is not included on the balance sheet and not included in total assets). The remaining variables of TOTASSETS, DE and BONUS% are those specified by PAT.

3.3 Data Collection

Data used in this study will be from a random sample of publicly-traded firms with SIC codes that indicate mortgage banking as their primary line of business. Each firm selected will be examined for the years 2007 through 2010. From the overall population of firms, we selected a random starting point and selected every third firm for analysis. In the event that a selected firm did not engage in the activity of servicing loans for any of the four years under examination, we selected the next firm in the population as a replacement. The selection process resulted in a random sample of 136 firms. For these firms, we acquired the generic data (total assets, total debt and total equity) directly from the COMPUSTAT database. Mortgage-specific data (MSR balance and servicing portfolio size) and compensation data is not captured or reported on COMPUSTAT. We acquired this data directly from the 10-Ks and proxy statements filed on the Security and Exchange Commission's Electronic Data-Gathering, Analysis and Retrieval database (EDGAR). This resulted in a firm/year sample size of 494 firm/years. This is less than 544 firm/years (the number of firms in the sample times the number of years analyzed or 136 x 4 = 544) because not every firm was active in every year under examination.

4. Results and Concluding Comments

4.1 Results

We will discuss the results in a two-step process. First, we will address the implications of the results from the perspective of the new accounting requirements of SFAS No. 157. Next, we will discuss the results from the perspective of PAT. And, finally, we will conclude by tying the two together.

4.1.1 Implications for SFAS No. 157

Table 1 provides descriptive statistics for the model variables as well as other variables of interest. The sample for the current study is similar to the sample used in Cochran et al. (2004). The mean MSR for our current sample is 77.86 BP. In Cochran et al. (2004), the mean MSR for the population was 78.95 BP. We tested the two means and reject the alternative hypothesis of unequal means ($p=0.5002$). Additionally, the range of MSRs for the current sample spans 316.18 BP or from -1.80 standard deviations to +5.50 standard deviations versus the 2004 sample that spanned 380 BP or from -1.55 standard deviations to +5.91 standard deviations.

Table 1. Descriptive statistics

Variable	Mean	Std. Dev.	Minimum	Maximum
Model variables:				
MSR_BP	77.86	43.31	0.00	316.18
lnTOTASSETS	7.96	1.78	4.30	14.65
lnSERVPORT	6.07	2.44	-0.61	15.08
lnSERVPORT ²	42.78	37.42	0.06	227.39
DE	10.14	11.96	-86.35	169.62
BONUS%	0.08	0.15	0.00	0.95
Other variables:				
Total Assets (millions)	50,023	269,013	73.69	2,312,231
MSRs (millions)	358	2,166	0.00	20,244
Servicing Portfolio (millions)	45,173	279,230	0.55	3,539,275
Stockholders' Equity (millions)	4,481	23,845	-37	240,702

Note: Means and deviations are calculated for the 494 cross-sectional pooled observations used in the model.

MSR_BP = Ratio of capitalized MSRs to the principal balance of the servicing portfolio (in basis points).

lnSERVPORT = Natural log of the principal balance of the servicing portfolio.

lnSERVPORT² = (Natural log of the principal balance of the servicing portfolio) squared.

lnTOTASSETS = Natural log of the book value of total assets.

DE = Ratio of the book value of total debt to the book value of total equity.

BONUS% = (cash bonus ÷ (total cash bonus + total cash salary)) × 100.

That the current sample spans a similar range as the Cochran et al. (2004) is problematic from a SFAS No. 157 perspective. All servicing portfolios are supposed to derive their value from “the market.” While “the market” is unknown and unknowable, it is the same for all participants. “The market” will allow for a range of values as not all servicing portfolios are identical. Variations in portfolio characteristics do allow for some variation in value (e.g., property location, interest rate, loan type and size to name a few). The variation in the Cochran et al. (2004) sample results not only from the variation in portfolio characteristics, but also variation in firm-specific characteristics discussed earlier. While this was acceptable pre-SFAS No. 157, it is not acceptable post-SFAS No. 157. That the variation is statistically the same for the two samples suggests that the firm-specific variations affecting value may still be at play. If only portfolio-specific variation were responsible for the range in the current sample, one would expect the range to be significantly tighter than the range of the 2004 sample. Even though “the market” is unknown, the market participants, their auditors and their regulators have access to the same data that we use in this study. We can think of no explanation for why the current range, that spans 7.30 standard deviations and is statistically the same as the 2004 sample, can be consistent with the accounting requirements of SFAS No. 157.

4.1.2 Implications for PAT

Table 2 provides the regression results which do not support the PAT hypotheses identified. The coefficients for two of the three PAT variables of interest, incentive compensation and the debt/equity ratios, are statistically insignificant suggesting that they do not influence the capitalization of MSR in any direction during the period under examination. Only the variable for size is significant (at the 1% level), but it is not in the predicted direction. While PAT suggests that larger firms will capitalize MSR at lower levels to reduce net income in order to avoid regulatory scrutiny, the data suggests the opposite for the period under examination. It is also noteworthy that the variables for the size of the servicing portfolio are both significant. These variables were included in the Cochran et al. (2004) study to avoid an omitted variable problem. The variables for total assets and the variables for the size of the servicing provide for the off-setting effects of size identified in the earlier study. PAT suggests that size (measured by total assets) should reduce overall levels of capitalization to avoid regulatory scrutiny, while size (as measured by the underlying servicing portfolio), in reality, should increase the income-producing ability of a servicing portfolio due to economies of scale. To omit the servicing variables in the earlier study would have caused the PAT variable for total assets to capture both the income-reducing effect of PAT and the income-increasing effect of economies of scale, potentially masking both. In fact, in the earlier study, when the servicing portfolio size variables were omitted from the analysis, the coefficient for total assets was not significant. This was evidence that the two measures of size were capturing their intended effect. If we run our regression on the current sample without the variables for the size of the servicing portfolio, the variable for total assets is still significant (at the 1% level), but half the value (5.47 versus 9.07 as reported in Table 2, with a 95% confidence interval of 3.27 – 7.67 without the servicing variables versus 5.14 – 13.00 with).

Table 2. Regression Results

Regressors	Expected Sign	α_i
Intercept		-3.85 (-0.24)
2008		-13.57 (-2.52)**
2009		(-2.52) (-0.47)
2010		(-7.47) (-1.37)
lnSERVPORT	+	6.30 (2.19)**
lnSERVPORT ²	+	-0.61 (-3.10)***
lnTOTASSETS	-	9.07 (4.53)***
DE	+	0.029 (1.26)
BONUS%	+	0.18 (0.01)
Sample size		494
Test of Model Significance		F(8,485) = 5.66
P Value		(p = 0.0000)

Notes:*, **, *** Significant at the 10%, 5% and 1% level respectively.

The regression estimated is:

$$\text{MSR_BP}_{it} = \alpha_0 + \sum \alpha_y \text{YR}_{it} + \alpha_1 \ln \text{SERVPORT}_{it} + \alpha_2 (\ln \text{SERVPORT}_{it})^2 + \alpha_3 \ln \text{TOTASSETS}_{it} + \alpha_4 \text{DE}_{it} + \alpha_5 \text{BONUS\%}_{it} + \varepsilon_{it}$$

Variables are defined as follows:

MSR_BP_{it} = MSR's divided by the principal balance of loans serviced (measured in basis points)

lnSERVPORT = the natural log of the servicing portfolio

lnTOTASSETS = the natural log of the book value of total assets

DE = the book value of total debt as a percentage of the book value of total equity

BONUS% = cash bonus as a percentage of the sum of cash bonus and cash salary.

4.2 Concluding Comments

What could explain the current test results that indicate that the non-servicing related PAT variables (size, debt/equity ratio and incentive compensation) are not influencing MSR capitalization post-financial crisis as PAT predicts when the Cochran et al. (2004) study significantly concluded that, prior to the financial crisis, they did? At the same time, the mean value of the level of capitalization has not changed. We suggest the possibility that firms are conscious of the scrutiny that compensation receives and have, for the short-term, minimized executive compensation as a placative measure. We also suggest the possibility that, due to the lack of scrutiny and understanding of MSR's, higher capitalization of MSR's is being used to mitigate losses the firms are experiencing as they work through the post-crisis period.

The period immediately subsequent to the financial crisis was marked by increased scrutiny of the mortgage industry, particularly of the large firms who were seen to dominate the market. Most of the attention was directed toward the origination and securitization of subprime mortgages and their eventual default as the housing bubble collapsed. There exist a plethora of articles citing the subprime mortgage lending market, predatory lending practices, financial disintermediation in the securitization process, historically low interest rates, and ever increasing real estate values as among the primary causes of the financial crisis that began in 2006. These are issues that are mostly understood by those reporting on the crisis and the public to whom the reporting is aimed. Absent in the post-crisis conversation is any discussion of the value of or the possible decline in value of the MSRs recorded on the balance sheet of these mortgage companies. MSRs and their associated accounting rules are not very visible or well understood by those not intimately involved in the servicing business.

During the immediate post-crisis period, mortgage banks experienced significant losses (Feig, 2008, Mouhalis, 2008, Dolbeck, 2008 and Thomas, 2010). The losses were, in part, the result of significant declines in the value of the mortgages and related mortgage-backed securities held on the balance sheet of these entities that resulted from the unexpectedly high rate of defaults and foreclosures (i.e. non-performing loans). Additionally, issues with mark-to-market accounting for financial assets, where firms had to value the assets at their fair value with the associated increase/decrease being recognized in the income statement, exacerbated the losses. Buyer interest in these assets "...dried up, sending market values plummeting" (Thomas, 2010). As a result, firms were forced to recognize the decline in the fair value (i.e. market value) of perfectly good performing loans. Add to these losses the increases in administrative work loads brought on "...by an overwhelming volume of ARM resets in a concentrated period of time, ..., heavy collections activity, workouts, loan modifications, default and foreclosure processing, and real estate-owned (REO) management" (Mouhalis, 2008) that caused costs to skyrocket, further exacerbating the losses.

Firms looked for ways to mitigate these losses. One of the visible and documented courses of action was rank and file employee layoffs despite the burgeoning workload. Many of the largest banks announced massive layoffs numbering in the tens of thousands of employees (Feig, 2008). Most of the layoffs were in the mortgage lending arms of these large institutions. Additionally, executive compensation came under renewed public, but more importantly, Congressional scrutiny. In response to the financial crisis that Congress blamed on the financial industry and the sub-prime lending market, Congress enacted the Emergency Economic Stabilization Act (EESA) in October of 2008. The primary purpose of the act was to allow for the injection of public funds into the faltering banking system (Jodrey & Kobayashi, 2009). Congress included in the act provisions that allowed Congress to control the level of executive compensation at any institution that received public funds under the act. While not directly affecting institutions that did not receive funds under the act, it is reasonable to assume that those companies that did not accept public funds were indirectly affected. Reductions in executive compensation during the period immediately post-crisis would have two benefits to all financial institution: the reduction of expenses (and therefore losses) as well as the avoidance of further public and regulatory scrutiny. It is reasonable to conclude that, in the short-term, these two benefits could outweigh the self-interest motivation of high levels of incentive compensation predicted by PAT and, thus, explain our results.

The process of capitalizing MSRs and the nature of the asset itself are not very well understood by the public or regulators. They have been virtually ignored by the media during the post-crisis period. PAT predicts that the larger a company is, the less likely they will be to choose income-increasing accounting choices (of which high levels of capitalization of MSRs is one). This was found to be the case in the pre-crisis period examined by Cochran et al. (2004). During the post-crisis period examined in this study, we find the exact opposite to be true. It would appear that the larger institutions are capitalizing higher levels of MSRs than would be predicted by PAT. The immediate short-term benefit for this behavior would be the ability to mitigate the unanticipated losses borne by these institutions due to the financial crisis by using a process and an asset that seems to have escaped the degree of public and regulatory scrutiny focused in other areas.

In summary, we do not find evidence of an undue influence of non-servicing related firm characteristics on the decision to capitalize MSRs as was found in Cochran et al. 2004. We do, however, find an inexplicable level of diversity in the range of capitalization of MSRs among the participants in the industry. This diversity is at odds with the fair value accounting rules promulgated by the FASB most recently in SFAS No. 157. Our findings cover a period characterized by a high degree of uncertainty and turbulence and may be short-term in nature. We think the issues surrounding the accounting for MSRs deserve continued examination especially as the mortgage markets, specifically, and the financial markets overall settle toward equilibrium.

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