The Impact of Firm-Supplied versus User-Supplied Fair Values on Analyst Outputs

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ABSTRACT: This paper examines how the source of fair value estimates affects user valuation outputs. Following accounting-based valuation theory, we examine two analyst forecast outputs: a balance sheet construct (net asset value, or NAV, which requires fair values of assets as a primary input) and an income statement construct (earnings-per-share, or EPS). Our sample includes publicly-traded UK and US real estate firms, for which real estate is the primary operating asset. The UK captures firm-supplied fair values, with firms reporting property fair values as mandated under both UK and international reporting standards. In contrast, the US captures user-supplied fair values, with firms reporting properties at depreciated historical cost as mandated under US standards, and also not voluntarily disclosing property fair values. We predict and find that relative to US firms, analysts of UK firms have more accurate and less dispersed NAV forecasts, consistent with firm-supplied fair values revealing private information that is incorporated into users’ valuation estimates in a balance sheet construct. However, we further find that analysts of US firms have more accurate EPS forecasts, consistent with historical cost reporting models leading to either more predictable earnings streams and/or greater analyst effort on income statement constructs.

Key Terms: fair value, analyst forecasts, net asset value, real estate

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1. INTRODUCTION

This paper examines how the source of fair value—firm-supplied or user-supplied—for a firm’s primary operating asset affects sophisticated users’ ability to estimate firm value. Prior research provides evidence that accounting-based fair value reporting for financial and non-financial assets is price-relevant: that is, reflected in stock prices (e.g., Easton et al. 1993; Barth 1994; Venkatachalam 1996; Song et al. 2010). This research infers the incorporation of fair values into user estimates of firm valuation via market prices of equity. We build on this research by directly examining whether the source of fair value estimates affect the precision of financial statement user outputs.

We use publicly-traded real estate firms domiciled either in the UK or US as our setting. This setting is advantageous for several reasons. First, the real estate industry is among the few in which fair value reporting can be observed for the firm’s primary operating assets. While other industries—such as banking and insurance—have significant exposure to fair value reporting, these settings are more complex due to more varied accounting treatments across various operating assets, as well as being subject to significant regulation.¹ Second, our focus on the US and UK exploits the primary reporting difference for this industry across these two countries. Specifically, real estate firms in the UK consistently recognize property assets at fair value on the balance sheet, both under UK domestic accounting standards as well as more recently adopted International Financial Reporting Standards (IFRS). In contrast, US real estate

¹ Regarding the more varied accounting treatment, banks report three major categories of investment securities, each having distinct reporting requirements: held-to-maturity securities, which are reported at amortized cost subject to impairment; trading securities, which are reported at fair value with changes in fair value recognized in net income; and available-for-sale securities, which are reported at fair value with changes in fair value recognized in other comprehensive income. Further, fair values for some investments are recognized (e.g., trading securities) while others are disclosed in the footnotes (e.g., held-to-maturity securities).
firms report property assets at historical cost as mandated under US standards; further, industry practice is that firms rarely voluntarily disclose property fair values. Accordingly, this setting provides subsamples of firms wherein the fair values of the primary operating assets are directly provided by the firm (UK real estate firms) versus those wherein fair values of these assets must be derived by financial statement users (US real estate firms). Third, despite this latter reporting difference, the real estate industry in the UK and US is highly developed, with both countries having a substantial number of publicly-traded real estate firms, relatively liquid property markets, and large number of analysts following these firms.

We examine how the source of fair value affects user valuation outputs, focusing on forecasts by analysts as proxies for outputs by sophisticated financial statement users. Consistent with accounting-based valuation theory (e.g., Ohlson 1995), we examine two forecast types: a balance sheet construct and an income statement construct. Of note, the real estate industry is among the few for which both balance sheet and income statement forecasts are observable. First, we examine a balance sheet forecast common within the real estate industry: net asset value (NAV). This is a valuation estimate, calculated by taking the estimated fair value of the firm’s assets (primarily the real estate properties) and subtracting the estimated fair value of the firm’s liabilities (primarily debt). As such, NAV provides an estimate of the firm’s equity value, with the fair value of the firm’s assets being a critical input. Second and related, we examine an income statement construct: earnings-per-share (EPS). Consistent with firm-supplied fair values revealing managers’ private information regarding the underlying value of the firm’s assets, we predict that NAV estimates based on firm-supplied fair values will have lower estimation error relative to those based only on user-supplied fair values. That is, we predict that analysts’ NAV forecasts by analysts as proxies for outputs by sophisticated financial statement users.

2 Prior research on US real estate has examined a third forecast type, funds-from-operations (FFO), which is commonly issued within the US (e.g., Fields et al. 1998; Vincent 1999; Baik et al. 2008). We do not examine FFO forecasts, as these are generally not observable for real estate firms outside of the United States.
estimates for UK real estate firms will have higher accuracy and less dispersion relative to those for US firms.

Empirical results confirm this prediction. We find that NAV forecasts for UK firms are more accurate and less dispersed relative to those for US firms. These findings are robust across a variety of specifications. Overall, the results are consistent with firm-supplied fair values revealing managers’ private information, and thus leading to more precise user estimates of firm value relative to user-supplied fair values. However, further analysis reveals that analysts following US firms exhibit greater EPS forecast accuracy relative to UK firms. This latter result is consistent with an historical cost reporting leading either to more predictable earnings streams and/or greater effort by analysts in forecasting income statement constructs.

Additional analyses provide further insights. We first document that UK firms exhibit higher proportions of analysts issuing NAV forecasts relative to US firms; however, we fail to find differences in the proportion of analysts issuing EPS forecasts. This suggests that firm-supplied fair values reduce costs to analysts in generating and issuing balance sheet related forecasts; however, fair value reporting does not appear to affect the propensity to issue income statement related forecasts, which appear ubiquitous across both UK and US firms. Further, we provide evidence that the lower NAV forecast error and dispersion exhibited by UK firms occurs primarily in the sample period preceding the global financial crisis (2000-2006), not during the crisis (2007-2010). The evidence suggests that the benefits to fair value reporting may accrue primarily in expansionary economic settings, where greater divergence occurs between fair value and historical cost based reporting for assets. In contrast, impairment rules that complement historical cost reporting appear to lead to similar balance sheet reporting outcomes during recessionary settings, and thus similar accuracy for analysts’ balance sheet forecasts. Final
sensitivity analyses confirm the latter: while all US firms exhibit higher NAV forecast error relative to UK firms, this difference is mitigated for those US firms reporting impairments.

Our findings contribute to two literatures. First, we build on prior research examining the decision relevance of fair value reporting (e.g., Barth 1994) by documenting that firm-supplied fair values of key operating assets can enhance financial statement users’ ability to estimate firm value. However, our evidence suggests that the benefits to fair value reporting may primarily occur during expansionary economic periods, as both fair value reporting and asset impairment under historical cost reporting lead to similar reporting outcomes in recessionary periods. Second, we build on prior research on analysts’ forecasts (e.g., Gu and Chen 2004) by comparing the impact of fair value reporting on a balance sheet versus an income statement construct, providing evidence that firm-supplied fair value enhances analysts’ ability to forecast balance sheet constructs (NAV forecasts) but not income statement constructs (EPS forecasts). Further, our analyses regarding NAV forecasts are unique, as analysts’ balance sheet forecasting activities are rarely studied in the prior literature. Finally, our evidence contributes to standard setters’ specific deliberations regarding the convergence of US and international reporting for real estate firms, as well as the more general debate regarding the extent of fair value reporting, by showing how firm-supplied fair values affect both the propensity and quality of analysts’ outputs.

Section 2 reviews the prior literature and develops the hypotheses. Section 3 presents the research design. Section 4 reviews the sample, primary empirical results, and sensitivity analyses. Section 5 presents other analyses. Section 6 concludes.
II. BACKGROUND AND HYPOTHESIS DEVELOPMENT

Background – Financial Reporting for Real Estate Firms

This paper exploits the primary distinction regarding reporting for property assets across UK and US real estate firms (also known as investment property firms): UK firms report property fair values, while US firms do not. Specifically, the reporting of real estate assets for UK-domiciled firms within our sample period falls under two reporting regimes: UK domestic standards (from 2000–2004); and IFRS (from 2005–2010). The relevant UK domestic standard, *Statement of Standard Accounting Practice 19: Accounting for Investment Properties* (SSAP 19), requires investment property to be reported on the balance sheet at ‘open market value’ at fiscal year end. ‘Open market value’ is defined by the Royal Institution of Chartered Surveyors’ *Appraisal and Valuation Manual* as “an opinion of the best price at which the sale of an interest in property would have been completed unconditionally for cash consideration on the date of valuation.” Thus, it is very similar to ‘fair value’ as defined by International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB). 

Effective January 1, 2005, the UK adopted IFRS as mandated within the European Union; the critical standard affecting real estate firms is *International Accounting Standard 40: Investment Properties* (IAS 40). This standard requires firms to report property asset fair values, either recognized on the balance sheet under the fair value method or disclosed in the footnotes under the cost method. However, industry practice in the UK was unanimous recognition of fair values on the balance sheet, in part owing to the legacy of reporting such fair values on the balance sheet under SSAP 19. Accordingly, all publicly-traded UK firms recognize property asset fair values on the balance sheet throughout our sample period.

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3 The IASB under IFRS 13 (2011) and FASB under Accounting Standards Codification 820 (2011) both define 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.”
The reporting of property assets in the US is dictated by accounting for property, plant and equipment under Accounting Research Bulletin 43 (now Accounting Standards Codification 360, *Property, Plant, and Equipment*). This requires property assets to be recognized on the balance sheet at historical cost subject to impairment. As such, US real estate firms are prohibited from reporting property fair values on the balance sheet under US accounting standards. Further, voluntary disclosure of property fair values is extremely rare, owing in part to litigation concerns.

**Prior Literature**

Much of the prior research examining fair value reporting focuses on the association between reported fair values and equity prices. Easton et al. (1993) examines asset revaluation reserves, which represent adjustments to market-prices, for a sample of Australian non-financial firms. The paper finds that these revaluation reserves explain both annual stock returns as well as the price-to-book ratio. Barth (1994) provides evidence that fair value estimates of US banks’ investment securities provide incremental explanatory power beyond historical costs. Venkatachalam (1996) further documents that banks’ derivative fair value disclosures explain share prices, and provide explanatory power beyond notional derivative amounts. Later research exploits further developments in US accounting standards relating to fair values, particularly Statement of Financial Accounting Standards (SFAS) 157. In particular, Song et al. (2010) documents greater value relevance for both level 1 and 2 fair values relative to level 3, as well as greater value relevance of level 3 fair values for firms having strong corporate governance.

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4 SFAS 157 distinguishes between three levels of inputs used to derive fair value estimates: level 1, reflecting observable inputs consisting of quoted prices in active markets for identical assets or liabilities; level 2, reflecting observable inputs other than quoted prices; and level 3, reflecting unobservable inputs for the asset or liability.
Note, no research has examined the effect of fair value reporting on analyst outputs, including balance sheet constructs such as net asset value forecasts.

Limited accounting research examines financial reporting within the real estate industry. Focusing on UK property firms, Dietrich et al. (2000) provides evidence that real estate fair values are managed to smooth reported changes in net asset value, and that firms employing external appraisers provide fair values that are less biased than those reported by firms employing internal appraisers. Muller and Riedl (2002) extends these findings by documenting lower information asymmetry for UK property firms employing external as opposed to internal appraisers, consistent with the equity market pricing differences in the reliability of fair value estimates. Finally, using the setting of 2005 mandatory IFRS adoption in the European Union, Muller et al. (2011) documents that mandating fair value reporting for property firms not previously providing these values reduces their information asymmetry.

**Hypothesis Development**

We motivate our analyses using valuation models from prior research (e.g., Ohlson 1995). These models characterize firm value as a function of a balance sheet construct (book value) and income statement construct (abnormal future earnings). We argue that firms reporting fair values provide financial statement users with more precise information regarding the future cash flows likely to be realized by the firm’s underlying assets. That is, we assume that reported fair values will reflect some private information managers have regarding the future performance of their firm’s property assets. Because fair values effectively capture anticipated cash flows, we argue the reporting of fair values by firms will manifest in more accurate user expectations of

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5 Cotter and Richardson (2002) similarly document that tangible asset revaluations for a sample of Australian non-financial firms are more reliable when conducted by independent appraisers versus internal firm directors.
balance sheet constructs. Further, we predict that firms providing fair values will have more homogenous valuation beliefs among financial statement users for these constructs.

To proxy for expectations of firm value reflected in a balance sheet construct, we use analysts’ net asset value (NAV) forecasts. NAV forecasts represent the firm’s fair value of assets less the fair value of liabilities; as such, NAV forecasts are similar to price targets. Within the real estate industry, a critical estimate in deriving such forecasts is the fair value of the firm’s assets, which is dependent on expectations of future cash flows. The fair value of liabilities is also important as many real estate firms employ substantial debt financing, which can be secured via the underlying tangible properties. However, it is typically easier to estimate the fair value of liabilities, which have more predictable cash flows due to defined contractual terms (e.g., interest rates).

Based on our expectations and use of NAV forecasts as proxies, we propose the following hypotheses:\textsuperscript{6}

\textbf{H}\textsubscript{1A}: Analysts’ NAV forecasts have less measurement error for firms reporting property fair values (i.e., UK firms) relative to firms not reporting property fair values (i.e., US firms).

\textbf{H}\textsubscript{1B}: Analysts’ NAV forecasts have less dispersion for firms reporting property fair values (i.e., UK firms) relative to firms not reporting property fair values (i.e., US firms).

We further propose two corollary hypotheses, which focus on income statement constructs. While the reporting of fair values can incorporate expected cash flows into the balance sheet, future earnings streams associated with such firms can be more volatile. Restated, firms applying historical cost can exhibit lower earnings volatility, with (for example) depreciation leading to more predictable future earnings. Further, the lack of fair value inputs from the firm can increase the costs to deriving precise estimates of balance sheet based

\textsuperscript{6} We note that noise or bias in reported fair values by UK firms should bias against finding that analyst NAV forecasts for UK firms are more accurate and less dispersed than those for US firms.
forecasts; as such, analysts of firms that do not provide fair values can put forth greater effort in predicting income statement based forecasts.\(^7\) To proxy for income statement based forecasts, we use analysts’ earnings-per-share (EPS) forecasts. Accordingly, we also predict:

\(H_{2A}:\) Analysts’ EPS forecasts have more measurement error for firms reporting fair values (i.e., UK firms) relative to firms not reporting fair values (i.e., US firms).

\(H_{2B}:\) Analysts’ EPS forecasts have higher dispersion for firms reporting property fair values (i.e., UK firms) relative to firms not reporting property fair values (i.e., US firms).

Finally, we note that \(H_{2A}\) and \(H_{2B}\) regarding the impact of firm versus user supplied fair value on analyst EPS forecasts also serve as benchmark analyses for \(H_{1A}\) and \(H_{1B}\). Specifically, if observed lower NAV forecast error and dispersion for the UK firms (as predicted by \(H_{1A}\) and \(H_{1B}\)) reflects differences in analysts or other country related factors across the UK and US (as opposed to differences in the financial reporting systems), then we should expect to find lower EPS forecast error and dispersion for UK firms as well. Accordingly, the opposite predictions for NAV versus EPS forecasts across the UK and US provides some comfort that findings are attributable to financial reporting versus other country level factors.\(^8\)

III. RESEARCH DESIGN

Net Asset Value (NAV) Forecast Error and Dispersion

We examine the determinants of analysts’ NAV forecast errors using the following regression (all variables are defined in Appendix A):

\[
NAV\_FE_{jt} = \beta_0 + \beta_1HORIZON_{jt} + \beta_2SIZE_{jt} + \beta_3FOLL_{jt} + \beta_4LOSS_{jt} + \beta_5EPSA_{jt} + \beta_6LEV_{jt} + \\
\beta_7STD\_RET_{jt} + \beta_8INSIDER\%_{jt} + \beta_9BM_{jt} + \beta_{10}NO\_FV_{jt} + \text{year} + \epsilon_{jt} \quad (1a)
\]

\(^7\) Further, the effect of fair value may not be reflected in analyst EPS forecasts as gains or losses from changes in fair value may not be included in analyst forecasts of street earnings (Gu and Chen 2004).

\(^8\) Note also that a typical difference noted for the US versus other countries, including the UK, relates to higher litigation risk in the US. However, litigation risk should not feature prominently in our setting, as analysts rarely face such risks.
The dependent variable is $NAV_{FE}$, analysts’ NAV forecast error for firm $j$ for fiscal year $t$. We calculate this variable in three steps. First, we take the absolute difference between analyst $i$’s most recent NAV forecast for firm $j$ for year $t$ and firm $j$’s market value of equity. Next, we scale this difference by firm $j$’s market value of equity two days before the forecast date. Finally, we average these scaled differences across all analysts issuing NAV forecasts for firm $j$ for year $t$. To measure market value of equity in the first step, we alternatively use firm $j$’s market value of equity 90, 180, or 250 days after each analyst’s forecast. We use these three windows to be consistent with analysts’ issuance of NAV forecasts, which typically reflect value forecasts over the subsequent year. Thus, we use market value of equity to benchmark the accuracy of analysts’ NAV forecasts, consistent with the underlying purpose of predicting NAV—that is, to provide an estimate of the firm’s value. This leads to three alternative estimations of Equation (1a) using as the dependent variable $NAV_{FE\_90}$, $NAV_{FE\_180}$, and $NAV_{FE\_250}$, respectively.

We include control variables likely to affect the accuracy of analysts’ NAV forecasts. Because no empirical research examines the determinants of NAV forecast accuracy, we include (as appropriate) controls from prior research examining EPS forecast accuracy (e.g., Lang and Lundholm 1996; Heflin et al. 2003). First, we include $HORIZON$, measured as the log of one plus the average number of days between analyst $i$’s NAV forecast and firm $j$’s earnings announcement date for year $t$ (Kross et al. 1990; Clement 1999). As later forecasts incorporate additional information regarding the firm’s performance, longer horizons should lead to higher NAV forecast errors, and thus a predicted positive coefficient for $HORIZON$.

Note our measure of the dependent variable effectively holds horizon constant across analysts; for example, $NAV_{FE\_90}$ uses market value of equity measured 90 days following each analyst $i$’s forecast. Nonetheless, we include $HORIZON$ as a control variable anchored by the firm’s annual earnings announcement date, as information flows may not be uniform throughout a firm’s fiscal year.
Next, we include $SIZE$ (measured as the market value of firm $j$ at the end of year $t-1$ in US dollars) and $FOLL$ (measured as the number of analysts issuing an NAV forecast for firm $j$ during year $t$). Both variables control for, among other items, the information environment of the firm. Larger firms and firms having greater analyst following are expected to have richer information environments, leading to more precise NAV forecasts, and thus predicted negative coefficients on both $SIZE$ and $FOLL$. However, if smaller firms are easier to analyze, owing to less complex property portfolios, then the predicted coefficient on $SIZE$ is alternatively positive; accordingly, we do not predict the sign for $SIZE$.

We then include various measures to capture the firm’s performance, capital structure, and reporting environment. We include two accounting-based measures of performance: $LOSS$, an indicator variable equal to one if firm $j$ reports a loss in year $t$, and zero otherwise (Heflin et al. 2003); and $EPSA$, the change in annual earnings per share from year $t-1$ to $t$, scaled by share price at the end of year $t-1$ (Lang and Lundholm 1996). $LEV$ is firm $j$’s total long-term liabilities divided by total assets, both measured at the end of year $t-1$. $STD_{RET}$ is the standard deviation of firm $j$’s daily returns measured over fiscal year $t-1$; we require firms to have at least 200 daily returns during year $t-1$. $INSIDER\%$ is the percentage of firm $j$’s common shares outstanding that are owned by insiders at the end of year $t-1$. Finally, $BM$ is firm $j$’s book-to-market ratio, assessed at the end of year $t-1$. We expect that firms reporting losses, having greater earnings volatility, with higher leverage, exhibiting higher standard deviation of returns, having higher insider ownership, or with higher book-to-market ratios will have greater measurement error in analysts’ NAV forecasts. As such, we predict positive coefficients for $LOSS, EPSA, LEV, STD_{RET}, INSIDER\%$, and $BM$.

\footnote{Results are robust to alternatively requiring 30 days of daily returns.}
Equation (1) also includes indicator variables for each sample year, to control for mean shifts in NAV accuracy that can occur across our sample period. We also cluster on firm to correct for the inflation in standard errors due to multiple observations from the same firm; alternative clustering (e.g., by country-year) does not affect the reported results.

The experimental variable is $NO\_FV$, an indicator variable equal to one if firm $j$ does not provide real estate fair values in year $t$, and zero otherwise. Owing to the structure of our sample data, this variable equals one for US firms, and zero for UK firms. As such, the coefficient captures the incremental measurement error in NAV forecasts for US firms, controlling for other determinants. Following H1a, if the reporting of fair values by the firm provides additional information leading to greater precision in users’ estimates of firm value, then the predicted sign on the coefficient for $NO\_FV$ is positive. That is, firms not providing property fair values (i.e., US firms) will have larger analyst NAV forecast errors relative to firms that do (i.e., UK firms).

We next examine analysts’ NAV forecast dispersion using the following regression:

$$NAV\_DISP_{jt} = \gamma_0 + \gamma_1HORIZON_{jt} + \gamma_2SIZE_{jt} + \gamma_3FOLL_{jt} + \gamma_4LOSS_{jt} + \gamma_5EPSA_{jt} + \gamma_6LEV_{jt} + \gamma_7STD\_RET_{jt} + \gamma_8INSIDER\%_{jt} + \gamma_9BM_{jt} + \gamma_{10}NO\_FV_{jt} + \text{year} + \eta_{jt}$$ (1b)

The dependent variable is $NAV\_DISP$, measured as the standard deviation of analysts’ NAV forecasts for firm $j$ for year $t$, each scaled by firm $j$’s market value two days before the forecast date. For the independent variables, we include the same controls as in Equation (1a).

Specifically, we predict higher dispersion in NAV forecasts for firms with longer forecast horizons, losses, greater changes in earnings-per-share, higher leverage, larger standard deviation of returns, greater insider ownership, and higher book-to-market ratios. This again leads to expected positive coefficients for $HORIZON, LOSS, EPSA, LEV, STD\_RET, INSIDER\%$, and $BM$. As previously, we do not predict the sign of the coefficient on $SIZE$. We predict a negative
coefficient for $FOLL$, as greater analyst following should lead to more information and greater convergence of beliefs among analysts.

Our experimental variable remains $NO\_FV$, an indicator variable equal to one for firms not providing fair value (i.e., US real estate firms), and zero otherwise (i.e., UK real estate firms). The coefficient on $NO\_FV$ will capture the incremental difference in the dispersion of NAV forecasts for US firms. Following $H_{1B}$, if providing property fair values reveals manager’s private information, and this leads to more agreement regarding firm value by analysts, then the predicted coefficient is positive. That is, firms not reporting fair values (i.e., US firms) will exhibit higher analyst NAV forecast dispersion relative to firms that do (i.e., UK firms).

**Earnings-Per-Share (EPS) Forecast Error and Dispersion**

We next examine the determinants of analysts’ EPS forecast error and dispersion using the following regressions, which parallel the above Equations (1a) and (1b):

$$EPS\_FE_{jt} = \rho_0 + \rho_1 HORIZON_{jt} + \rho_2 SIZE_{jt} + \rho_3 FOLL_{jt} + \rho_4 LOSS_{jt} + \rho_5 EPSA_{jt} + \rho_6 LEV_{jt} + \rho_7 STD\_RET_{jt} + \rho_8 INSIDER\%_{jt} + \rho_9 BM_{jt} + \rho_{10} NO\_FV_{jt} + \text{year} + \zeta_{jt}$$ (2a)

$$EPS\_DISP_{jt} = \theta_0 + \theta_1 HORIZON_{jt} + \theta_2 SIZE_{jt} + \theta_3 FOLL_{jt} + \theta_4 LOSS_{jt} + \theta_5 EPSA_{jt} + \theta_6 LEV_{jt} + \theta_7 STD\_RET_{jt} + \theta_8 INSIDER\%_{jt} + \theta_9 BM_{jt} + \theta_{10} NO\_FV_{jt} + \text{year} + \psi_{jt}$$ (2b)

For Equation (2a), the dependent variable is $EPS\_FE$, analysts’ EPS forecast error for firm $j$ for fiscal year $t$. We measure analysts’ EPS forecast error as the absolute value of the difference between firm $j$’s reported EPS and the most recent mean analyst forecast for year $t$, scaled by the absolute value of the mean EPS forecast. For Equation (2b), the dependent variable is $EPS\_DISP$, the dispersion in analysts’ EPS forecasts for firm $j$ for fiscal year $t$. We measure EPS forecast dispersion as the standard deviation across each analyst $i$’s most recent earnings forecast for firm $j$ for year $t$, scaled by the absolute value of firm $j$’s mean EPS forecast for year $t$. 

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Similar to the analyses of NAV, we include control variables documented in prior literature likely to affect the accuracy/dispersion of analysts EPS forecasts. Accordingly, we expect higher EPS forecast error or dispersion for firms with: longer forecast horizons, lower analyst following; losses; greater changes in earnings; more leverage; greater stock return volatility; higher insider ownership; or higher book-to-market ratios. This leads to a predicted negative coefficient for $\text{FOLL}$, and predicted positive coefficients for $\text{HORIZON}$, $\text{LOSS}$, $\text{EPS}_\Delta$, $\text{LEV}$, $\text{STD_RET}$, $\text{INSIDER\%}$ and $\text{BM}$.\(^{11}\) We again do not predict the sign on the coefficient for $\text{SIZE}$. Both regressions include year fixed effects, and cluster standard errors by firm.

$\text{NO}_FV$ remains our experimental variable, equaling one for firms not providing property fair values (i.e., reporting under historical cost—that is, US firms), and zero otherwise (i.e., providing fair values—that is, UK firms). Following $H_{2A}$ and $H_{2B}$, if reporting under historical cost leads to more predictable net income and/or greater analyst effort in predicting earnings, then we predict negative coefficients for $\text{NO}_FV$ in both regressions. That is, analysts of US firms will exhibit lower EPS forecast error and dispersion relative to analysts of UK firms.

### IV. EMPIRICAL RESULTS

**Sample Selection and Descriptive Statistics**

We include all publicly-traded real estate firms domiciled either in the US or UK during 2000 through 2010 having necessary data for each analysis. To avoid self-selection, we allow for alternative samples depending on the forecast being analyzed.\(^{12}\) Accordingly, Table 1 Panel A presents the firm-year samples used in the analysis of NAV forecast error ($N = 483$), NAV

\(^{11}\) Excluding $\text{EPS}_\Delta$ from Equations (2a) and (2b) to avoid mechanical associations between the dependent and independent variables does not change our results.

\(^{12}\) For example, we would not want to limit our sample to firms having both NAV and EPS forecasts in the same year, as firms receiving NAV forecasts may not be fully representative of the population of firms.
forecast dispersion \((N = 243)\), EPS forecast error \((N = 805)\), EPS forecast dispersion \((N = 707)\), choice of issuing NAV forecast \((N = 815)\) and choice of issuing EPS forecast \((N = 796)\). Panel B presents the distribution of NAV forecast error sample observations by year. Note, NAV forecasts increase over time for both the US and UK; however, the increase is particularly substantial for the US firms starting in 2004.\(^{13}\)

Panel C presents descriptive statistics for the control variables for the US and UK subsamples, as well as the combined sample. US firms are larger, but have lower number of analysts issuing NAV forecasts. They also have a higher incidence of reporting losses, higher leverage, higher standard deviation of returns, lower insider ownership, and lower book-to-market ratios. The latter is noteworthy and likely reflects systematic differences across the US and UK reporting standards for these firms. In particular, as US firms report property assets under historical cost, the numerator will systematically be lower relative to the fair value reporting required in the UK, leading to lower book-to-market ratios.\(^{14}\)

**NAV Forecast Error and Dispersion**

Table 2 Panel A provides univariate comparisons of the dependent variables used to analyze NAV forecast error and dispersion across US and UK real estate firms. US firms consistently exhibit significantly larger mean and median NAV forecast errors. For example, focusing on \(NAV\_FE\_90\), mean NAV forecast errors are 0.637 for US firms versus 0.459 for UK firms (\(p\)-value on difference < 0.001). Similar differences occur for both \(NAV\_FE\_180\) and

\(^{13}\) We note that all analyses are robust to eliminating sample years in which the US has no NAV observations (i.e., 2000, 2001, 2003, and 2010). In addition, Section 5.2 discusses analyses partitioning the sample period using the global financial crisis.

\(^{14}\) Note also that the average book-to-market ratio for UK firms exceeds one. This can reflect differences attributable to timing and/or expectations of future performance between reported fair values of properties by the firm versus market perceptions of these values; that is, market participants (on average) appear to have lower future cash flow expectations for our sample firms than what the firms are reporting.
However, we fail to find univariate differences in NAV forecast dispersion \( (NAV_{\text{DISP}}) \), with the US (0.234) and UK (0.228) having similar values.

Table 3 then presents the multivariate results examining analysts’ NAV forecast error and dispersion. We first discuss Panel A examining NAV forecast error. Column (1) presents results for the base regression including only the control variables, where the dependent variable is \( NAV_{FE\_90} \) (i.e., the NAV forecast error is calculated using the firm’s market value of equity 90 days following each analyst’s NAV forecast). Among control variables, the coefficient for \( FOLL \) (–0.039, \( t \)-statistic = 3.26) is significantly negative, as predicted. In addition, the coefficients for \( LEV \) (0.569, \( t \)-statistic = 3.68) and \( STD\_RET \) (0.082, \( t \)-statistic = 2.49) are each significantly positive, as predicted. The remaining variables are insignificant. This suggests that NAV forecast error is lower for firms having higher analyst following, and greater for firms having higher leverage and stock return volatility. Column (2) then presents results for this regression, with the experimental variable \( NO\_FV \) included. Results on the control variables are unchanged, except the coefficient on \( BM \) is now marginally significantly positive (0.020, \( t \)-statistic = 1.39). Of primary interest, the coefficient on \( NO\_FV \) is significantly positive as predicted (0.191, \( t \)-statistic = 3.88). Further, the adjusted-\( R^2 \) increases from 16.50% to 18.88%. This supports \( H_{1A} \), and is consistent with NAV forecasts for US real estate firms having 19.1% higher forecast error relative to UK firms, controlling for other determinants.

Columns (3) and (4) present results, using alternative definitions of the dependent variable. In particular, Column (3) uses the dependent variable \( NAV_{FE\_180} \) (with forecast error calculated using the firm’s market value of equity 180 days following each analyst’s NAV forecast), while Column (4) uses the dependent variable \( NAV_{FE\_250} \) (using the firms’ market value of equity 250 days following each analyst’s NAV forecast). In both cases, the coefficient
on $NO_{FV}$ remains significantly positive: when $NAV_{FE_{180}}$ is the dependent variable, the coefficient is 0.220 ($t$-statistic = 4.07); using $NAV_{FE_{250}}$, the coefficient is 0.215 ($t$-statistic = 3.71). These results again support $H_{1A}$, and are consistent with NAV forecasts for US firms being less accurate than those for UK firms.

Panel B presents results with the dependent variable of $NAV_{DISP}$, the dispersion in analysts’ NAV forecasts. As before, we present a base regression in Column (5), and include the experimental variable of $NO_{FV}$ in Column (6). Focusing on Column (6), we find that dispersion is increasing in $HORIZON$ (0.062, $t$-statistic = 2.10), $LOSS$ (0.264, $t$-statistic = 4.21), and $BM$ (0.215, $t$-statistic = 3.50). Further, we find that the coefficient on $NO_{FV}$ is significantly positive (0.104, $t$-statistic = 1.77), as predicted. This is consistent with $H_{1B}$, and suggests that NAV forecasts of US firms have higher dispersion relative to those for UK firms.

**EPS Forecast Error and Dispersion**

Table 2 Panel B presents univariate comparisons of the dependent variables examining EPS forecasts across US and UK firms. While the US exhibits lower average EPS forecast error ($EPS_{FE} = 0.551$) relative to the UK (0.588) and higher EPS forecast dispersion ($EPS_{DISP} = 0.433$ for US, versus 0.313 for UK), neither is significantly different across these subsamples.

Table 4 presents the multivariate results, with Panel A examining analysts’ EPS forecast error, and Panel B examining EPS forecast dispersion. In Panel A, Column (1) presents results using the base regression. As expected, EPS forecast error is higher for firms reporting losses ($LOSS$ coefficient = 1.508, $t$-statistic = 7.27), having greater changes in earnings ($EPS\Delta$ coefficient = 0.942, $t$-statistic = 3.41), and with higher book-to-market ratios ($BM$ coefficient = 0.107, $t$-statistic = 1.61). The remaining control variables are insignificant. Column (2) presents
results including the experimental variable. Results on the control variables are unchanged, except the coefficient on $BM$ is no longer significant, and the coefficient on $LEV$ is now significantly positive (0.275, $t$-statistic = 1.69). Consistent with $H_{2A}$, the coefficient on $NO\_FV$ is significantly negative as predicted (−0.220, $t$-statistic = 1.90). This suggests that analysts of US firms have lower EPS forecast error relative to analysts of UK firms, controlling for other determinants of forecast accuracy.

Panel B presents results for EPS forecast dispersion, with the base regression presented in Column (3), and the regression including experimental variable presented in Column (4). Focusing on Column (4), dispersion is higher for firms with lower analyst following (−0.009, $t$-statistic = 1.82), reporting losses (0.576, $t$-statistic = 5.60), larger changes in earnings (0.112, $t$-statistic = 3.47), and higher leverage (0.366, $t$-statistic = 2.79). Turning to the experimental variable, the coefficient on $NO\_FV$ is insignificant; thus, we fail to find support for $H_{2B}$.

Sensitivity Analyses $^{15}$

We now conduct a series of sensitivity analyses to assess the robustness of the results; we focus on the NAV measures, which have been rarely examined in prior literature, in contrast to EPS measures, which have been extensively examined and whose properties are better understood. $^{16}$ First, we examine alternative measurements of the dependent variable, $NAV\_FE$ (NAV forecast error). Recall that we use market value of equity to proxy for “actual” values of NAV to calculate forecast error; this seems reasonable, as a primary objective of forecasting NAV is to estimate the underlying value of the firm’s equity. Further, we use market value of

$^{15}$ All untabulated results within this section are available upon request.

$^{16}$ Nonetheless, we apply similar sensitivity analyses to the EPS measures as well. While significance levels on the coefficient for $NO\_FV$ vary (i.e., stronger or weaker than those reported, depending on the specification), the sign is unchanged from the tabulated results.
equity alternatively measured 90, 180, and 250 days following each analyst’s forecast; this is consistent with analysts’ stated horizons for NAV forecasts, which tend to predict value two to four quarters into the future. Nonetheless, we now consider shorter windows to measure market value of equity, which can better capture more immediate information effects of the analysts’ NAV forecasts. Accordingly, we alternatively measure market value of equity 30 and 60 days following each analyst’s forecast. Untabulated results remain consistent with our Table 3 Panel A findings: the coefficient on $NO_FV$ is significantly positive using 30 days (0.204, $t$-statistic = 4.22) or 60 days (0.177, $t$-statistic = 3.67).

Second, we conduct alternative specifications to assess the robustness of our results to alternative scalars and outliers. Regarding alternative scalars, recall that both $NAV_FE$ and $NAV_DISP$ (i.e., NAV forecast error and dispersion, respectively) are scaled using market value of equity two days preceding each analyst’s forecast. We motivate this choice of scalar as a measure capturing the market’s (unbiased) expectation of firm value conditional on all publicly-available information immediately preceding issuance of the analyst’s NAV forecast. However, similar to the EPS measures of Table 4, we now alternatively scale $NAV_FE$ and $NAV_DISP$ using the average NAV forecast, thus obtaining an average forecast error relative to the mean forecast. Untabulated results repeating the Table 3 analyses are again unchanged: the coefficient on $NO_FV$ remains significantly positive at the 1% level using this alternative scalar across all measurement windows for forecast error (i.e., 30, 60, 90, 180, and 250 day), as well as in the dispersion regression. Regarding outliers, recall that the primary analyses use studentized residuals to identify influential observations; consistent with statistical application, we eliminate observations with error terms exceeding three standard deviations. We alternatively employ the following: eliminating outliers based on Cook’s D test using the conventional cut-off point of $4/n$. 

20
(where $n$ is the sample size); and winsorizing the top/bottom 2.5% of observations. Untabulated results are again unchanged, except results for NAV dispersion are insignificant.

Overall, the results of these sensitivity analyses indicate that the primary finding—that NAV forecasts are more accurate for firms reporting under fair value—is robust to numerous alternative estimations.

V. OTHER ANALYSES

The Propensity to Issue NAV versus EPS Forecasts

We next examine analysts’ decision to issue NAV versus EPS forecasts to provide preliminary insights into the supply of each forecast type using the following model:

$$FOLL_{NAV,jt} \mid FOLL_{EPS,jt} = \lambda_0 + \lambda_1 SIZE_{jt} + \lambda_2 LOSS_{jt} + \lambda_3 EPSA_{jt} + \lambda_4 LEV_{jt} + \lambda_5 STD\_RET_{jt} + \lambda_6 INSIDER\%_{jt} + \lambda_7 BM_{jt} + \lambda_8 NO\_FV_{jt} + \text{year} + \xi_{jt}$$

The dependent variable is alternatively $FOLL_{NAV}$ (the number of unique analysts issuing an NAV forecast for firm $j$ during year $t$) or $FOLL_{EPS}$ (the number of unique analysts issuing an EPS forecast for firm $j$ during year $t$). Each is divided by the number of unique analysts issuing either an NAV or EPS forecast for firm $j$ during year $t$; thus, $FOLL_{NAV}$ ($FOLL_{EPS}$) captures the percentage of analysts following the firm that issues an NAV (EPS) forecast.

We include the control variables of $SIZE$, $LOSS$, $EPSA$, $LEV$, $STD\_RET$, $INSIDER\%$, and $BM$, all as previously defined. We include these variables to proxy for, among other things, the demand for certain types of information reflected in NAV versus EPS forecasts. We expect that the firm’s overall information environment ($SIZE$), uncertainty regarding performance ($LOSS$ and $EPSA$), leverage ($LEV$), risk ($STD\_RET$), level of insider ownership ($INSIDER\%$), and underpricing ($BM$) will affect analysts’ propensity to forecast NAV and EPS. We exclude the
variable $FOLL$ as it is used to calculate the dependent variable.\textsuperscript{17} However, we do not provide predicted signs, as the effects of each variable are unclear \textit{ex ante}.

As previously, the experimental variable is $NO_{-}FV$, an indicator variable equal to one for firms providing property fair values (i.e., US firms), and zero otherwise (i.e., UK firms). We have separate predictions for when the dependent variable is $FOLL_{-}NAV$ versus $FOLL_{-}EPS$. When it is $FOLL_{-}NAV$, if the provision of fair values by the firm complements analyst forecasting behavior by reducing the cost to estimate and issue NAV forecasts, then the predicted sign on the coefficient is negative. That is, firms not providing fair values (i.e., US firms) will have lower percentages of analysts issuing forecasts that require fair value inputs (i.e., NAV forecasts). When it is $FOLL_{-}EPS$, if the use of historical-cost reporting (including depreciation) increases the predictability of earnings (and thus reduces the costs to estimate and issue EPS forecasts), then the predicted sign on the coefficient is positive. That is, firms reporting under historical cost (i.e., US firms) will have higher percentages of analysts issuing EPS forecasts.

Table 2 Panel C presents univariate comparisons of $FOLL_{-}NAV$ and $FOLL_{-}EPS$ across the US and UK subsamples. As expected, both the mean and median values of $FOLL_{-}NAV$ for UK firms (0.246 and 0.190, respectively) are significantly larger than those for US firms (0.175 and 0.167, respectively). However, we fail to find differences for $FOLL_{-}EPS$ across the US and UK samples; in fact, the average values indicate that most analysts issue EPS forecasts both for US firms (0.984) as well as UK firms (0.990).

Table 5 presents the multivariate results from estimating Equation (3). Paralleling our previous estimations, we first present base regressions in Columns (1) and (3), and then regressions including the experimental variable in Columns (2) and (4). Focusing on the $FOLL_{-}NAV$ estimation in Column (2), the likelihood of issuing an NAV forecast is decreasing in

\textsuperscript{17} We note that Tables 3 and 4 are robust to excluding $FOLL$ as an explanatory variable.
the change in earnings (–0.041, \( t \)-statistic = 6.11) and increasing in the firm’s leverage (0.107, \( t \)-statistic = 1.69). Further, \( NO\_FV \) is significantly negative, as predicted (–0.134, \( t \)-statistic = 4.81). This is consistent with the provision of fair values increasing the likelihood of analysts’ issuing NAV forecasts. We next turn to the \( FOLL\_EPS \) estimation in Column (4). The only significant variable is insider ownership, which is positively associated with the propensity to issue an EPS forecast (0.001, \( t \)-statistic = 2.14). \( NO\_FV \) is insignificant (0.001, \( t \)-statistic = 0.29), thus failing to provide support that use of historical-cost reporting increases the likelihood of issuing EPS forecasts. Note, consistent with the lack of variation in \( FOLL\_EPS \) across the US and UK subsamples presented in the univariate analyses in Table 2, the intercept is near one and highly significant (0.992, \( t \)-statistic = 107.03).

Overall, the latter results suggest that firm-supplied fair values increase the propensity of analysts to issue fair value-based (i.e., NAV) forecasts; however, virtually all analysts issue EPS forecasts regardless of the firm providing or not providing fair values.\(^{18}\)

The Global Financial Crisis

We next partition the sample period to better understand the observed greater accuracy, lower dispersion, and greater propensity to issue NAV forecasts for UK firms (i.e., firms reporting property fair values). Specifically, we examine fiscal years preceding the global financial crisis (defined as 2000-2006) versus during the crisis (defined as 2007-2010). We choose 2006 as the cut-off year, as stock markets did not exhibit substantial declines until 2007. Our focus on this crisis is intuitive, with elevated property prices identified as a major contributor to this crisis. Further, we predict differential relative performance of fair value

\(^{18}\) We also perform sensitivity analyses to the \( NAV\_FOLL \) and \( EPS\_FOLL \) regressions, similar to those estimated in Section 4.4. Results are identical (and occasionally stronger) than those tabulated in Table 5.
versus historical cost reporting across expansionary versus recessionary periods. In particular, during expansionary periods exhibiting substantial property value increases (i.e., 2000-2006), we expect that fair value reporting will diverge significantly from historical cost reporting, owing to the prohibition under historical cost to mark property assets up in value. In contrast, during recessionary periods exhibiting substantial property value decreases (i.e., 2007-2010), we expect that fair value reporting will converge with historical cost reporting, owing to impairment test rules under US historical cost reporting that require assets be marked down to fair value.19

Accordingly, we re-estimate analyses examining the NAV measures by incorporating an indicator variable to capture differential effects across the pre- and post-crisis periods. Specifically, we re-estimate Equations (1a), (1b) and (3) by replacing the experimental variable \( NO_{-FV} \) with the variables \( NO_{-FV} \) and \( CRISIS \times NO_{-FV} \). \( NO_{-FV} \) remains an indicator variable equal to one for firms not reporting fair value (i.e., US firms), and zero otherwise (i.e., UK firms). \( CRISIS \) is an indicator variable equal to one for observations occurring during the crisis (i.e., 2007-2010), and zero otherwise (i.e., 2000-2006). Thus, the coefficient on \( NO_{-FV} \) captures the relationship between reporting fair value and the quality of NAV forecasts in the pre-crisis period and \( CRISIS \times NO_{-FV} \) captures the incremental effects of the crisis on the relationship between fair value reporting and the quality of NAV forecasts.20

Table 6 reports the results, with Column (1) replicating the findings using \( NAV\_FE\_90 \) as the dependent variable. We find that firms not reporting fair value (i.e., US firm) have significantly higher NAV forecast error (coefficient on \( NO_{-FV} = 0.318, t\)-statistic = 5.62) in the pre-crisis period. Further, as expected, we find that this positive relationship is attenuated during the financial crisis period, as the coefficient on \( CRISIS \times NO_{-FV} \) is significantly negative (–

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20 We do not include \( CRISIS \) separately as a main effect, as we include year indicator variables.
0.292, \( t \)-statistic = 4.00). Results are similar using \( NAV_{FE\_180} \) in Column (2), and \( NAV_{FE\_250} \) in Column (3). In Column (4), we then replicate the findings using \( NAV_{DISP} \) as the dependent variable. We fail to find that the effect of fair value reporting on dispersion is attenuated during the crisis (coefficient on \( CRISIS \times NO\_FV = -0.041, t \)-statistic = 0.67).

Finally, in Column (5), we replicate the findings using \( FOLL\_NAV \). Consistent with the above findings, we find that analysts’ propensity to issue NAV forecasts for US increases during the crisis (coefficient on \( CRISIS \times NO\_FV = 0.161, t \)-statistic = 3.82), attenuating the general lower likelihood to issue such forecasts. Untabulated results, using a fully interacted model, are stronger than those reported. Overall, the results suggest that the relatively greater accuracy, lower dispersion, and higher issuance of NAV forecasts for analysts of UK firms occur primarily in the period preceding the global financial crisis.\(^{21}\)

### The Role of Long-Lived Asset Impairments

Finally, we examine the role of long-lived asset impairments. As proposed above, impairment testing in the US requires firms to reduce reported property values to fair value when there is a permanent decline in asset value, which will lead to greater alignment in reporting outcomes under fair value and historical cost reporting. Restated, the financial reporting inputs to analysts’ NAV forecasts—the asset values—will converge more in such circumstances. This leads to a prediction that the higher forecast error/dispersion for US firms relative to UK firms will be attenuated for those US firms reporting impairments. Accordingly, we re-estimate Equations (1a) and (1b) of Table 3, now including \( NO\_FV \times IMPAIR \), where \( IMPAIR \) is an

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\(^{21}\) We also conduct untabulated analyses of the information content of analysts’ NAV forecasts, using the average three-day abnormal stock return to each analyst’s most recent NAV forecast as the dependent variable. We include only observations that do not overlap with either EPS forecast issuances or earnings announcements to better isolate information events attributable only to the analyst’s NAV forecast. Consistent with the above, we find that NAV forecasts by analysts of US firms have lower information content, but only in the pre-crisis period.
indicator variable equal to one for US firms reporting long-lived asset impairments, and zero otherwise. Note that we exclude IMPAIR as a main effect, as UK real estate firms (generally) do not report long-lived asset impairments as property assets are restated each period to fair value.

Table 7 presents the results; we tabulate only NAV_FE_90 and NAV_DISP; untabulated results using NAV_FE_180 and NAV_FE_250 are similar to those reported. As expected, Column (1) reveals that US firms reporting impairments have attenuated NAV forecast errors (coefficient on NO_FV x Impair = \(-0.127\), \(t\)-statistic = 2.48) relative to US firms not reporting such impairments (coefficient on NO_FV = 0.258, \(t\)-statistic = 4.48). However, even US firms reporting impairments continue to have higher forecast error relative to UK firms; the \(p\)-value on the \(F\)-test of the combined coefficients of \((NO_FV + NO_FV \times Impair)\) is 0.007. Column (2) reveals directionally consistent, though insignificant results: we fail to find differential dispersion for US firms reporting impairments \((NO_FV \times Impair = -0.033, t\text{-statistic} = 0.94)\).

Overall, the results are consistent with analysts for UK firms having higher NAV forecast accuracy, lower NAV forecast dispersion, greater propensity to issue NAV forecasts, and higher information content of NAV forecasts—but only in the pre-crisis sample period. Further, the results suggest this is at least partially attributable to the differential outcomes of fair value versus historical cost reporting across expansionary versus recessionary periods, as the latter appears to result in a greater occurrence of impairments under historical cost reporting, leading to greater convergence in analyst balance sheet outcomes during recessionary periods.

VI. CONCLUSION

This paper examines how the source of fair value affects the precision of financial statement user valuation outputs. We focus on publicly-traded real estate firms domiciled in the
UK and US during 2000-2010. This provides a subsample of firms that reports fair values of their primary operating assets (UK firms, which report property fair values as mandated under UK and international accounting standards) and a subsample that does not (US firms, which report these properties at historical-cost, as mandated by US standards). Our analyses focus primarily on the precision of analysts’ net asset value (NAV) forecasts, which are commonly-issued valuation forecasts requiring estimates of the fair value estimates of property assets.

We predict and find that NAV forecasts for firms providing fair values are more accurate and less dispersed relative to those for firms not providing such estimates. Specifically, we document that both NAV forecast errors and dispersion are lower for UK firms relative to US firms. This is consistent with firm-supplied fair values revealing private information, which analysts are able to extract and incorporate into their own valuation estimates, leading both to more precise estimations as well as greater convergence of beliefs. Additional analyses reveal that EPS forecasts are more accurate for US firms relative to UK firms, consistent with historical-cost accounting leading to more predictable earnings streams and/or greater analyst effort for income statement forecasts. Further examination is consistent with this latter interpretation, as analysts are more likely to issue NAV forecasts when the firm provides fair values, suggesting lower costs to generating and issuing such forecasts.

Finally, analyses reveal that the above effects occur primarily prior to the financial crisis. Specifically, observed differences across analyst NAV forecasts for US versus UK firms appear attributable to firm-years preceding the crisis (defined as 2000-2006) as opposed to during the crisis (defined as 2007-2010). This suggests that analysts increase their use of balance sheet forecasts during recessionary periods. Of further note, this also suggests that the benefits to fair value reporting may primarily occur during expansionary economic periods. This is intuitive, as
recessionary periods are more likely to lead to similar reporting outcomes under either fair value reporting or historical cost (owing to the latter’s impairment test requirements). A final set of sensitivity analyses provides confirmatory evidence, as NAV forecasts of US firms reporting impairments have less forecast error relative to US firms not reporting impairments.

Overall, we contribute to prior research on fair value reporting by documenting that the provision of fair values by firms can reveal private information that improves financial statement user outputs. Further, we document that the informational benefits appear to accrue primarily during periods of expansion, versus those of recession. In addition, we build on the literature examining analysts forecasts by examining a unique set of analysts’ balance sheet-based outputs—NAV forecasts—which have received little attention in prior research. Finally, our study is of interest to US and international standard setters in their continuing deliberations on how far to extend fair value reporting. We conjecture that further use of fair value would increase financial statement users’ emphasis on the statement of financial position, and likely lead to a larger role for the balance sheet-based (i.e., NAV) forecasts that we examine. Of further note, the FASB has indicated its short-term intent to converge US standards relating to real estate assets with IFRS by requiring that these assets be reported at fair value, which would be a dramatic shift in financial reporting for publicly-traded US real estate firms.
REFERENCES


_________. 2011. Fair Value Measurement (Topic 820): Amendments to achieve common fair value measurement and disclosure requirements in US GAAP and IFRSs. Financial Accounting Standards Board, Norwalk,CT.


APPENDIX A – VARIABLE DEFINITIONS

**Dependent variables:**

\[
\begin{align*}
\text{NAV}_{FE,90jt} & \quad \text{Analysts’ net asset value (NAV) forecast error for firm } j \text{ for year } t, \\
(\text{NAV}_{FE,180jt}) & \quad \text{measured by (1) taking the absolute difference between analyst } i \text{'s most recent NAV forecast for firm } j \text{ for year } t \text{ and firm } j \text{'s market value of equity; (2) scaling by firm } j \text{'s market value of equity two days before the NAV forecast date; and (3) averaging these differences across all analysts issuing NAV forecasts for firm } j \text{ in year } t. \text{ Market value of equity for } \text{NAV}_{FE,90} (\text{NAV}_{FE,180}) [\text{NAV}_{FE,250}] \text{ is measured 90 (180) [250] days following each analyst’s NAV forecast.} \\
\text{NAV}_{DISP}jt & \quad \text{Analysts’ net asset value (NAV) forecast dispersion for firm } j \text{ for year } t, \text{ measured as the standard deviation of analysts’ most recent NAV forecast for firm } j \text{ for year } t, \text{ scaled by firm } j \text{'s market value of equity two days before the NAV forecast date.} \\
\text{EPS}_{FE}jt & \quad \text{Analysts’ earnings-per-share (EPS) forecast error for firm } j \text{ for year } t, \text{ measured by (1) taking the absolute value of firm } j \text{'s actual year } t \text{ earnings per share less the mean across each analyst } i \text{'s most recent EPS forecast for firm } j \text{ for year } t; \text{ and (2) scaling by the absolute value of firm } j \text{'s mean EPS forecast for year } t. \\
\text{EPS}_{DISP}jt & \quad \text{Analysts’ earnings-per-share (EPS) dispersion for firm } j \text{ for year } t, \text{ measured as the standard deviation across each analyst } i \text{'s most recent earnings forecast for firm } j \text{ for year } t, \text{ scaled by the absolute value of firm } j \text{'s mean EPS forecast for year } t. \\
\text{FOLL}_{NAV}jt & \quad \text{The number of unique analysts issuing an NAV forecast for firm } j \text{ during year } t \div \text{divided by the number of unique analysts issuing either an NAV or EPS forecast for firm } j \text{ during year } t. \\
\text{FOLL}_{EPS}jt & \quad \text{The number of unique analysts issuing an EPS forecast for firm } j \text{ during year } t \div \text{divided by the number of unique analysts issuing either an NAV or EPS forecast for firm } j \text{ during year } t.
\end{align*}
\]

**Control variables:**

\[
\begin{align*}
\text{HORIZON}jt & \quad \text{The log of one plus the average number of days between each analyst } i \text{'s forecast for firm } j \text{ for year } t \text{ and the earnings announcement date firm } j \text{ for year } t. \\
\text{SIZE}jt & \quad \text{The log of firm } j \text{'s year } t-1 \text{ market value of equity in US dollars.} \\
\text{FOLL}jt & \quad \text{The number of unique analysts issuing net asset value or earnings-per-share forecasts for firm } j \text{ during year } t. \\
\text{LOSS}jt & \quad \text{An indicator variable equal to 1 if firm } j \text{ reports negative net income for year } t, \text{ and 0 otherwise.} \\
\text{EPSA}jt & \quad \text{The change in earnings-per-share for firm } j \text{ for year } t, \text{ measured as the}
\end{align*}
\]
absolute value of earnings-per-share for year \( t \) less earnings-per-share for year \( t-1 \), divided by share price at the end of year \( t-1 \).

\[ LEV_{jt} \]
Firm \( j \)'s total long-term liabilities divided by total assets, both measured at the end of year \( t-1 \).

\[ STD_{RET_{jt}} \]
The standard deviation of daily stock returns for firm \( j \) for year \( t-1 \), using a minimum of 200 trading days.

\[ INSIDER_{%jt} \]
The percentage of firm \( j \)'s common shares outstanding owned by insiders at the end of year \( t-1 \).

\[ BM_{jt} \]
Firm \( j \)'s book-to-market ratio at the end of year \( t-1 \).

**Experimental variable:**

\[ NO_{FV_{jt}} \]
An indicator variable equal to one if firm \( j \) does not provide property fair values in year \( t \) (i.e., is a US firm), and zero if firm \( j \) does provide property fair values in year \( t \) (i.e., is a UK firm).
# TABLE 1
Sample Selection and Descriptive Statistics

**Panel A: Sample Selection**

<table>
<thead>
<tr>
<th>Available real estate firms having:</th>
<th>Table/Panel</th>
<th>US firms</th>
<th>UK firms</th>
<th>Combined firms</th>
</tr>
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<tbody>
<tr>
<td>- NAV forecasts</td>
<td>T3, PA</td>
<td>303</td>
<td>180</td>
<td>483</td>
</tr>
<tr>
<td>- 2 or more NAV forecasts to calculate dispersion</td>
<td>T3, PB</td>
<td>145</td>
<td>98</td>
<td>243</td>
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<tr>
<td>- EPS forecasts</td>
<td>T4, PA</td>
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<tr>
<td>- 2 or more EPS forecasts to calculate dispersion</td>
<td>T4, PB</td>
<td>471</td>
<td>236</td>
<td>707</td>
</tr>
<tr>
<td>- the percentage of NAV forecast</td>
<td>T5, PA</td>
<td>534</td>
<td>281</td>
<td>815</td>
</tr>
<tr>
<td>- the percentage of EPS forecast</td>
<td>T5, PB</td>
<td>514</td>
<td>282</td>
<td>796</td>
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**Panel B. Distribution by Year (using N = 483 sample)**

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</table>

**Panel C: Descriptive Statistics—Control Variables (using N = 483 sample)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>US firms (N = 303) Mean</th>
<th>Median</th>
<th>UK firms (N = 180) Mean</th>
<th>Median</th>
<th>Combined Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZE</td>
<td>3.381</td>
<td>1.920</td>
<td>1.862</td>
<td>0.701</td>
<td>2.815</td>
<td>1.498</td>
</tr>
<tr>
<td>FOLL</td>
<td>1.710</td>
<td>1.000</td>
<td>2.250</td>
<td>2.000</td>
<td>1.911</td>
<td>2.000</td>
</tr>
<tr>
<td>LOSS</td>
<td>0.172</td>
<td>0.000</td>
<td>0.078</td>
<td>0.000</td>
<td>0.137</td>
<td>0.000</td>
</tr>
<tr>
<td>EPSA</td>
<td>0.054</td>
<td>0.012</td>
<td>0.224</td>
<td>0.012</td>
<td>0.118</td>
<td>0.012</td>
</tr>
<tr>
<td>LEV</td>
<td>0.503</td>
<td>0.501</td>
<td>0.357</td>
<td>0.354</td>
<td>0.448</td>
<td>0.455</td>
</tr>
<tr>
<td>STD_RET</td>
<td>2.334</td>
<td>1.461</td>
<td>1.854</td>
<td>1.506</td>
<td>2.156</td>
<td>1.485</td>
</tr>
<tr>
<td>BM</td>
<td>0.620</td>
<td>0.478</td>
<td>1.466</td>
<td>1.212</td>
<td>0.935</td>
<td>0.664</td>
</tr>
</tbody>
</table>

This table presents the sample selection and descriptive statistics. In Panel A, we select all available US and UK real estate firms having necessary data for each analysis. In Panel B, we present the distribution of observations across the US and UK by year. In Panel C, we present descriptive statistics for the US firms, UK firms, and the combined sample. ***, **, and * (^^^, ^^, ^) represent two-tailed tests of differences in means (medians) across the US versus UK firms that are significant at the 1%, 5% and 10% levels, respectively. All variables are defined in Appendix A.
### TABLE 2
Univariate Analyses of Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total N</th>
<th>US firms</th>
<th></th>
<th></th>
<th>UK firms</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>Mean</td>
<td>Median</td>
<td>N</td>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td></td>
<td>(3)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td><strong>Panel A: Net Asset Value (NAV) Forecasts (Table 3)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NAV_FE_90</td>
<td>483</td>
<td>303</td>
<td>0.637</td>
<td>0.539</td>
<td>180</td>
<td>0.459 ***</td>
<td>0.349 ^^^</td>
</tr>
<tr>
<td>NAV_FE_180</td>
<td>483</td>
<td>303</td>
<td>0.666</td>
<td>0.581</td>
<td>180</td>
<td>0.477 ***</td>
<td>0.417 ^^^</td>
</tr>
<tr>
<td>NAV_FE_250</td>
<td>483</td>
<td>303</td>
<td>0.709</td>
<td>0.636</td>
<td>180</td>
<td>0.498 ***</td>
<td>0.367 ^^^</td>
</tr>
<tr>
<td>NAV_DISP</td>
<td>243</td>
<td>145</td>
<td>0.234</td>
<td>0.120</td>
<td>98</td>
<td>0.228</td>
<td>0.127</td>
</tr>
<tr>
<td><strong>Panel B: Earnings-Per-Share (EPS) Forecasts (Table 4)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPS_FE</td>
<td>805</td>
<td>526</td>
<td>0.551</td>
<td>0.238</td>
<td>279</td>
<td>0.588</td>
<td>0.201</td>
</tr>
<tr>
<td>EPS_DISP</td>
<td>707</td>
<td>471</td>
<td>0.433</td>
<td>0.236</td>
<td>236</td>
<td>0.313</td>
<td>0.134</td>
</tr>
<tr>
<td><strong>Panel C: Percentage of Analysts Issuing NAV versus EPS Forecasts (Table 5)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOLL_NAV</td>
<td>815</td>
<td>534</td>
<td>0.175</td>
<td>0.167</td>
<td>281</td>
<td>0.246 ***</td>
<td>0.190 ^^^</td>
</tr>
<tr>
<td>FOLL_EPS</td>
<td>796</td>
<td>514</td>
<td>0.984</td>
<td>1.000</td>
<td>282</td>
<td>0.990</td>
<td>1.000</td>
</tr>
</tbody>
</table>

This table presents mean and median univariate comparisons of the dependent variables used in the analyses of Tables 3, 4, and 5. The sample includes US real estate firms in columns (1) and (2), and UK real estate firms in columns (3) and (4), both over the period 2000 through 2010. Panel A presents results for analyst net asset value (NAV) forecasts, which are used as dependent variables in Table 3. Panel B presents results for analyst earnings per share (EPS) forecasts, which are used as dependent variables in Table 4. Panel C presents results for the percentage of analysts issuing NAV versus EPS forecasts, which are used as the dependent variables in Table 5. All variables are defined in Appendix A.

In column (3), ***, **, and * represent significance at the 1%, 5%, and 10% levels for two-tailed tests of mean differences, respectively. In column (4), ^^^, ^^, and ^ represent significance at the 1%, 5%, and 10% levels for two-tailed tests of median differences, respectively.
TABLE 3
Multivariate Analysis of Net Asset Value (NAV) Forecast Error and Dispersion

Panel A: NAV Forecast Error

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pred Sign</th>
<th>Coeff (t-stat)</th>
<th>Coeff (t-stat)</th>
<th>Coeff (t-stat)</th>
<th>Coeff (t-stat)</th>
<th>Coeff (t-stat)</th>
<th>Coeff (t-stat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>?</td>
<td>-0.277 (1.17)</td>
<td>-0.211 (0.87)</td>
<td>-0.206 (0.85)</td>
<td>-0.297 (0.98)</td>
<td>-0.407 (2.03)**</td>
<td>-0.369 (1.87)*</td>
</tr>
<tr>
<td>HORIZON</td>
<td>+</td>
<td>0.038 (1.28)</td>
<td>0.028 (0.96)</td>
<td>0.042 (1.43)*</td>
<td>0.039 (1.03)</td>
<td>0.078 (2.71)***</td>
<td>0.062 (2.10)**</td>
</tr>
<tr>
<td>SIZE</td>
<td>+/−</td>
<td>0.009 (1.33)</td>
<td>0.006 (0.93)</td>
<td>0.007 (1.10)</td>
<td>0.004 (1.13)</td>
<td>-0.002 (0.61)</td>
<td>-0.002 (0.83)</td>
</tr>
<tr>
<td>FOLL</td>
<td>−</td>
<td>-0.039 (3.26)**</td>
<td>-0.023 (1.74)**</td>
<td>-0.016 (1.21)</td>
<td>-0.087 (0.67)</td>
<td>-0.008 (0.68)</td>
<td>-0.003 (0.30)</td>
</tr>
<tr>
<td>LOSS</td>
<td>+</td>
<td>0.023 (0.32)</td>
<td>0.025 (0.35)</td>
<td>-0.010 (0.15)</td>
<td>-0.095 (1.37)</td>
<td>0.270 (4.12)***</td>
<td>0.264 (4.21)***</td>
</tr>
<tr>
<td>EPSA</td>
<td>+</td>
<td>0.007 (0.35)</td>
<td>0.007 (0.36)</td>
<td>0.001 (0.08)</td>
<td>0.010 (0.73)</td>
<td>-0.019 (0.14)</td>
<td>-0.030 (0.22)</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.569 (3.68)**</td>
<td>0.322 (1.90)**</td>
<td>0.361 (1.86)**</td>
<td>0.557 (2.28)**</td>
<td>0.019 (0.15)</td>
<td>-0.059 (0.45)</td>
</tr>
<tr>
<td>STD_RET</td>
<td>+</td>
<td>0.082 (2.49)**</td>
<td>0.068 (2.02)**</td>
<td>0.039 (1.20)</td>
<td>0.035 (1.36)*</td>
<td>0.002 (0.07)</td>
<td>-0.008 (0.35)</td>
</tr>
<tr>
<td>INSIDER%</td>
<td>+</td>
<td>0.001 (0.11)</td>
<td>0.001 (0.55)</td>
<td>0.002 (1.48)*</td>
<td>0.003 (1.62)*</td>
<td>0.001 (0.31)</td>
<td>0.001 (0.56)</td>
</tr>
<tr>
<td>BM</td>
<td>+</td>
<td>0.012 (1.11)</td>
<td>0.020 (1.39)*</td>
<td>0.016 (2.04)**</td>
<td>0.015 (2.48)***</td>
<td>0.161 (3.06)***</td>
<td>0.215 (3.50)***</td>
</tr>
<tr>
<td>NO_FV</td>
<td>+</td>
<td>0.191 (3.88)**</td>
<td>0.220 (4.07)***</td>
<td>0.215 (3.71)***</td>
<td></td>
<td></td>
<td>0.104 (1.77)**</td>
</tr>
</tbody>
</table>

Panel B: NAV Forecast Dispersion

<table>
<thead>
<tr>
<th>Year</th>
<th>Year</th>
<th>Year</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>483</td>
<td>483</td>
<td>483</td>
<td>483</td>
</tr>
<tr>
<td>243</td>
<td>243</td>
<td>243</td>
<td>243</td>
</tr>
</tbody>
</table>

Adjusted-$R^2$  

| 16.50% | 18.88% | 19.77% | 19.08% | 34.71% | 35.89% |

This table presents analyses examining the determinants of analysts’ net asset value (NAV) forecast error and dispersion across US versus UK real estate firms over the period 2000 through 2010. Panel A presents results where the dependent variable is analyst NAV forecast error, measured by (1) taking the absolute difference between analyst $i$’s most recent NAV forecast for firm $j$ for year $t$ and
firm’s $i$’s market value of equity; (2) scaling by firm $j$’s market value of equity two days before the NAV forecast date; and (3) averaging these differences across all analysts issuing NAV forecasts for firm $j$. In columns (1) and (2), market value of equity is measured 90 days following each analyst’s NAV forecast (i.e., $NAV\_FE\_90$); in column (3), market value of equity is measured 180 days following each analyst’s NAV forecast (i.e., $NAV\_FE\_180$); in column (4), market value of equity is measured 250 days following each analyst’s NAV forecast (i.e., $NAV\_FE\_250$).

Panel B presents results where the dependent variable is analyst NAV forecast dispersion ($NAV\_DISP$), measured as the standard deviation of analysts’ most recent NAV forecast for firm $j$ for year $t$, scaled by firm $j$’s market value of equity two days before the NAV forecast date.

In both panels, the experimental variable is $NO\_FV$, an indicator variable equal to one if firm $j$ does not provide property fair values in year $t$ (i.e., is a US firm), and zero if firm $j$ does provide property fair values in year $t$ (i.e., is a UK firm). All other variables are defined in Appendix A.

We remove outliers using studentized residuals exceeding three standard deviations. Standard errors are clustered by firm. ***, **, * represent significance at the 1%, 5%, and 10% levels for the indicated one- or two-tailed tests.
TABLE 4
Multivariate Analysis of Earnings-Per-Share (EPS) Forecast Error and Dispersion

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pred Sign</th>
<th>Coeff (t-stat) 1</th>
<th>Coeff (t-stat) 2</th>
<th>Coeff (t-stat) 3</th>
<th>Coeff (t-stat) 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>?</td>
<td>1.244 (1.97) *</td>
<td>1.392 (2.13) **</td>
<td>0.898 (1.96) **</td>
<td>0.845 (1.21)</td>
</tr>
<tr>
<td>HORIZON</td>
<td>+</td>
<td>–0.061 (0.89)</td>
<td>–0.076 (1.11)</td>
<td>–0.124 (1.91)</td>
<td>–0.117 (1.79)</td>
</tr>
<tr>
<td>SIZE</td>
<td>+ / –</td>
<td>–0.010 (1.17)</td>
<td>–0.007 (0.72)</td>
<td>0.002 (0.17)</td>
<td>0.001 (0.07)</td>
</tr>
<tr>
<td>FOLL</td>
<td>–</td>
<td>–0.013 (1.31)</td>
<td>–0.017 (1.67) **</td>
<td>–0.011 (2.14) **</td>
<td>–0.009 (1.82) **</td>
</tr>
<tr>
<td>LOSS</td>
<td>+</td>
<td>1.508 (7.27) ***</td>
<td>1.507 (7.36) ***</td>
<td>0.572 (5.60) ***</td>
<td>0.576 (5.60) ***</td>
</tr>
<tr>
<td>EPSA</td>
<td>+</td>
<td>0.942 (3.41) ***</td>
<td>0.966 (3.32) ***</td>
<td>0.103 (3.60) ***</td>
<td>0.112 (3.47) ***</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.169 (0.87)</td>
<td>0.275 (1.69) **</td>
<td>0.394 (2.94) ***</td>
<td>0.366 (2.79) ***</td>
</tr>
<tr>
<td>STD_RET</td>
<td>+</td>
<td>–0.075 (1.22)</td>
<td>–0.050 (0.76)</td>
<td>0.054 (1.18)</td>
<td>0.045 (0.95)</td>
</tr>
<tr>
<td>INSIDER%</td>
<td>+</td>
<td>–0.001 (0.52)</td>
<td>–0.002 (0.94)</td>
<td>0.001 (0.34)</td>
<td>0.001 (0.08)</td>
</tr>
<tr>
<td>BM</td>
<td>+</td>
<td>0.107 (1.61) *</td>
<td>0.010 (0.12)</td>
<td>0.054 (0.89)</td>
<td>0.081 (1.08)</td>
</tr>
<tr>
<td>NO_FV</td>
<td>–</td>
<td>–0.220 (1.90) **</td>
<td></td>
<td></td>
<td>0.068 (1.05)</td>
</tr>
</tbody>
</table>

Fixed effects: Year Year Year Year

N: 805 805 707 707

Adjusted-$R^2$: 36.26% 36.80% 33.47% 33.65%

This table presents analyses examining the determinants of analysts’ earnings-per-share (EPS) forecast error and dispersion across US versus UK real estate firms over the period 2000 through 2010. Panel A presents results where the dependent variable is analyst
earnings forecast error, $EPS_FE$. $EPS_FE$ is measured by (1) taking the absolute value of firm $j$’s actual earnings per share for year $t$ less the mean across each analyst $i$’s most recent earnings forecast for firm $j$ for year $t$; and (2) scaling by the absolute value of the mean earnings forecast for firm $j$ for year $t$. Panel B presents results where the dependent variable is analyst earnings forecast dispersion, $EPS_DISP$. $EPS_DISP$ is measured as the standard deviation of analysts’ most recent earnings forecast for firm $j$ for year $t$, scaled by the absolute value of the mean earnings forecast for firm $j$ for year $t$.

In both panels, the experimental variable is $NO_FV$, an indicator variable equal to one if firm $j$ does not provide property fair values in year $t$ (i.e., is a US firm), and zero if firm $j$ does provide property fair values in year $t$ (i.e., is a UK firm). All other variables are defined in Appendix A.

We remove outliers using studentized residuals exceeding three standard deviations. Standard errors are clustered by firm. ***, **, * represent significance at the 1%, 5%, and 10% levels for the indicated one- or two-tailed tests.
### TABLE 5
Analysis of the Propensity to Issue Net Asset Value (NAV) versus Earnings-Per-Share (EPS) Forecasts

<table>
<thead>
<tr>
<th></th>
<th>Panel A. NAV Forecasts</th>
<th>Panel B. EPS Forecasts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable:</strong></td>
<td><strong>FOLLNAV</strong></td>
<td><strong>FOLLEPS</strong></td>
</tr>
<tr>
<td><strong>Variable</strong></td>
<td><strong>Pred Sign</strong></td>
<td><strong>Coeff (t-stat)</strong></td>
</tr>
<tr>
<td>Intercept</td>
<td>?</td>
<td>0.530 (6.41) ***</td>
</tr>
<tr>
<td>SIZE</td>
<td>+ / −</td>
<td>0.001 (0.09)</td>
</tr>
<tr>
<td>LOSS</td>
<td>+ / −</td>
<td>−0.001 (0.01)</td>
</tr>
<tr>
<td>EPSA</td>
<td>+ / −</td>
<td>−0.032 (4.62) ***</td>
</tr>
<tr>
<td>LEV</td>
<td>+ / −</td>
<td>0.007 (0.09)</td>
</tr>
<tr>
<td>STD_RET</td>
<td>+ / −</td>
<td>0.004 (0.39)</td>
</tr>
<tr>
<td>INSIDER%</td>
<td>+ / −</td>
<td>−0.001 (0.37)</td>
</tr>
<tr>
<td>BM</td>
<td>+ / −</td>
<td>0.010 (1.36)</td>
</tr>
<tr>
<td>NO_FV</td>
<td>−</td>
<td>−0.134 (4.81) ***</td>
</tr>
</tbody>
</table>

Fixed effects: Year

N: 815  815  796  796

Adjusted-$R^2$: 19.00%  24.67%  4.43%  4.44%

This table presents analysis of analysts’ propensity to issue net asset value (NAV) forecasts versus earnings per share (EPS) forecasts. The sample includes US and UK real estate firms over the period 2000 through 2010. Panel A (Panel B) presents results where the dependent variable is $FOLLNAV$ ($FOLLEPS$), defined as the number of unique analysts issuing an NAV (EPS) forecast for firm $j$ during year $t$ divided by the number of unique analysts issuing either an NAV or EPS forecast for firm $j$ during year $t$. All other
variables are defined in Appendix A. We remove outliers using studentized residuals exceeding three standard deviations. Standard errors are clustered by firm. ***, **, * represent significance at the 1%, 5%, and 10% levels for the indicated one- or two-tailed tests.
**TABLE 6**  
Effect of the Global Financial Crisis on NAV Forecast Error, Dispersion, and Propensity to Issue NAV Forecasts

<table>
<thead>
<tr>
<th>Variable</th>
<th>Pred Sign</th>
<th>$NAV_{FE}_{90}$</th>
<th>$NAV_{FE}_{180}$</th>
<th>$NAV_{FE}_{250}$</th>
<th>$NAV_{DISP}$</th>
<th>$FOLL_{NAV}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>Intercept</td>
<td>?</td>
<td>0.312 (1.71)*</td>
<td>0.329 (1.72)*</td>
<td>0.304 (1.23)</td>
<td>−0.493 (2.35)**</td>
<td>0.122 (3.27)***</td>
</tr>
<tr>
<td>$HORIZON$</td>
<td>+</td>
<td>0.020 (0.67)</td>
<td>0.033 (1.13)</td>
<td>0.030 (0.77)</td>
<td>0.059 (1.98)**</td>
<td></td>
</tr>
<tr>
<td>$SIZE$</td>
<td>+ / −</td>
<td>0.006 (0.83)</td>
<td>0.006 (0.97)</td>
<td>0.008 (1.04)</td>
<td>−0.002 (0.88)</td>
<td>0.002 (0.76)</td>
</tr>
<tr>
<td>$FOLL$</td>
<td>−</td>
<td>−0.026 (2.06)**</td>
<td>−0.020 (1.51)*</td>
<td>−0.013 (0.96)</td>
<td>−0.004 (0.36)</td>
<td></td>
</tr>
<tr>
<td>$LOSS$</td>
<td>+</td>
<td>0.022 (0.29)</td>
<td>−0.013 (0.20)</td>
<td>−0.099 (1.40)</td>
<td>0.263 (4.18)***</td>
<td>0.001 (0.06)</td>
</tr>
<tr>
<td>$EPSA$</td>
<td>+</td>
<td>0.007 (0.38)</td>
<td>0.002 (0.11)</td>
<td>0.010 (0.77)</td>
<td>−0.030 (0.22)</td>
<td>−0.038 (5.80)***</td>
</tr>
<tr>
<td>$LEV$</td>
<td>+</td>
<td>0.343 (2.06)**</td>
<td>0.382 (1.98)**</td>
<td>0.580 (2.39)***</td>
<td>−0.054 (0.40)</td>
<td>0.076 (1.17)</td>
</tr>
<tr>
<td>$STD_RET$</td>
<td>+</td>
<td>0.080 (2.38)***</td>
<td>0.050 (1.56)*</td>
<td>0.048 (1.89)**</td>
<td>0.005 (0.23)</td>
<td>0.010 (1.00)</td>
</tr>
<tr>
<td>$INSIDER%$</td>
<td>+</td>
<td>0.001 (0.55)</td>
<td>0.002 (1.50)*</td>
<td>0.003 (1.65)*</td>
<td>0.001 (0.57)</td>
<td>−0.001 (1.35)</td>
</tr>
<tr>
<td>$BM$</td>
<td>+</td>
<td>0.019 (1.26)</td>
<td>0.015 (1.82)**</td>
<td>0.014 (2.24)**</td>
<td>0.216 (3.53)***</td>
<td>0.003 (0.72)</td>
</tr>
<tr>
<td>$NO_FV$</td>
<td>+</td>
<td>0.318 (5.62)***</td>
<td>0.349 (5.77)***</td>
<td>0.358 (5.42)***</td>
<td>0.127 (1.92)**</td>
<td>−0.192 (5.73)***</td>
</tr>
<tr>
<td>$CRISIS \times NO_FV$</td>
<td>−</td>
<td>−0.292 (4.00)***</td>
<td>−0.298 (3.63)***</td>
<td>−0.330 (3.66)***</td>
<td>−0.041 (0.67)</td>
<td>0.161 (3.82)***</td>
</tr>
</tbody>
</table>

Fixed effects: Year, Year, Year, Year

$N$: 483, 483, 483, 243, 815

Adjusted-$R^2$: 20.84%, 22%, 21.17%, 36%, 26.94%

This table examines the effect of the global financial crisis on the analyses using the NAV sample observations. We compare effects preceding the global financial crisis (2001–2006) versus after the start of this crisis (2007–2010) using $CRISIS$, an indicator variable equal to one for observations within 2007-2010, and zero otherwise. All other variables are defined in Appendix A. We remove outliers using studentized residuals exceeding three standard deviations. Standard errors are clustered by firm. ***, **, * represent significance at the 1%, 5%, and 10% levels for one- or two-tailed tests (see previous Tables 3 and 5 for predicted signs).
<table>
<thead>
<tr>
<th>Variable</th>
<th>Pred Sign</th>
<th>Coeff (t-stat) (1)</th>
<th>Coeff (t-stat) (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>?</td>
<td>-0.243 (1.01)</td>
<td>-0.378 (1.95) *</td>
</tr>
<tr>
<td>HORIZON</td>
<td>+</td>
<td>0.029 (0.99)</td>
<td>0.062 (2.14) **</td>
</tr>
<tr>
<td>SIZE</td>
<td>+ / –</td>
<td>0.005 (0.89)</td>
<td>-0.003 (1.04)</td>
</tr>
<tr>
<td>FOLL</td>
<td>–</td>
<td>-0.023 (1.74) **</td>
<td>-0.003 (0.29)</td>
</tr>
<tr>
<td>LOSS</td>
<td>+</td>
<td>0.035 (0.48)</td>
<td>0.264 (4.25) ***</td>
</tr>
<tr>
<td>EPSA</td>
<td>+</td>
<td>0.007 (0.38)</td>
<td>-0.026 (0.19)</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.353 (2.10) **</td>
<td>-0.051 (0.40)</td>
</tr>
<tr>
<td>STD_RET</td>
<td>+</td>
<td>0.073 (2.11) **</td>
<td>-0.006 (0.28)</td>
</tr>
<tr>
<td>INSIDER%</td>
<td>+</td>
<td>0.001 (0.68)</td>
<td>0.001 (0.57)</td>
</tr>
<tr>
<td>BM</td>
<td>+</td>
<td>0.019 (1.31)</td>
<td>0.213 (3.48) ***</td>
</tr>
<tr>
<td>NO_FV</td>
<td>+</td>
<td>0.258 (4.48) ***</td>
<td>0.121 (2.05) **</td>
</tr>
<tr>
<td>NO_FV x Impair</td>
<td>–</td>
<td>-0.127 (2.48) ***</td>
<td>-0.033 (0.94)</td>
</tr>
</tbody>
</table>

**F-test (p-value):**

(NO_FV + NO_FV x Impair) > 0

0.007 *** 0.085 *

Fixed effects Year Year

N 483 243

Adjusted-$R^2$ 20.05% 36.09%

This table examines the effect of impairments on analysts’ NAV forecasts. *Impair* is an indicator variable equal to one for US firms reporting impairments/special items, and zero otherwise. All other variables are defined in Appendix A.

We remove outliers using studentized residuals exceeding three standard deviations. Standard errors are clustered by firm. ***, **, * represent significance at the 1%, 5%, and 10% levels for one- or two-tailed tests (see previous Table 3 for predicted signs).