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# International Accounting in Light of Enron: Evidence from Empirical Research

## **Cover Page Footnote**

International Law; Commercial Law; Law

# International Accounting in Light of Enron: Evidence from Empirical Research

*Mark H. Lang\**

## Introduction

Recent accounting scandals in the United States may suggest that U.S. reporting is fundamentally flawed and that other systems might be preferable. However, I believe that conclusion would ignore the substantial body of empirical research that could provide insight on the relative effectiveness of the U.S. financial reporting system. My goal in this paper is to examine how the evidence from this empirical research bears on understanding the current state of international accounting development and its prospects for the future. In particular, I focus on the evidence related to the quality of accounting data produced under the U.S. accounting system relative to that produced under other systems.<sup>1</sup>

My general conclusion is that, based on the weight of the extant empirical evidence, the U.S. system has produced accounting data that compare favorably with those produced under other systems, and that the resulting transparency and credibility of capital markets has been at least on par with the system of any other country.<sup>2</sup> Related research on cross-listing suggests that

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<sup>1</sup> My goal is not to provide a comprehensive survey of the literature, but to highlight a few representative recent papers that illustrate the basic results, and to provide discussion and references to the broader literature.

<sup>2</sup> See Christian Leuz, et al., *Earnings Management and Investor Protection: An International Comparison*, J. FIN. ECON. (forthcoming 2003), <http://jfe.rochester.edu/02307/pdf> (last visited Apr. 8, 2003) (on file with the North Carolina Journal of International Law and Commercial Regulation); Judy Land & Mark Lang, *Empirical*

investors view the decision by non-U.S. firms to list on U.S. exchanges (thereafter subjecting themselves to U.S. accounting and regulation) as enhancing their credibility.<sup>3</sup> While Enron raises questions about specific aspects of the U.S. financial reporting system, I argue that there is little reason to believe that any other accounting system would have been more effective in dealing with these issues. In fact, the ongoing response, both in terms of legislative changes and penalties for those involved, has the potential to actually enhance the long-term credibility of the U.S. system.

### Research Literature

My focus is on large-sample empirical research using archival accounting and stock price data. As with any research approach, this one has strengths and weaknesses. An advantage of this approach is that it evaluates data actually reported by firms rather than speculating about the data that a given accounting system might report. For example, it is tempting to argue that a principles-based system requiring conformance with a “true and fair view” would result in better accounting than a detailed rules-based system, because the principles-based system would constrain firms from engineering around bright-line rules. However, the extent to which such a standard actually constrains behavior (especially without considering the associated auditing and enforcement standards) is an empirical question. In addition, this approach permits inferences based on a large sample of firms rather than relying on individual examples. While one can certainly find cases in which the U.S. system has performed poorly, it is more difficult to argue that other systems are better, or that the U.S. system has deteriorated, if one cannot find empirical

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*Evidence on the Evolution of International Earnings*, 77 ACCT. REV., 115, 115–33 (Supp. 2002); Ray Ball, et al., *The Effect of International Institutional Factors on Properties of Accounting Earnings*, 29 J. ACCT. & ECON. 1, 1–51 (2000).

<sup>3</sup> See Mark Lang, et al., *How Representative are Firms that are Cross Listed in the United States? An Analysis of Accounting Quality*, J. ACCT. RES. 1, 1–34 (forthcoming May 2003); Marco Pagano, et al., *The Geography of Equity Listing: Why Do Companies List Abroad?*, LVII J. FIN. 2651, 2651–94 (Dec. 2002); John C. Coffee, Jr., *Racing Towards the Top?: The Impact of Cross-Listings and Stock Market Competition on International Corporate Governance*, 1–87 (Columbia Law School, Working Paper No. 205, May 30, 2002); Darius P. Miller, *The Market Reaction to International Cross-listings: Evidence From Depository Receipts*, 51 J. FIN. ECON. 103, 103–23 (1999).

evidence in large sample tests.

In terms of limitation, this approach is descriptive rather than normative. As a result, the goal is to describe differences across countries rather than to infer which is “best,” since that would require an explicit cataloging of winners and losers across systems, followed by a weighting of their importance. Second, the data are historical, and much of the analysis pre-dates the Enron failure. However, as argued later, more recent papers include recent data, and some studies have explicitly examined whether there has been a deterioration of quality over time.<sup>4</sup> Third, by its very nature, this approach is limited to systems that have been implemented and for which data are available. Several presenters in this conference suggest alternative accounting approaches that may be superior but have not yet been implemented in any country, and therefore cannot be examined empirically. Finally, this approach cannot separate the effects of accounting standards from other features of the reporting system, such as enforcement and attestation. However, it seems more useful to evaluate the system as a whole rather than to focus on one aspect, like accounting standards, in isolation.

I consider several primary streams of research: comparisons across countries,<sup>5</sup> cross-listing,<sup>6</sup> and comparisons over time.<sup>7</sup> Comparisons across countries provide direct insight into the effects of differences in reporting systems. Cross listing research, while indirect, provides evidence on how investors and non-U.S. firms view the credibility of the U.S. system. Finally, time series comparisons suggest whether the quality of reporting has deteriorated over time.

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<sup>4</sup> See Wayne Landsman & Edward Maydew, *Has the Information Content of Annual Earnings Announcements Declined in the Past Three Decades?*, 40 J. ACCT. RES. 797, 797–808 (2002); Land & Lang, *supra* note 1.

<sup>5</sup> See Ball, et al., *supra* note 2; Land & Lang, *supra* note 2; Leuz, et al., *supra* note 2.

<sup>6</sup> See Coffee, *supra* note 3; Lang, et al., *supra* note 3; Miller, *supra* note 3; Pagano, et al., *supra* note 3.

<sup>7</sup> See Land & Lang, *supra* note 2; Landsman & Maydew, *supra* note 4.

### *Comparative Studies*

Many studies rely on categorizations of accounting systems, and then on comparisons within and between accounting systems.<sup>8</sup> The most typical dichotomy is between the common law and civil law countries.<sup>9</sup> While the categorization is crude (and there is an extensive literature considering other potential characterizations) the categories are at least useful for structuring thinking about potential differences.

Because financial accounting is intended primarily to convey information to the providers of capital, development of accounting systems is a function of the primary sources of capital. In this view, common law economies (with the United States being a primary example) are distinguished by their historic reliance on diffuse equity ownership as a source of capital, facilitating separation of ownership and control. That system places greater information demands on companies for two reasons. First, individual investors are too small to be able to justify direct communication and customized information. Similarly, investors are typically diversified so even if they could communicate directly, it would be costly for them to deal with individual firms. As a result, financial accounting has developed as a primary communication mechanism to provide relatively standardized, comparable data across firms. Given the importance of individual investors to the capital markets, substantial resources have been devoted to developing the accounting system and associated infrastructure. In the United States, probably more than any other country, substantial resources are expended on developing comprehensive accounting standards, auditing financial statements, enforcing regulation through the SEC, and litigating violations of accounting standards.

On the other hand, the civil law countries traditionally have not relied as heavily on diffuse equity ownership. Rather, ownership often includes large blockholders (sometimes other corporations or families), bank financing, and, in some cases, greater governmental involvement. In addition, the stakeholder

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<sup>8</sup> Ball et al., *supra* note 2, at 1; Leuz, et al., *supra* note 2 (manuscript at 1, on file with authors).

<sup>9</sup> Ball et al., *supra* note 2, at 2; Leuz, et al., *supra* note 2 (manuscript at 3–4, on file with authors).

model is broader and includes groups such as labor unions. As a consequence, communication with diffuse equity owners and minority investor protection has not received as much emphasis. Fewer resources tend to be devoted to accounting, resulting in less comprehensive accounting standards, fewer auditors, less enforcement, and less potential for shareholder litigation. In addition, financial reporting and tax reporting have traditionally been more closely aligned, because financial reporting is not deemed sufficiently important to justify the cost of maintaining separate records.

The overall conclusion from comparative research is that common law countries in general, particularly the United States, produce accounting data that rank high in terms of quality and usefulness for valuation relative to other countries.<sup>10</sup> This conclusion is based on research using several approaches. First, some researchers have examined the correlation between accounting information and stock price, based on the notion that if accounting data are highly correlated with share prices and movements in share prices, then the data better capture economic reality.<sup>11</sup> For example, Ball et al. examine the relation between annual earnings and returns for samples of firms from common law countries (the United States, United Kingdom, Canada, and Australia) and civil law countries (France, Germany, and Japan) to test the timeliness of reported earnings.<sup>12</sup> Overall, they find that common law countries tend to report accounting data that are more highly-correlated with returns, suggesting that their earnings are a timelier source of information.<sup>13</sup> Further, among the common law countries, the United States and Canada rank near the top.<sup>14</sup>

Ball, et al. investigate the source of the added timeliness by comparing the relation between accounting information and stock price for good and bad news.<sup>15</sup> They argue that managers have natural incentives to disclose good news voluntarily, but that

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<sup>10</sup> Ball et al., *supra* note 2, at 2; Land & Lang, *supra* note 1; Leuz, Christian, et al., *supra* note 2 (manuscript at 3–4, on file with authors).

<sup>11</sup> Ball et al., *supra* note 2, at 2–3.

<sup>12</sup> *Id.* at 17.

<sup>13</sup> *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at 23.

differences in accounting requirements, litigation exposure and enforcement affect managers' willingness to disclose bad news.<sup>16</sup> In particular, their results indicate that the primary difference between common and civil law countries is in the timely recognition of bad news, with losses recognized in a more timely manner in common law countries.<sup>17</sup> Again, the United States ranks near the top of the common law countries in terms of early recognition of bad news, probably reflecting the effects of litigation exposure, and accounting standards on issues like asset impairment that encourage timely loss recognition.<sup>18</sup>

Their results on cash flows are also interesting. While it may seem tempting to argue that cash flows are more informative than earnings because of the management discretion inherent in accruals, their paper also analyzes the issue of the informativeness of operating cash flows across countries.<sup>19</sup> The basic result is that, across all countries, accounting earnings are significantly more informative to valuation than cash flows.<sup>20</sup> More importantly, the informativeness added by accruals is generally greater in common law countries than in other countries.<sup>21</sup> Again, the United States ranks near the top suggesting that, despite concerns about the discretion inherent in accruals, managers generally make assumptions that enhance the informativeness of the resulting accounting data.<sup>22</sup>

The basic message from Ball et al. is echoed in Leuz et al. using a different approach.<sup>23</sup> Leuz focuses more directly on differences in the extent of earnings management across countries.<sup>24</sup> For example, the tendency of managers to use their discretion in managing earnings to smooth earnings is a concern everywhere, including the United States. For example, former Securities and Exchange Commission (SEC) chairman, Arthur

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<sup>16</sup> *Id.* at 22–23.

<sup>17</sup> *Id.* at 23.

<sup>18</sup> *Id.*

<sup>19</sup> *Id.* at 38.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> Leuz et al., *supra* note 2 (manuscript at 23–24, on file with authors).

<sup>24</sup> *Id.* (manuscript at 1–2, on file with authors).



Levitt, noted the use of “cookie jar reserves” to smooth earnings by shifting income from good years to bad years, thereby reducing the informativeness of earnings.<sup>25</sup>

Leuz compares the tendency to manage earnings across thirty-one countries using a variety of measures of earnings management and discretion.<sup>26</sup> Supporting the Ball conclusions, Leuz finds that, despite (or perhaps because of) SEC concerns about earnings management, U.S. firms consistently rank near the bottom (least earnings management) across a range of measures.<sup>27</sup> It is instructive to consider the specific measures they use. First, they examine the variability of operating income relative to the variability of cash flows.<sup>28</sup> The reasoning behind this measure is that, if managers use discretionary accruals to smooth variability in reported income, then operating income will be smoother than cash flows. Closely related, they consider the correlation between changes in accruals and changes in cash flows, arguing that if managers use their discretion to manage earnings they will use positive accruals to offset poor cash flow results.<sup>29</sup> Third, they examine the magnitude of overall accruals by comparing the absolute value of accruals to cash from operations.<sup>30</sup> The advantage of this measure is that it does not rely on predictions about the likely direction of discretionary accruals but, rather, measures the overall quantity. Finally, they consider the frequency of small profits relative to small losses.<sup>31</sup> The notion here is that, in cases in which “unmanaged” earnings would have resulted in a small loss, firms engaging in earnings management will use their discretion to find a way to report a small profit.

For each measure considered, Leuz et al. find that the United States ranks near the bottom in terms of earnings management

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<sup>25</sup> SEC Chairman Arthur Levitt, Remarks at the NYU Center for Law and Business, “The ‘Numbers Game’” (Sept. 28, 1998), available at <http://www.sec.gov/news/speech/speecharchive/1998/spch220.txt> (on file with the North Carolina Journal of International Law and Commercial Regulation).

<sup>26</sup> Leuz, et al. *supra* note 2 (manuscript at 28, on file with authors).

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

<sup>31</sup> *Id.*

(*i.e.*, less evidence of earnings management).<sup>32</sup> Further, they create an aggregate measure of earnings quality by combining the scores on their four earnings management measures.<sup>33</sup> On that basis, the results are particularly striking: of thirty-one countries for which data are available, the United States has less evidence of earnings management than any other country.<sup>34</sup> That is not to say there is no evidence of earnings management in the United States, but that the evidence is less pronounced in the United States than in any other major economy.

Overall, the results from these papers, and others in the comparative literature, suggest that the United States generally ranks high relative to other countries based on empirical measures of accounting quality.

### *Cross-Listing*

Although indirect, related research comes from the literature on the benefits of cross-listing. Cross-listing on U.S. exchanges is interesting because it entails added regulatory requirements in terms of filings with the SEC and reconciliation of net income and shareholders' equity to U.S. General Accepted Accounting Principles (GAAP).<sup>35</sup> While added requirements might be expected to reduce the attraction of U.S. listing, since other markets typically do not impose such strict requirements, the United States has been successful in attracting listings.<sup>36</sup>

Coffee surveys the cross-listing literature and argues that the evidence is most consistent with the notion that cross-listing serves a bonding role, constraining firms to more transparent reporting.<sup>37</sup> As evidence, he cites Miller, who finds that firms that cross listed on U.S. markets experienced an increase in share price around the listing announcement.<sup>38</sup> Even more striking is the finding that the reaction is stronger the more fully a firm commits

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<sup>32</sup> *Id.*

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> Coffee, *supra* note 3, at 28–30.

<sup>36</sup> *Id.* at 20.

<sup>37</sup> *Id.* at 1–87.

<sup>38</sup> Miller, *supra* note 3.

to the U.S. regulatory structure.<sup>39</sup> For example, firms that listed on the NYSE or Nasdaq (and hence were required to file with the SEC and reconcile net income and shareholders' equity to U.S. GAAP) enjoyed a larger stock price response than those that opted to trade on the over-the-counter market, which, until recently, did not require reconciliation to U.S. GAAP.<sup>40</sup> Firms with private placements under Rule 144A and trading on PORTAL (which have the fewest regulatory requirements) did not experience positive returns.<sup>41</sup> As a consequence, it appears that investors give greater credibility to firms that choose to list on the U.S. market.

Consistent with that conclusion, Lang, et al. examine the types of firms that are attracted to U.S. listing.<sup>42</sup> Their evidence indicates that firms choosing to list on U.S. exchanges tend to be those with the most transparent reporting even in their home markets, suggesting that the U.S. listing requirements may serve to screen out firms that are less willing to be forthcoming with the market.<sup>43</sup> That conclusion does not hold for firms that cross-list on non-U.S. exchanges or on the U.S. over-the-counter market where the regulatory environment is less demanding.<sup>44</sup> Further, their results suggest two related explanations for the findings. First, firms that self-select into cross-listing tend to be those that have a history of transparency, and therefore view the requirements associated with U.S. listing as less onerous.<sup>45</sup> Second, firms improve the quality of even their home financial statements following cross listing.<sup>46</sup>

Taken with the results in the previous section on the association between accounting information and stock prices, these results suggest that investors and managers view the United States as a particularly demanding regulatory environment in which to list. Further, the results suggest that they benefit from the increased transparency.

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<sup>39</sup> *Id.* at 114.

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> Lang et al., *supra* note 3.

<sup>43</sup> *Id.* at 31.

<sup>44</sup> *Id.* at 34.

<sup>45</sup> *Id.* at 33.

<sup>46</sup> *Id.* at 32.

*Comparisons over Time*

Of course, the preceding literature is based on data over long sample periods. It is possible that U.S. financial reporting was once effective, but has deteriorated over time. While that possibility cannot be dismissed entirely, it seems unlikely for several reasons. First, the literature comparing evidence of earnings quality over time is mixed at best.<sup>47</sup> Papers such as Landsman and Maydew, for example, examine the stock market reaction to earnings announcements over the last thirty years for evidence that earnings have become less informative or timely.<sup>48</sup> The paper finds little general evidence of deterioration in the informative nature of earnings announcements over time.<sup>49</sup> If anything, their evidence indicates that the stock market reaction to earnings announcements has increased over time, suggesting that accounting earnings remain a timely and useful source of information.<sup>50</sup>

In an international setting, Land and Lang compare earnings management across countries over time.<sup>51</sup> In particular, they focus on the correlation between cash flows and accruals to examine cross-country differences in earnings management and whether earnings smoothing has become more prevalent.<sup>52</sup> Their evidence suggests that the level of U.S. earnings smoothing has remained approximately constant over time.<sup>53</sup> While there is evidence of a reduction in earnings management in other countries, they find that earnings smoothing in the United States remains modest relative to other countries, a finding consistent with the results in Leuz, et al.<sup>54</sup>

While the preceding evidence fails to show a systematic shift in the quality of U.S. financial reporting over time, it is still possible that the deterioration has occurred so suddenly that it has

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<sup>47</sup> Landsman & Maydew, *supra* note 4.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.* at 804.

<sup>50</sup> *Id.*

<sup>51</sup> Land & Lang, *supra* note 2, at 115.

<sup>52</sup> *Id.* at 130.

<sup>53</sup> *Id.*

<sup>54</sup> *Id.*; Leuz et al., *supra* note 2.

gone undetected in tests that focus on longer time periods. However, that possibility seems unlikely for several reasons. First, it is not clear that there have been major changes in U.S. accounting in the last few years that would cause a sudden drop in the quality of reporting. Most explanations typically associated with the alleged drop in reporting quality are more likely to have developed gradually and should therefore be reflected in the studies which examine changes over time. For example, while it is true the volume and detail of accounting standards have increased, that has been more of a gradual trend and should be reflected over longer periods. Similarly, while it is alleged that auditors have become more reliant on non-audit revenues, that too has probably been a gradual trend so its effects should be reflected in the data. As a result, it is difficult to think of significant changes that would predict a dramatic shift in accounting quality.

## Discussion

Why, if financial reporting works well, do a disproportionate share of financial reporting disasters appear to occur in the United States? I believe there are several answers. First, paradoxically, the United States may attract the very types of firms that are more likely to fail. In particular, industries with high natural levels of risk and information asymmetry between managers and investors are more likely to be forced to seek out markets with the most credibility to raise capital. For example, it is striking that startup high technology firms typically choose the U.S. markets on which to list. While certainly it is not possible, one potential explanation is that those firms are attracted to the U.S. markets because they are informationally better developed, and investors are therefore likely to be most comfortable with their credibility.<sup>55</sup> To the extent that the U.S. market attracts riskier firms, there will naturally be more failures. However, that is not to say that the failures reflect a poor U.S. reporting environment.

Also, a natural consequence of better monitoring is that violations are detected earlier. As a result, the preponderance of scandals in the U.S. market may reflect the attention paid to

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<sup>55</sup> While I am not aware of direct evidence on this, Pagano, et al. find that European firms cross-listing into the US market (as opposed to European markets) are more likely to be high-growth, technology firms. Pagano et al., *supra* note 3, at 2651.

attestation and compliance. For example, *The Economist* quotes Liesel Knorr, Secretary-General of the German Accounting Standards Committee as saying, while discussing German accounting, "there is quite a bit of small-time cheating and there might be big cheating as well."<sup>56</sup> *The Economist* goes on to add, "because nobody checks, she says, you cannot tell."<sup>57</sup> Closely related, the United States lacks the kind of long-term relationship investing seen in other countries. As a result, firms with large losses are allowed to fail, and the financial reporting is designed to report the losses immediately rather than allowing them to be smoothed out over time. Even a disaster like Enron might have been averted (although at potentially very high cost) had relationship investors been present who were willing to continue to provide capital and had the financial reporting system allowed Enron to continue to hide its losses.

## Conclusions

Clearly, recent scandals raise important issues with respect to U.S. financial reporting. My goal in this paper is simply to caution against overreaction. Based on the existing research evidence, it seems difficult to make a compelling case that U.S. reporting is fundamentally flawed. Subject to its inherent limitations, the existing empirical evidence suggests that the U.S. financial reporting system has performed well relative to other systems.<sup>58</sup> Further, despite claims to the contrary, there is not clear evidence that the quality of U.S. financial reporting has declined significantly over time.<sup>59</sup>

That having been said, recent scandals do clearly indicate important areas of potential improvement. For example, Enron highlights difficult issues related to special purpose entities and the potential for auditor conflicts of interest created by demand for non-auditing services. However, the general track record of U.S. financial reporting suggests that a response focusing on specific

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<sup>56</sup> *Holier Than Thou*, THE ECONOMIST, Feb. 8, 2003, at 69.

<sup>57</sup> *Id.*

<sup>58</sup> Leuz et al., *supra* note 2, at 1; Land & Lang, *supra* note 2, at 133; Ball et al., *supra* note 2, at 1.

<sup>59</sup> Landsman & Maydew, *supra* note 4 at 797–808; Land & Lang, *supra* note 2 at 115–133.

issues rather than fundamental changes may be merited. Overall, there is little evidence that any other existing system would give a better result.

How will the recent scandals affect the credibility of U.S. reporting going forward? While it is too early to judge definitively, it is certainly possible that the scandals may have a positive long-term effect. In particular, the initial response to the issues raised by Enron has been fairly dramatic.<sup>60</sup> Certainly the collapse of Enron's auditor, indictment of key executives, and recent legislative action suggest that the issues have been taken quite seriously.<sup>61</sup> Even though, as noted earlier, other countries face similar issues, the international response has been muted relative to the United States.<sup>62</sup> Assuming that the momentum continues, including significant penalties against individuals in the case, it seems plausible that the long-term credibility of the system may even be enhanced in the aftermath of Enron.

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<sup>60</sup> *Holier Than Thou*, *supra* note 56.

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

