

8-1-2006

# The Convergence of Accounting Standards or the Next Revolutionary Change in the Accounting Industry

Mariya Smantser  
*Pace University*

Follow this and additional works at: [http://digitalcommons.pace.edu/honorscollege\\_theses](http://digitalcommons.pace.edu/honorscollege_theses)



Part of the [Accounting Commons](#)

---

## Recommended Citation

Smantser, Mariya, "The Convergence of Accounting Standards or the Next Revolutionary Change in the Accounting Industry" (2006). *Honors College Theses*. Paper 42.  
[http://digitalcommons.pace.edu/honorscollege\\_theses/42](http://digitalcommons.pace.edu/honorscollege_theses/42)

This Article is brought to you for free and open access by the Pforzheimer Honors College at DigitalCommons@Pace. It has been accepted for inclusion in Honors College Theses by an authorized administrator of DigitalCommons@Pace. For more information, please contact [rracelis@pace.edu](mailto:rracelis@pace.edu).

**The Convergence of Accounting Standards or the  
Next Revolutionary Change in the Accounting Industry.**

NAME: Mariya Smantser  
MENTOR: Dr. Tinkelman  
FIELD OF STUDY: Public Accounting

## **The Convergence of Accounting Standards or the Next Revolutionary Change in the Accounting Industry.**

In the past five years the accounting industry has undergone major transformations. A wave of corporate scandals that began with Enron shook accounting's foundations, and led to passage of the Sarbanes Oxley Act of 2003. As the industry is absorbing and implementing the new requirements of the Sarbanes Oxley Act, it has yet another development on the horizon -- the pressure of convergence of accounting standards between the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB). Marie Kling, senior manager in PWC, summarizes the current situation: "The train heading towards global GAAP has left the station, while it won't reach its destination overnight, there's no turning back. Even a U.S.-based company with no international operations will be affected by the move towards convergence".<sup>1</sup>

In September 2002 the "train left the station" after FASB and IAS embarked on a long term project to converge their accounting standards. In 2002 FASB and IASB signed the "Norwalk Agreement" that obliged them to work on converging their accounting standards.<sup>2</sup> Currently the project is on top of the agendas for both FASB, and IASB and progress is being made.

### Impact of globalization and the need to converge

The greater emphasis on convergence is a result of the wave of globalization that has swept our world. Today more and more companies are becoming multinational. Companies have operations in different parts of the world with increasing number of subsidiaries, joint ventures and franchises. The capital markets of the United States, the

European Union, Eastern Europe, Asia, and Australia have become intertwined.

Investors now have more access than ever to financial markets and foreign companies.

It is imperative to continue to improve the efficiency of such markets so that they remain healthy. However, a major obstacle that lingers in these markets is that the U.S., Europe and Japan have different regulatory standards for financial reporting. The translation of financial statements from one type of standard to another is burdensome because of time and cost required. Some companies prefer not to list on U.S. stock exchanges, to avoid the complexities associated with the U.S. reporting. Also, investors have to be aware of the differences when evaluating foreign companies, and this distorts comparability and consistency. Financial statements are less relevant to its users when they are not fully comparable. The consequence is that some investors choose not to invest in foreign companies to avoid potential misunderstanding of financial statements, and hence making a wrong investment decision. In the short term the disadvantages are not so obvious, but in the long run this can impede integration of capital markets, and efficient allocation of capital which is vital for a strong world economy. In 2000, FASB stated that it "has long recognized that in order for international capital markets to function properly, a single set of high quality, international accounting standards must exist." <sup>3</sup>

#### Origin and analysis of the differences in standards

Before I further discuss convergence, it is well worth while to examine the origin of the differences between accounting standards among nations. The main culprits for the differences between accounting standards are political factors. For example, in France and Germany the state always had a major influence on the accounting regulations. The

government was largely concerned with protecting creditors; therefore, accounting standards that evolved were based on historic cost, and that tended to understate profits and assets.<sup>4</sup> In countries like the United Kingdom and U.S., independent accounting boards are responsible for regulations with emphasis on shareholder protection. However, there are also a number of studies that have concluded that cultural factors influenced the differences between national accounting standards.<sup>5</sup>

In 1997, an IASC-US comparison project was performed to examine the major differences between IAS and U. S. GAAP. The project identified 255 major differences. This statistic emphasizes just how much work there was to be done during the convergence project.

The findings of the report help explain the differences between the U.S. GAAP and the IASC. It can be concluded that the differences are inevitable because “they serve different environments, respond to different mandates, and result from different standard setting structures and processes.”<sup>6</sup> For example, U.S. GAAP evolved to be more detailed with domestic emphasis to respond to “complexities of U.S. economic environment a demand from sophisticated financial statement users for reliable high quality financial information.”<sup>7</sup> The international standards are characterized as more general because they are not intended to address a specific economic environment. One of the conclusions of the study was that IAS and U.S. GAAP standards have similarities and that both could even reach the same conclusions, but because the IASC standards have many alternatives, the same result is often unlikely.

I would like to discuss some of the findings of this joint FASB / IASC's U.S. GAAP comparison project because they will enhance the understanding of what are the

major tasks of the conversion project. The project has identified several “sets” of differences that exist.

The first are differences due to disparities in recognition.

For example, leases are one of the areas where reconciliation will be required. The major difference is the classification of a lease as operating or as an asset. Under FASB 13 “Accounting for Leases,” there are precise criteria that dictate how a lease should be classified. However, its counterpart, IAS 17 –“Leases,” allows management to assess the substance of the lease, which can lead to different financial results. Another example is employee equity compensation, such as stock options. Under U.S. GAAP companies are now required to expense stock options, whereas under IAS 19-“Employee Benefits,” no such recognition of expense is required.

A third example of a disparity in recognition is accounting for income taxes. Even though IAS 12 is primarily based of SFAS 109, there remain differences in the exceptions to the application of the standards, as well as some differences in recognition, measurement and disclosure criteria.<sup>8</sup> For example, SFAS 109 has six explicit exceptions to the principle, while IAS 12 has three. The differences in exceptions that will need to be addressed relate to intercompany transfers, foreign subsidiaries and undistributed earnings, and foreign currency translation. With respect to measurement there exist differences in taxation schemes. For instance, in U.S. income is taxable when it is earned, while in some European Union countries there is a “two rate scheme,” where income is taxed at a basic rate, while dividends are taxed at the incremental rate.<sup>9</sup>

A second type of difference that was identified by the study is one where the two sets of standards require different treatment of the same item. For example, research and

development costs for companies following U.S. GAAP are expensed as they are incurred. But under international standards, costs that are associated specifically with development can be capitalized. When it comes to construction contracts, IAS 11 requires the use of the percentage of completion method to recognize revenue and expense, whereas under U.S. GAAP only in certain situations can this method be used. Two different set of standards also exist for recognition of profit and loss for sale-leaseback transactions. FASB 13 mandates deferring any recognition of profit or loss on such transactions, whereas its counterpart, IAS 17, requires immediate recognition. Also, with regard to pensions, U.S. GAAP authorizes prior service cost to be amortized over the expected service life of its employees. But IAS 19 requires prior service cost to be expensed.

Other type of differences that were identified relate to timing and measurement. The difference in two sets of standards that exist for "Interim Financial Reporting" is an example of a timing difference. Under U.S. GAAP the timing of recognition of certain accruals and deferrals differs from IAS requirements. Also, U.S. GAAP does not require companies to recognize losses for inventory for interim financial reporting, but IAS 34 requires. With regard to pensions, again there are major differences that relate to measurement. For example, U.S. GAAP requires that we recognize a minimum liability which is equal to unfunded accumulated pension benefit obligation. There are no such requirements for its international counterpart.

Standards may also differ because one set may allow alternative methods, while the other does not. For instance, for Cash Flow Statements, IAS 7 allows dividends and interest paid or received to be either classified as operating or financing cash flows.

However, under U.S. GAAP, interest paid or dividends received are operating cash flows, whereas dividends paid are financing cash flows. When it comes to borrowing costs, IAS 23 allows two approaches that entities can implement. In one, the entity expenses all the borrowing costs in the period incurred, while the other permits their capitalization.

However, FASB 34 permits only one approach, that is, capitalization of the costs.

Another area of disparity between IAS and U.S.GAAP is how to account for investments in joint ventures. IAS 31 gives two alternatives-the equity method or the proportionate consolidation method, while under U.S. GAAP only the equity method is permitted.

These are just a few differences out of 255 that were named by the IASC –US comparison project. All of these divergences and much more were still not resolved by the joint conversion project. The good news is that both sides agree that it is imperative to have items in both sets of financial statements presented the same way to induce comparability. The bad news is that it will require enormous amount of time, money and negotiations.

#### Initiatives towards convergence and the pressure on FASB to follow

The process of convergence is a great challenge and its success is dependent on constant compromise between the two influential accounting boards-FASB and IASB. A big step for FASB was to even consider integrating with international standards, since it has positioned itself as the leader in accounting standard setting. In 1997, the prospects of convergence were very dim. Michael Sutton, who was an SEC chief accountant at that time, stated that, "Reaching agreement on internationally accepted accounting standards involves a process of reconciling the interests of different business, professional, and

regulatory cultures and systems, and we must acknowledge that the prospects for success are uncertain." <sup>10</sup>

The first initiative towards convergence was taken by the European Union. The European Commission in 2001 issued a regulation requiring listed companies in the European Union to adopt international standards for consolidated financial statements effective 2005. This was a response to European Union capital markets losing competitiveness because many of its companies sought financing in U.S. markets, where the capital market is much larger and more integrated. <sup>11</sup> According to Sir David Tweedie, chairman of the IASB, in 2005 the consolidated financial statements of 7,000 companies in European Union and approximately 15,000 listed companies worldwide were reported under the International Accounting Standards.

The number of countries that have already embraced convergence is astounding. In total, 91 countries in 2005 were using the international standards, thus increasing pressure on many others to join in. <sup>12</sup> Countries such as Australia and South Africa have embraced international financial reporting standards (IFRS), while New Zealand will require companies to report under IFRS by 2007. In Asia, Hong Kong and Philippines have adopted IFRS word for word, while India, Pakistan, Thailand and Malaysia adopted parts of IFRS, and Canada is debating whether to keep its own national GAAP, adopt IFRS or U.S. GAAP. <sup>13</sup> Even China made progress in adopting IFRS when in 1998 the Chinese government issued regulations to harmonize certain Chinese GAAP with IAS. <sup>14</sup> Russia has indicated that it will adopt the standards as well, but without giving a specific time frame, and Japan, another economic superpower, has begun converging its national GAAP with IFRS. <sup>15</sup> In fact, Financial Executives International is calling 2005 "The

Year of International Financial Reporting Standards.”<sup>16</sup> The three members of the G4 or the “Group of Four” accounting standard setters, which consists of the U. S., the U. K., New Zealand and Canada have either converted or pledged convergence.

This widespread movement significantly increases pressure on FASB to work with IASB to produce uniform standards. FASB understands that it will isolate itself and jeopardize the success of U.S. financial markets by not joining the rest of the economic superpowers in converging with IFRS. FASB will never agree to replace U.S. GAAP for IFRS. But what has been agreed on is that both boards will work together to adopt the better quality standard from each other or develop new ones when both sets of standards are not suitable. The goal is that this will result in high quality financial statements for the whole world. According to former FASB chairman Robert Hertz, harmonization of accounting standards, for the United States, is an “opportunity to kill three birds with one stone by improving US reporting, simplifying US standards and standard setting and offering US market participants the benefits of international convergence.”<sup>17</sup>

Another pressure that I believe induced FASB to consider convergence were the corporate scandals that engulfed U.S. markets beginning 2001. An interesting fact that I should point out is that the Sarbanes Oxley bill was signed by President Bush in July 2002, while the Norwalk Agreement was signed in September of 2002 between FASB and IASB. Even though my research did not yield any concrete evidence that the corporate scandals directly affected the decision by FASB to converge standards, I still think that this cannot be a coincidence. One of the goals of Sarbanes Oxley is to “protect investors by improving the accuracy and reliability of corporate disclosures.”<sup>18</sup> The accuracy and reliability is often distorted due to the complex accounting methods that

give an opportunity to hide losses and inflate profits, because it becomes more difficult to audit such complicated transactions. The shock of Enron and WorldCom probably prompted FASB to speculate on the underlying causes of the scandals. Maybe the idea of convergence between the two most influential accounting boards of the world to produce standards that would incorporate the better of each seemed like the most reasonable step after Sarbanes Oxley.

Not only is the process of reconciling financial statements from one acceptable set of standard to another burdensome and time consuming, it is also very expensive.

According to John Burton, an Ambassador of the EU, companies can spend between five and ten million dollars on the reconciliation process per year.<sup>19</sup>

Eliminating the double work of reconciling will not only save money, but free up time for management and staff to concentrate on relevant business matters.

Today, convergence is only a matter of time; however, the road there is long and difficult. The Norwalk Agreement in 2002 was the first step towards convergence between IFRS and U.S. GAAP. This agreement marked a commitment to achieve compatible financial reporting standards and to ensure that once compatibility is achieved it will be maintained.<sup>20</sup> The goal of the convergence project is not to achieve identical statements, but rather to strive to achieve compatible statements where there are no divergences on how to account for the same transactions.

The two boards have taken a number of initiatives to expedite the process. For example, both boards hold joint meetings twice year, and both boards align agendas to reflect convergence decisions. There is a joint staffing of major projects, and collaboration between the interpretive bodies of each board, which are FASB's Emerging

Issue Task Force and IASB's International Financial Reporting Interpretation Committee. Also, a major convergence research project is underway whose goal is to analyze all the differences between U.S. GAAP and IFRS and suggest an approach that would reconcile the differences in the most effective way. As we can see the initiatives emphasize the boards' commitment to work together to achieve one set of accounting standards.

In April 2005, another agreement was reached between the SEC and the European Union, in which the SEC agreed to implement measures to allow non-U.S. companies not to reconcile IFRS to U.S. GAAP in order to have access to U.S. stock exchanges. Such measures are set to be implemented by 2009. This will be an important step because it will align US stock exchanges with all major world stock exchanges that accept IFRS, with the exception of Japan.<sup>21</sup> Currently, there are 459 foreign companies from 47 countries listed on NYSE, which represent 20% of total companies listed and about 33% of total market capitalization, while NASDAQ has 338 foreign companies, about 10% of its total listings.<sup>22</sup> These facts show why the SEC is under pressure to allow companies not to reconcile their financial statements to U.S. GAAP. However, I believe that when the time comes the SEC's decision will be contingent on the progress made in the convergence of accounting standards. I doubt that, if major differences in financial reporting still exist, the SEC will still consent to the agreement.

In an interview in 2005, FASB chairman, Robert Hertz speculated that the convergence of U.S. GAAP and IASB will be attained within nine years.<sup>23</sup> The time frame definitely seems realizable considering that in February 2006, FASB and IASB renewed a "Memorandum of Understanding," where the two boards reassured their commitment to achieving uniform accounting standards.<sup>24</sup>

The memorandum also discussed the progress to be made and the goals to accomplish by 2008. For example, the following items are to be reconciled by 2008: fair value option, impairment, income tax, investment properties, research and development, subsequent events, borrowing costs, government grants, joint ventures, and segment reporting.<sup>25</sup>

Accomplishments made in the convergence process:

Despite the many challenges that the convergence project faces, there have been some significant accomplishment made. Since 2001 a major project for IASB and FASB was to develop a common exposure draft for accounting for business combinations. The result was IFRS 3 that prohibited the pooling of interest method and required the use of the purchase method to account for business combinations. The implementation of this standard by entities in European Union aligned their financial statements with those entities in United States, Canada and Australia where the only acceptable method is the purchase method.<sup>26</sup>

According to FASB, a uniform application of the purchase method will “improve the completeness, relevance, and comparability of financial information about business combinations that is reported in financial statements by eliminating existing inconsistencies in the guidance for measuring assets acquired and liabilities assumed in a business combination.”<sup>27</sup> The Purchase method requires acquisition of a business to be measured at fair market values of assets, liabilities and equity, and one buyer is identified. The FASB has enforced the purchase method on June 2001 and has been a strong proponent of it ever since. FASB claims that the purchase method results in better interpretation on the effects of acquisition on financial statements because it gives a

better idea of the initial cost of the transaction.<sup>28</sup> Major problems with the pooling of interest method were that the book value of the assets acquired was combined with the buyer's assets without specifying who the buyer was, and investors had difficulty analyzing success of the acquisition because the initial cost of purchase was not clear.<sup>29</sup> IASB felt a lot pressure to enforce one method for better and consistent reporting.

Another significant achievement in the convergence was progress made related to accounting for goodwill. IASB also replaced its IAS 22 with IAS 36 that prohibited the amortization of goodwill. This change aligned the international standard on goodwill more closely with FASB's SFAS 141, under which goodwill is periodically tested for impairment and an impairment loss is recognized accordingly. The only difference that still remains is that IASB prefers to use a one step approach to an impairment testing compared to the FASB two step approach.<sup>30</sup> These were major steps in improving the consistency of IAS and U.S. GAAP. Yet much more work is to be done on business combinations for joint ventures and Special Purpose Entities. An outstanding issue regarding SPE's that is to be addressed is the definition of when a company has control over another.

Meaningful progress was made on convergence of standards that deal with income below continuing operations. When IASB accepted FASB 144 –Accounting for Impairment or Disposal of Long Lived Assets, it agreed that the U.S. standard was superior. IAS 35 “Discontinuing operations” was replaced by IFRS 5 “Non current Assets Held for Sale and Discontinued Operations.” According to IFRS 5, its new features are the classification as “held for sale,” the use of a disposal group, the use of lower of carrying amount and fair value less cost to sell as measurement value of disposal

assets. Also, under the old IAS 35, disclosure of a discontinued operation was made on the earlier of the dates when an entity entered into an agreement to sell or its board of directors approved a plan to discontinue.<sup>31</sup> With IFRS 5, a discontinued operation is disclosed under different circumstances, such as when the operation was disposed of or when assets in operations were classified as held for sale and entity will not have any involvement after the disposal.<sup>32</sup> By enforcing only one method, IASB improved not only understanding of financial statements but it took one step forward towards achieving uniform accounting standards.

When it came to the component of “accounting changes”, FASB replaced its APB Opinion 20 that required a cumulative effect of change in accounting principle to be stated in the period a change was made. FASB issued statement no. 154 that emulated IAS 8, which required companies to report effects of accounting changes retrospectively for all comparative financial statements. FASB thought that the international standard for this component can improve comparability in future years and, because the effect of the accounting change will be applied retroactively, the current income will not be as volatile as compared to previous years.<sup>33</sup>

However, the compromise on the component of extraordinary items, unlike the compromises for the other two components of income below operations, is still being debated. In 2002 IASB issued an “Improvement Exposure Draft” where it disallowed classification of “extraordinary items” in income statements as well as their disclosure in the notes to financial statements. According to the article in the CPA Journal, “the IASB’s position is that extraordinary items are a normal risk of doing business and thus should not be reported separately.”<sup>34</sup> However, under U.S. GAAP, items that are

unusual and infrequent in occurrence are classified as extraordinary in the last line before net income.<sup>35</sup> The two boards are still working on how to best integrate their approaches on representation of extraordinary items.

Another development that signifies the progress towards international convergence is that both FASB and IASB embarked on the Joint Conceptual Framework Project. The success of the project would result in “a coherent system of inter-related objectives and fundamentals that should lead to consistent standards that prescribe the nature, function and limits of financial accounting and financial statements.”<sup>36</sup> The frameworks of each board have many similarities, just as they have many differences. The Joint Conceptual Frameworks Project was launched to examine the conceptual frameworks of two boards, and assist in the reconciliation of the differences.<sup>37</sup>

The conclusions of the project were presented in December 2004 and I would like to discuss some of their findings. It was concluded that the conceptual frameworks of IASB are more comprehensive than that of FASB. The two boards' conceptual frameworks primarily exist to direct standard setters in developing accounting standards. However, IASB also emphasizes that its conceptual framework should serve as a guide for preparers, auditors and users of financial statements. Another difference between the conceptual frameworks of IASB and FASB is the importance each board assigns to it. Companies that report under IFRS are required to consider IASB's conceptual framework when no standard or interpretation exists. However, in the U.S., the conceptual framework carries the same relatively low importance as textbooks and articles.

Another significant difference worth mentioning that will need to be resolved by the two boards is the hierarchy of qualitative characteristics of accounting information.

The four qualitative characteristics are ranked in order of importance in U.S., while under the IASB each carries an equal level of importance.<sup>38</sup>

The purpose of the Joint Conceptual Framework Project is to address all of these differences that would result in better comparability of financial statements. The fact that the two boards are vigorously involved in reconciling their conceptual frameworks signifies major advancement in the convergence process.

In order to better align IAS with the corresponding U.S. GAAP standards, IASB eliminated the following alternatives from its standards: for IAS 27 “Consolidated and Separate Financial Statements,” minority interest will be stated separately from parent interest in the equity section; for IAS 21-“Changes in Foreign Exchange Rates,” the losses on devaluation of currency will not be allowed to be capitalized; for IAS 8 “Accounting Policies, Changes in Accounting Estimates and Errors,” IAS will eliminate one of its allowable choices to record the effects of change in accounting principle or correction of an error as a current period adjustment, leaving only the choice of retrospective adjustments. Also, IAS modified provisions of some of its standards to make the disclosure requirements more comprehensive. For example, IAS will now require disclosures when management makes assumptions about accounting estimates that are material. Also, disclosures of compensation packages of management, and disclosures with regard to related party transactions, such as balances, terms and conditions are now mandatory disclosures.

In the accounting section of Commercial Lending Review, a number of proposals by FASB were analyzed that would reconcile certain provisions with IAS.<sup>39</sup> For example, for “Exchanges of Non-Monetary Productive Assets,” the proposed

statement replaced the requirement that the transactions for exchange of non-monetary assets have to be recorded at the fair market value of asset exchanged. Instead, the proposal states that such transactions will be recorded at the fair market value of assets received. Another proposal that FASB made was to change its current computation for diluted EPS when using the treasury stock method. With the proposed statement the incremental shares included in diluted EPS will be calculated by using the average market price of common shares instead of using weighted average of incremental shares, which was previously required.

#### Objections and criticism to convergence

My research did not yield major controversies or public criticism that would be expected to surround such a major transformation in the accounting industry. However, there have been some objections and public outcries against adopting certain standards. For example, big European banks do not want to adopt the U.S. approach on accounting for financial instruments. These institutions are major users of financial instrument especially derivatives. The U.S. GAAP favors a current market value approach to valuation; however, the banks favor a historic cost approach which tends to minimize volatility.

In addition to the inherent difficulty of trying to achieve the best compromise, there are outside forces that try to interfere. There is lobbying by powerful corporations who claim that adopting IFRS can hurt their financial statements results.<sup>40</sup> There is also pressure, mostly in the European Union by national, local and regional governments, to prevent adoption of certain standards that they view as less desirable for financial consequences. Sir David Tweedie, chairman of the IASB, in his address on the

importance of international convergence, quoted Paul Volcker to emphasize the danger of succumbing to corporate and political lobbying: “the net results of politicized national decisions would be to weaken, perhaps irreparably, one of the foundation stones of effective accounting practices in a rapidly globalizing world economy.”<sup>41</sup> I would assume that privately the two boards are bombarded with letters from investors, creditors, small or large corporations expressing criticism for the convergence.

A criticism that I see being raised with the convergence process is that a single set of financial reporting standards for the whole world is not the best solution. Maybe the national GAAP of each nation exists for a purpose to reflect the social and political environment of each nation. Some can argue that specific accounting systems evolved in such a way as to best support economic systems of each nation, and such revolutionary changes to financial reporting can cause disruptions in the capital markets of each nation.

But this can be contradicted because the economic environment today is far different from what it was when nations developed and implemented their national accounting standards. Today the economies of nations are integrated and interdependent on one another. In the past decades globalization has created wealth and opportunities for nations and its people. This is because globalization led to a flourish in trade, investment in capital markets and infrastructure. Most recently, Europe eliminated a major obstacle to globalization on its continent by introducing its single currency, the euro. This has led to a more efficient distribution of capital, wealth, an increase in cross border trade and overall improvement of the European Union's capital markets. The next step to further facilitate globalization and improve the efficiency of capital markets is to introduce a single set of accounting standards.

During my research I encountered a study conducted in China whose purpose was to analyze whether harmonization of accounting standards results in harmonization of accounting practices. The study is based on the regulation passed by the Chinese government in 1998 that eliminated many differences between Chinese GAAP and IAS by revising many of its standards to harmonize them with IAS .<sup>42</sup> The study used a before and after approach to see whether the earnings gap decreased after the 1998 regulation. Based on statistical analysis on Chinese companies that are required to reconcile with IAS, the study concluded that there were no significant reductions in earning gap between Chinese GAAP and IAS. The study explains that the lack of gap reduction is attributed to a deficiency of “effective financial-reporting infrastructure, including preparer professionalism, quality auditing, and effective enforcement.”<sup>43</sup>

Such conclusions can be used by skeptics to undermine the effectiveness of harmonization. It can be argued that social factors, such as education, attitudes, and ways of conducting business can distort the purpose of convergence. Further criticism that may be drawn from the study is that establishing uniform accounting standards does not guarantee uniform accounting practices. Certain inherent cultural differences are responsible for that and overcoming them is another project.

A major concern for FASB and a topic for criticism is that international standards are more lenient and not as detailed. The use of a fair value approach by IASB to measure the value of assets and liabilities, which it considers to be the most relevant measure, is in dispute by FASB. IAS permits a write down or a write up of inventory periodically to reflect changes in the net realizable value of inventory.<sup>44</sup> FASB asserts

that this approach undermines reliability and understandability of accounting information.

<sup>45</sup> U.S. GAAP requires valuing inventory based on its original cost.

Another issue that has been raised regarding the convergence project is its timing.<sup>46</sup> The U.S. accounting industry and corporate industry is still adjusting to extensive requirements of Sarbanes Oxley Act. But, they are now to be faced with new regulatory changes rising from the convergence project. It can be argued that the inappropriate timing will be too much to handle for the accounting industry in such a short period and will create inefficiency in the process of adoption of the revised standards.

Today, accounting standards are definitely a top priority in the convergence project. However, the differences in audit standards must be eventually addressed as well. Just like differences in accounting standards, differences in audit objectives and practices evolved in a way that reflects each country's private sector, capital markets, legal environment, and tax regulations.<sup>47</sup> The audit opinion must have one interpretation only and not have variations from country to country. To accomplish that, auditing standards must have the same meaning and application, audit reports must be presented using the same content, and professional independence requirements must not differ.<sup>48</sup> Even when we achieve a single set of accounting standards, its many benefits will be distorted unless the auditing standards and practices are consistent.

#### How can we transition efficiently?

It is undoubtedly true that within ten years U.S. GAAP will be converged with IFRS. If before it seemed a remote possibility, today it is only a matter of time. This historic transformation of the accounting industry is becoming the talk among

accounting professionals. It is a subject in many accounting journals and scholarly articles and newspapers.

The concerns are the efficiency of this transition. Both boards have stipulated the long term benefits of the convergence for national and the world economy. But neither board has addressed the short term consequences of the transition on accounting industry and national economies. For example, how are we going to be ready in time to interpret, and properly implement the new standards, when we are still preoccupied with adjusting to the requirements of Sarbanes Oxley?

One remedy that would mitigate the problems with transition is to put greater emphasis on international accounting standards in the accounting curricula of colleges and universities. I think that this will be a necessity to accustom young accountants to the standards that they will eventually work with. Otherwise, it will create inefficiency and confusion when students learn one type of standards in school, but in a couple of years are forced to use another standard. Students should have exposure to IFRS and be constantly informed of the new standards that arise from the convergence progress.

I have researched accounting curricula for some universities and found that a majority of them only offer one introductory course to international accounting, either at a graduate or undergraduate level, but usually never at both. For example, today Pace University, which is respected for its accounting program, offers only one international accounting course on the undergraduate level and no such courses on the graduate level. NYU Stern's business school, introduces accounting majors to international standards at an MBA level only with no such courses in the undergraduate program.<sup>49</sup> The

Wharton School of Business, just like NYU's Stern offers international accounting in their graduate program only.<sup>50</sup> In the future, accounting programs should definitely be changed to reflect this new development so that the next generation of accountants are competent to provide top quality services for our economy.

Not only should students be exposed to international standards and the progress of the convergence, accounting professionals should also be aware of the developments in accounting industry. Large and medium size accounting firms should make sure that their staff is informed about the convergence that is happening. The changes that are taking place will directly impact the professionals and the CPA firms. That is why it is imperative that accounting practitioners should have an understanding of international standards, and the progress being made so that when the time comes, the transition will not negatively affect the quality of services provided.

### Conclusion

The International Accounting Standards Committee (IASC), which is the oversight body of IASB, best expressed the benefits of convergence in its constitution, where it states that that the goals of convergence “are to develop in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world capital markets and other users make sound economic decisions”.<sup>51</sup>

The world we live in now is characterized by constant change. There are transformations taking place in every aspect of our society, and the accounting profession

is by no means an exception. The industry has evolved to reflect the changes in the corporate world and to address our economic changes.

It seems that the next significant evolutionary step in the accounting profession is the convergence of accounting standards. Many countries have replaced their national GAAP with international financial reporting standards or are in the process or are contemplating doing so.

A robust accounting industry directly affects the health of our economy, because accounting is the backbone of the corporate world and its capital markets. Today globalization has intertwined nations' economies and major changes in the accounting industry reverberate all over the world. As we saw, the accounting scandals in corporate America affected not only our stock market, but the world stock markets as well. That is why it is in our interest that we keep our accounting industry, healthy, dependable and efficient.

A healthy accounting industry should result in comparable, comprehensive and consistent financial statements. The best way to guarantee that is to converge international accounting standards with U.S. GAAP, because these are the world's two most influential sets of accounting standards. The consequences will improve world financial markets by stimulating efficient distribution of capital investments. Financial statements are the most important guide that individual investors and institutional investors use to make decisions on how to best allocate their capital. We should not get in the way of the current transformation if we want to ensure the efficiency of global markets, and consequently of global economies.

## Endnotes

- 
- <sup>1</sup> Cummings, John. Business Finance Mag.com. "Waking up to Global GAAP." June 2005  
<http://www.businessfinancemag.com/magazine/archives/article.html?articleID=14425>
- <sup>2</sup> Financial Executive. "The Brave New World of IFRS." Nov. 2005. Retrieved Feb. 13 . 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928625041&SrchMode=1&sid=4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145129276&clientId=2088>
- <sup>3</sup> Halliday, Donald. AIA Journal. "International Convergence and the rise of International Standards." Sept. 1<sup>st</sup> 2003. Retrieved Feb. 22<sup>nd</sup> 2006  
<http://www.aia.org.uk/PDFs/International%20Accountant/International%20Convergence.pdf>
- <sup>4</sup> Tyrrall David. Financial Management. "Continental Drift." Jun 2005. Retrieved Feb. 16<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=861762891&SrchMode=1&sid=15&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145144549&clientId=2088>
- <sup>5</sup> Ding Y., JeanJean T., Stolowy H. "Why do national GAAP differ from IAS? The role of culture." The International Accounting Conference, Athens University of Economics and Business. March 4-6, 2004. Retrieved Jan 10<sup>th</sup> 2006.  
<http://www.business.uiuc.edu/accountancy/vkzcenter/conferences/athens/papers/Ding.pdf>
- <sup>6</sup> Summary of FASB's IASC/U.S. GAAP Comparison Project. Retrieved Jan. 30 2006  
<http://www.ustreas.gov/offices/international-affairs/standards/code6.pdf>
- <sup>7</sup> Summary of FASB's IASC/U.S. GAAP Comparison Project. Retrieved Jan. 30 2006  
<http://www.ustreas.gov/offices/international-affairs/standards/code6.pdf>
- <sup>8</sup> Short Term International Convergence. Financial Accounting Standards Advisory Council. March 2004. Retrieved April 22 2006.  
[http://www.fasb.org/project/03-23-04\\_fasac\\_convergence.pdf](http://www.fasb.org/project/03-23-04_fasac_convergence.pdf)
- <sup>9</sup> Short Term International Convergence. Financial Accounting Standards Advisory Council. March 2004. Retrieved April 22 2006.  
[http://www.fasb.org/project/03-23-04\\_fasac\\_convergence.pdf](http://www.fasb.org/project/03-23-04_fasac_convergence.pdf)
- <sup>10</sup> Sutton, Michael. Accounting Horizons. "Financial reporting in U.S. capital markets: International dimensions." June 1997. Retrieved. 16<sup>th</sup> Feb. 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=1&did=13163582&SrchMode=1&sid=13&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145142755&clientId=2088>
- <sup>11</sup> CPA Journal. "The European Union's Role in International Standards Setting." Nov. 2005. Retrieved Feb. 16<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928795491&SrchMode=1&sid=1&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145139627&clientId=2088>
- <sup>12</sup> "IASB's Sir David Tweedie 'Optimistic' on Convergence."  
<http://web8.epnet.com.rlib.pace.edu/externalframe.asp>
- <sup>13</sup> Pacter, Paul. Int. J. Accounting, Auditing and Performance Evaluation. "What Exactly is Convergence."

---

<http://www.iasplus.com/resource/2005ijaape.pdf>

<sup>14</sup> Accounting Horizons. "Evidence from China on whether harmonized accounting standards harmonize accounting practices." Sep. 2002. Retrieved Feb. 16<sup>th</sup>

<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=5&did=199171201&SrchMode=1&sid=5&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145209397&clientId=2088>

<sup>15</sup> Financial Executive. "The Brave New World of IFRS." Nov. 2005. Retrieved 13 Feb. 2006

<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928625041&SrchMode=1&sid=4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145129276&clientId=2088>

<sup>16</sup> Financial Executive. "The Brave New World of IFRS." Nov. 2005. Retrieved 13 Feb. 2006

<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928625041&SrchMode=1&sid=4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145129276&clientId=2088>

<sup>17</sup> Tweedie, David. Speech before Committee on Banking, Housing and Urban Affairs of U.S. Senate. Washington D.C. Sept. 9<sup>th</sup> 2004. Retrieved March 30<sup>th</sup> 2006.

[http://www.iasb.org/uploaded\\_files/documents/8\\_129\\_040909-dpt.pdf](http://www.iasb.org/uploaded_files/documents/8_129_040909-dpt.pdf)

<sup>18</sup> Parkinson John, Bloom Steward. *Optimize Magazine*. "Surviving Sarbanes Oxley." June 2003. Retrieved April 22<sup>nd</sup> 2006.

<http://www.optimize.com/article/showArticle.jhtml?articleId=17700918>

<sup>19</sup> Bruton, John. "Speech By John Bruton Ambassador of the European Union to the United States of America." Irish Financial Services Association Annual Dinner. Dublin, Ireland. Sept. 1<sup>st</sup> 2005. Retrieved Feb 16<sup>th</sup> 2006

<http://www.eurunion.org/welcome/ambassadorscorner/jbIrFinanServ090105.htm>

<sup>20</sup> Pacter, Paul. *Int. J. Accounting, Auditing and Performance Evaluation*. "What Exactly is Convergence."

<http://www.iasplus.com/resource/2005ijaape.pdf>

<sup>21</sup> Financial Executive. "The Brave New World of IFRS." Nov. 2005. Retrieved 13 Feb. 2006

<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928625041&SrchMode=1&sid=4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145129276&clientId=2088>

<sup>22</sup> Pacter, Paul. *Int. J. Accounting, Auditing and Performance Evaluation*. "What Exactly is Convergence."

<http://www.iasplus.com/resource/2005ijaape.pdf>

<sup>23</sup> Financial Executive. "FASB Chairman Robert Herz: 'Complexity Impedes Transparency'." Nov. 2005. Retrieved Feb. 13<sup>th</sup> 2006

<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928624781&SrchMode=1&sid=1&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145241571&clientId=2088>

<sup>24</sup> IAS Plus. IASB Agenda Project. "Convergence Issues-IFRS and U.S. GAAP" Retrieved April 1<sup>st</sup> 2006.

<http://www.iasplus.com/agenda/converge.htm#0602mou>

<sup>25</sup> IAS Plus. IASB Agenda Project. "Convergence Issues-IFRS and U.S. GAAP" Retrieved April 1<sup>st</sup> 2006.

<http://www.iasplus.com/agenda/converge.htm#0602mou>

- 
- <sup>26</sup> CPA Journal. "Joint Business Combination Project." Jan. 2006. Retrieved Feb. 16<sup>th</sup> 2006. <http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=973064071&SrchMode=1&sid=17&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145147610&clientId=2088>
- <sup>27</sup> Financial Accounting Standards Board. Project Updates. May 2<sup>nd</sup> 2005. Retrieved Jan. 30 2006 <http://www.iasplus.com/agenda/converge.htm#0602mou>
- <sup>28</sup> Journal of Accountancy. "FASB Rules Out Pooling of Interest." July 1999. Retrieved Jan. 30<sup>th</sup> 2006 [http://www.aicpa.org/pubs/jofa/jul1999/financial\\_accounting.htm](http://www.aicpa.org/pubs/jofa/jul1999/financial_accounting.htm)
- <sup>29</sup> Journal of Accountancy. "FASB Rules Out Pooling of Interest." July 1999. Retrieved Jan. 30<sup>th</sup> 2006 [http://www.aicpa.org/pubs/jofa/jul1999/financial\\_accounting.htm](http://www.aicpa.org/pubs/jofa/jul1999/financial_accounting.htm)
- <sup>30</sup> CPA Journal. "Joint Business Combination Project." Jan. 2006. Retrieved Feb. 16<sup>th</sup> 2006. <http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=973064071&SrchMode=1&sid=17&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145147610&clientId=2088>
- <sup>31</sup> Journal of Accountancy. "Convergence in Search of the Best." Jan. 2006. Retrieved. Feb. 13<sup>th</sup> 2006 <http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=958827471&SrchMode=1&sid=18&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145148374&clientId=2088>
- <sup>32</sup> Journal of Accountancy. "Convergence in Search of the Best." Jan. 2006. Retrieved. Feb. 13<sup>th</sup> 2006 <http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=958827471&SrchMode=1&sid=18&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145148374&clientId=2088>
- <sup>33</sup> Journal of Accountancy. "Convergence in Search of the Best." Jan. 2006. Retrieved. Feb. 13<sup>th</sup> 2006 <http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=958827471&SrchMode=1&sid=18&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145148374&clientId=2088>
- <sup>34</sup> CPA Journal Online. "Extraordinary decision leads to Extraordinary Changes." June 2004. Retrieved Feb. 13<sup>th</sup> 2006 <http://www.nysscpa.org/cpajournal/2004/604/essentials/p24.htm>
- <sup>35</sup> CPA Journal Online. "Extraordinary decision leads to Extraordinary Changes." June 2004. Retrieved Feb. 13<sup>th</sup> 2006 <http://www.nysscpa.org/cpajournal/2004/604/essentials/p24.htm>
- <sup>36</sup> Pyke, Christopher. Student Accountant. "The Accounting Conceptual Framework." June 1999. Retrieved Feb. 16<sup>th</sup> 2006 <http://www.accaglobal.com/publications/studentaccountant/13202>
- <sup>37</sup> Financial Accounting Standard Board. Joint Conceptual Framework Project. Dec. 2004. Retrieved. Feb. 16<sup>th</sup> 2006 [http://www.fasb.org/fasac/12\\_2004confwk.pdf](http://www.fasb.org/fasac/12_2004confwk.pdf)
- <sup>38</sup> Financial Accounting Standard Board. Joint Conceptual Framework Project. Dec. 2004. Retrieved. Feb. 16<sup>th</sup> 2006 [http://www.fasb.org/fasac/12\\_2004confwk.pdf](http://www.fasb.org/fasac/12_2004confwk.pdf)

- 
- <sup>39</sup> Commercial Lending Review. "FASB and IASB Support Convergence of Accounting Standards." Jul. 2004. Retrieved Feb. 13<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=6&did=669586191&SrchMode=1&sid=1&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1144627722&clientId=2088>
- <sup>40</sup> The Wall Street Journal. "Accounting's Global Rule Book; When It Comes to the Numbers, Why Can't the World Agree? FASB Will Push for Harmony." Nov. 2003. Retrieved Feb. 16<sup>th</sup>.  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=466600681&SrchMode=1&sid=2&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145241662&clientId=2088>
- <sup>41</sup> Tweedie, David. Speech before Committee on Banking, Housing and Urban Affairs of U.S. Senate. Washington D.C. Sept. 9<sup>th</sup> 2004. Retrieved March 30<sup>th</sup> 2006.  
[http://www.iasb.org/uploaded\\_files/documents/8\\_129\\_040909-dpt.pdf](http://www.iasb.org/uploaded_files/documents/8_129_040909-dpt.pdf)
- <sup>42</sup> International Journal of Accounting. "A comparison of value relevance of accounting information in different segments of the Chinese stock market." Urbana: 2004 Retrieved. Feb. 16<sup>th</sup>  
[http://web8.epnet.com.rlib.pace.edu/citation.asp?tb=1&\\_ua=bo+B%5FSU+vid+SC+db+buhjnh+sid+SC+shn+1+mid+SU+dt+international++accounting++standards+bt+international++accounting++standards+do+B%5FSU+9D57&\\_ug=sid+ED22CC1B%2DFBAB%2D4BCC%2D8BF1%2D572CB4F053B4%40sessionmgr3+dbs+buh+cp+1+77A8&\\_us=mh+1+frn+1+hd+False+hs+True+cst+0%3B1%3B3+or+Date+fh+False+ss+SO+sm+ES+sl+0+sel+False+ri+KAAACB3A00031241+7D76&\\_uh=btn+Y+A152&\\_uso=%5F8&fn=1&rn=4](http://web8.epnet.com.rlib.pace.edu/citation.asp?tb=1&_ua=bo+B%5FSU+vid+SC+db+buhjnh+sid+SC+shn+1+mid+SU+dt+international++accounting++standards+bt+international++accounting++standards+do+B%5FSU+9D57&_ug=sid+ED22CC1B%2DFBAB%2D4BCC%2D8BF1%2D572CB4F053B4%40sessionmgr3+dbs+buh+cp+1+77A8&_us=mh+1+frn+1+hd+False+hs+True+cst+0%3B1%3B3+or+Date+fh+False+ss+SO+sm+ES+sl+0+sel+False+ri+KAAACB3A00031241+7D76&_uh=btn+Y+A152&_uso=%5F8&fn=1&rn=4)
- <sup>43</sup> International Journal of Accounting. "A comparison of value relevance of accounting information in different segments of the Chinese stock market." Urbana: 2004 Retrieved. Feb. 16<sup>th</sup>  
[http://web8.epnet.com.rlib.pace.edu/citation.asp?tb=1&\\_ua=bo+B%5FSU+vid+SC+db+buhjnh+sid+SC+shn+1+mid+SU+dt+international++accounting++standards+bt+international++accounting++standards+do+B%5FSU+9D57&\\_ug=sid+ED22CC1B%2DFBAB%2D4BCC%2D8BF1%2D572CB4F053B4%40sessionmgr3+dbs+buh+cp+1+77A8&\\_us=mh+1+frn+1+hd+False+hs+True+cst+0%3B1%3B3+or+Date+fh+False+ss+SO+sm+ES+sl+0+sel+False+ri+KAAACB3A00031241+7D76&\\_uh=btn+Y+A152&\\_uso=%5F8&fn=1&rn=4](http://web8.epnet.com.rlib.pace.edu/citation.asp?tb=1&_ua=bo+B%5FSU+vid+SC+db+buhjnh+sid+SC+shn+1+mid+SU+dt+international++accounting++standards+bt+international++accounting++standards+do+B%5FSU+9D57&_ug=sid+ED22CC1B%2DFBAB%2D4BCC%2D8BF1%2D572CB4F053B4%40sessionmgr3+dbs+buh+cp+1+77A8&_us=mh+1+frn+1+hd+False+hs+True+cst+0%3B1%3B3+or+Date+fh+False+ss+SO+sm+ES+sl+0+sel+False+ri+KAAACB3A00031241+7D76&_uh=btn+Y+A152&_uso=%5F8&fn=1&rn=4)
- <sup>44</sup> AICPA Professional Standards. Volume 3. International Financial Reporting Standards. IFRS 2.33
- <sup>45</sup> Financial Executive. "The Brave New World of IFRS." Nov. 2005. Retrieved Feb. 13<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=0&did=928625041&SrchMode=1&sid=4&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145129276&clientId=2088>
- <sup>46</sup> Tweedie, David. Speech before Committee on Banking, Housing and Urban Affairs of U.S. Senate. Washington D.C. Sept. 9<sup>th</sup> 2004. Retrieved March 30<sup>th</sup> 2006.  
[http://www.iasb.org/uploaded\\_files/documents/8\\_129\\_040909-dpt.pdf](http://www.iasb.org/uploaded_files/documents/8_129_040909-dpt.pdf)
- <sup>47</sup> Journal of Accountancy. "International Auditing Differences." April 1996. Retrieved March 30<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=2&did=9376504&SrchMode=1&sid=8&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145205429&clientId=2088>
- <sup>48</sup> Journal of Accountancy. "International Auditing Differences." April 1996. Retrieved March 30<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=2&did=9376504&SrchMode=1&sid=8&Fmt=4&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1145205429&clientId=2088>

---

<sup>49</sup> NYU Stern. MBA Accounting Curriculum. Retrieved. March 30<sup>th</sup> 2006  
[http://w4.stern.nyu.edu/accounting/academic.cfm?doc\\_id=1447](http://w4.stern.nyu.edu/accounting/academic.cfm?doc_id=1447)

<sup>50</sup> University of Pennsylvania Wharton School of Business. MBA Accounting Curriculum. Retrieved March 30<sup>th</sup> 2006  
<http://www.wharton.upenn.edu/mbaresource/curriculum/acct/>

<sup>51</sup> Northwestern Journal of International Law and Business. "Creation of World Wide Accounting Standards." Spring 2005. Retrieved March 30<sup>th</sup> 2006  
<http://proquest.umi.com.rlib.pace.edu/pqdweb?index=4&did=843806831&SrchMode=1&sid=4&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1144459095&clientId=2088>