

CONTEMPORARY FINANCIAL REPORTING AND INTANGIBLE RESOURCES: IMPLICATIONS FOR CORPORATE GOVERNANCE

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Abstract

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The key question of this paper is what are the implications for corporate governance from the emergence of contemporary financial reporting and intangible resources? Going beyond traditional financial reporting, Boards of Directors and corporate executives should investigate the intangible resources of contemporary financial reporting. What intangible resources are causing the huge price to earnings (PE) ratio gap and the huge market to book (M/B) ratio gap for their companies? Possibly such gaps are driven by global brand names, global licensing, customer loyalty, product quality, and product innovation. Unfortunately, the short-term focus upon traditional financial reporting by both Wall Street and corporate executives to “make the numbers”, i.e. short-term (quarterly), predicted numbers, has damaged firms’ competitiveness. Such damages include postponing or cutting expenditures on emerging technologies, advertising, research and development, employee training, and maintenance expenses. Research has shown that such earnings management techniques are relatively futile efforts since a consensus earnings miss by a company generally produces an insignificant 1.5% to 2% share price drop. Boards of Directors should inform corporate executives accordingly. To offer solutions to these issues and implications for corporate governance, this paper is divided into the following sections: the emergence of contemporary financial reporting; asset value migration: the power of intangibles; top five future business value drivers: all intangibles; forward looking measures for intangible resources; market gaps: “old economy” versus “new economy” companies; global brands and global licensing; hidden intangible values made visible; international perspectives on contemporary financial reporting; and conclusions.

Keywords: Financial Reporting, Intangible Resources, PE Ratio, Market to Book Ratio

1. INTRODUCTION

In a 2019 interview entitled “Regaining Relevance in Financial Reporting” (Frigo, 2019), Baruch Lev and Feng Gu elaborated the main message of their 2016 book, *The End of Accounting*. They argued that investors are poorly served by arcane accounting methods and new ways to measure companies’ performance are needed. The authors stated that traditional reported earnings and financial statements no longer reflect the realities of

businesses but instead follow an arcane set of accounting rules and regulations, established for “old economy” companies, such as energy, steel, autos, and other traditional manufacturing. New metrics are needed for “new economy” companies, such as technology, software, biotech, and internet operators. Also, with the emergence of digital technologies, new metrics are needed for both “old” and “new economy” companies (Grove, Clouse, & Schaffner, 2018). For example, many “old economy” energy companies are adopting new digital and

artificial intelligence technologies (Grove & Clouse, 2019, 2017).

Lev and Gu argued that traditional financial reporting has reflected an alternate reality which fails to highlight essential factors that make an enterprise rise or fall. For example, the most important, value-creating investments in patents, brands, information technology (IT), and other intangibles must be expensed, just like salaries and rent, instead of reflecting future value or benefits. Reported earnings include both long-term sustainable growth and one-time, transitory gains and losses and they are based on many subjective managerial estimates, such as prospective bad debts, future pension liabilities, stock-option expenses, and asset impairments or write-offs. Thus, they argued that all such reporting results in backward-looking accounting statements that say little about an enterprise's future growth and ability to compete. Research has shown an increasing gap between reported earnings and share prices, especially for "new economy" technology companies, and earnings have lost their ability to predict future corporate performance which is their main use by investors (Lev & Gu, 2016).

To offer solutions to these issues and implications for corporate governance, this paper is divided into the following sections: the emergence of contemporary financial reporting; asset value migration: the power of intangibles; top five future business value drivers: all intangibles; forward looking measures for intangible resources and assets; market gaps: "old economy" versus "new economy" companies; global brands and global licensing; hidden intangible values made visible; international perspectives on contemporary financial reporting; and conclusions. In an Appendix, new risks from intangibles are summarized.

2. THE EMERGENCE OF CONTEMPORARY FINANCIAL REPORTING

The Lev and Gu research (2016) for determining contemporary financial reporting was based on the detailed examination of the transcripts of hundreds of quarterly earnings calls by U.S. public companies in order to gauge the information sought by financial analysts and investors. Most financial analysts' questions concerned the strategy of the company and the strategic assets: those value-creating, unique, and hard to imitate corporate resources. Accordingly, they based their recommended Strategic Resources & Consequences Report on the information they learned from the questions and answers in these earnings calls.

To construct this report, they recommended that a company take five steps (Frigo, 2019):

1. Start by identifying its major strategic assets, such as patents, brands, customer franchise, and unique business processes, like Amazon's and Netflix's customer recommendation algorithms.
2. Proceed with identifying the investments in creating and maintaining the strategic assets, such as research and development and customer acquisition costs.
3. Delineate the major threats to these assets from competitors' infringement and technologic disruptions.

4. Articulate the deployment of strategic assets, such as how many patents are under development, licensed out, or abandoned.
5. Compute the value created by its strategic and other assets.

The importance of, and focus on, intrinsic value, such as in these five steps, has been advocated for the evolution of corporate governance (Grove & Lockhart, 2019).

Lev and Gu stated that the resources enabling value creation are called strategic resources, which are different from accounting-recognized assets. Such strategic resources share the following three attributes:

1. They are valuable. They create or contribute to the creation of a stream of benefits, exceeding costs, such as patents underlying profitable products or services.
2. They are rare. A limited amount of these assets is generally available, like wireless spectrum or airlines' landing rights.
3. They are difficult to imitate. Competitors cannot easily acquire or produce these resources; quickly mimicking valuable brands, like Google, is practically impossible.

Enterprises owning and operating efficiently such strategic assets consistently implement value-creating strategies that their present or potential competitors cannot put into effect and, thereby, gain a sustained competitive advantage. Using this theory of strategic resources or assets as a foundation, Lev and Gu built a Strategic Resources & Consequences Report which has five aspects. Each aspect also has usefulness attribute as follows:

1. Resource Development with usefulness attribute number 1: Inform investors about the strategic resources (assets) of the enterprise, their characteristics, value, and related attributes, such as number of patents in a company's portfolio, patents supporting products/services, number of patents licensed out, patent quality, and protection mechanisms against infringement.
2. Strategic Resources with usefulness attribute number 2: Inform investors with specificity about the investments or expenditures made in the process of building the enterprise's strategic assets, such as customer acquisition costs for telecom and internet companies.
3. Resource Preservation with usefulness attribute number 3: Articulate the major risks to the company's strategic assets from infringement by competitors, disruptions by new technologies, and regulatory moves, as well as the measures taken by management to mitigate these risks.
4. Resources Deployment with usefulness attribute number 4: Outline the specific deployment or uses of the firms' strategic assets — the strategies to extract value from the assets.
5. Value Created with usefulness attribute number 5: Quantify and report the consequences-value creation- of managers' activities in creating, preserving, and deploying strategic assets.

Lev and Gu provided four industry case studies to illustrate their Strategic Resources & Consequences Report: media and entertainment, property and casualty insurance, pharmaceuticals and biotech, and oil and gas companies. The media and entertainment report is illustrated here with key intangible resources and assets. Data are provided in the first, second, and fifth aspects of this report. The third and fourth aspects use narratives, except that the fourth step also includes key statistical data:

1. Resource Development: customer acquisition costs, research & development, acquired technology, and licenses & rights purchases.
2. Strategic Resources: customers: additions, total, & churn; content: movies, TV series, exclusive licenses & rights, organization capital, brands & trademarks, and alliances.
3. Resource Preservation: disruption threats, resource decay prevention, knowledge management, and mitigating organizational amnesia.
4. Resources Deployment: marketing strategies' performance, new products & performance, and key statistics: customer penetration, content viewing, circulation numbers, and active alliances.
5. Value Created: value created in a period from operations, and changes in asset values: customer lifetime value, brands value, and content value.

3. ASSET VALUE MIGRATION: THE POWER OF INTANGIBLES

The following information shows a migration and reverse of resource or asset values from tangibles into intangibles from a traditional 85%/15% split in 1975 to a new 15%/85% split in 2015 over four decades, based on percentages of S&P 500 equity market value (Cokins & Shepherd, 2017):

Table 1. Asset value migration

<i>Year</i>	<i>Tangibles</i>	<i>Intangibles</i>
1975	85%	15%
1985	70%	30%
1995	38%	62%
2005	20%	80%
2015	15%	85%

According to traditional microeconomic theory, businesses operate rationally and productively. Rules are clear and simple. Revenues are maximized. Costs are minimized as waste is reduced and eliminated. Operations are automated with the latest technology. Underproductive businesses quickly adjust to negative pressures from competitors and shareholders, or languish and die, and the efficient marketplace notices everything.

However, such simplistic, traditional assumptions and views of reality have shifted dramatically, as shown in the decades of data migration from 1975 to 2015, when business value moved from the timeless, familiar area of tangibles assets into the new frontier of intangible resources and assets. Business value left plant floors and moved into offices where white-collar workers toil with their minds in areas, such as digital technology,

finance, engineering, sales, and customer service. Brain is replacing brawn. Knowledge workers are the world's best educated, most highly paid, and most under-standardized human resources, according to the following statistics (Heitman, 2017):

1. Growth of knowledge work jobs versus total jobs since 1920: 6 to 1.
2. Knowledge workers in the Fortune 500 companies: 9 million.
3. Knowledge worker time wasted due to under-standardized tasks: 35%.
4. Cost of under-standardization in the Fortune 500 companies: 20% of earnings.
5. Of the 9 million knowledge workers in the Fortune 500 companies, the full-time equivalent (FTE) of more than 3 million FTE's (9 million * 35%) are wasted by under-standardization.

Thus, there is plenty of room for improvement in knowledge processes with various standardization approaches, similar to the standardization processes previously used in factories. Knowledge workers are now defining their work products, streamlining production, and monitoring unit cost, quality, and productivity. Artificial intelligence (AI), like IBM's Watson, has huge potential to help with such standardization as almost any repetitive task can be replaced by AI. Such work knowledge activities have helped lead to this switch in business value from tangible assets into intangible assets in the last four decades (Heitman, 2017).

4. TOP FIVE FUTURE BUSINESS VALUE DRIVERS: ALL INTANGIBLES

Over 50 business executives from the largest FTSE 100 U.K. companies, including BT, Lloyds Banking Group, National Grid, Old Mutual, Rolls Royce, and Unilever, were asked to list the top five value drivers that contribute to the long-term success of their businesses. The responses, regardless of company size and reach, were similar and were all intangible. In fact, the only two traditional or tangible value drivers in the top ten were revenue and profit. The top five intangible value drivers were (Pilot, 2017):

1. Culture/purpose - Culture, defined by many as the way things are done around here when no one is looking, and purpose, defined as the company's broader reason for existence, were both key drivers of value. A defining, managing and communicating culture, purpose, and strategy to create value in the long term are imperative in this fast-changing business environment. Also, culture and purpose help to promote the internal alignment that leads to a motivated and engaged workforce.
2. Employees - Your business is only as good as your people. It is well known that having successful employees with the right skills and expertise is crucial for any business. However, for companies to get the most out of their people, it is also important that employees are engaged, motivated, and well-aligned with the company's purpose and strategy.

3. Customer satisfaction - In business, maintaining good relationships means everything. You need to understand your customers' needs and expectations to ensure you are delivering the right products or services and that you are creating a customer experience that improves customer service and increases satisfaction. Strong working relationships can be built, ensuring that every interaction with a customer is an opportunity to monitor and build which takes trust and transparency on both sides.
4. Technology - In an increasingly connected world where data is rapidly becoming a company's most precious resource and where large incumbents are constantly being challenged by disruptive forces, investing in the right technology is crucial for delivering future value and keeping pace with the hyper-connectivity, data-informed decision-making, and automation, which are reshaping business.
5. Trust/reputation - In the age of social media scrutiny, corporate reputations can be made or broken in a matter of seconds. It is important to recognize that value lies in the eye of the beholder and is inherently subjective. Increasing awareness and understanding of the changing nature of value, risks, and opportunities that face organizations and how those are being managed is critical to building trust.

This last intangible business value driver of trust/reputation is a real challenge in this rapidly changing global economic environment. For example, in September 2015, the U.S. Environmental Protection Agency discovered that 11 million diesel engines of Volkswagen (VW) cars sold globally had software that was able to detect when cars were being tested and to change the performance of the engine to improve test results. In addition to the \$30 billion that the scandal has cost the company, a former VW executive received the maximum sentence of seven years in prison and a \$400,000 fine for his role in VW's emissions scandal (Ruiz-Grossman, 2017).

Another trust/reputation example concerns oil and gas companies dealing with the upcoming generation of business customers. Millennials' perceptions of the oil industry indicate that it may struggle to find workers and customers in the future. A 2017 McKinsey & Co. study found that 14% of millennials say they would not want to work in the oil and gas industry because of its negative image, the highest negative percentage of any industry in this study. Millennials question the longevity of the industry and see the industry's careers as unstable, blue-collar, difficult, dangerous, and harmful to society (Taylor, 2017).

5. FORWARD LOOKING MEASURES FOR INTANGIBLE RESOURCES AND ASSETS

A key to improving a company's performance measurement system and decision-making is to include emerging intangible resources and assets. A company needs to develop and test cause-and-effect linkages, using Big Data analytical techniques,

possibly with artificial intelligence technology. A company should consider how both contemporaneous measures and forward-looking measures fit with its strategy and decision-making, including what outcomes will occur when. Such measures need to be periodically evaluated, especially for any unintended consequences. Contemporaneous measures rely upon traditional tangible assets while the forward-looking measures rely upon the evolving intangible resources and assets. These forward-looking measures fit nicely with the top five intangible business drivers discussed in the previous section. Both contemporaneous and forward-looking measures are listed as follows (Farrell et al., 2017):

1. Contemporaneous measures:
 - Net income;
 - Quarterly stock return;
 - Earnings per share;
 - Residual income.
2. Forward-Looking Measures:
 - Customer satisfaction;
 - Employee satisfaction;
 - Product quality;
 - Product innovation;
 - Brand strength;
 - Product time to market.

Contemporaneous measures provide information about how employees' activities and choices affect the current performance of the company but little to no information about how such activities will affect future performance. In contrast, forward-looking performance measures can be leading indicators of both future performance and intangible resource values.

6. MARKET GAPS: "OLD ECONOMY" VERSUS "NEW ECONOMY" COMPANIES

Market gaps between "old economy" and "new economy" companies are reflected in Table 1 by comparisons of the Price Earnings (PE) ratio and the Equity Market Value to Equity Book Value (M/B) ratio for ten companies in each category. The PE ratio is based upon the most recent stock market price and historical earnings numbers. The M/B ratio is a measure of the increase in shareholder wealth. The book value of the equity is the historical amount invested in the business by the equity investors. The market value of the equity is what the equity investors' investment is worth now. If the market value is greater than the book value, then the net present value (NPV) is positive, indicating an increase in shareholder wealth. This increase will be larger as the market to book ratio becomes larger. When examining this ratio, the higher the rate of return a business is earning on its equity relative to the return required by the equity investors, the higher will be the market to book ratio. For the market to book ratio to be greater than 1.0, the firm must earn a return on its equity greater than the equity investors' required rate of return (Grove, Clouse, & Schaffner, 2018).

The twenty companies in Table 3 comparisons were chosen because they are large, well-known publicly traded companies with business models and operational technologies that enable them to be categorized as either "old economy" or "new economy". The ten "old economy" companies are

Alcoa, Caterpillar, Chevron, Coca-Cola, ExxonMobil, General Electric (the only company that was in the original Dow Jones Average), General Motors, Pfizer, Proctor & Gamble, and Wal-Mart. The ten “new economy” companies have developed and taken advantage of emerging technologies: Apple, Alphabet (Google), Alibaba, Amazon, eBay, Facebook, IBM, Microsoft, Netflix, and Tesla.

There are huge market gaps in both the PE and M/B ratios between “new economy” companies and “old economy” companies. The PE average of 75.54 for “new economy” companies is 2.22 times larger than the PE average of 34.09 for the “old economy” companies or, alternatively, the “old economy” company PE average is 55% lower than the “new economy” company PE average. The M/B average of 13.51 for “new economy” companies is 3.80 times larger than the average of 3.56 for the “old economy” companies, or the “old economy” company average is 74% lower than the “new economy” company average. Since stock prices are set by a reasonably “efficient stock market,” there must be reasonable justifications for such huge market gaps in both the PE and M/B ratios. Boards of Directors should be asking corporate executives: what intangibles cause such market gaps and competitive advantages for “new economy” companies or disadvantages for “old economy” companies?

7. GLOBAL BRANDS AND GLOBAL LICENSING

A major contributor to these market gaps is the existence of global brand names. Interbrand and other consulting companies have created well-established valuation methods for brand names. The mechanics of determining brand values are relatively simple. Obtain an appropriate royalty rate from one of the two major databases (RoyaltySource and ktMINE) and apply it to the projected sales of the branded product with a terminal value after the last forecasted calendar year. Then, discount the projected royalty income with an appropriate discount rate. In a World Intellectual Property Report, Interbrand analyzed the top ten global brands as a percentage of the companies’ total market capitalization (King & Newman, 2015):

Table 2. Brand value

Company	Brand value	Brand value
	(in billions of \$)	(% of Market Cap)
Apple	\$98.3	58.0%
Google	93.3	20.7%
Coca-Cola	79.2	39.3%
IBM	78.8	26.9%
Microsoft	59.6	22.9%
General Electric	47.0	19.9%
McDonald’s	42.0	43.9%
Samsung	39.6	35.2%
Intel	37.3	20.0%
Toyota	35.4	17.8%
Averages	61.0	30.5%

Four of the five top ten global brand companies were also “new economy” technology companies in our Table 1 intangible asset analysis, and three of these companies had the largest market capitalizations: Apple (\$882 billion), Google or Alphabet (\$726 billion) and Microsoft (\$660 billion). In a 2016 study, Interbrand calculated and totaled

both inter brand and brand finance metrics. Examples were provided for just three companies, Apple, Google, and Coca-Cola which were in its previous 2013 study. Their brand values as a percentage of market cap were 46.8%, 45.6%, and 58.9%, respectively (Cokins & Shepherd, 2017).

Concerning global brands, a study by Cone Communications and Echo Research of 10,000 global consumers (Minow, 2016) found that 91% would likely switch to brands that support a social or environmental cause, like being green (83%), reducing consumption (81%), and contributing financially to nonprofits (65%). Conversely, 90% indicated that they would boycott a company based on immoral or irresponsible business practices, similar to the millennials view of oil and gas companies as unstable, blue-collar, difficult, dangerous, and harmful to society.

Another major contributor to intangible assets and corresponding market gaps is the existence of global licensing. The following top ten global licensors, which market everything from toys and games to art and entertainment, reported the highest retail sales of licensed merchandise worldwide (in billions of US dollars). With the exception of Sanrio, a Japanese company, all of these firms are based in the United States (King & Newman, 2015):

1. \$45.2: The Walt Disney Company, entertainment;
2. \$18.0: PVH Corporation, apparel;
3. \$17.7: Meredith, media and marketing;
4. \$13.0: Iconix Brand Group, apparel;
5. \$9.0: Mattel, toys and games;
6. \$6.5: Sanrio, consumer products;
7. \$6.0: Warner Brothers Consumer Products, entertainment;
8. \$5.5: Major League Baseball, sports;
9. \$5.5: Nickelodeon, entertainment;
10. \$5.1: Hasbro, toys and games.

A global licensing valuation method could be used, similar to the global brand valuation method just analyzed, to analyze, value, and report intangibles assets.

8. HIDDEN INTANGIBLE VALUES MADE VISIBLE

This tremendous surge in intangible resource and asset values has huge implications for corporate governance theory and the survival of the corporation. Agency theory has been the dominant perspective of corporate governance, but the question of corporate purpose has been divided into two theories. The first theory is that corporations have a responsibility to maximize shareholder value and the second theory is that corporations have the responsibility to balance the interests of all stakeholders. Since these two theories go in different directions, the central focus of corporate governance has become blurred.

In 2015, a third alternative was proposed by the European Parliament’s Committee on Legal Affairs: “shareholders do not own corporations. Contrary to the popular understanding, public companies have legal personhood and are not owned by their investors. The position of shareholders is similar to that of bondholders, creditors, and employees, all of whom have contractual relationships with companies but do not

own them” (Tunjic, 2017). Thus, this third alternative is not based upon corporations revolving around the interests of shareholders or stakeholders, but in which shareholders and stakeholders move around the corporation which has interests in various capitals: traditional financial, production, human, social, intellectual, and environmental. The corporation must store and convert each of these capitals to maintain and enhance itself and focus on long-term value creation, not short-term financial engineering to “make the numbers” for executive compensation (Nocera, 2017). Theoretically, this cycle of capital creation can continue into perpetuity provided the corporation does not exploit the sources of capital, such as share buy backs or dividends, instead of capital expenditures, especially for digital technology, or do something stupid or suicidal, like ignoring technology threats and opportunities (Tunjic, 2017).

The International Integrated Reporting Council (IIRC) and AREOPA, a consulting firm specializing in valuing intellectual capital, have provided the following approaches to making hidden intangible values visible. An IIRC framework identified six types of capital that constitute the resources an organization draws on to build its business model, similar to the six capitals in the 2015 European Parliament proposal for the corporation being its own personhood:

1. Traditional financial capital;
2. Manufactured capital;
3. Human capital;
4. Social/relationship capital;
5. Intellectual capital;
6. Natural capital.

The objective is to quantify the various capitals that generate the missing market values. The traditional balance sheet plus such intangibles collectively provide internal operational capacity and the capability to pursue a competitive advantage. Examples might include the impact on supplier costs from a well-developed supply chain with positive supplier relationships, collaboration that results in innovation and creativity, enhanced customer relationships, and a brand leading to retaining and growing customer volume and reducing sales cost per dollar (Cokins & Shepard, 2017).

9. INTERNATIONAL PERSPECTIVES ON CONTEMPORARY FINANCIAL REPORTING

By focusing upon intangible resources’ impacts on contemporary financial reporting in the major sections of this paper, this research has contributed to current international perspectives on contemporary financial reporting. It has developed a more comprehensive contemporary financial reporting perspective, especially with the recommended Strategic Resources and Consequences Report (Lev & Gu, 2016). This report was based upon an analysis of hundreds of quarterly conference calls by U.S. companies with financial analysts. The following international perspectives for contemporary financial reporting are much more narrow in focus.

For example, key corporate characteristics of using voluntary web-based financial reporting (WFR) were examined for companies listed in the United Arab Emirates (UAE). Results indicated that firm size

and leverage were key determinants of voluntary WFR adoption. Other traditional firm characteristics, such as profitability, industry, and liquidity did not explain WFR practices (Oyelere & Kuruppu, 2016). A second Middle East research paper studied the disclosures of social responsibility practices for Saudi listed companies. It found that these companies used standalone reports separate from their annual financial reports. The companies attempted to design their reports to suit the requirements of the Global Reporting Initiatives but there were significant differences between commitments of Saudi’ companies concerning their disclosure of social responsibility and sustainable development practices (Ahmed, 2016).

A third Middle East study analyzed voluntary financial and non-financial information disclosed on the internet by Qatar companies. It found that firm size, assets in place, and business complexity were significant variables in explaining the level of internet financial and non-financial reporting disclosures but company age, profitability, and liquidity were not significant (Hossain et al., 2012). A fourth Middle East study examined the factors affecting corporate disclosure practices in the Gulf Cooperation Council countries. It found three factors: economy, capital markets, and laws/enforcement mechanisms and made related recommendations to improve disclosure and financial reporting practices (Shehata, 2014).

An Asia-Pacific international study addressed how interim reporting regulation varied across the region by examining relevant regulations in eight countries. It found that such regulations showed considerable variation in the form of regulatory enforcement, reporting lag, audit requirements, and reporting form. Thus, the quest for international convergence in interim financial reporting practices needed improvement (Cuong et al., 2013).

An international study of EU companies examined the level of narrative disclosure compliance with the International Accounting Standard Board’s Management Commentary Framework (MCF). The results showed that after the adoption of International Financial Reporting Standards, the MCF compliance level was medium, ranging from 8% to 75% and averaging 53%. Thus, there was much room for improvement with respect to financial reporting. Furthermore, the region forced to comply with mandatory requirements (e.g., the U.S.) did not provide a greater amount of disclosure information in its MCF reporting than the regions that were not required to comply with these disclosure guidelines (e.g., Western Europe and Northern Europe (Garefalakis et al., 2016).

A U.S. study examined the relationship and implications of corporate governance from recent financial reporting frauds. The following timeless factors of corporate governance facilitated such frauds: all-powerful CEO, weak system of internal control, focus on short-term performance goals, weak or non-existent code of ethics, and questionable business strategies with opaque disclosures. Accordingly, new corporate governance guidelines for companies, Boards of Directors, and audit committees were established by U.S. stock exchanges and the Sarbanes-Oxley Act. Such guidelines included a required independent Board of Directors, a public internal control report by a company’s auditors, an accounting expert on the Board’s audit committee, a two-year waiting period

for auditors to go to work for their client companies, and a required disclosure of a company's code of ethics (Grove & Cook, 2007).

10. CONCLUSIONS

Concerning the key question of implications for corporate governance from the emergence of contemporary financial reporting and intangible resources, this paper has offered observations and solutions to the key issues of asset value migration: the power of intangibles, the top five future business value drivers which are all intangibles, forward looking measures for intangible resources and assets, market gaps for "old economy" versus "new economy" companies which are driven by intangibles, global brands and global licensing, hidden intangible values made visible, international perspectives on contemporary financial reporting, and conclusions. The Appendix summarized new risks from intangibles.

Going beyond traditional financial reporting, Boards of Directors and corporate executives should investigate the various aspects, especially intangible resources, of contemporary financial reporting, such as the recommended Strategic Resources & Consequences Report. For example, what causes the huge PE ratio and M/B ratio gaps for their companies, especially if it is a "new economy" company? What are the intangible resources and assets causing such gaps? "New economy" companies need to maintain and increase such gaps while "old economy" companies need to find sources of such intangible resource advantages. Unfortunately, for "old economy" energy companies that are mainly sellers of commodities, it is difficult for them to create and establish intangible resource or asset values, such as global brand names, global licensing, customer loyalty, product quality, and product innovation, which drive the PE and M/B ratio market gaps.

In the United States, the unfortunate, short-term focus upon traditional financial accounting by both Wall Street financial analysts and corporate executives to "make the numbers", i.e. short-term (quarterly), predetermined (analysts' consensus) numbers, has damaged firms' competitiveness. For both "old economy" and "new economy" companies, such damages include postponing or cutting expenditures on emerging technologies, advertising, research and development, employee training, and maintenance expenses in order to "make the numbers." Since traditional financial accounting

deficiencies make it hard for executives to report the real performance of the company, they often resort to earnings based upon non-generally accepted accounting principles (non-GAAP). For example, non-GAAP shenanigans and CEO pay impacts for "old economy" energy companies have been explored in prior research (Grove & Clouse, 2015, 2016).

Both the international and U.S. accounting standards boards (IASB and FASB) have chosen fair value accounting (FVA) as one method to improve the quality of financial reporting. Unfortunately, research has shown a strong negative relationship between FVA and earnings quality for U.S. banks (Pompili & Tutino, 2019; Tutino & Pompili, 2018). Also, first-time adopters of international accounting standards in the European Union used earnings management techniques, depending on the level of the legal enforcement in each country (Mechelli & Cimini, 2013). Furthermore, initial public offerings (IPO) firms in the U.S. not only manipulated accruals to inflate reported earnings but also engaged in the manipulation of actual company activities, such as postponing research, development and advertising, in the IPO year (Bao et al., 2013). Also, in U.S. firms, a positive relationship between a decrease in that firm's market value and income-decreasing earnings management was found (Badertscher, 2011). However, current research has also shown that earnings management techniques are relatively futile efforts since a consensus earnings miss by a company generally produces an insignificant 1.5% to 2% share price drop on average (Lev & Gu, 2016). Boards of Directors should inform and monitor corporate executives accordingly.

Major limitations of this research are the fast, ongoing changes to intangible resources and assets which impact the practice of corporate governance by company executives and Boards of Directors. Future research could focus on lessons learned from field studies at companies who are addressing such issues, as well as earnings management issues. The Price Earning and Market to Book ratio comparisons for "new" and "old" economy companies could also be updated. Also, future research could investigate the evolution of sustainability reporting to strengthen corporate governance. Currently, a majority of the U.S. S&P 500 companies have publicly disclosed their sustainability performances with Environmental, Social, and Governance (ESG) metrics (Grove & Clouse, 2018). Such companies have outperformed their competitors who did not report such ESG metrics (Verschoor, 2017).

Table 3. Intangible assets relevance. Market to Book ratio comparisons (12/31/2017)

<i>Old Econ. Companies</i>	<i>PE Ratio</i>	<i>Market/Book</i>	<i>Market Cap.</i>	<i>New econ. Companies</i>	<i>PE Ratio</i>	<i>Market/Book</i>	<i>Market Cap.</i>
Alcoa	28.65	1.46	8.25	Apple	19.16	6.76	905.80
Caterpillar	103.09	6.85	89.10	Alphabet	36.10	5.40	751.14
Chevron	34.84	1.56	227.36	Alibaba	48.78	10.53	444.84
Coca-Cola	44.25	8.52	195.69	Amazon	303.03	29.74	573.71
ExxonMobil	27.03	2.10	351.43	eBay	5.73	14.00	39.88
Gen. Electric	20.66	2.03	154.02	Facebook	35.09	8.88	525.43
Gen. Motors	8.91	1.37	59.87	IBM	12.82	7.80	141.95
Pfizer	22.94	3.72	221.32	Microsoft	30.49	9.20	666.39
Proc.&Gam.	24.51	4.22	233.1	Netflix	188.68	30.75	82.40
Wal-Mart	26.04	3.73	290.02	Tesla	N/A	11.99	56.95
<i>Total Market Cap.</i>			1,830.16	<i>Total Market Cap.</i>			4,188.49
Average Ratios	<i>PE</i>	<i>M/B</i>		<i>PE</i>	<i>M/B</i>		
	34.09	3.56		75.54	13.51		
	55%	74%		2.22	3.80		
	Lower	Lower		Higher	Higher		

Notes: Market to Book=Equity Market Value/Equity Book Value. Market capitalization in billions.

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APPENDIX

New risks

The following new risks represent key diagnostic questions which focus upon intangible resource and asset values, especially the intangible of a thriving corporate culture, as opposed to resistance to change. Boards of Directors and corporate executives need to pay attention to this evolving world of financial accounting and financial analysis which is moving beyond traditional financial statements to a focus on key intangible issues, resources, and assets.

A 2017 global survey of 728 Board of Director members and corporate executives in North America, Asia Pacific, Europe, and Africa by Protiviti, a global consulting firm, and North Carolina State Enterprise Risk Management Initiative, ranked the following top ten risks with the most potential impact in 2018:

1. Rapid speed of disruptive innovation
2. Resistance to change
3. Managing cyber threats
4. Regulatory change and heightened regulatory scrutiny
5. Corporate culture may not encourage timely escalation of risk issues
6. Succession challenges and talent retention
7. Privacy management and data security
8. Adverse economic conditions in markets where the company does business
9. Productivity and efficiency increases with the help of big data
10. Digital, low-cost competition

Three of the top five risks related to concerns about staying competitive while the global marketplace was rapidly changing. 67% of the respondents considered the rapid speed of disruptive innovation the top risk with significant impact. 61% worried that their company's culture may resist adjustments to the business model and operations necessary to respond to such rapid changes. The survey's authors recommended that Boards of Directors and corporate executives (or their risk management committees) pose and analyze seven diagnostic questions (Vollmer, 2017):

1. Is the risk assessment process frequent enough and does it involve all appropriate organizational stakeholders?
2. Is the business environment monitored over time for evidence of changes that may invalidate one or more critical assumptions underlying the company's strategy?
3. Are risks evaluated in the context of the company's strategy and operations?
4. Is the process supported by an effective methodology and relevant risk criteria, does it consider extreme as well as plausible scenarios, and does it consider a sufficient time horizon to pick up strategic risks?
5. Does the process encourage an open, positive dialogue for identifying and evaluating opportunities and risks, and does it give adequate attention to differences in viewpoints that may exist across different global jurisdictions?
6. Does the process delineate the critical enterprise risks from the day-to-day risks of managing the business?
7. Is the Board informed of the results on a timely basis, and do Directors agree with management's determination of the significant risks?