“Dodd-Frank and risk-taking: reputation impact in banks”

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Dodd-Frank and risk-taking: reputation impact in banks

Abstract

The banking industry plays a significant role in both the financial system and economy as a whole. By 2012, the US banking system owned US $14.45 trillion in assets. However, the importance of the banking system stretches beyond its mere size. Numerous studies have indicated that the health of this sector has significant effects on overall economic activity, as well as the size and persistence of economic cycles. For the purposes of this paper, the researchers measured the correlation between current legislation, risk-taking, market value, and reputation. This was performed by calcula-ting Z-scores to determine bank risk-taking. The Z-scores were correlated to market value to determine its impact. Reputable firm behavior was used to determine the correlation between market value and reputation. The statistical package for Social Sciences was used to perform ANOVA analysis of share value and Z-scores. A literature review was conducted to determine the reputational impact. It was determined that current legislation might have a desired result on risk-taking, that risk-taking might not have an impact on market value, and that reputation might have an impact on market value.

Keywords: reputation, banking industry, financial system, economic activity, Z-scores, legislation, risk-taking.
JEL Classification: C21, G18, G21, G32, G38, K23.

Introduction

The United States (US) economy expanded rapidly since the last financial downturn in 1920, with the inflationary assistance of bankers and the federal government. The prosperity of the 1920s in the US was followed by the Great Depression, which started in 1929. On 3 September and 12 October 1929, respectively, share prices dropped substantially and speculators were sold out as they failed to respond to margin calls (Christianson, 2014). From 1929 to 1933, US Gross National Product (GNP) declined by 29%, the price level fell by 25%, the unemployment rate reached 25%, and approximately 9 000 banks suspended operations because of financial distress (Wheelock, 1995).

As a result of the exceptional amount of speculation permitted by Wall Street rules, which many believe contributed largely to the economic downturn (Rothbard, 1972), the Glass Steagall Act was passed in 1933 (Lucas Jr & Nicolini, 2014). This Act prohibited National and Federal Reserve member banks and bank holding companies (BHCs) from underwriting corporate equity and debt (White, 2010). The Act was passed as a result of perceived conflicts of interest between banking and underwriting (Calomiris & Haber, 2013).

Advocates of the Glass Steagall Act claim that potential conflicts of interest between commercial and investment banking are too severe and these institutions should remain separate (Cyree, 2000). Bank lobbyists, however, argued that the Glass Steagall Act and the restrictions it imposed, did not improve the banking industry (White, 2010). Notwithstanding, between 1933 and 1937, real GNP in the US grew at an average rate of over eight percent per year and between 1938 and 1941 with over 10% per year. These rates of growth are spectacular, even for an economy pulling out of a severe depression (White, 2010; Crawford, 2011; Wall, 2014).

Nonetheless, after six decades, the Act was repealed in 1999 (Cyree, 2000) and the Gramm-Leach-Bliley Act (GLBA) of 1999 was enacted (White, 2010). The most important feature of the new law was the repeal of legal separation of the commercial and investment banking industries (White, 2010; Calomiris & Haber, 2013). Over time, commercial and investment banks, in cooperation with complaint regulators, questioned statutory restrictions in order to find a way in which to combine commercial and investment banking (Wall, 2014).

The GLBA widened the range of activities that banks and their holding companies could conduct, and repealed the parts of the Banking Act of 1933 that separated commercial banking from the securities business (White, 2010; Calomiris & Haber, 2013). The sections of the Bank Holdings Company Act of 1956 that separated commercial banking from the insurance business, were also repealed. Thus, the GLBA permits single holding companies to offer banking, securities and insurance, as they had prior to the Great Depression (White, 2010).

The articulated rationale for the passage of the GLBA was that technological developments that eviscerated the traditional distinctions between commercial and

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investment banks had already occurred (Calomiris & Haber, 2013). These technological innovations made traditional commercial banking obsolete. According to this view, if the nation's commercial banks were to survive, they would have to move into new, more profitable areas like investment banking (Wall, 2014).

This meant that the GLBA was at its core, ostensibly a bailout bill for the banking industry. The justification for the statute was that it was required to rescue a commercial banking industry that was thought to be obsolete (White, 2010). The Act's proponents maintained the manner in which the banking industry could be saved, was to allow banks to merge with non-banking financial firms. Furthermore, the privacy provisions of the GLBA made it difficult for firms to remain independent of the financial services conglomerate envisioned by the statute. Firms that tried to remain independent would find that their inability to obtain useful information regarding their clients would hamper their ability to compete (Calomiris & Haber, 2013).

Consequently, due to relaxed Wall Street regulations, in addition to Basel II not having been prescribed in the US at that time, during the fall of 2008, an unprecedented large number of financial institutions collapsed, which resulted in a freeze of global credit markets and required government intervention worldwide (Crawford, 2011). This banking collapse caused a severe recession in economies around the world. The seeds of this panic were sown in the credit boom that peaked in mid-2007, followed by the meltdown of subprime mortgages and all types of securitized products (Ivashina & Scharfstein, 2010).

As a result of the credit crisis of 2007-2009, the Dodd-Frank Act was signed into law on 21 July 2010. The credits crisis, which was considered as the worst financial crisis since the Great Depression of 1929, was exacerbated by financial instruments and new forms of financing that were not dreamed of in the earlier era. The enactment of the Dodd-Frank Act was deemed necessary, as government bailouts of banks and large financial institutions reached well over US$100 billion in 2008 (Lu & Whidbee, 2013). Consequently, it became evident that the existing regulatory framework could not adequately oversee these institutions (Skeel Jr, 2010).

The Dodd-Frank Act led to a new epoch in financial regulation. The old epoch dated back to the early 1930s, when the Glass Steagall Act was passed in 16 June 1933, dismantling giant Wall Street banks and putting deposit insurance in place for the first time (Lucas Jr & Nicolini, 2014). Never again, they promised, would investors be forced to live by their wits in unregulated markets, or ordinary Americans lose their life savings if their bank failed (Skeel Jr, 2010).

The findings in this paper contribute to the literature in several ways. Firstly, the extent to which current legislation might have had an impact on the risk-taking of five preselected international banks, is demonstrated. In addition, the extent to which risk-taking by these banks had an impact on their reputation, is pointed out. The importance and relevance of the Z-score as a measure of bank insolvency are also briefly highlighted. Furthermore, as one of the primary objectives of the Dodd-Frank Act is to reduce risk-taking in banks, this research provides direct evidence, within the means of the study limitations, on whether or not this objective is being achieved.

The paper is set out as follows: a literature study, which details the Dodd-Frank Act with focus on international markets is provided in section 1. This is followed by a correlation between legislation, risk-taking, market value and reputation in section 2. The research methodology is mentioned in section 3 and the results obtained are presented in section 4. A conclusion follows in the last section.

1. Literature review

The banking industry plays a significant role in both the financial system and the economy as a whole. By the end of 2012, the US banking system owned US $14.45 trillion in assets. During the second quarter of 2013, earnings grew by 23% to US $42.3 billion, marking the 16th consecutive quarter of rising earnings (Staunton, 2014).

However, the importance of the banking industry extends beyond its size. Bernanke (2013) indicated that the health of this sector has significant effects on overall economic activity, as well as the size and persistence of economic cycles. As a result, banking regulation has undergone tremendous change over time, with extensive regulations put in place in the 1930s, which was later removed in the last quarter of the 20th century (Kroszner & Strahan cited in Rose, 2014).

The banking industry has consequently been subject to extensive government regulation, including what prices (i.e., interest rates) banks may charge, the activities they may engage in, the risks they may and may not take, the amount of capital they must hold, and what location they can operate in (Da Silva & Divino, 2013). Banks are also subject to regulation by multiple regulators at both the state and federal levels; even banks that operate at a single location are likely to be regulated by at least one state and two federal bodies. The US system of prudential regulation and supervision of banking is without doubt a complex structure, due to the fact that it is not centralized in a single regulator, but is the responsibility of a number of separate and independent

regulators (Kroszner & Strahan cited in Rose, 2014). Furthermore, bank regulation and supervision are separate from other functions in order to ensure financial stability, including Lender of Last Resort (LOLR) and deposit insurance, which gives rise to competing responsibilities and claims.

As is evident, a complex banking structure creates the necessity for complex law. In part, this legal complexity is also a response to the increasing complexity of social interactions and economic exchanges in society (Gambacorta & Rixtel, 2013). However, in many instances, the growth of legal complexity appears to be outpacing the scalability of an approach that relies exclusively, or substantially, on human experts and the ability of clients to absorb and act on the advice provided (Lippe, Katz & Jackson, 2014). The Dodd-Frank Act is detailed in the following section.

1.1. Dodd-Frank Act. The Dodd-Frank Act is a noteworthy example of regulation designed to respond to the complexity of modern industry. Furthermore, it is an example of a regulatory approach that challenges the capacity of the legal profession to scale to the task. A requirement of the Dodd-Frank Act is that large banks must develop a resolution plan (Grant, 2012; Seligman, 2015) in which they explain how they could either be dismantled or survive the failure of one part of the institution (Lippe et al., 2014).

Section 165(d) of the Dodd-Frank Act, requires each non-bank financial company supervised by the Federal Reserve System (Fed), and each Bank Holding Company (BHC) with assets of US$50 billionor more, to report periodically to the Fed, the Federal Deposit Insurance Corporation (FDIC), and the Financial Stability Oversight Council (FSOC), which is an interagency supervisory body created by Dodd-Frank (Grant, 2012; Barth, Dearie, Skeel& Wilmarth cited in Shultz, 2014).

Section 165(d)(8) of the Dodd-Frank Act required the Fed and the FDIC to issue joint final rules implementing section 165(d) by no later than January 2012 (Grant, 2012). These rules require a strategic analysis by the company of the manner in whichit can be resolved under the Bankruptcy Code, Chapter eleven of the United States Code, in a way that would not pose systematic risk to the financial system (Barth et al. cited in Shultz, 2014).

The problem with the Dodd-Frank Act, however, lies not with its two objectives. These objectives are right on target. The problem lies with how they are handled (Bettencourt, 2014). The two themes that emerge, repeatedly and unmistakably, from the two thousand pages of legislation are (1) government partnership with the largest financial institutions (Kim & Muldoon, 2015) and (2) ad-hoc interventions by regulators rather than a more predictable, rules-based response to crisis. Each could dangerously distort American finance, which will make it more politically charged, less vibrant, and further removed from basic rule-of-law principles than ever before in modern American financial history (Skeel Jr, 2010).

The first theme is government partnership with the largest Wall Street banks and financial institutions (Kim & Muldoon, 2015). The Dodd-Frank Act singles out a group of financial institutions for special treatment. The banks that meet the US $50 billion thres hold, and the non-bank financial institutions designed by the new FSOC as systematically important will be put in their own separate category (Ludwig, 2012). Furthermore, there is no serious effort to dismantle the largest of these banks or to meaningfully scale them down. As they are special, and because no one really believes the largest will be allowed to fail, they will have a competitive advantage over other financial institutions (Bettencourt, 2014).

The second theme overlaps with the first: the Dodd-Frank Act enshrines a system of ad-hoc interventions by regulators that are separated from basic rule-of-law constraints. The unconstrained regulatory discretion reaches its peak with the new resolution rules for financial institutions in distress (Skeel Jr, 2010).

The Dodd-Frank Act resolution is designed for systematically important financial institutions that have been singled out for special treatment. However, the rules do not require that an institution be designated as systematically important. Should regulators want to take over a struggling bank, they can simply do so as long as they can honestly say that it is ‘in default or in danger of default’ and its default could have ‘serious adverse effects’ on stability (Evanoff & Moeller, 2014). Furthermore, they may be able to take over every affiliate in the bank’s network (Richardson cited in Evanoff & Moeller, 2014). Once the institution is in government hands the FDIC can pick and choose among creditors, deciding to pay some in full and leaving the rest with the dregs that remain after the favored creditors are paid (Skeel Jr, 2010).

Although the overall pattern of the legislation is disturbing, a handful of its contributions could genuinely improve the regulatory landscape. Though there are substantial uncertainties, the new framework for clearing derivatives and trading them on exchanges holds an unequivocal advantage (Allen, 2014; Johnson, 2015). The reforms promise to make the derivatives markets far more transparent than in the past (Johnson, 2015), and to diminish the risk that the default of a major financial institution will cause upheavals throughout the financial markets (Skeel Jr, 2010).

A second step forward is the new Consumer Financial Protection Bureau established by legislation (Evanoff & Moeller, 2014) to serve as a consumer watchdog with respect to credit card and mortgage

practices. Although the new Bureau will be part of the Fed (Clarke & Zywicki, 2013), it will be almost completely insulated from second-guessing by the Fed or other bank regulators. It has been argued that the Bureau has been given too much power, and consumers' interests were woefully underrepresented during the credit crisis of 2007-2009. Although consumer protection will remain within the Fed, it will be far more robust now that it is a separate operation (Skeel Jr, 2010).

On 7 January 2015, the restrictions the Dodd-Frank Act placed on large banks such as JP Morgan Chase and Citigroup were scrutinized by Republicans, with the ultimate goal to relax these restrictions (Johnson, 2015). The first step in this direction was the formation of a bill to 'make technical corrections' to the Dodd-Frank Act. On 21 May 2015, the Senate Banking Committee approved, by 12 to 10 vote, a financial regulatory reform package developed by the Committee's Chairman that includes the most significant changes to Dodd-Frank since the law was enacted in 2010. These changes include: (1) raising the asset threshold that subjects banks to enhanced prudential standards from the Fed from US $50 billion to US $500 billion; (2) allowing for most loans that lenders hold in portfolio to be classified as qualified mortgages to determine their compliance with the Consumer Financial Protection Bureau's (CFPB) ability-to-repay rule; (3) changing the process used by the Financial Stability Oversight Council (FSOC) to designate systematically important institutions (non-bank financial firms) to improve transparency; and (4) increasing the bank asset threshold from US $10 billion to US $50 billion, which triggers direct examinations by the CFPB (GreenbergTraurig, 2015).

It can be argued that these changes would bring regulatory relief to community and regional banks, which would boost the economy. However, contradictory arguments have been madethat these amendments are going too far in developing banks' provisions of Dodd-Frank, which was put into place to prevent another crisis.

2. Risk-taking, uncertainty and reputation

Literature which dates back as far as the 1980s indicates that excessive risk-taking in the banking industry, with slack regulatory supervision, has dire economic consequences (Bernanke, 1983; Calomiris & Mason, 1997, 2003a, 2003b). The last of which was the credit crisis of 2007-2009; a crisis so detrimental it has, in fact, been deemed the worst financial crisis since the Great Depression of 1929. The credit crisis is viewed by some as either a direct or indirect result of the repeal of the Glass Steagall Act, which saw the enactment of the Gramm-Leach-Bliley Act, an advocate for relaxed regulation (White, 2010; Crawford, 2011). There is also general consensus among economists and policymakers that trust and confidence played significant roles in the credit crisis and were central to any effective recovery plan (Earle, 2009).

As a result of the credit crisis, attention was refocused on the importance of the reputations of financial industries and banks. As these institutions provide a variety of services to client firms, reputation should be especially important when a bank aims to maintain or increase its market value, as a bad reputation leads to lower market values for equity sold in the future (Fernando, Gatchev, May & Megginson, 2012). An example of this would include Wells Fargo & Co., an American multinational banking and financial services holdings company, with one of the worst reputations for customer service in 2012. Compared to JP Morgan Chase, another American multinational banking and financial services holdings company, whose stock rose by 29.4%, Wells Fargo & Co.'s stock rose only 16%, in 2013. Although numerous factors can have an impact on a company's shares, these two companies comparatively provide at least some indication that reputation has an impact on market value, as they are both financial institutions and, thus, compete in the same market (Reuters, 2013).

Reputation is equally important for high quality financial institutions and banks to credibly distinguish themselves from low quality banks that presumably have a bad reputation and a low market value. This would require high quality banks, with a good reputation and a high market value, to expand significant resources in building and maintaining reputation (Fernando et al., 2012).

Not only was a revised regulatory framework required, but also the new legislation had to account for trust, confidence, reputation and risk-taking. As a result, on 21 July 2010, the Dodd-Frank Act was enacted with two very strong objectives. The first was to limit the risk of contemporary finance, often referred to as shadow banking, and the second was to limit the damage caused by the failure of a large financial institution (Skeel Jr, 2010).

As mentioned, the objectives of the Dodd-Frank Act were sound; however, some argue that only once the Act was in place, did officials attempt to understand the very lengthy and complex piece of legislation. In addition, some banks reported an increase in profits, which could be attributed to numerous factors. One of these factors might have been increased risk-taking. For the purposes of this paper, the researcher investigated whether increased profits could in any way be attributed to an increase in risk-taking. Hence, it was investigated whether the legislation in place (the Dodd-Frank Act) limited risk-taking in banks. The following propositions were consequently formulated.

Proposition (1): current regulatory supervision might not limit risk-taking in the banking and financial industries sector.

Proposition (2): risk-taking might have an impact on the market value of a bank or financial industry.

Proposition (3): the market value of a bank or financial industry might reflect its reputation.

3. Research methodology

3.1. Stability. As a result of excessive risk-taking, the Dodd-Frank Act was enacted with two objectives, only one of which forms part of this paper. This objective was to limit risk-taking, which is measured by means of Z-scores developed by Roy (1952), Hannan & Hanweck (1998), Boyd, Graham & Hewitt (1993) and De Nicolo (2000). The Z-score is a measure of bank stability and indicates the distance from insolvency.

The probability of insolvency can be expressed as $prob(-ROA < CAR)$, where ROA is return on assets calculated as π/A and CAR is the capital-to-asset ratio calculated as $E/$A. Should profits follow a normal distribution, it can be illustrated that z = (ROA+CAR)/SD(ROA), which is the inverse of the probability of insolvency (Beck & Laeven, 2006; Beck, Hesse, Kick & Von Westernhagen, 2009; Mirzaei, 2013). More specifically, the Z-score indicates the number of standard deviations that a bank's ROA has to fall below its expected value before equity is depleted and the bank is insolvent (Roy, 1952; Hannan & Hanweck, 1998; Boyd et al.,1993; De Nicolo, 2000).

3.1.1. Model diagnostics. As this model has been used extensively in literature, it is important to emphasize its relevance and importance. As such, Chiaramonte, Croci and Poli (2015) confirmed that the Z-score was still very relevant and could, in fact, be compared to CAMELS (Capital, Asset Quality, Management Earnings, Liquidity, and Sensitivity to market risk) variables. Chiaramonte et al. (2015) examined whether the Z-score was an accurate tool to predict bank distress on a sample of banks from 12 European countries, in addition to placing focus on the empirical attractiveness of the Z-score.

These researchers found that (1) the Z-score indicates good predictive power to identify bank distress, (2) that the Z-score performed similarly to the CAMELS variables, however, the Z-score had the advantage of being more parsimonious than CAMELS models, as it demanded less accounting and questionable data. Such a result is valuable for stakeholders, as they rely solely on available public information and seek simple and reliable measures of bank soundness, (3) that the predictive ability of the Z-scores held true, even when using several different computational approaches, and (4) that the Z-score was slightly more effective when the organizational and productive complexity of banks increased along with the public incentives to scrutinize bank riskiness, as is the case for large banks.

3.2. Population, sample, and data collection. This paper comprises two samples, as a fully systematic test of bank risk-taking would require data from all international banks required to adhere to the Dodd-Frank Act, which would not be feasible. Since it is only required of each non-bank financial company supervised by the Fed, and each BHC with assets of US $50 billion or more, to adhere to the Dodd-Frank Act regulations, only five major financial institutions were identified. The financial data obtained are publicly available and were analyzed from 2008, since the Dodd-Frank was only enacted in July of 2010. The data used in the analysis specifically included the data gathered from the balance sheets and income statements contained in the annual reports of the identified international banks. The second data sample comprised publicly available data on the market value of each individual financial institutions from 2008 to 2016. The data were used to determine what the effects of risk-taking were on share price movement and consequently banks' reputations.

3.3. Data analysis. To test for Proposition (1), the Z-scores for the individual banks, as well as the mean Z-score, was calculated using Microsoft Excel, as only basic descriptive statistical analyses was used.

To test for Proposition (2), the Statistical Package for Social Sciences (SPSS) was used to perform more advanced statistical analysis by means of correlation and analysis of variance (ANOVA) of share value and Z-scores. ANOVA was applied to determine if the mean dependent variable scores obtained differed significantly. This was achieved by determining how much variation in the dependent variable scores (share value) was attributable to the independent scores (Z-scores).

To test for Proposition (3), a literature review was conducted.

4. Results and discussion

4.1. Descriptive statistics. Two timelines were used in order to accurately predict the impact that new legislation might have on the risk-taking, and also on the market value of the banks. The first time period under investigation was 2005 to 2009, a period just prior to the enactment of the Dodd-Frank Act. The second period was from 2010 to 2014, a period in which the Dodd-Frank Act was active.

The data in Table 1 indicate the descriptive statistics for the analyzed variables from 2005 to 2009. The net income is also indicated, which was analyzed from the financial statements of five major banks, and reached a

minimum of negative US $27 684 billion, maximum of US $24 600 billion, and a mean of US $7 936 billion. The large deviation can be attributed to the credit crisis, which had a major impact on profits, as well as the differentiation in the sizes of banks.

The second important variable is the share value. For the purposes of this paper, the focus was on the impact that legislation might have had on the share value, hence, the overall mean of the share value of the five banks between the two predefined periods needed to be compared. The mean indicated in the table was calculated as US $63.83.

The Z-scores varied from -1.07 to 3.52 with a mean of 1.74 and a standard deviation of 1.18. The dramatic downturn in the economy as a result of the credit crisis had a major impact on the Z-scores, as did all the variables. This would explain the negative Z-scores experienced during this time. The maximum Z-scores was expected, as some banks did not experience the hardships of the credit crisis as much as others.

Table 1. Descriptive statistics from 2005 to 2009

	N	Minimum	Maximum	Mean	Std. Deviation
Net income (US$)	25	-27684	24600	7936.20	10120.42
Share value (US$)	25	3.78	211.31	63.83	51.31
Z-scores	25	-1.07	3.52	1.74	1.18

Source: researcher's own deductions (2016).

The data in Table 2 indicate the descriptive statistics from 2010 to 2014, a period during and after the enactment of the Dodd-Frank Act. Amean net income ofUS$8 630.76 billion, with a mean share value of US $51.69 was calculated. The z-scores were analyzed with a minimum of 0.00, a maximum of 16.06, a mean of 5.16 and a relatively large standard deviation of 5.18. The large standard deviation can be attributed to the recovery period after the credit crisis.

Table 2. Descriptive Statistics from 2010 to 2014

	N	Minimum	Maximum	Mean	Std. Deviation
Net income	25	-2238	21762	8630.76	6651.28
Share value	25	3.90	172.52	51.69	50.48
Z-scores	25	0.00	16.06	5.16	5.18

Source: researcher's own deductions (2016).

4.2. Proposition testing results. Proposition (1): From the data in Table 1 and Table 2, it is evident that the Z-scores as a measure of insolvency had increased from time period one (2005 to 2009) to time period two (2010 to 2014). The mean Z-score for period one was 1.74 with the mean Z-score for period two being 5.16. This is a dramatic increase of 3.42, which indicates that if risk-taking is a measure of solvency, the five banks on average were much more risk averse, lowering risk-taking with the enactment of the Dodd-Frank Act. This indicates that the risk-taking decreased during and after the period of enactment of the Dodd-Frank Act. Thus, Proposition (1) might not be valid.

Proposition (2) was tested using inferential statistical tests, which consisted of simple linear regression and ANOVA tests. The dependent variable is share price. The results of regression risk-taking on market value between 2005 and 2014 are indicated in Table 3. The linear regression analysis tested the relationship between the five major international banks' risk-taking (Z-scores) and the share price.

Table 3. Regression and ANOVA of Z-scores on market value

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.003[a]	.000	-0.21	4.14
a. Predictors: (constant), share price				

ANOVA (Analysis of variance)

Model		Sum of squares	df	Mean square	F	Sig.
1	Regression	0.009	1	0.009	0.001	0.982[b]
	Residual	824.14	26	17.17		
	Total	824.15	27			
a. Dependent variable: Z-score						
b. Predictors: (constant), share price						

Coefficients[a]

Model		Non-standardized coefficients		Standardised coefficients	t	Sig.
		β	Std. error	Beta		
1	(Constant)	3.437	0.893		3.85	0.00
	Share price	0.00	0.012	0.003	0.023	0.982
a. Dependent Variable: Z-scores						

Source: researcher's own deductions (2016).

From the results, it can be deduced that the independent variable (share price) depicts 21% of the changes to the dependent variable. In addition, the data in the ANOVA table indicate that the model was insignificant, which infers that the changes in the dependent variable are insignificant to the independent variables with a sig. value of 0.982. Further to this, the Beta values from the Coefficient table are the regression equation ($B_0 = 3.437$; $B_1 = 0.00$). The Standard error for the Constant indicates that at an $\alpha = 0.05$ and degrees of freedom (df) of 26, the Beta of 3.437 falls between the range of 1.381 and 5.493. This was calculated with a critical value of 2.056. Taking $\alpha = 0.05$ with df of 26 and a critical value of 2.056, this can be computed for all the variables.

The t-value is derived by dividing the Beta with the Standard error. This value is used to determine if the data are statistically significant. However, the data analysis provided Sig. values, and with a Sig. value > 0.05, the data are statistically insignificant. Thus, Proposition (2) is not valid.

Proposition (3) a good reputation is dependent on ethical behavior including factors such as marketing strategies, treatment of employees, care of the environment, and honest financial reporting. In addition, Smith, K.T., Smith, M. and Wang (2010) found

evidence that firms with a higher reputation have higher market value. The results indicated that these firms do enjoy a market value premium. They concluded that reputable firm behavior creates a valuable tangible asset that is distinct from industry peers. In addition, the results supported the impression management theory, in that those businesses that can effectively direct reputation management activities, will receive tangible economic and other benefits, in this case, an increase in the wealth of the corporate stockholders. Thus, Proposition (3) might be valid.

Conclusion

The researchers of this paper aimed to prove three propositions. In order to determine the validity of Proposition (1), the descriptive statistics of the net income, share value and Z-scores for two determined time periods (2005-2009and 2010-2014) were analyzed. Z-scores were used to determine risk-taking. The results indicated that the mean Z-scores did increase, which indicates that Proposition (1) might not be valid. Proposition (2) was also nullified by the ANOVA of Z-scores and share value. The results indicated that the Z-scores had no direct impact on share price with $p = 0.982$. Proposition (3), however, might be valid, as a literature review evidencing the relationship was conducted. Previous studies had also conducted similar empirical research, which resulted in similar conclusions.

Consequently, since the data that were used indicate that the Dodd-Frank Act might lower risk-taking by banks, it means that its objectives were reached. As a result, the regulatory bodies in place have enacted a piece of legislation that not only limits risk-taking, but in turn, might have an effect on reputation and reputation risk. If it is perceived by the public that banks take on less risk, the banks' reputation might benefit. However, risk-taking, reputation and misconduct in banking are topics that require further research.

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