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CONTROLLING WORKPLACE BULLYING BY POLICY AND CORPORATE CULTURE

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Abstract: Workplace bullying is a pervasive and damaging employment problem facing U S. employers today. In the absence of current legal protections to prohibit and prevent workplace bullying, employers will need to address the problem in other ways. Anti-bullying policies can be adopted. The model Healthy Workplace legislation under consideration around the country could be used to provide a good template or existing civil rights anti-harassment and anti-violence policies can be broadened to proscribe bullying behaviors. Still, if employers truly want to extinguish bullying in the workplace before it occurs, they need to change the way they approach the problem. Management practices leading to an organization wide culture of mutual respect is the recommended course.

INTRODUCTION

The problem of bullying has long been addressed by American law when it occurs in a public school setting because most states have adopted school anti-bullying provisions by statute. But the evidence is clear that bullying is not a problem confined to the schoolyard. Although there is no single definition, the Workplace Bullying Institute (WBI) has defined workplace bullying as "repeated, health-harming mistreatment, verbal abuse, or conduct which is threatening, humiliating, intimidating, or sabotage that interferes with work or some combination of the three". (WBI, 2010) Such behavior has become known as "general harassment" or "class-free harassment", because it is harassment that is not prohibited by a specific violation of civil rights law, such as sexual harassment. (Yamada, 2000) Studies and surveys confirm that workplace bullying is now a significant employment problem in the U.S. that leads to a variety of damages to victim employees and serious losses to employers as well. A recent survey shows that over 50% of employees polled have either suffered or witnessed workplace bullying in their career. (WBI, 2012)

Public support for a law to prevent this conduct has become overwhelming. A survey published in 2010 by Parade Magazine showed that 93% favored a law to eliminate workplace bullying. (Kindsian, 2010) Yet, almost 10 years since a model law was proposed no statute at the Federal or State level has been passed that would address the problem. Employers' have also been slow to adopt anti-bullying policies on their own. Both legislators and employers have been spirited away by concerns that anti-bullying laws could have off-setting unintended consequences of unjustified litigation and negative HR effects on employers. So the epidemic of American workplace bullying continues.

This article will discuss workplace bullying in the U.S., the current status of the law surrounding the problem, and what measures employers can adopt to prevent bullying behavior. The first part of the discussion will offer a brief historic overview of how the problem became recognized as a legal employment issue in the U.S. The causes of workplace bullying and the resulting costs and damages to employers and employees will also be examined.

Legal efforts to address workplace bullying in the U.S. by court made tort law theories will be reviewed along with their shortcomings. Next, legislative efforts, including an overview of the model "Healthy Workplace Bill" (Yamada, 2010) will be considered, as will the pros and cons

of that proposed law.

Finally, the management implications for an employer policy will be drawn. It will be recommended that employers focus on prevention of bullying in the first instance through an overriding organization-wide culture of respect together with adoption of a reasonable workplace abuse prevention policy and procedure when it does not.

BRIEF HISTORY

The term "Workplace Bullying" was coined in 1992 by English journalist Andrea Adams in her publication "Bullying at Work" (Adams, 1992) where she applied the concept of the school yard bully to the workplace. Since then a number of countries have adopted statutory laws designed to prevent workplace bullying and sanction employers who fail to adopt policies and procedures to do so. The U.S. trails Sweden, Canada, Australia, and many European countries that have enacted anti-bullying legislation. In 1993, Sweden was the first country with legislation prohibiting workplace bullying. France and Belgium followed in 2002. To date, several Canadian provinces (Quebec, Saskatchewan, and Manitoba), two Australian states (South Australia and Queensland), the United Kingdom, Norway, Denmark, the Netherlands, and Turkey have statues in force, premised on either the employer's duty to provide a health/safety workplace or the view that freedom from workplace harassment as a civil right. Regardless of the rationale, employers are obligated to provide employees with a psychologically safe workplace where employees are treated with respect. (Gumbus, 2012)

By comparison, the U.S. legal system has given little attention to bullying in the workplace. However, the problem in the U.S. has been the subject of significant study. Early researchers include Gary and Ruth Namie, who went on to found the Workplace Bullying Institute (WBI), a non-profit organization that advocates new legislation to recognize the rights of bullied employees, in much the same way that the Human Rights Commission (HRC) has for the LGBT community. Like the HRC, the WBI also maintains a website (WBI, 2013) and outreach programs to provide resources and to support legal efforts to prevent workplace bullying. The WBI commissioned two major surveys conducted on U.S. employees in 2007 and 2010 (WBI, 2010) that have served to demonstrate the extensive prevalence of workplace bullying in the U.S. WBI co-founder Gary Namie would later serve as an expert witness on workplace bully in Raess v Doescher (2008), the first reported U.S. case to say that workplace bullying could be a basis for employee lawsuits.

A legislative solution has also been formulated in 2002. Seton Hall University Law professor David Yamada developed the first model anti-workplace bullying legislation known as the "Healthy Workplace Bill" (Yamada, 2004) for states to consider for adoption. The act borrowed structural cues from the law governing hostile environment sexual harassment developed though the landmark decisions of the U.S. Supreme Court. A proposed statute was later prepared by the WBI and offered in various forms by 29 separate bills around the country.

PREVALENCE OF WORKPLACE BULLYING

Recent studies of the U.S. workplace confirm just how widespread the problem has become. Statistics and their professional and academic sources now abound to confirm and describe the scope of the problem and its damages. Most center on some description in general terms of what constitutes bullying behavior, estimates of the percentage of employees exposed to, or witnessing it, the types of harm suffered by employees, and an accounting of costs to employers. While the numbers from these sources vary, statistics have largely converged to

provide the outlines of a prevalent problem. The WBI surveys of 2007 and 2010 showed that 35% of surveyed employees were subjected to workplace bullying and another 15% were witness to it. (WBI, 2010) A survey taken in 2012 by Careerbuider.com in 2012 (Grasz, 2012) showed no improvement. A follow up survey by WBI in 2012 showed a worsening picture, with 58% reporting that they were currently bullied. (WBI, 2012)

Studies and surveys have concluded there are several common features of workplace bullying at the firm level. (1) Bullies tend to be male and institutionally superior employees. (2) Bullying undermines the victim's ability to do the job. (3) Bully victims are frequently successful workers whom the bully targets due primarily to feelings of inadequacy.

Some who have studied the rise of workplace bullying in the U.S. believe that the increase is due to national and global employment trends. Amanda Lueders, a leading advocate for a legislative solution to workplace bullying in the U.S. has identified these: (1) an increase in service sector jobs that require more interaction and so more chances for conflict, (2) globalization with downsizing pressures on mid level management forcing harsher treatment, (3) a decline in unionization, reducing the structure provided by unions for dispute resolution, (4) increased diversity of the workforce that without controls which can lead to conflict, and (5) increased use of temporary workers that foster management's view of workers as interchangeable commodities. (Yamada, 2000)

A recent study of cases filed with allegations of bullying confirms these trends. Over 66% of the cases were brought against public sector employers. Most also involved employment in the service sector (60.5%) compared to manufacturing (11.6%) and nearly 1/3 of the service sector cases involved schools. Most bullies were males as were most victims. Most cases were same sex. Most bullies were bosses. (Martin, 2010)

In the final analysis, damages to people make this issue a concern from both a practical as well as ethical perspective. Bullying takes its toll on employees who suffer a variety of stress related illnesses, headaches, high blood pressure, impaired immune systems and digestive problems, and a variety of psychological disabilities including depression and even suicide. Employers suffer from lost opportunity cost dealing with the problem, lost morale, lost productivity, absenteeism, increased sick leave and medical costs, employee turnover, poor customer relations, and even losses from sabotage and revenge caused by bullying. The APA has estimated U.S. companies lose $300 billion each year from the effects of bullying. (Daniel, 2009) In short, raising awareness and taking proactive measures to inspire better workplace practices can promote more productive workplaces and lead to healthier employees.

U.S. CASE LAW

As noted earlier, while several countries have nationwide statutes protecting against workplace bullying, there is no such U.S. legislation. As a result, bullied American workers are currently relegated to filing law suits seeking damages. But such suits, unguided by a specific statutory prohibition or preventative framework, has provided a poor aggregate deterrent against a wide spread employment problem like bullying. There are inherent limitations to such suits because they usually serve to remedy one employee at a time and then only after the harm is suffered. While an occasional landmark employment law decision can have sufficient breadth to reach employers broadly and put them on notice of adverse legal consequences, court decisions are more frequently fact specific. Further, courts in the same jurisdiction can disagree on the application of the same case or legal theories employed and may even render inconsistent results under the same facts. For all these reasons, a cause of action authorized by

statute and resulting court decisions within a coherent statutory framework have been shown far better at deterring harm and providing a remedy once it is suffered.

Making matters worse, no reported U.S. court decision has recognized a cause of action for workplace bullying. Bullied employees have been forced to rely on the most analogous common law tort theories to support their claim. These are Intentional Emotional Distress, Assault and Battery, and Intentional Interference with Contract. Unfortunately, because none of these torts were designed to deal with workplace bullying, they have proven woefully inadequate in most cases.

INTENTIONAL EMOTIONAL DISTRESS (IIED)

Given that much of the injury from workplace bullying is mental and emotional stress, IIED would seems a very logical tort to address the problem. To establish the tort, plaintiff must prove: (1) defendant acted intentionally or recklessly, (2) defendant's conduct was extreme or outrageous, (3) that it caused emotional distress, and (4) that the emotional distress was severe. To establish the element of extreme or outrageous conduct, the behavior must be so severe that no reasonable person could be expected to endure it. (ALI, 1965)

Outrageous employer conduct was sufficiently alleged in Khan. (Parsons Global Services Ltd., 2008) While employed as an international courier for Parsons, Khan was kidnapped. To further its interest in preventing possible future kidnappings, the employer refused to pay the kidnappers ransom despite threats of torture. The company also prevented Khan's wife from paying the ransom until after Khan had been torched and a video was sent to his wife showing part of his ear being amputated. The court concluded Parson's conduct "….so outrageous in character, and so extreme in degree, as to go beyond all possible bounds of decency." (Khan at 429) However, the case did not involve bullying, and provides no precedent for a bullying claim using IIED.

On occasion, workplace bullying has satisfied the tort's requirement of "extreme or outrageous" conduct requirement. For example, in GTE Southwest Inc. v Bruce (1999), the Texas Supreme Court upheld a verdict of $275,000 for three employees who had suffered two years of supervisor abuse that included yelling, cursing, physical threats, and threats of termination. Similarly, in Wenigar v Johnson (2006), a finding of IIED was upheld where the supervisor of a disabled employee shouted at him on a daily basis, refused to permit him to take breaks or vacation, told co-workers he was stupid and retarded. However, neither the GTE nor Wenigar decisions have been followed by the courts.

Instead, the vast majority of IIED claims brought for workplace bullying are dismissed because the conduct is found insufficiently outrageous. So in White v Monsanto (1991) the Louisiana Supreme Court reversed a jury verdict for plaintiff by finding that the supervisor's unjustified and continuous profane tirade with threats to terminate plaintiff that lead to her emergency hospitalization for severe anxiety, though crude and uncalled for, was not sufficiently extreme or outrageous. In Herrera v Lufkin Industries Inc. (2007), the court ruled that evidence of four years of repeated derogatory comments by a supervisor regarding plaintiff's race, stricter rules, and continuous questioning of plaintiff's competence, satisfied his Title V11 claim of racial harassment, but was insufficient to prove outrageous conduct for the IIED claim. The court in Crowley v North American Telecommunications Association (1997), found that the supervisor continuous refusal to allow plaintiff to complete his work, meet with others, attend required meetings, followed by a demand he sign a poor performance evaluation which he refused to do causing his termination, was indeed offensive and unfair conduct, but insufficient to satisfy the

requirement of outrageous conduct.

Bullying claims based on IIED are also defeated because causation or severity is insufficiently shown. In Harris v Jones (1977), the plaintiff lost his award for lack of severity because he couldn't prove how much his supervisors bullying affected his pre-existing speech and anxiety disorders. Because the employer was unaware of plaintiffs' pre-existing mental condition, the court in KFC Nat'l Mgmt. Co v Weathersby (1992) reversed a verdict finding IIED of a store manager subjected to sexual harassment, unsupported accusations of theft and demands to take a lie detector test in front of customers that lead to her hospitalization for depression.

Battery and Assault

Since some workplace bullying cases include physical intimidation or threats of physical injury to employees, these tort theories would seem well fit to address them. Yet few cases have resulted in an employee's recovery against the employer, for a variety of reasons. Battery and assault are separate crimes and separate torts. The intentional tort of battery is established by (1) an intentional touching without consent or privilege (2) that results in either harm or offense. The touching can be slight and can include rude, insulting and angry touching. The intent involved is the intent to make bodily contact. Assault is any threatening act that puts another in reasonable fear of an immediate battery. (ALI, 1965)

Although some courts have allowed recovery against the employer where the conduct occurs during performance of the employer's work on a showing that employers were aware or at least should have been aware of the conduct, courts generally find that acts of assault and battery do not further employers interests, and impose liability only against the aggressor.

A typical example is Griffin v Williams Mercer Inc. (1998), where an executive assistant who was subjected to quid pro quo sexual harassment, and obscene phone calls and a sexual attack by her supervisor at an office party also brought claims of assault and battery against the harasser and the employer. Her assault claim based on the harasser's obscene phone calls was dismissed because there was no immediate threat of a battery. The assault and battery claims against the harassing supervisor were upheld, brutal assault and battery claims against the employer were denied because they were not committed in furtherance of employer's work.

The court in Jackson v Saturn of Chapel Hill Inc. (2005) similarly ruled that employer would not be liable for sexual advances because the conduct was not reported and not liable for assault and battery and "bullying" threats of retaliation even if employer was told of the incidence because the harassers conduct was not in furtherance of employers primary business of selling cars.

Tortious Interference of Contract (IFC)

This theory would seem to fit those cases where workplace bullying has driven the employee to quit or be set up for termination, but this has not been so. This tort is made out by proof of (1) a valid contract which plaintiff is a party, (2) infers knowledge of the contract relationship, (3) intentional inducing of breach or termination of the relationship, and (4) damages from loss of the contract relationship. (ALI, 1979)

Courts have refused to hold employers liable on the theory that an employer being a party to the employee's employment contract can't interfere with its own contract. So for

example, in Lewis v Oregon Beauty Supply Co (1987), an employee was fired due to a false appraisal provided by her supervisor with whom she had a failed workplace affair. Although her employment was at will, the court affirmed a jury verdict for contract interference against the supervisor because he used wrongful means of physical and verbal intimidation, threats and defamation in connection with the termination. However, no liability was extended to the corporate employer because it was a party to her employment contract.

Another major hurdle arises from the "at will" doctrine that governs most private sector employment in the U.S. Because such employment can be terminated at the will of either party without cause, most courts hold an employee at will has no valid contract rights, thereby defeating proof of the first element of this tort. An exception allows the suit to proceed if "improper means" to interfere are used such as violence, threats, bribery or the commission of another intentional tort such as defamation, duress or fraud.

Further, courts will deny IFC recovery against other individual employees when their actions were within the scope of employment, and the interference arises from just doing their job. In Cassidy v Hartford Financial services Group, (2008), plaintiff alleged that employer's fraud investigator conducted an interview in a very hostile, raised his voice, threatened her, and bullied her into a false confession, upon where the employer terminated her. The case based on IFC was dismissed against the investigator because he was acting within authority and against the employer because she was an at-will employee.

The "Workplace Bullying" Decision: Raess v Doescher

The decision by the Indiana Supreme Court in Raess v. Doescher, (2008) is considered a landmark because it was the first and only one so far in the U.S. to use the term "workplace bullying" as a concept to support recovery of damages. In an Indianapolis area hospital, Raess was an operating room heart/lung technician who sued Dr. Doescher, his supervising open-heart surgeon. According the Raess, Doescher had become angered by reports Raess made to hospital administrators of previous mistreatment of other technicians. Doescher aggressively charged Raess "with clenched fists, piercing eyes, beet red face, popping veins, and screaming and swearing at him". Raess said this backed him up against the wall and he put his hands up. Doescher suddenly stopped, stormed past him and left the room, stating "you're finished, you're history". (Raess at 794) Raess further testified he was forced to quit his job because his confidence and focus was affected and Raess' psychiatric expert testified that Doescher had cause Raess to suffer emotional distress, a depressive disorder with anxiety and panic attack affecting him in his career, earning capacity, and family life.

Raess sued Doescher based on all three common law torts of assault, intentional infliction of emotional distress, and intentional interference with employment relationship. The trial court dismissed the interference claim, finding no facts showed Doescher intended to interfere with Raess' job or that Raess' job was in jeopardy with the hospital. The case then went to the jury on the remaining claims of assault and emotional distress. Raess retained WBI co-founder Gary Namie as an expert witness. Over Doescher's objection, Namie, using language from the HWB, was permitted to testify that Doescher was a "workplace abuser" who subjected Raess to "an abusive work environment", and that the behavior in question constituted "an episode of workplace bullying". (Raess at 796) The trial court instructed the jury that it could consider Namie's testimony as a basis for recovery and denied Doescher instruction that the jury disregard it. The jury found Dr. Doescher not liable on the emotional distress claim, but held for Raess on the assault claim awarded $325,000. The case was reversed by the Court of Appeals for insufficient evidence, but the Indiana Supreme Court

affirmed. In the Court's written opinion, the term "workplace bullying" appears 22 times.

The Raess v Doescher decision has garnered a great deal of attention and discussion from both legal scholars and human resource practitioners, including spirited praise from organizations advocating law to address workplace bullying. But the case has not been followed by the courts in Indiana or elsewhere.

Martin and La Van Case Law Study

A study of 45 cases with abusive workplace allegations drawn from Federal District Court decisions during 2003-2007, published in 2010 by Martin and La Van (Martin, 2010) further confirms the inadequacy of current U.S. law. Employees lost their case against the employer over 70% of the time. This was so, even though over 70% of the cases presented a separate claim based on a violation of the U.S. Constitution, one of the several Federal Civil Rights Statutes, or a common law theory. Further, nearly 1/4 of the cases also involved some type of physical violence and abuse occurred even though over 1/3 of employers involved had some form of anti-bullying policy in place.

While the authors' remark that the 30% litigation success rate demonstrates current law is offering some protection, sufficient enough to put employers on notice that workplace bullying can mean liability, this number was reported in the aggregate and the basis in any given case was not explained. Though its good advice to employers that they be concerned with liability, with so many other legal grounds for these employee to prevail, another observation could be drawn: existing U.S. law is failing to address or prevent workplace bullying, and that employers should be less concerned with avoiding liability and more with addressing bullying as costly and continuing moral problem the courts are not preventing.

A LEGISLATIVE PROPOSAL: "THE HEALTHY WORKPLACE BILL"

As previously noted, David Yamada and Gary and Ruth Namies have been leading advocates for anti-workplace bullying legislation. In several articles they traced the causes and effects of workplace bullying, the development of European legislation that addressed the problem there, studies confirming the problem in the U.S. and reviewed the inadequacies of U.S. common law tort theories to reach it. Yamada drafted model legislation he called the Healthy Workplace Bill and the Namies formed a lobbying group (WBI) to promote the legislation, initially to the California General Assembly in 2003.

Yamada's model bill borrows heavily from established law that addresses discrimination caused by a "hostile environment", to provide what he called "status-blind hostile work environment protection" (Yamada, 2004), because the HWB is not limited to protecting a specific class of employees nor aimed at preventing discrimination as are U.S. civil rights laws. Rather, it is designed like current Europeans anti workplace bullying laws, to protect the dignity of all workers in their day to day jobs from emotional and physical distress caused by intentional abusive conduct, not addressed by US tort theories, IIED in particular.

The HWB, such as the bill introduced in the Massachusetts Senate, (Mass. Gen. Ct. 2009) brought the two concepts of hostile environment and IIED together by defining workplace bullying as "an abusive work environment "that" exists when the defendant (bully), acting with malice, subjects an employee to abusive conduct, so severe, that it causes tangible harm to the employee". Malice is defined as "… the desire to cause pain, injury, or distress to another"." Abusive conduct" is defined in part as "conduct, including acts, omissions, or both that a

reasonable person would find hostile, based on the severity, nature, and frequency…. ", and the definition includes a non exhaustive listing of intentional misbehaviors that can be considered abusive. "Tangible Harm" requires proof of a material impairment to a person's mental or physical health, or bodily integrity. Thus under the HWB, plaintiff's prima facie case is not sight. There is no case unless plaintiff proves the bully intended harm, the conduct was hostile to the average person, and was so severe that it caused provable material mental or physical harm. The act's supporters believed these requirements sufficient to exclude frivolous claims.

In addition to these elements of proof, major concessions to employers legitimate interests and management prerogatives are made by providing four separate affirmative defenses that can be established: (1) when the employers exercised due care through preventative measures, such as an anti-bullying policy and reporting procedure and the employee's failed to use of those measures- a defense borrowed directly from sexual harassment decisions; or (2) where the claim is based on an adverse employment decision reasonably made for poor performance, misconduct, or economic necessity; or (3) where the claim is based on a reasonable performance evaluation; or (4) where the claim is based on an investigation of the employee's illegal or unethical activities. (Canty, 2009)

ARGUMENTS CONCERNING THE HWB

Many legal scholars have hailed the HWB as a balanced legislative solution to workplace bullying. (Calvin, 2012) In the nearly 10 years since it was first proposed, there have been 29 bills discussed by state legislatures based in varying degrees on the HWB. But the legislation has been opposed by some business lobbies and the corporate employment law bar. To date the legislation has not been adopted at the state level. The following are some of arguments made to oppose adoption of the HWB. Each has significant counter considerations. (Yamada 2010)

Wrong Culture

Opponents of the HWB say that it is based on European assumptions of loyalty and lifetime job commitment which does not fit the American work culture. In the U.S. it is not unusual for workers to frequently change jobs when dissatisfied. Bullied workers can simply leave, allowing the market to correct firms where bullying is prevalent. (Lueders, 2008) However, this ignores contemporary workplace surveys of U.S. employees who report consistent and widespread bullying year after year, which suggests many workers either are not free to escape the abuse in the current employment or that the problem is so widespread, that bullying now represents a costly market failure of U.S. employment generally.

Bosses Must Bully

Studies show that bullies tend to be supervisors. The argument here is that they have to bully because some anti-social behavior is necessary to make employees productive and business competitive. Reference is made to many leaders in America's strongest new industries that are known for their tough demanding leadership style. (Van Dyck, 2007) This ignores the empirical evidence that bullying costs firms money by lost productivity, lost loyalty, and causes unsafe behavior, and sabotage. Evidence mounts of the cost to employers for sick leave and medical claims and concurrent damage to employees' health and well-being. There is also an ethical issue, as this argument asserts that malicious and harmful behavior as a form of Social Darwinism in the corporate setting is good.

Frivolous Claims

Another reason for resistance is the argument that the HWB will impose a civility or "no-jerk" code which will lead to frivolous claims because the language (especially the listing of misbehavior that can constitute "abusive conduct") isn't sharpened enough to give defendants and their employer's notice of what behavior is inappropriate, or narrowed enough to allow the normal function of business. Claims could also be made for administrative mistakes in applying a mandated policy. (Morris, 2008) But the retort is that HWB has very specific elements of proof, requires malice, and uses an objective "reasonable person" standard. Further, the employer retains the prerogative to evaluate, discipline, investigate and terminate employees so long as they act reasonably, in furtherance of legitimate business interests.

Threatens Employment At-Will

It is argued that an exception to the court made "at-will" employment rule may be created by the statute. Because the HWB encourages employers to establish a procedure for resolving bullying claims, all the defendants found innocent will be given grounds to assert an implied contract to continued employment. Complainants who successfully establish they were bullied in conjunction with a management action which was not found "reasonable" could argue they have a right to continued employment, especially in light of the reinstatement remedy the act authorizes. (Van Dyck, 2007) The counter argument is that the cause of action for harassment under the civil rights laws has not been found to imply a "for cause" contract or threaten the at will doctrine. Employers retain the right to terminate employees without cause, so long that it is not for the proscribed reason of discrimination. The HWB would operate in the same manner. In addition, language excluding such implied contract and/or expressly retaining the at-will rule, could easily be added the proposed legislation and to employers anti-bullying policies.

Diminishes Other Rights

Passage of a class free or general harassment statute could take away requisite attention to harassment discrimination cases, and dilute those laws. A statute and even a policy that defines bullying might also be abused by organizations to mask other harmful conduct that is not covered. (Clarke, 2011) Such arguments have been made when new remedial employment legislation is considered. However, the HWB is aimed at preventing cases of severe malicious abusive harmful conduct that studies confirm exist and are not being addressed by existing civil rights laws. And the fact that some conduct may be missed or that the law or policy will be abused by some are not good reasons for failing to try.

Too Costly

This argument asserts that U.S. employers are already over regulated and don't need another legislative mandate, especially in tough economic times. Costs will arise from creation and administration of an anti-bullying policy, employee education and training, and defenses of lawsuits under a new statute. (Van Dyck, 2007) However, such costs must be set against the many and widespread costs to employers and employees that result from the unchecked problem of workplace bullying. Aside from cost considerations, there is a separate moral justification of such remedial employment law in discouraging preventable harm to employees, and providing a remedy when it is suffered.

MANAGEMENT IMPLICATIONS: POLICY WITH CULTURAL OF RESPECT

Given that at present, there is no adequate remedy in the courts and no legislation to prohibit and prevent workplace bullying, the question become what can an organization do to address this serious problem? One option is to develop an anti-bullying policy and procedure for resolving bullying incidents. Existing anti-harassment or anti-violence policies can be amended or used as models. Alternatively, a separate" general harassment" policy can be developed, using components of the HWB for guidance. In either case, the policy needs to be easy to use, have a clear definition of bullying, and have an effective procedure for handling complaints. In addition, the policy must be accessible to all employees and there has to be an ongoing training of supervisors and managers. In other words, use the approach normally recommended in establishing an affirmative defense to harassment claims that the courts have honored.

However, employers have shown little understanding of how to implement a policy and many have been reluctant to adopt a separate anti-bullying policy for one or more of the same reasons voiced for opposing a healthy workplace anti-bullying statute. A 2011 study conducted by the Society of Human Resource Management found that 44% of the respondents had no policy and that another 40% had chosen to attach workplace bullying to an existing policy. In fact, only 3% said that they had a separate policy for their organization. (SHRM, 2012) Further, even the best policies can only do but so much. Some people will ignore it, employees may fail to report incidences, and poor administration of the policy can lead to additional problems. Additionally, a policy that prohibits bullying maybe a good first step to take, but it has inherent limitations in identifying and preventing the underlying causes of bullying behavior.

A better approach is to change the culture and develop an environment of mutual respect. (Gumbus, 2012) This "cultural" approach would concentrate on getting all employees to view the adoption of mutual respect goals and procedures as a choice made by them to improve the quality of their working environment. At the individual level, the necessary organizational change involves motivating employees to take on "prosocial" behaviors that demonstrate respect for individual rights and allegiance to the needs and interests of coworkers. At the group level, organizational change involves motivating groups of employees to establish norms of prosocial behaviors such as being empathetic and defending the rights of individual employees. It is not sufficient, however, that workgroups develop a shared understanding about what are and are not "acceptable" standards of behavior. Rather, they must also understand what constitutes mutual respect behaviors. Although bullying is a form of disrespect, a culture of mutual respect refers to shared values and beliefs about both protecting and respecting the rights of coworkers.

While there are numerous approaches for instituting planned organization change and development, a "bottom-up" approach that focuses on "unfreezing" established beliefs and behaviors is often best. Such a participatory, people-centered approach is aimed at changing individual behaviors but also attitudes and motivations, thus developing a shared understanding and acceptance of anti-harassment and mutual respect behaviors using three stages. (Deadrick, 1995)

Step 1: Problem Recognition

The first step in the change process is an organization-wide recognition of bullying problems and the need for a mutual respect culture. At the organizational level, problem recognition involves an assessment of whether the formal policies and procedures are working

and whether employees are exhibiting disrespectful behaviors. If employees do not understand the basis and need for anti-bullying policies, it is unlikely they will adopt mutual respect and anti-bullying behaviors or report incidence of bullying among their peers. At the individual level, problem recognition involves an assessment of whether or not employees are even aware of what specific job behaviors could be construed as disrespectful and /or bullying. If employees did not comprehend or remember the formal communications regarding anti-bullying policies and procedures, they might be somewhat "accepting" of bullying involving them and/or their peers or managers.

One method for diagnosing both the nature and extent of bullying problems in the workplace is an employee survey. A questionnaire could be used to monitor employee perceptions of the working environment, the anti-bullying policies and procedures, and what they believe are acceptable standards of behavior.

Step 2: Employee Learning and Development

The second step involves creating a desire to change, soliciting input about how to change, and designing development programs to implement change. In order to create a desire to change, employees themselves must feel a need for change. Instead of sending employees to training programs that emphasize "obedience" to pre-determined policies, employers could initially share the survey results with employees and have everyone participate in open discussions about the need for change and employees' responsibility for enacting and enforcing change. If employees are given the opportunity to openly discuss their complaints, opinions, questions, or reservations about the need for a mutual respect, bully-free work environment, they may become more aware of the problems and more sensitive to the needs and interests of their coworkers.

Once employees perceive a need for change and have been empowered to effect change, a learning environment has been created that will enable them to change. At this point, employees can work in groups to develop a list of behaviors that exemplify a mutual respect work environment and a list that exemplifies disrespect. Ultimately, the input from all employee groups can be merged to form a list of "respectful" behaviors that represent the "ideal state", which can serve both as a goal for all employees to achieve and a basis for subsequent evaluation. The use of group problem-solving techniques essentially allows the employees themselves to develop their mutual respect "model".

Based on the results of the survey and the input from employees, employers can now target employee development programs to focus on the underlying source of bullying or disrespect problems in their particular organization.

Step 3: Evaluation of Change Effectiveness

The third step in the change process involves obtaining feedback about whether or not the change efforts worked. An evaluation of individual employee job behaviors could be conducted to determine the effectiveness of the employee learning and development programs. In this regard, a development-oriented performance appraisal instrument can be used to evaluate job behaviors that either promote or violate the mutual respect culture. To do this, firms would need to expand the scope of job behaviors contained in the typical appraisal instrument to include behaviors that are both "prosocial" and "anti-social". Although the actual content (job behaviors) of the appraisal form will vary from employer to employer, the prosocial and anti-social behavioral dimensions to be used in the evaluation could be based on the list of

behaviors previously developed by the employees themselves in Step 2 of our model. The evaluation should be conducted by multiple raters (i.e., supervisors, peers, and self raters), in order to get a more reliable assessment of employee bullying behaviors.

In connection with these three step approach, employers should also be mindful of two important additional management principles: First, employers need to stop emphasizing what employees shouldn't do and start stressing what employees should do, namely, treating others with respect. In addition, to focusing on employee empowerment techniques discussed previously as a means of changing culture, the impact of "leaders" should be recognized and managed. Ideally, leaders create a vision of the future and demonstrate that vision through their actions. If employees believe that their behaviors will lead to the accomplishment of related goals, they will behave accordingly. The creation of a workplace characterized by mutual respect is a vision that employers and employees should embrace. If leaders communicate organizational values, priorities, expectations, and concerns, and also model that vision, they can have a significant impact on the development of a mutual respect culture. While a culture of mutual respect is not a utopia, it should result in higher job satisfaction, less conflict, and lower stress.

Second, employers also need to switch their approach to solving the bullying problem from a top-down to a bottom-up approach. In today's workplace it is not enough to rely only on rules and punishments as means of preventing and eliminating bullying. Rather, employers need to approach this issue just as they do other organizational change efforts and ask employees to help define what constitutes a mutual respect culture. This approach will ultimately change employees' attitudes, the organization's culture and norms, and lead to a shared understanding and acceptance of both anti-bullying and mutual respect behaviors.

CONCLUSION

Without law to prohibit and prevent the damaging effects of workplace bullying, employers will have to face the problem. The model Healthy Workplace legislation under consideration around the country could be used to provide guidance for anti-bullying policy. However, policy can only go so far. If employers truly want to extinguish bullying in the workplace before it occurs, it is recommended that employers adopt an approach that will lead to a culture of respect.

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IFRS ENFORCEMENT AND POSSIBLE ROLES OF THE SEC
AFTER CONVERGENCE TO IFRS

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Abstract: The United States is one of the last countries to consider the convergence to International Financial Reporting Standards (IFRS). Currently there is not a strong global enforcing body in existence for IFRS. Countries that have converted to IFRS maintain their own standards of regulations. While a few global or multi-national systems look out for the interests of stockholders, none have enforcing power. The objective of this paper is to review current major global regulatory bodies and SEC structure and to provide suggestions regarding how to structure SEC to facilitate international regulatory and enforcement activities worldwide particularly after IFRS convergence in the United States.

INTRODUCTION

In the United States, the Security Exchange Commission (SEC) provides investor protection by strong market regulation of publicly traded entities. The SEC enforces the rules and regulations to maintain fair business dealings and to protect investors against fraud by altering and creating new ways to regulate the investment market. The US is one of the last countries to consider the conversion to International Financial Reporting Standards (IFRS). In order to be competitive in financial reporting terms on a global scale, the conversion for the US seems inevitable. Currently, a strong global enforcing body does not exist. Countries that have converted to IFRS maintain their own standards of regulations. While a few global or multi-national systems look out for the interests of stockholders, none have enforcing power. The objective of this paper is to discuss the global IFRS enforcement and the possible role of the SEC after the US converges to IFRS. Specifically, this paper aims at exploring potential possibility of building upon or extending the existing structure of the SEC to fulfill its role of enforcing the compliance of IFRS as well as collaborating with agencies across the borders to ensure the compliance is executed at both national and international level. This paper proceeds as follows. Section 2 reviews the current role of the SEC and IFRS convergence status. Section 3 discusses the enforcement function of the SEC after IFRS convergence. Section 4 reviews the international IFRS enforcement efforts and Sections 5 and 6 conclude suggestions for global IFRS enforcement and the role of SEC after IFRS convergence.

THE SECURITY EXCHANGE COMMISSION (SEC) AND IFRS CONVERGENCE

The Security Exchange Commission was created in 1934 to restore investors' confidence and to protect their interests after the Great Depression and the stock market crash in 1929. The SEC accomplishes shareholder protection by strong market regulation of the publicly traded entities. These companies must disclose detailed and meaningful financial statements and other information that might influence the public's financial decisions. Shareholders need to make decisions about their investments by observing and studying the comprehensive and accurate financial and non-financial information provided by publicly traded companies. One of the SEC's responsibilities is to enforce the rules and regulations in order to maintain fair business transactions and to protect investors against fraud. The SEC describes this role on its website in the mission statement as "The mission of the U.S. Securities and

Exchange Commission is to protect investors, maintain fair, orderly, and efficient markets, and facilitate capital formation"[1]

The SEC fundamental function is to supervise the security industry's key participants by enforcing US Generally Accepted Accounting Principles (GAAP). GAAP ensures comparability of financial statements among US companies to aid the decision process of investors, who need access to detailed disclosures about companies' operations and financial performance in order to make sound investment decisions.

Since the late 1950s, the concept of the International Convergence has been around and growing. Different countries established different measures to bring the global accounting standards into one common system. The United States observed these changes for decades, but did not join the effort until the late 1990s. In 1996, the SEC first announced publicly that it was considering the acceptance of the International Accounting Standards Committee's (IASC) standards for Foreign Private Issuers. As IFRS had already been adopted in many countries by that time, the US lagged behind the entire world. In 2007, a final ruling was published by the SEC about the elimination of the reconciliation to US GAAP for Foreign Private Companies. In 2008, the SEC followed that ruling by formulation of a roadmap that laid out the mandatory use of international standards by all SEC-registered publicly traded companies as early as 2014. In 2011, the SEC set a 2012 goal to decide whether to converge to IFRS.

Prior studies suggest that there is a growing consensus that if the US wants to continue to attract foreign investor's capital and remain an active participant in the global market, the convergence of the current US GAAP to the IFRS is inevitable (Khurana and Michas, 2011; Cai and Wong, 2010; Hail, Leuz, and Wysocki, 2010).

IFRS AND SEC ENFORCEMENT

Crucial to the SEC's effectiveness in the area of its function is its enforcement authority (Werner, 1984). Each year the SEC brings hundreds of civil enforcement actions against individuals and companies for violation of the securities laws. Typical litigation includes insider trading, accounting fraud, and providing false or misleading information about securities and companies. The SEC is the primary overseer and regulator of the U.S. securities market by working closely with many institutions, including Congress, federal departments and agencies, the self-regulatory organizations (e.g. the stock exchanges), state securities regulators, and various private sector organizations such as American Institute of Certified Public Accountants (AICPA). Although enforcement plays a crucial role for the effectiveness of capital market and financial reporting, the accounting literature has given less attention to the issue of enforcement even though enforcement is critical to the proper application of the accounting rules (Leuz, 2010).

The enforcement issue is particularly important as the world moves toward unifying the accounting language by adopting IFRS. However, prior research suggests that even if countries might use IFRS accounting language, it is unlikely that a one-size fits all regulation and enforcement system would necessarily follow because the level of disclosure requirement, the rigor of capital security laws, the economic, cultural and political environments of countries are different (Leuz, 2010; Licht, 2007; La Porta et al., 1997, 1998, 2006). The level of enforcement efforts also varies widely across international boundaries and even within regions such as Europe (Jackson, 2007). Daske et al. (2008) show that countries' institutional differences,

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[1] http://www.sec.gov/about/whatwedo.shtml

including legal enforcement plays a critical role for the capital market. Wilson (1989) comments that countries' informal actions, private negotiations, and industry guidance substitute to some degree for formal enforcement actions. As matter of fact, most countries maintain their own country-specific enforcement systems after IFRS adoption and it is unlikely and unnecessary that countries must converge to a harmonized regulatory and enforcement system even if the global markets are moving toward one common accounting language. According to Wilson's examination of European administrative practices and American practices (1989), there is no clear relationship between each nation's results and the management of its regulatory process and the laws it enforced.

However, principle-based IFRS leaves room for diverse reporting practice and disclosure; the convergence will not achieve much comparability and transparency if there is no proper level of consistent enforcement across countries. Even when firms report all relevant information in a truthful manner, regulation and enforcement ensure consistent application of reporting rules, which improves the objectivity of analysis and credibility of the financial system as a whole (Zingales, 2008). Based on a similar notion, Luez (2010) proposes an independent agency as an international enforcement mechanism that provides global oversight of financial reporting.

The SEC does not necessarily need to converge with or conform to the "international" level regulatory systems because there are significant institutional differences among countries, including their legal, political, and economic systems. It is, however, imperative that SEC extends its enforcement function and current operational units in order to closely collaborate with other international regulatory bodies to enforce the financial reporting rules that will be used by the companies domestically and globally. This "collaborative" instead of converged enforcement mechanism is necessary in order to maintain discipline among the listed companies across countries. The SEC will most likely maintain its current strong role in regulating the capital market and ensuring the financial reporting compliance, but its future role after IFRS convergence would be to participate in on-going international conversations to address regulatory issues and standards that evolve over time.

Before exploring the options for SEC's role in enforcing IFRS and how it can collaborate with other international level enforcement agencies, the following brief review of existing international regulatory agencies will help to shed light on ways to structure collaboration with those agencies to enforce the IFRS reporting.

INTERNATIONAL ENFORCEMENT EFFORTS

European Union (EU) IFRS Enforcement

International Accounting Standard Board (IASB) is a non-governmental, privately funded independent organization, which does not have authority to require countries to comply with IFRS. The IASB's function is to develop and maintain a set of standards, but not to enforce them. When the regulation on the application of IFRS was adopted in July 2002, the Committee of Securities Regulators (CESR)[2] was asked to develop standards for enforcement of the accounting principles. The proposal required the adoption of IFRS and the introduction of an independent institutional oversight mechanism. Member states must set up an independent institutional oversight mechanism in order to certify that the financial statements comply with

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[2] The European Commission Committee of European Securities Regulators (CESR):
http://ec.europa.eu/internal_market/securities/cesr/index_en.htm

IFRS. That is, enforcement is carried out by independent administrative authorities in each member state. In order to ensure that the work done by the various member states is comparable, it was also decided that CESR develops two related standards. Standard 1 identifies the need for setting up an appropriate mechanism whereby CESR members discuss enforcement issues in order to achieve a high level of coordination and convergence. This standard requires the state members to appoint an independent party to check the financial statements and keep other member states informed about decisions in order to ensure that rules are complied with in a comparable way. Standard 2 relates to the coordination of enforcement activities and contains more specific guiding principles of enforcement activities.

Regulatory Bodies in North, South and Central America and in the Caribbean Regions

The current existing North American Securities Administrators Association (NASAA) is another global organization involving in enforcing and monitoring global financial reporting. The NASAA was created in 1919 to protect international investors' interest and is the oldest international investor protection organization. Today, NASAA membership consists of 67 state, provincial, and territorial securities administrators in the 50 states, District of Columbia, U.S. Virgin Islands, Puerto Rico, Canada, and Mexico. Empowering an organization like NASAA, to be the global protector of investors' rights could be a first step for IFRS to be implemented and regulated in the North America region.

The Council of Securities Regulators of the Americas (COSRA) is another possible cross-broader regulatory unit for IFRS enforcement. COSRA has a very similar role to the NASAA, which is to protect investors' interest. Established in 1992, COSRA is a forum for North, South, Central America and the Caribbean security regulators. The existing international and institutional infrastructure of NASAA or COSRA can be used to build a cost effective regulatory system for enforcing IFRS compliance. All the countries of the Americas that chose to adopt IFRS standards will be regulated by this body. If the NASAA or COSRA does not want to take on additional commitment, creating a sub international regulatory agency that works with NASAA or COSRA could be another option, but cost and time needed to create a separate new international agency may be a concern.

Other Global Regulatory Bodies

The International Organization of Securities Commissions (IOSCO)[3] is another regulatory body. Formed in 1983, The IOSCO expanded from an inter-American regional association into a global cooperative body. In 1984, securities regulators from France, Indonesia, Korea and the United Kingdom were the first agencies to join the organization from outside the Americas. Today IOSCO is recognized as the international standard setter for securities markets. Its membership regulates more than 95% of the world's securities markets and it is the primary international cooperative forum for securities market regulatory agencies. IOSCO members are drawn from over 100 jurisdictions and its membership continues to grow. In 2002, IOSCO adopted a Multilateral Memorandum of Understanding (MMoU) designed to facilitate cross-border enforcement and exchange of information among international securities regulators. Principles of the MMoU are considered primary instruments in facilitating cross-border cooperation, reducing global systemic risk, protecting investors and ensuring fair and efficient securities markets. The major role of IOSCO is creating standards and surveillance of international securities transactions. IOSCO wants to promote the "integrity of the market by a

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[3] IOSCO http://www.iosco.org/about/index.cfm?section=background

rigorous application of standards and by effective enforcement against offenses."[4] It is possible that this organization could fulfill the global responsibility by enhancing the power of IOSCO to ensure that all IFRS countries are mandated by the organization and by obliging all the listed companies to follow the IFRS.

Building on the experience of CESR, the Standing Committee No 1 of IOSCO has recently started a project similar to that was developed by EU's CESR-Fin for the coordination of enforcement of financial information, with a particular interest in governing multi-national enterprises reporting under IFRS. These two groups have coordinated joint efforts to increase the effectiveness and efficiency of monitoring the IFRS compliance. Broadening the coordination of enforcement beyond the boundaries of Europe will become a necessity as the application and recognition of IAS/IFRS progresses worldwide.

Given many existing international regulatory agencies, there should be an overall international collaborative to coordinate the enforcing activities, so the enforcement of IFRS can be carried out with consistency. This can be accomplished by forming a new global IFRS enforcer or having one of the existing international institutions leads this overall international collaborative.

SUGGESTIONS FOR GLOBAL IFRS ENFORCEMENT AND SEC STRUCTURE

Form a Global IFRS Enforcer

To form the international IFRS enforcement institution, a country could send representatives to the meetings and have input over developing the guidelines and rules. As discussed previously, each country will maintain its own regulatory system and the enforcement will still be executed at country level while the global organization would periodically check corporate financial statements in randomly selected countries. A standard system can be established to hold countries accountable. Because every country benefits from being part of a global economy, they would have an incentive to regulate their companies strictly. That is, the regulations will be enforced at the country level, where the global organization will be monitoring the reporting compliance. Countries would be allowed to participate in the global system as long as they make their own countries' firms comply with the regulations. Since all the countries have their country-specific regulations, they would continue to have degree of freedom to determine whichever method would make their own country's corporations more responsible. For example, in US, publicly traded companies need to comply with the Sarbanes-Oxley Act in addition to financial reporting rules.

Under this scenario, each country would maintain its own enforcement system in regulating the stock market and enforcing the IFRS and would report to the global regulatory body such as NASAA, COSRA, IOSCO or a new collaborative entity on behalf of the firms. Number of representatives sent to the organization could be measured by the size of capital market, population or other appropriate measures determined by this international regulatory organization. The following sections contain suggestions related to effect on the SEC after IFRS convergence.

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[4] IOSCO http://www.iosco.org/about/index.cfm?section=background

Establish Mandatory Compliance System

Assuming the formation of the international regulatory unit discussed above, the SEC[5] would need to modify its organizational structure in order to closely collaborate with international regulatory units. Regulation, compliance and enforcement are three main functions of the SEC that would be particularly affected by IFRS convergence. SEC could require firms to designate compliance officers for IFRS financial reporting. In order to comply with regulatory requirements under Sarbanes-Oxley laws, the vast majority of firms may already hire compliance officers to ensure the policies and procedures are followed. Making the financial reporting compliance officers a mandatory requirement may enhance the IFRS reporting rules being carried out more consistently. This mandatory compliance can be incorporated in the compliance requirement embedded in SOX 302. For highly regulated industries such as financial banking, insurance, food and drug industries, firms may decide to designate two compliance officers, one for industry specific rules and regulations and the other for IFRS reporting. The compliance officers from each firm will directly report to SEC Regional Office, which then reports to the offices of Enforcement, Compliance Inspections & Examinations. This reporting structure will directly connect the enforcement and compliance function of SEC to company level.

Modify Reporting System

The SEC would continue its official role in supervising US financial reporting and would also collaborate closely with other countries on matters of international enforcement of IFRS. This requires a reporting system that closely monitors the IFRS compliance. In the era of GAAP, the Office of International Affairs (OIA)[6] worked with a global network of securities regulators and law enforcement authorities to facilitate cross-border regulatory compliance. Given OIA staff's specialized knowledge in international affairs, foreign laws and regulations, the SEC can build upon this existing office by expanding its existing relationship with other countries to enhance international regulation enforcement organizations. After IFRS convergence, the role of OIA is expected to be more proactively involved in international financial reporting enforcement and regulatory matters. To closely monitor IFRS compliance, all regional SEC offices should directly report to the OIA as well as to the Enforcement Division and the Office of Compliance Inspections and Examinations, to which these regional offices currently report.

Establish an Advisory Group and Regulatory Committee

The United States could also establish a system resembling the European Financial Reporting Advisory Group (EFRAG) and the Accounting Regulatory Committee (ARC) used in the EU. The EFRAG is responsible for providing advice to the European Commission (EC) regarding accounting matters. When implementing IFRS, the EFRAG reviews each standard and decides whether the EC should adopt that standard for use in Europe. The EC then seeks advice from the ARC, which is a governmental organization comprised of representatives from

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[5] The Commission consists of four Commissioners and one Chairman with five divisions and eighteen offices. The eleven regional offices directly report to both Division of Enforcement and Office of Compliance Inspections and Examinations. The SEC is currently in the process of establishing the Office of Credit Ratings, the Office of Investor Advocate, and the Office of Municipal Securities, required by P.L. 111-203. Appendix 1 shows the organization chart of SEC. Three divisions that are most likely related to IFRS reporting and enforcement are, International Affairs, Enforcement and Compliance Inspections & Examinations.

[6] The mission of OIA is "…to promote investor protection and monitor securities transactions cross-border by advancing international regulatory and enforcement cooperation, promoting the adoption of high regulatory standards worldwide, and formulating technical assistance programs to strengthen the regulatory infrastructure in global securities markets." (http://www.sec.gov/about/whatwedo.shtml#org)

each member state of the EU, and is responsible for reviewing the IFRS regulations and providing recommendations about adoption in the EU. If the ARC recommends approval of a particular standard, the EC decides whether to endorse the standard as written by the IASB (or as amended) or to reject it. If endorsed, the standard becomes regulation for all firms in the EU to follow.

The United States could set up national advisory bodies similar to the EFRAG and ARC. The body resembling EFRAG could be comprised of elected members from different industries within each state, while the one similar to ARC that could be comprised of accounting experts elected by the SEC from around the country. Establishment of these bodies would ultimately result in groups of industry leaders within each state to meet regularly and address nation-wide issues relating to each industry as well as coordinate effective control techniques within each industry among the different states. This establishment will allow for collaboration among industries on how to handle financial reporting issues. The SEC would act as the top authoritative agency within the United States to ensure that individual states and the companies within them are following IFRS and establishing effective controls for deterring and handling fraud. The advisory group and regulatory committee should report to the SEC chair and commissioners.

Create a Subunit to Bridge the SEC and the Global Regulatory Body

To ensure high level of coordination and compliance around the globe, the SEC should also establish a subunit to bridge the SEC and the global regulatory body for implementing IFRS and dealing with international companies. This new subunit will coordinate the Enforcement Division, the Office of International Affairs, and the Office of Compliance, Inspections and Examinations. It also would communicate with the global regulatory body on behalf of the SEC and would be specifically responsible for participating in voting or establishing financial reporting rules and regulations at the global level of institutions such as IASB, IOSCO, CESR, NASAA, COSR or a new collaborative as previously discussed.

Although each country has its existing regulatory system (i.e. SOX act of 2002 in the US), the regulatory decisions and handling of disputable cases should be shared among countries, so similar cases can use the prior cases as references, which it is hoped will lead to consistency. The overall global regulatory unit can develop the shared information to a database that consolidates and integrates all the legal and accounting practices. The information sharing system can be implemented by adding specific IFRS dispute issues to the current database of Accounting and Auditing Enforcement Releases (AAER) which are publicly available on the SEC website. The protection of confidentiality of companies, information shared in the database will be a key issue in sharing the case treatment among countries.

Appendix 2 depicts the reporting relationship among SEC offices and the relationship between the SEC and international standard bodies. Specifically, this figure shows how a subunit coordinates US and global regulatory bodies.

CONCLUSION

This paper proposes changes to the SEC structure in order to coordinate international financial reporting and IFRS enforcement. After a review of the current existing global regulatory bodies and SEC structure, a few recommendations are made: 1) an international IFRS enforcement body should be formed by expanding the existing cross-border regulatory bodies. Each country should maintain its own country-specific regulatory system but it should report to this international regulatory body regarding IFRS compliance. 2) The current SEC compliance system should be strengthened by a mandatory requirement that publicly traded companies have an office that monitors the IFRS compliance and directly reports to the SEC regional office. 3) The current eleven regional offices should directly report to the Office of International Affairs in addition to the Office of Enforcement and Office of Compliances, Inspections and Examinations. 4) The SEC should establish an advisory group and a regulatory committee to support the IFRS compliance and enforcement. 5) The SEC should create a subunit to bridge the SEC to the IFRS enforcement at the global level and to facilitate the enforcement activities within the US as well as across borders. Handling of disputable cases and applications of standards by individual countries can be shared through a database created by the international regulatory bodies such as IOSCO to ensure consistent coordination of enforcement activities and compliance at the global level.

Much further discussion is needed on the implementation issues of financial regulatory systems pertaining to IFRS, and potential implications for the future role of the SEC as part of a compliance enforcement body which will be crucial to US after the GAAP convergence to the IFRS.
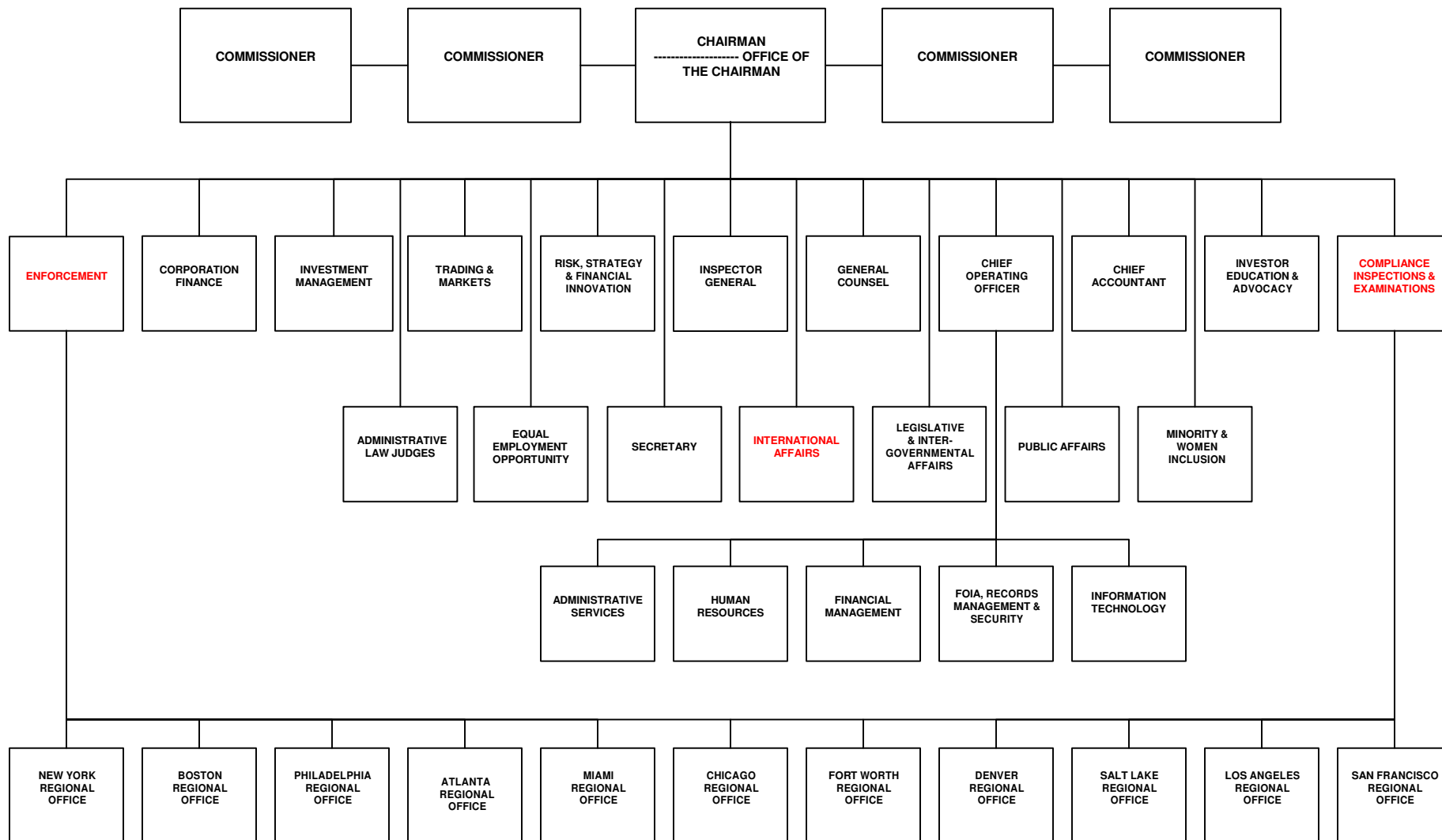
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[2] The European Commission Committee of European Securities Regulators (CESR):
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3 IOSCO: http://www.iosco.org/about/index.cfm?section=background

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[5] http://www.lexology.com/library/detail.aspx?g=a9c0b625-7d06-435c-9d71-bb232e366c92

6 More details about USA PATRIOT ACT: http://www.fincen.gov/statutes_regs/patriot/

[7] IOSCO website: http://www.iosco.org/lists/display_committees.cfm?cmtid=5

[8] Office of International Affairs (OIA), SEC: http://www.sec.gov/about/whatwedo.shtml#org

APPENDIX 1. SEC ORGANIZATIONAL CHART (source: SEC website)

COMMISSIONER	COMMISSIONER	CHAIRMAN -------------------- OFFICE OF THE CHAIRMAN	COMMISSIONER	COMMISSIONER

ENFORCEMENT	CORPORATION FINANCE	INVESTMENT MANAGEMENT	TRADING & MARKETS	RISK, STRATEGY & FINANCIAL INNOVATION	INSPECTOR GENERAL	GENERAL COUNSEL	CHIEF OPERATING OFFICER	CHIEF ACCOUNTANT	INVESTOR EDUCATION & ADVOCACY	COMPLIANCE INSPECTIONS & EXAMINATIONS

ADMINISTRATIVE LAW JUDGES	EQUAL EMPLOYMENT OPPORTUNITY	SECRETARY	INTERNATIONAL AFFAIRS	LEGISLATIVE & INTER-GOVERNMENTAL AFFAIRS	PUBLIC AFFAIRS	MINORITY & WOMEN INCLUSION

ADMINISTRATIVE SERVICES	HUMAN RESOURCES	FINANCIAL MANAGEMENT	FOIA, RECORDS MANAGEMENT & SECURITY	INFORMATION TECHNOLOGY

NEW YORK REGIONAL OFFICE	BOSTON REGIONAL OFFICE	PHILADELPHIA REGIONAL OFFICE	ATLANTA REGIONAL OFFICE	MIAMI REGIONAL OFFICE	CHICAGO REGIONAL OFFICE	FORT WORTH REGIONAL OFFICE	DENVER REGIONAL OFFICE	SALT LAKE REGIONAL OFFICE	LOS ANGELES REGIONAL OFFICE	SAN FRANCISCO REGIONAL OFFICE

APPENDIX 2. STRUCTURE OF SEC AND IFRS ENFORCEMENT

SEC Chair and Commissioners

Enforcement

Compliance, Inspections and Examinations

International Affairs

Other SEC divisions and offices

All eleven existing regional offices directly report to the three units (instead of just Enforcement, Compliance, Inspections and Examinations as currently structured.)

Advisory Group

Regulatory Committee

National Level

Subunit- coordinates US IFRS regulation and compliance activities and works with other global regulatory/enforcement bodies

International Level

International Standards Bodies such as IASB

Shared information database such as accounting treatment, compliance and enforcement cases

International Regulatory/Enforcement body or forum such as IOSCO, CESR, NASAA. COSRA

CURRENT DEVELOPMENT OF THE NEW TAX LAW

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Abstract: In the past three years there were three important legislative acts in income tax law. This paper investigates their impacts. It points out that the new tax law increases the highest income tax rate to 39.6% and the dividends and the long-term capital gains tax rate to 20%. It raises the employee Medicare tax to 2.35% and the medical expense deduction floor to 10%. It reinstates the phase-out of the total itemized deduction and the personal exemption. It imposes a new "net investment income tax" at 3.8%. It further charges a 2.3% excise tax on medical device. It also imposes penalties on those who are uninsured. This paper explains some details and gives any examples. The paper also offers tax planning strategies.

INTRODUCTION

In a long series of legislative acts in the past two years, the tax law has been greatly changed. It involves three major acts: (A) The "American Taxpayer Relief Act of 2012" (The Act-1),[i] (B) The "Patient Protection and Affordable Care Act of 2010" (The Act-2),[ii] and (C) the "Health Care and Education Reconciliation Act of 2010" (The Act-3).[iii] The last two were commonly known as "Obamacare." Altogether as a group it raises the maximum marginal individual income tax rate from 35% to 39.6%. It increases the highest qualified dividends and long-term capital gains tax rate from 15% to 20%. It imposes a new "net investment income tax" at 3.8%. It boosts the employee's Medicare tax from 1.45% to 2.35%. It raises the medical expense deduction threshold from 7.5% to 10%. It further charges a new excise tax on medical devices at 2.3%. It levies another excise tax on health coverage provider at 40% on premium exceeding a threshold amount. In addition, it reinstates the phase-out on total itemized deductions and personal and dependency exemptions. This is the current development of the new tax law. The impact is truly monumental, and the system is highly complicated. This paper elaborates the details with examples and offers some tax planning strategies.

INDIVIDUAL INCOME TAX RATE FROM 35% TO 39.6%

The most devastating impact of the new tax law is the increase in individual income tax rate. The marginal tax rate depends on taxable income. Before The Act-1 there were six tax brackets (10%, 15%, 25%, 28%, 33% and 35%). The Act-1 adds one more, i.e., 39.6% for unmarried taxpayers with more than $400,000 of taxable income ($450,000 for married taxpayers filing a joint return, or $425,000 for a head of household).[iv] Hence, there are now seven tax brackets. Clearly, The Act-1 is targeting the wealthy taxpayers for higher tax.

It should be noted that the highest corporate marginal income tax rate remains the same as it was before still at 35% on corporate taxable income, while the individual marginal tax rate is now increased to as high as 39.6%. The difference is as much as 4.6% (39.6% - 35%). It should alert the taxpayer that, for the first time in the last ten years, the corporate tax rate is now lower the individual tax rate. There is an important implication. It is more beneficial to switch from individual income to corporate income.

There are many strategies to accomplish this objective. It is true that an S corporation's income is taxed at an individual tax rate, while a C corporation at a corporate rate. This involves the choice between an S corporation and a C corporation. In the case of profit, it is more advantageous to operate the business as a C corporation than an S corporation because the former entails less income tax than the latter. Likewise, in the case of losses, it is equally beneficial to operate the business as an S corporation than a C corporation because the former saves more income tax than the latter.

Before 1993 the individual tax rate was higher than the corporate tax rate. C corporation was more preferable than individual. Since 1993, both rates are equal, but a C corporation is subject to double taxation, S corporation became more beneficial. And now the C corporation tax rate is much lower than the individual. This should send a notice to the taxpayers that there is a compelling reason to convert from S corporation back to C corporation again. The Act-1 will definitely cause such a strategic maneuver.

In another strategy a taxpayer may find it more profitable to realize an income under a business than under an individual. For example, Alex is a one-man company. He needs to open up a bank account. Should he do it under the company's name or under his personal name? The former entails less income tax (at 35%) on the interest income than the latter (at 39.6%). Obviously, the former is more preferable than the latter. Again, The Act-1 will encourage a taxpayer to move income away from the individual income.

By the same principle a taxpayer may find it more desirable to recognize an expense under an individual than under a business. For example, Bruce is a one-man company. He intends to donate cash to a local hospital. Should he do so in the name of his business or under his personal name? The former is a business expense that saves income by only 35%, while the latter is a personal itemized deduction that saves income tax by as much as 39.6%. Evidently, the latter is more beneficial than the former. Again, The Act-1 will discourage a taxpayer from realizing expense under a business.

These examples show that, under the new tax law, there is a difference in income tax rate between an individual and a business. A taxpayer should choose business in the event of gains, but individual in the case of losses. Although income tax rate goes up, there are strategies that a taxpayer can still take advantage of it.

QUALIFIED DIVIDENDS AND LONG-TERM CAPITAL GAINS TAX RATE FROM 15% TO 20%

The equally noticeable change in the new tax law is the increase in dividends and long-term capital gains tax rate. It should be noted that the dividends and long-term capital gains tax rate depends on the level of income tax rate. Before The Act-1 if a taxpayer's income tax rate was 15% or lower, the dividends and long-term capital gains tax rate was zero percent (0%); otherwise, it is 15%. In other words, there were two tax brackets for dividends and long-term capital gains, i.e., 0% and 15%. At that time the highest income tax bracket was 35%. Since the Act-1 adds one more income tax bracket at 39.6%, it also adds one more dividends and long-term capital gains tax bracket at 20%.[v] The Act-1 did not really increase the dividends and long-term capital gains tax rate from 15% to 20%; instead, it only adds one more tax bracket. If a taxpayer's marginal income tax rate is 39.6% the dividends and long-term capital gains tax rate is 20%. In other words, for those unmarried taxpayers, whose taxable income is $400,000 or lower, the maximum dividends and long-term capital gains tax rate is still 15%. Beyond this point the tax rate is 20%. Therefore, after The Act-1 there are now three dividends and long-

term capital gains tax brackets, i.e., 0%, 15% and 20%.

It is rather interesting to observe that, although the dividends and long-term capital gains have three different rates, they are flat rates, not progressive rate. It applies the rate to the whole amount of dividends, not piece-meal.

For example, Taxpayer A, unmarried, has $400,000 taxable income including $1,000 dividends. Taxpayer B, also unmarried, has $401,001 taxable income including $1,000 dividends. What are their dividends tax liabilities under The Act-1, respectively? For the former, the table income before or after the $1,000 dividends always falls into the 35% tax bracket. Therefore, the dividends tax rate is 15%, and hence the dividend tax liability is $150 ($1,000 x 15%). On the other hand, for the latter, the table before or after the $1,000 always falls into the 39.6% tax bracket. Therefore the dividends tax rate is 20%, and hence the dividends tax liability is $200 ($1,000 x 20%). This example shows that the $1,000 dividends never cause the marginal income tax bracket to cross the 35% income tax bracket. This is easy.

However, in the event that the amount of dividends does cause the income tax bracket to cross the rate boundary, the portion of the dividends below the boundary is taxed at a lower rate, while the remaining portion of the dividends is taxed at a higher rate. Here is an example.

Taxpayer C, unmarried, has $400,900 taxable income including $1,000 dividends. What is his dividend tax liability under The Act-1? Evidently, before the $1,000 dividends, the taxable income was $399,900 ($400,900 - $1,000). The $1,000 dividend has caused the marginal income tax rate to cross marginal income tax rate to cross from 35% to 39.6%; consequently, it also caused the dividends tax rate to jump up from 15% to 20%. Therefore, the first $100 ($400,000 - $399,900) of the dividends is taxed at 15%, i.e., $15 ($100 x 15%), while the remaining $900 ($1,000 - $100) is taxed at 20%, i.e., $180 ($900 x 20%), totaling $195 ($15 + $180). This example illustrates that, if he dividends causes the income tax rate to cross the tax rate boundary, a portion of the dividends is taxed at a lower rate (15%), the remaining portion is taxed at a higher rate (20%). This is more complicated. The taxpayer must be aware of the dividends threshold amount. In this example, it is more beneficial for the investor to receive only $100 dividends, rather $1,000, because the additional $900 dividends are taxed at a higher rate. The threshold amount becomes a critical point for tax planning strategies.

NEW NET INVESTMENT INCOME TAX AT 3.8%

Perhaps the most detrimental consequence of the new tax law is the imposition of a new category of income tax on net investment income. This is the major backbone to finance the so-called "Obamacare." The Act-3 provides that an additional income tax is imposed on taxpayers at a rate of 3.8%[vi] of the lesser of
(a) net investment income, or
(b) the excess of the modified adjusted gross income over a threshold amount of $200,000 for unmarried taxpayers or a head of household ($250,000 for married taxpayers filing a joint return, and $125,000 for married taxpayers filing a separate return).[vii]

This new tax is known as "net investment income tax" (NIIT). It also applies to estate and trust. In that case net investment income means undistributed net investment income and threshold amount means dollar amount at which the highest tax bracket begins ($11,950 in 2013).[viii]

Modified adjusted income means adjusted gross increased by income exclusion amount, such as foreign earned income exclusion ($97,600 in 2013).[ix] Net investment income means unearned income. It includes three categories:

(a) Gross income from interest, dividends, rents, royalties, annuities, etc.

(b) Passive income by which the taxpayer did not materially participate in the management of the business. It also includes gains from financial instrument transactions, such as spot, future, forwards, options, etc. It further includes commodity business, such a corn, wheat, soybeans, etc. Passive losses can be offset against passive income.

(c) Short-term or long-term capital gains from sales of properties not held for active business, such as stock, bonds, personal-use properties. Short-term or long-term capital losses can be offset against short-term or long-term capital gains.[x]

This means only the income, that the taxpayer did not actively earn is included in "net investment income. This is unearned income. The Act-3 imposes a 3.8% tax on it. On the contrary, the active income, that the taxpayer is engaged in earning is not included in "net investment income." Examples include wages, commissions, tips, profits from a business that the taxpayer operates, etc. The Act-3 does not impose the NIIT on earned income. It implies that the NIIT is targeting on those taxpayers who are investors and also affluent. The NIIT is not aimed at those taxpayers who are investor, but may not be wealthy, or those who are wealthy, but may not be an investor.

Actually, this NIIT is really not inevitable. There are strategies that can mitigate the tax burden. It should be noted that two conditions must be met for the NIIT to occur: positive amount of net investment income, and the modified adjusted income exceeding a threshold amount. The taxable "net investment income" is the lesser of these two amounts.

For example, a taxpayer, unmarried, has $201,000 adjusted gross income including $3,000 dividends. The taxable "net investment income" is the lesser of the $3,000 dividends or the $1,000 excess adjusted gross ($201,000 adjusted gross income - $200,000 threshold amount), i.e., $1,000. Had the taxpayer's adjusted gross income been $204,000, the taxable net investment income would have been the lesser of $3,000 or $4,000 ($204,000 - 200,000), i.e., $3,000.

If an income is not taxable, it is not included in "net investment income," such as interest income from municipal bonds, pension, Roth IRA withdrawal, proceeds from life insurance policy, inheritance from death, social security, gift up to $14,000, etc. A taxpayer can really maneuver to generate nontaxable income and thus reduce NIIT.

Even if there is "net investment income" there are strategies to offset against it. For example, if a taxpayer sells a stock for a capital gain, he may also sell a stock for a capital loss to offset against the gain. In another example, profit from an investment without material participation is a passive income and thus a "net investment income." The taxpayer may increase the hours of participation and thus convert from passive income to active income. It avoids the "net investment income."

There are also strategies that can reduce adjusted gross income. Many "adjustments" were made before reaching adjusted gross income, such as business losses, rental losses, moving expense, alimony payment, IRA contribution, tuition and fees, etc. For example, a taxpayer can simply go to set up a traditional IRA account and make a deposit. A taxpayer can go to take a course in computer to update his job skills. The tuition is an adjustment that can reduce the adjusted gross income. A taxpayer can always augment these adjustments so as to

reduce the adjusted gross income and hence reduce the "net investment income." There are many more strategies.

The above three tax rate increases can be summarized in the following table.

TAXABLE 1 - Changes in Tax Rates

TAXABLE INCOME			TAX RATE		
Un-Married	Married jointly	Head of household	Ordinary Income & short-term capital gain	Qualified dividend & long-term capital gain	Net investment income tax*
$0-8,925	$0-17,850	$0-12,750	10%	0%	0%
8,926-36,250	17,851-72,500	12,751-48,600	15%	0%	0%
36,251-87,850	72,501-146,400	48,601-125,450	25%	15%	0%
87,851-183,250	146,401-223,050	125,451-203,150	28%	15%	0%
183,251-398,350	223,051-398,350	203,151-398,350	33%	15%	3.8%
398,351-400,000	398,351-450,000	398,351-425,000	35%	15%	3.8%
400,001-up	450,001-up	425,001-up	**39.6%**	**20%**	3.8%

*At 3.8% of the lesser of net investment income or adjusted gross income in excess of $250,000 for married filing jointly ($200,000 for unmarried or a head of household).

EMPLOYEE'S MEDICARE TAX FROM 1.45% TO 2.35%

In order to finance the Obamacare, there is another tax spike. The Act-2 provides that, effective January 1, 2013, the employee's portion of the Medicare tax is increased by 0.9% of the gross wages or self-employment income in excess of $200,000 for unmarried taxpayers ($250,000 for married taxpayers filing a joint return on combined wages or self-employment income, or $125,000 for married taxpayers filing a separate return).[xi] In other words, the employee's Medicare tax will be increased from 1.45% to 2.35% (1.45% + 0.9%). It should be noted that, in the event of a joint return, the new tax rate applies to the combined gross wages or self-employment income for both the husband and the wife together, not separately.

The employer's portion of the Medicare tax remains the same as it was before The Act-2 at 1.45%. There is no threshold or limit on the Medicare tax on both the employee and the employer. With respect to the old age, survivor and disability tax, the tax rate does not change at 6.2% up to $113,700 (for 2013) of gross wages or self-employment income.

Here is an example. A taxpayer, unmarried, earns $220,000 of gross wages. What is the employee's and the employer's Medicare tax under The Act-2? For the employee, the first $200,000 is taxed at 1.45%, i.e., $2,900 ($200,000 x 1.45%), while the remaining $20,000 ($220,000 - $200,000 threshold amount) is taxed at 2.35%, i.e., $470 ($20,000 x 2.35%), totaling $3,370 ($2,900 + $470). The employer's Medicare tax is still at 1.45% on the entire $220,000 of gross wages, i.e., $3,190 ($220,000 x 1.45%).

It is rather surprising to observe that, for the first time in history, the employee's Medicare tax is increased beyond the employer's share. This can be attributed to the cost of "Obamacare."

So far, there are four increases in tax rates. What is the result? It can be tabulated in the following table:

TABLE 2 - Increases in Tax Rates and Threshold Amounts

		FROM	TO	INCREASE	THRESHOLD
A	Income tax rate	35%	39.6%	+4.6%	$400,000
B	Dividend and long-term capital gain tax rate	15%	20%	+5%	400,000
C	Net investment income tax (NIIT)	0%	3.8%	+3.8%	200,000
D	Employee's Medicare tax rate	1.45%	2.35%	+0.9%	200,000
	TOTAL			+14.3%	

It is quite astonishing to realize that the new tax law under these three Acts has increased, roughly, the tax rate by as much as 14.3%, besides other impacts as explained below. After these increases in tax rates, the updated tax rate could go up from 35% to as high as 49.3% (35% + 14.3%). This is truly tremendous. The worse is yet to come.

Notwithstanding the impact, it should be noted that each increase has a threshold amount. For example, for an unmarried taxpayer, the threshold amount is $400,000 for the highest income tax rate and dividends and long-term capital gains tax rate, and $200,000 for the new "net investment income tax" and the employee's Medicare tax rate. All these threshold amounts clearly indicate that these tax hikes are aimed at the wealthy taxpayers. Nevertheless, if a taxpayer can maneuver the income in such a way as not to cross the threshold amount, the effect on the tax spike can be substantially mitigated. That is the guiding principle of tax planning strategies.

MEDICAL EXPENSE DEDUCTION FLOOR FROM 7.5% TO 10%

Tax rate spike is not the only way to increase the tax burden. It can be done by means of decrease in tax deductions. It is a backdoor gimmick. In this case it involves the medical expense deduction which is a part of itemized deductions on Schedule A of Form 1040. Traditionally, only the medical expense in excess of 7.5% of the adjusted income is deductible. This is referred to as "floor." Now, The Act-2 provides that, effective January 1, 2013, the "floor" for the medical expense deduction is increased to 10%.[xii] It means that only the amount of medical expense exceeding 10% of the adjusted gross income is deductible. However, this rule does not apply to the taxpayers who are 65 and order up through December 31, 2016.[xiii]

If the deduction for the medical expense is reduced it will indirectly increase the taxable income and thus the tax liability. It should also be noted that there is no threshold amount for the medical expense deduction. It leads to the consequence that all taxpayers, regardless of the level of adjusted gross income or taxable income, will be affected by this new tax rule.

PHASE-OUT ON TOTAL ITEMIZED DEDUCTIONS

There is another backdoor gimmick to deny the tax deductions. This time it involves the total itemized deductions. The Act-1 provides that, effective January 1, 2013, a taxpayer's total otherwise allowable itemized deductions must be reduced by the lesser of

(a) 3% of the adjusted gross income in excess of a threshold amount of $300,000 for married taxpayers filing a joint return ($275,000 for a head of household, or $250,000 for unmarried taxpayers), or

(b) 80% of total otherwise allowable itemized deductions other than medical expense, investment interest expense, casualty or theft losses, and wagering losses.[xiv] In other words, the allowable itemized deductions in determining this threshold are state income tax, property tax, mortgage interest, charitable contributions, and miscellaneous deductions.

The reduction of the total itemized deduction is referred to as "phase-out." This requirement is quite complicated. Here is an example. A taxpayer, unmarried, has $350,000 of adjusted gross income and the following itemized deductions after considering all floors. What are the total itemized deductions allowed under The Act-1?

		Allowed	Allowable
a	Medical expense	$8,000	$0
b	State income tax	7,000	7,000
c	Mortgage interest	6,000	6,000
d	Investment interest expense	5,000	0
e	Charitable contributions	4,000	4,000
f	Casualty and theft losses	3,000	0
g	Miscellaneous deductions	2,000	2,000
h	Gambling losses	1,000	0
	TOTAL	36,000	19,000
	Floor: Lesser of (a) 3%x(350,000-$250,000) = 3%x100,000 = 3,000, or (b) 80%x19,000　　　　　　　　　　　= 15,200	(3,000)	
	TOTAL ITEMIZED DEDUCTIONS ALLOWED	33,000	

The total itemized deductions allowed have two floors. First, 3% of the $350,000 total itemized deduction in excess of the $250,000 threshold amount, i.e., $3,000 [3%x($350,000 - 250,000) = 3% x $100,000 = $3,000]. Second, the total allowable total itemized deductions are only $19,000 as listed in the last column, i.e., $15,200 (80%x$19,000). The floor is the lesser of $3,000 or $15,000, i.e., $3,000. As a result, the total itemized deductions allowed under the Act-1 is reduced by $3,000, i.e., $33,000 ($36,000 - $3,000).

This example shows that, as long as (a) the adjusted gross income is greater than the threshold amount, and (b) there are itemized deductions that are allowable (state income tax, mortgage interest, charitable contributions, and miscellaneous deductions), the total itemized deductions are subject to phase-out. Since there is a threshold amount, the phase-out is aiming at the affluent taxpayers. Nevertheless, if a taxpayer can make efforts to reduce those few allowable items of itemized deductions, the amount of phase-out can also be reduced.

PHASE-OUT ON PERSONAL AND DEPENDENCY EXEMPTIONS

There is another backdoor gimmick. This time it involves the reduction of personal and dependency exemptions. The Act-1 provides that the personal and dependency exemptions must be reduced by two percent for each $2,500 or fraction thereof by which the adjusted gross income exceeds the threshold amount of $300,000 for married taxpayers filing a joint return ($275,000 for a head of household, or $250,000 for unmarried taxpayers).[xv]

For example, a taxpayer, unmarried, has $297,600 adjusted gross income. How much is the personal exemption allowed in 2013 (personal exemption is $3,900) under The Act-1? The reduction percentage is

2% x [($297,600 - $250,000)/2,500] = 2% x (47,600/2,500) = 2% x 19.04 = 2% x 20 = 40%.

So the $3,900 personal exemption is reduced by 40%, i.e., $2,340 ($3,900 x 60%).

In fact, the concept of "phase-out" is prevailing in many places in income tax law, especially in tax credits. Total itemized deductions and personal and dependency exemptions are just two of them. The purpose is to deny tax deductions and tax credits to the affluent taxpayers.

NEW EXCISE TAX ON MEDICAL DEVICE AT 2.3%

In order to finance the "Obamacare" there is still another tax hike. This time it is carried out in the form of sales tax, rather than income tax. The Act-3 provides that a tax is imposed on the sale of any taxable medical device by the manufacturer, producer, or importer at a rate equal to 2.3% of the price.[xvi] By taxable medical device, it means any device that is intended for humans, except eyeglasses, contact lenses, and hearing aids.[xvii]

The tax on the sale of a product is a sale tax. Sales tax belongs to the jurisdiction of the state and local governments, not the Federal government. However, this additional 2.3% excise tax on the sale of any medical device belongs to the Federal government. As a consequence, the sale of a medical device now burdens two kinds of sale tax- state as well as Federal. Federal excise taxes have been imposed since the 1950s.

NEW EXCISE TAX ON HEALTH COVERAGE PROVIDER AT 40%

Surprisingly enough, the "Obamacare" still imposes another excise tax on high cost employer-sponsored health coverage. The Act 2 provides that "A 40 percent exercise tax will be imposed on health coverage provider starting in 2018 to the extent that the aggregate value of employer-sponsored health coverage for an employee exceeds a threshold amount."[xviii]

The tax threshold amount in 2018 is $10,200 multiplied by the health cost adjustment percentage with self-only coverage, and $27,500 in the case of the coverage other than self-only coverage. These amounts are just starting point for determining the thresholds for taxing excess benefits. This is known as "Cadillac" health plan. It means that if a health care provider offers discriminatory coverage to different employees the provider will be penalized with a 40% excise tax.

NEW TAX ON THE UNINSURED

If the "Obamacare" is not strange enough it even imposes penalties on those who do not purchase a minimum health insurance coverage. Starting January 1, 2014, the penalties per year per member of the family are the greater of a flat amount ($95 in 2014, $325 in 2015, $695 in 2016)[xix] or a percentage (1% in 2014, 2% in 2015, and 2.5% in 2016)[xx] of the family income in excess of the tax filing threshold amount). The tax filing threshold amount in 2014 for a single person is $10,150 ($6,200 standard deduction + $3,950 personal exemption). The amount of penalties is computed on the basis of per month, not per year, for the number of months in the year in which the family is not insured.

Here is an example to show how it works. A taxpayer is married filing a joint return with one child over 18 having an income of $40,000 in 2014, but uninsured for the entire 12 months of the year. What is amount of penalties in 2014 for all three members of the family together?

The flat amount of penalties is $285 ($95 x 3) in 2014. The tax filing threshold amount for the married couple is $20,300 in 2014, the excess amount of the family income over this $20,300 threshold is $19,700 ($40,000 - $20,300). One percent of the $19,700 excess amount is $197 ($19,700 x 1%). The amount of penalties is the greater of $285 or $197.

The purpose of the penalty is really not to finance the "Obamacare." Instead, it is to require every citizen to be medically insured. This example shows that, even a citizen has income above the filing threshold, he still has to pay a minimum penalty of $95 in 2014. The amount of penalty will go up steadily thereafter.

CONCLUSION

This paper delineates some important changes in income tax law under the three most recent legislations. It points out that the new tax law has raised the highest income tax rate from 35% to 39.6%, the dividends and long-term capital gains tax rate from 15% to 20%, the employee Medicare tax from 1.45% to 2.35%, and the medical expense deduction floor from 7.5% to 10%. The new tax law further imposes a new "net investment income tax" at a rate of 3.8%, and an excise tax on medical device at 2.3%. It further reinstates the phase-out provision on the total itemized deductions, and the personal and dependency exemptions. It also charges penalties on those who are uninsured. This paper explains some details and gives examples. This paper further offers many tax planning strategies.

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[i] The American Taxpayer Relief Act of 2012, P. L. 112-240, December 31, 2012.
[ii] The Patient Protection and Affordable Care Act of 2010, P. L. 111-148, March 23, 2010.
[iii] The Health Care and Education Reconciliation Act of 2010, P. L. 111-152, March 30, 2010.
[iv] IRC §1(i)3(A).
[v] Ibid §1(h)1(D).
[vi] Ibid §1411(a)(1).
[vii] Ibid §1411(b).
[viii] Ibid §1411(a)(2).
[ix] Ibid §1411(d).
[x] Ibid §1411(c).
[xi] Ibid §3101(b)(2).
[xii] Ibid §213(a).
[xiii] Ibid §213(f).
[xiv] Ibid §68(b)(2).
[xv] Ibid §68(b)(1).
[xvi] Ibid §4191(a).
[xvii] Ibid §4191(b).
[xviii] Ibid §4980I.
[xix] Ibid §5000A(c)(3)(B).
[xx] Ibid §5000A(c)(2)(B).

AN EMPIRICAL ANALYSIS OF SFAS 159, FAIR VALUE OPTION, ON U.S. INSURANCE COMPANIES

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Abstract: For the past two decades there has been a global concern whether fair value should be used in accounting or historical cost (HC). While HC is perceived to be more verifiable and objective, the intent of the fair value option is to improve the relevance of financial information by presenting assets and liabilities at their current fair values.

This empirical study covers implications regarding market value and fair value disclosures for publicly traded US insurance companies for the first four years (2008-2011) after the implementation of the Statement of Financial Accounting Standards (SFAS) 159, *The Fair Value Option for Financial Assets and Financial Liabilities,* in November 2007. Since 1991 the Financial Accounting Standards Board (FASB) issued five updates on this topic. By issuing SFAS 159 in 2007, the board declares fair value accounting to be the preferred method over historical cost, therefore, establishing their position in the debate regarding the use of fair-value in accounting.

To the best of our knowledge, our study is the first in the insurance industry segment to investigate the association between the extent of FV disclosure and market risk (Beta), as well as the association between EPS and market risk, following the implementation of SFAS 159. Consistent with prior research, we utilize a panel data multivariate regression model to test our hypotheses. Our results show no significant association between fair value disclosure and the firms' exposure to market risk. In addition, we have found that earnings per share in the insurance sector are positively associated with companies' exposure to market risk. Moreover, we have found that the size of a firm is positively associated with market risk, while we have found no association between the firms' borrowing and market risk in the insurance sector.

Based on our sample observations, we conclude that the fair value disclosure requirement for insurance companies will not reduce the risk for these companies and has no significant impact on their cost of capital and, thereby, will not increase the market value of these companies. The policy implication of the results of our study is to provide standard setters and policy makers with evidence that can be used in their cost/benefit analysis of requiring the fair value disclosure in the insurance industry segment.

INTRODUCTION

The conventional accounting model that relies on historical cost was intended to be used in a market where prices are relatively stable and change very slowly. The historical cost (HC) accounting requires that most assets and liabilities to be measured and reported at their acquisition costs. Since historical cost is based on actual transactions, it is less subject to manipulations (Barizah and Bakar, 2007, p. 21; Aliabadi et al., 2013, p. 2). Furthermore, historical cost is relevant for making economic decisions because past prices serve as a

reliable basis for price forecasts (Barizah and Bakar, 2007, p. 21). The down-side is that HC is not relevant for decision-making because external users such as investors want to see the current changes in value of the financial instruments reflected on the books of the company. Therefore, historical cost is irrelevant in assessing an entity's current financial position (Barizah and Bakar, 2007, p. 21).

Contrariwise, the fair value represents the economic reality of the firms, instead of just a summary of past transactions (Barizah and Bakar 2007, p. 21). Another benefit of the fair value is the fact that it provides a better value of efficiency by separating profits or losses that arise from holding the assets before they are sold (Barizah and Bakar 2007, p. 22). However, in situations where a second-hand market does not exist, the determination of the fair value estimates is at the discretion of the managers, which makes it less verifiable and open to subjectivity. If no market prices are available, complex appraisals or calculations of costs and use of index numbers may be employed; therefore, there is a need for standardization of the method used (Barizah and Bakar, 2007, p. 22).

To respond to the current global economic environment, both the Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) have attempted to intensify the use of fair value estimates and disclosures into financial reports. In an effort to develop a single conventional set of global accounting standards, on October 2002 FASB and IASB signed a memorandum of understanding called "The Norwalk Agreement" (Verma, 2009). Subsequently, in the past two decades, the Financial Accounting Standards Board issued five significant standards regarding fair value accounting (FVA), SFAS 107 in 1991, SFAS 115 in 1993, and SFAS 133 in 1998 (Guthrie et al. 2011, p.489).

The first standard, SFAS 107, expanded disclosure agreements for assets and liabilities that were recognized on the balance sheet. With the implementation of SFAS 113 in 1993 we see an important departure from the historical cost and market valuation premise for debt and equity securities. Trading and available for sale securities would be reported at fair value, with unrealized gains and losses for available for sale securities excluded from earnings and reported in a separate component of shareholders' equity, while held-to-maturity securities still reported at amortized cost. Furthermore, SFAS 133 required that an entity recognize all derivatives as either assets or liabilities in the statement of financial position and record them at fair value.

The fourth important update regarding fair value reporting and disclosures is SFAS 157, which emerged in 2006. Prior to SFAS 157 there were too many definitions of fair value and little GAAP guidance, which created inconsistencies in use of fair value in practice. Therefore, this standard sets the framework on how to measure the fair value, while expanding disclosures about fair value measurements. SFAS 157 defines fair value as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date". To be noted, the definition of fair value concentrates on the price to be received by the market participant to sell the asset (also called exit price) as opposed to the price paid to acquire the asset (also called entry price).

Within six months form the issuance of SFAS 157 in September 2006, FASB issued SFAS 159[1]. The purpose of this statement was to improve financial reporting by providing

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[1] Available at http://www.fasb.org/pdf/aop_FAS159.pdf. On July 1, 2009, SFAS 159 was codified into Accounting Standards Codification Topic 825, Financial Instruments.

clear directives. This way companies can diminish volatility in reported earnings caused by measuring related assets and liabilities without having to apply complex hedge accounting provisions. The issuance of SFAS 159 "The Fair Value Option for Financial assets and Financial Liabilities" in November 2007 reached its highest point at the end of two decades of the debate between practitioners and accounting standards setters. By issuing this statement, the board declares fair value accounting to be the preferred method over historical cost.

The guidance in SFAS 159 related to fair value measurements needs to be applied simultaneously with SFAS 157 (Ratcliffe 2007, p.60). Furthermore, SFAS 159 requires the implication of fair value option on an instrument-by-instrument basis. Eligible items for fair value reporting include: long-term borrowings, nonfinancial insurance contracts and warranties, available-for-sale securities and mortgage loans held for sale, rights and obligations related to warranty agreements, written loan commitments (Aliabadi et al. 2013, p.). Ineligible items include leases, deposit liabilities, post retirement and pension benefits, financial assets and liabilities recognized under lease agreements, plus investments in subsidiary that the company needs to consolidate (Aliabadi et al. 2013, p. 2; Ratcliffe 2007, p.61). Moreover, the fair value option, if used, must be applied to entire instruments and not to portions of instruments (FAS 159, p.1).

An entity had the option to be an early adopter of the standard beginning of a fiscal year that starts on November 15, 2007, provided the entity meets certain conditions. The decision whether to adopt early or not had to be made within 120 days of the beginning of the fiscal year of adoption, while the fair value option to eligible items is retroactive to the early adoption date (FAS 159, p.1). Once elected, the decision is irrevocable until the instrument is sold (FAS 159, p.1).

LITERATURE REVIEW

The debate regarding the fair value in the insurance industry is important because of the controversy surrounding it. Both SFAS 157 and SFAS 159 were implemented in the midst of the 2007-2009 financial crisis and the activity related to pricing of third level securities was challenged to have implications with the economic recession (Cascini and DelFavero, 2011, p.7). Furthermore, Sarah Johnson, writer for CFO Magazine, the author of "Illiquid Markets Rock Fair-Value Accounting", suggests that most executives blame the use of FVA for volatile income statements and billion-dollar write-downs for the financial services firms (Cascini and DelFavero 2011, p.7). Among the biggest reasons for the write-downs is the significant exposure to mortgage-backed-securities, which are rights to the cash flows from pools of mortgage loans. On a global scale, by mid-September 2008, the financial services industry experienced about $500 billion of market-to-market write-downs (Cascini and DelFavero 2011, p.7).

Proponents of historical cost accounting (HCA) claim that fair value estimates lead to reduced reliability in comparison to historical cost (Barth et al. 2004, p.243). Barth et al. select only investment securities as well as gains and losses associated with investment securities to examine the difference between FVA and HCA. Within the banking industry, investment securities are government-issued debt securities and the intention is to hold them to maturity; therefore, any adjustments to fair value are not necessary (Barth et al. 2004, p.243). Their findings indicate that the incremental explanatory power on market value given by fair value estimates is superior to the one given by historical cost (Barth et al. 2004, p.244; Aliabadi et

al. 2013, p. 4). However, when gains and losses are examined, historical cost had bigger explanatory power over fair value estimates (Barth et al. 2004, p.244).

Following the implementation of SFAS 107, Nelson (1996) builds on Barth`s research by examining the association between the market value of common equity and fair value estimates. She focuses her research only on commercial banks. Nelson`s hypothesis is that the explanatory power of FVA is amplified by two competing indicators of value: growth in book value and return on equity. Barth tests her hypothesis using an empirical model that does not include the two value-control variables. Her findings indicate that "only the reported fair values of investment securities have incremental explanatory power relative to book value" (Nelson 1996, p.161). Nelson also examines the explanatory power of fair value disclosures for loans and long-term debt and finds no reliable evidence (Nelson 1996, p.161). In the seconds phase of her research, after adding the value-control variables (ROE and growth in book value), the results indicate that the fair value of investment securities no longer have notable associations with the market value, contrary to the prior findings resulting from the first phase (Nelson 1996, p.161).

In applying the SFAS 159, an entity shall report the effect of the first re-measurement to fair value as a cumulative-effect adjustment to the opening balance of retained earnings at effective date (FAS 159 p.20). These conditions create room for opportunistic election of the fair-value treatment at adoption for firms to avoid the recognition of an income statement loss because unrealized losses on securities can be transferred straight from accumulated other comprehensive income (AOCI) to retained earnings, without passing it through the income statement (Henry 2009,p.182). Furthermore, only increases in value succeeding the transfer resulting in a gain are to be recognized in the income statement (Henry 2009, p.182). The opportunistic implementation of the standard would have a one-time positive effect on earnings from loss avoidance (instead of recognizing losses on underwater securities in the income statement) through the transition adjustment and possibly gains from increases in the fair value of securities subsequent to the fair value election (Henry 2009, p.188).

Pursuing this loophole in the implementation of SFAS 159, Henry`s work in 2009 investigates its use for early adopters, testing whether the early adoption was opportunistic or not. From a total sample of 427 banks, 35 institutions announced the early adoption of SFAS 159, but 11 of them rescinded or revised the decision. The remaining of 392 banks were late adopters. In her study, Henry found that early adopters, both rescinders and nonrescinders, had significantly higher accumulated unrealized losses on securities than later adopters (Henry 2009, p.191). Henry suggests that the increased amount of unrealized losses among early adopters can be grounds to avoid reporting those losses on the income statement (Henry 2009, p.191). For the early adopters that did not rescind, Henry finds insignificant differences, but rescinders` decision indicates noncompliance with the intent of SFAS 159; therefore, she proves opportunistic use of the provision (Henry 2009, p.197).

Guthrie`s work in 2011 is extending the work of Henry, examining to what extent the early adoption benefited firms the current or future earnings. This study focuses on the first quarter of the fiscal year of 2008 on a sample of 72 large hand-picked companies from S&P 1500 Index, from which one third were commercial banks and two thirds were not commercial banks. The sample consists of 21 early adopters and 51 regular adopters (Guthrie 2011, p.507). By expanding the sample outside the banking industry, Guthrie is aiming for a better picture of the extent of the early adoption under the fair value option. On a case by case basis, some early adopters have experienced an improvement in current or future earnings that may suggest earnings management in financial statements (Guthrie 2011, p.487).

Because of the global financial crisis that peaked in 2008, Guthrie suggests that her findings cannot be generalized. The crisis may have increased unrealized losses for some firms, which created the grounds for opportunistic election choices that benefit future earnings (Guthrie 2011, p.489). Contrary to Henry`s research, Guthrie`s findings do not support a systematic opportunistic election for neither early or regular adopters (Guthrie 2011, p.489).

Expanding Henry and Guthrie`s work, Aliabadi et al. (2013) focus on the next four years following the implementation of SFAS 159. Their sample consists of 199 US commercial banks with the SIC code 6020. The results indicate no association between the extent of the fair value disclosure and the change on market to book value of equity (Aliabadi et al. 2013, p.9). This research does not support Henry`s work in 2009, which suggests that fair value has significant explanatory power on market value, but it supports Guthrie`s results from 2011. To the best of our knowledge, there is no prior research in the insurance industry to investigate the association between the extent of FV disclosure and market risk (Beta), after the implementation of SFAS 159.

HYPOTHESIS DEVELOPMENT

Our study examines the extent of the fair value disclosure on the firm`s exposure to market risk for insurance companies, as opposed to focusing on opportunistic election of the fair value. Henry`s research indicates that firms who elected the fair value displayed a positive impact on earnings, while Guthrie`s and Aliabadi et al.`s research found no significant impact on earnings. Our research brings more light into this matter, examining the market reaction by observing the current price of the firm at specific points in time.

We employed a four-stage valuation model commonly used in stock valuation, adopted from Zhang and Rezaee (2009), consistent with prior research (e.g., Aliabadi et al. 2013). The idea behind this model suggests that fair value disclosures affect value drivers, which have a direct effect on financial indicators. Furthermore, the indicators affect the firms` intrinsic value that is reflected by its stock price. This link is better illustrated in the Figure 1 below:
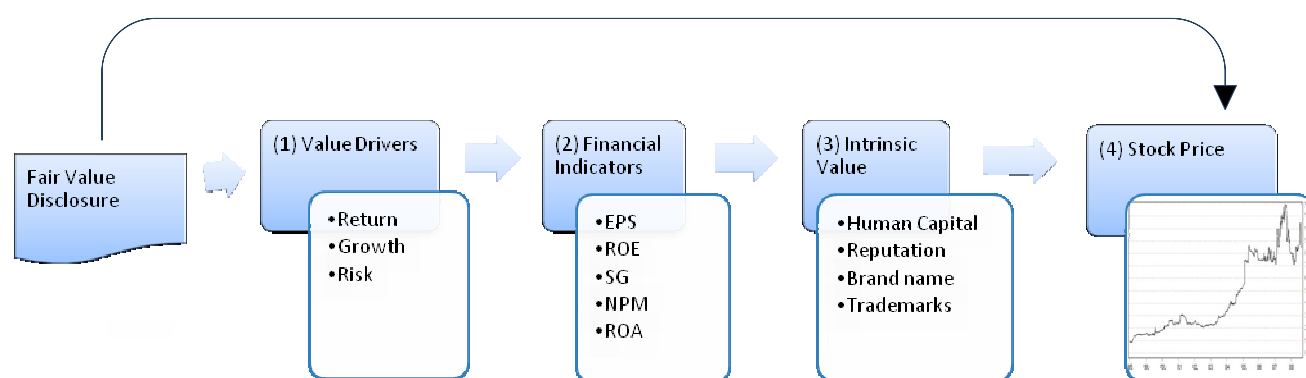

Figure 1: The four-stage model for corporate market valuation
(adopted from Zhang and Rezaee, 2009)

Stage 1. Corporate Value Drivers

Value drivers are fundamental elements of strategic management, which build and protect the value of a business. Black et al. (1998) show how corporate value is formed to

accomplish a return in excess of cost of capital (Return) and achieve a constant business progress (Growth), while managing market risk (risk). In recent years, we notice a tendency toward a more transparent, investor-desired reporting model that encourages firms to disclose information that allows an investor or other stakeholder to identify the value creation potential (Aliabadi et al., 2013). Increased transparency and disclosure develop value drivers by: (a) helping the company to expand its new markets (Bromley 2002), (b) maximizing the incremental impact of incremental sales (Kreps and Wilson 1982) and (c) reduce the risk of doing business (Orlitzky and Benjamin 2001).

Stage 2. Financial Indicators

As shown above, we remarked how fair value disclosure affects the basic value drivers: return, growth and risk. Furthermore, we will see how the fair value affects future financial indicators.

a.   The fair value disclosure and sales revenue: According to Kreps and Wilson (1982), the quality of a product is not always observable prior to purchase, but a detailed disclosure of relevant information on financial statements can serve as an indication of the quality of the product. Furthermore, an increased number of well-informed clients will increase the volume of goods purchased, which helps the growth of sales revenue.

b.   The fair value and costs: A comprehensive use of FV disclosure can help reducing costs by: (i) negotiating better contracts with suppliers than the competitors, (ii) spending less on marketing operations, or by (iii) having access to better financial capital resources, establishing itself as a stable participant in the market (Aliabadi et al., 2013, p.6).

c.   The fair value of a stock takes into account future earnings, which can be influenced by a company's market share, projected sales growth and net profit. Earnings per share (EPS) are a great indicator of actual value and using expected earnings per share for future years supports the idea of the stock's potential.

Stage 3. Intrinsic Values

Financial analysts predict how a company will perform financially by examining the leverage of the firms, its assets against its liabilities ratios, or the strength of its market position. More often than not, investors are looking for opportunities that present strong growth and earnings potential that have been overlooked by the market, but the challenge is to find the true value of the company (intrinsic value) as opposed to its market value. Determining the intrinsic value is important because it allows investors to find bargains.

In some instances, a new competitor on the market or an overall economic industry decline can weaken the stock`s position beyond the company`s control. Due to intangible factors, there is no accurate method for calculating the stock`s intrinsic value, but examining the aspects of an intrinsic value option enables the investor to determine if a specific asset should be held, purchased, or sold in a timely manner. Moreover, firms are growing their stocks on many types of capital, such as: organizational capital (trademarks, intellectual property), customer capital (brands or customer base), human capital (employees) and stakeholder`s capital (corporate reputation) to distinguish themselves in the industry (Aliabadi et al., 2013, p.6).

Stage 4. Stock Price

The finance literature presents two competing views on how the share price is computed (Aliabadi et al. 2013; Fama and French 1992 and 1995). The first view suggests that stock markets are efficient and that any changes are consequentially reflected in stock price (Aliabadi et al., 2013, p.6).

The second view on share price calculation is that stock price is influenced by both financial factors such as taxes and transaction costs, as well as non-financial factors such as investor`s anticipations or beliefs (Fama and French 1995, p.139). Fama and French`s study examines whether the behavior of stock prices, in reference to size and book-to-market-equity (BE/ME), reflects the behavior of earnings. This research suggests that with rational pricing, short-term earnings do not have much effect on stock price or BE/ME; however, BE/ME needs to be associated with long-term modifications in profitability (Fama and French 1995, p.139). In addition, with irrational pricing, stock prices and BE/ME can depend on swings in investor sentiment, not related to long-term earnings (Fama and French 1995, p.139).

Based on the above discussion regarding corporate drivers and their effect on stock price, we hypothesize that:

HYPOTHESIS 1: There is a negative association between the extent of the fair value disclosure and the firm`s exposure to market risk for insurance companies.

HYPOTHESIS 2: There is a positive association between earnings per share and market risk for companies in the insurance industry.

METHOD

To test the above two hypotheses, we are utilizing the following multivariate regression model:

$$BETA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 Fv_{Index_{it}} + \beta_3 ROE_{it} + \beta_4 LVRG_{it} + \beta_5 EPS_{it} + v_{it}$$

Where:

$BETA_{it}$ is the dependent variable (Compustat Mnemonic = BETA). Beta is a measurement of the sensitivity of a company's stock price to the overall fluctuation in the Standard & Poor's 500 index price for U.S. companies. If Beta is less than 1, the security will be less volatile than the market, and when beta is larger than 1, the security's price will be more volatile than the market.

And:

$SIZE_{it}$ represents the firm`s total assets and measures as the log of total assets (Compustat Mnemonic = AT). Total asset represents current assets plus net property, plant, and equipment plus other non-current assets.

$Fv_{Index_{it}}$ is an index that measures the extent of the fair value disclosed by the insurance company. This index is calculated by dividing the amount of reported fair value of assets (Compustat Mnemonic = TFVA) by the reported total assets (Compustat Mnemonic = AT).

TFVA represents the total amount of assets measured at fair value and should equal the sum of assets under Level 1, 2, and 3, plus any other adjustments or netting.

ROE_{it} is the return on equity (Compustat Mnemonic = ROE). ROE is equal to income before extraordinary items and discontinued operations less preferred dividend divided by common equity.

$LVRG_{it}$ measures the financial leverage of a company and calculated by dividing total liabilities (Compustat Mnemonic = LT) by total assets (Compustat Mnemonic = AT).

EPS_{it} is an indicator of the firm`s profitability (Compustat Mnemonic = EPSF12) and represents earnings per share after allowing for the conversion of convertible senior stock and debt, and exercise of warrants, option outstanding and agreement for issuance of common shares upon satisfaction of certain conditions.

All variables are indexed for firm i at time t.

SAMPLE AND DATA COLLECTION

Our sample includes a total of 126 US insurance companies with Compustat sub-industry codes 6311 Life & Health Insurance, 6331 Multi-Line Insurance and 6351 Property and Casualty Insurance. We analyze four years of observations from 2008 to 2011, following the implementation of SFAS 159.

From the original 136 companies extracted from Compustat research insight database, we removed companies with incomplete observations. Our final sample with more complete data includes 126 companies with 504 firm/year observations. The full list of the companies is found in the appendix at the end of this paper.

For each dependent and independent variables we calculated the minimum and maximum. In order not to have skewed results, we removed outliers that don`t fit the formula:

Min < sample < Max,
where: Min= Mean – 5 * St. dev. and
Max= Mean + 5 * St. dev.

We repeated this process for all variables included in the model presented in the previous section.

RESULTS

The descriptive statistics of the data are shown in Table 1. As this table shows, the mean for market risk (beta) is slightly more than 1 and the sample includes low risk, medium risk, and high risk companies. The sample also includes companies with different sizes. As shown in Table 1, the log of total assets ranges from 2.24 to 13.76 with mean of 8.96, indicating that our sample includes all ranges of insurance companies from small size to large size. This table also shows that the median of FV_Index is .64, indicating that in average more than 64 percent of total assets are shown at fair value. In addition, this table shows that our sample includes both profitable and non-profitable companies with ROE ranging from -189 percent to 77.85 percent. The earnings per share information shown in the table has the same interpretation as return on equity. Finally the LVRG (debt to total assets) variable ranges from

.2 to 1.26, indicating that sample companies have borrowing of 20 to 126 percent of their total assets.

Table 1. Descriptive Statistics for Dependent and Independent Variables

Variable	Obs	Mean	1st Quartile	2nd Quartile	3rd Quartile	STD	Min.	Max.
BETA	427	1.186112	0.6	0.94	1.64	0.8041006	.53	3.96
SIZE	480	8.960333	7.0725	9.07	10.71	2.447872	2.24	13.76
Fv_index	480	0.593896	0.52	0.64	0.75	0.2216234	0	0.99
ROE	473	2.926998	0.76	6.06	10.73	21.26558	-189.2	77.85
LVRG	480	0.77575	0.69	0.79	0.89	0.151807	0.2	1.26
EPS	432	10.42634	-60.81	-6.99	59.99	189.6237	-886.67	955.56

The results of the two-tailed, Pearson correlation analysis are shown in Table 2. As this table shows independent variables are not highly correlated with each other and there is no sign multicolinearity. This indicates that our results are reliable.

Table 2. Pearson Correlation Matrix for Dependent and Independent Variables

	BETA	SIZE	Fv_index	ROE	LVRG	EPS
BETA	1					
SIZE	0.516***	1				
Fv_index	0.1708***	0.2279***	1			
ROE	-0.0933**	0.0047	-0.003	1		
LVRG	0.5498***	0.5522***	0.0663	-0.0914**	1	
EPS	0.1204**	0.0631	0.0525	0.3515***	0.0612	1

*, **, ***, significant at .10, .05, and .01 level, respectively (two tailed).

Table 3 shows the results of running our regression model. As this table shows, the coefficient of FV_index is not significant, providing no support for our first hypothesis; therefore, the extent of the fair value disclosure does not have any association with market risk.

Regarding the second hypothesis, the coefficient of EPS is significant and highlights that earnings per share in the insurance industry are positively associated with market risk. This finding suggests that profitable insurance companies take riskier investments, whereas poor performers companies are more cautious ones.

Other findings:

We also found that the coefficient of SIZE is significant, indicating that the size of a firm in insurance industry is positively associated with market risk. This finding implies that larger firms are riskier than smaller ones (e.g., they borrow more money).

The coefficient of LVRG is not significant, suggesting that there is no association between the firm`s borrowing and market risk. Therefore, the size of the borrowing by a firm is not necessarily used by investors to measure the firm's market risk.

Table 3. Panel Data Regression Results (Using Random Effect)

$$BETA_{it} = \beta_0 + \beta_1 SIZE_{it} + \beta_2 Fv_{index\,it} + \beta_3 ROE_{it} + \beta_4 LVRG_{it} + \beta_5 EPS_{it} + v_{it}$$

BETA*	Coef.	Std. Err.	z	P > z	[95% Conf.	Interval]
SIZE	0.144525***	0.026049	5.55	0.000	0.09347	0.19558
Fv_index	**-0.17701**	0.123627	-1.43	0.152	-0.41931	0.065294
ROE	-0.00082	0.00184	-0.45	0.654	-0.00443	0.002782
LVRG	**0.207247**	0.322575	0.64	0.521	-0.42499	0.839483
EPS	0.000179**	0.000008	2.03	0.042	6.28E-06	0.000351
_cons	-0.15531	0.242467	-0.64	0.522	-0.63053	0.319918

R-sq:	within	= 0.0068
	Between	= 0.3129
	Overall	= 0.2999
Wald chi2		= 53.35
Prob > chi2		= 0.0000

*, **, ***, significant at .10, .05, and .01 level, respectively (two tailed).
*BETA = Dependent Variable

SUMMARY AND CONCLUSIONS

To the best of our knowledge, our study is the first in the insurance industry to investigate the association between the extent of FV disclosure and market risk (Beta), as well as the association between EPS and market risk, following the implementation of SFAS 159. Because most prior research studies point towards negative associations between fair value and market value, we expected to have a similar result, but our findings do not support our expectation.

Barth et al.`s (2004) findings show that the incremental explanatory power on market value given by fair value estimates is higher than the one given by historical cost (Barth et al., p.244; Aliabadi et al., p.4). However, when gains and losses are examined, historical cost had bigger explanatory power over fair value estimates (Barth et al. p.244). Extending Barth`s work, Nelson`s (1996) found that adding value-control variables (ROE and Growth in book value) reduces the effect of fair value (Nelson 1996, p.161). Nelson`s explanations for the significant associations between fair value disclosure and market value are the result of

omitting the indicators of market value that are captured by the accrual accounting system (Nelson p.161). Henry`s research shows that companies that elect FVO observed a positive impact on earnings (Henry 2009, p. 191). Our results do not show an association between FVO and market value and therefore, contradict Barth`s, Nelson`s and Henry`s findings.

By expanding the sample outside the banking industry, Guthrie (2011) attempts to show a better picture of the early adoption under the fair value option. Her findings suggest no significant negative impact on earnings for firms that elect FVO (Guthrie 2011, p.489). Aliabadi et al. (2013) expand the time horizon to the next three years following SFAS 159 and finds similar results to Guthrie's. Contrary to Barth, Nelson and Henry, our results line up with Guthrie`s and Aliabadi et al.`s work. Based on our sample observations, we suggest that the fair value disclosure requirement if set by standard setters for insurance companies has no significant impact on companies' cost of capital and, thereby, will not increase the market value of these companies.

Our data is limited to the four years (2008-2011) of available observations post SFAS 159 adoption from Compustat. More data will be available as time passes and more analyses are needed to support or reject our results. Another limitation is that our study only focuses on the insurance segment of financial services. A great way to extend this research is to study a broader sample that includes other financial institutions such as: credit card companies, credit unions, consumer finance companies, stock brokerages and investment funds.

We conclude that there is no significant correlation between fair value disclosure and the firm`s exposure to market risk. In addition, we have found that earnings per share in the insurance sector are positively associated with market risk (Beta). We have also found that the size of a firm is positively associated with market risk; whilst we have found no association between the firm`s borrowing and market risk in the insurance industry. Our findings align with recent studies, Guthrie (2011) and Aliabadi et al. (2013) provide more evidence to the academic debate regarding fair value accounting. The policy implication of our research provides standard setters and policy makers with evidence that can be used in their cost/benefit analysis of requiring the fair value disclosure for companies in the insurance industry.

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APENDIX
The complete list of the 126 companies used in this study.

Column 1	Company Name	Ticker
1	ACE LTD	ACE
2	ACMAT CORP -CL A	ACMTA
3	AEGON NV -ADR	AEG
4	AFFIRMATIVE INS HOLDINGS INC	AFFM
5	AFLAC INC	AFL
6	ALLIANZ SE -ADR	AZSEY
7	ALLIED WORLD ASSURANCE CO AG	AWH
8	ALLSTATE CORP	ALL
9	ALLSTATE LIFE INSUR CO/NY	
10	AMBAC FINANCIAL GROUP INC	ABKFQ
11	AMERICAN EQTY INVT LIFE HLDG	AEL
12	AMERICAN FAMILY INS GROUP	
13	AMERICAN FINANCIAL GROUP INC	AFG
14	AMERICAN INDEPENDENCE CORP	AMIC
15	AMERICAN INTERNATIONAL GROUP	AIG
16	AMERICAN LIFE HOLDING CO	ALFE
17	AMERICAN NATIONAL INSURANCE	ANAT
18	AMERICAN SAFETY INS HLDG LTD	ASI
19	AMERISAFE INC	AMSF
20	AMTRUST FINANCIAL SERVICES	AFSI
21	ARCH CAPITAL GROUP LTD	ACGL
22	ARGO GROUP INTL HOLDINGS LTD	AGII
23	ASPEN INSURANCE HOLDINGS LTD	AHL
24	ASSURANCEAMERICA CORP	ASAM
25	ASSURANT INC	AIZ
26	ASSURED GUARANTY LTD	AGO
27	ASSURED GUARANTY MUNI HLDGS	ZZZ1
28	ATLANTIC AMERICAN CORP	AAME
29	AVIVA PLC -ADR	AV
30	AXA -ADR	AXAHY
31	AXIS CAPITAL HOLDINGS LTD	AXS
32	BALDWIN & LYONS -CL B	BWINB
33	BERKLEY (W R) CORP	WRB
34	BERKSHIRE HATHAWAY	BRK.B
35	CHINA LIFE INSURANCE CO –ADR	LFC
36	CHUBB CORP	CB
37	CINCINNATI FINANCIAL CORP	CINF
38	CITIZENS INC	CIA
39	CNA FINANCIAL CORP	CAN
40	CNO FINANCIAL GROUP INC	CNO
41	DONEGAL GROUP INC	DGICA
42	EASTERN INSURANCE HLDGS INC	EIHI
43	EMC INSURANCE GROUP INC	EMCI
44	EMPLOYERS HOLDINGS INC	EIG
46	ERIE INDEMNITY CO -CL A	ERIE
47	FAIRFAX FINANCIAL HOLDINGS	FRFHF
48	FBL FINANCIAL GROUP INC-CL A	FFG
49	FEDERATED NATIONAL HLDG CO	FNHC
50	FIDELITY NATIONAL FINANCIAL	FNF
51	FIRST ACCEPTANCE CORP	FAC
52	FIRST AMERICAN FINANCIAL CP	FAF

53	FORTEGRA FINANCIAL CORP	**FRF**
54	GAINSCO INC	**GANS**
55	GENWORTH FINANCIAL INC	**GNW**
56	GLOBAL INDEMNITY PLC	**GBLI**
57	GREAT-WEST LIFE & ANN INS CO	
58	HALLMARK FINANCIAL SERVICES	**HALL**
59	HANOVER INSURANCE GROUP INC	**THG**
60	HARTFORD FINANCIAL SERVICES	**HIG**
61	HARTFORD LIFE INSURANCE CO	
62	HCC INSURANCE HOLDINGS INC	**HCC**
63	HEALTHMARKETS INC	**3799B**
64	HILLTOP HOLDINGS INC	**HTH**
65	HOMEOWNERS CHOICE INC	**HCI**
66	HORACE MANN EDUCATORS CORP	**HMN**
67	INDEPENDENCE HOLDING CO	**IHC**
68	INFINITY PROPERTY & CAS CORP	**IPCC**
69	ING LIFE INS & ANNUITY CO	
70	INVESTORS HERITAGE CAP CORP	**IHRC**
71	INVESTORS TITLE CO	**ITIC**
72	KANSAS CITY LIFE INS CO	**KCLI**
73	KEMPER CORP/DE	**KMPR**
74	KINGSTONE COS INC	**KINS**
75	KINGSWAY FINANCIAL SVCS INC	**KFS**
76	LIBERTY MUTUAL AGENCY-REDH	
77	LINCOLN NATIONAL CORP	**LNC**
78	LOEWS CORP	**L**
79	MAJESTIC CAPITAL LTD	**MAJCQ**
80	MANULIFE FINANCIAL CORP	**MFC**
81	MARKEL CORP	**MKL**
82	MBIA INC	**MBI**
83	MEADOWBROOK INS GROUP INC	**MIG**
84	MERCURY GENERAL CORP	**MCY**
85	METLIFE INC	**MET**
86	NATIONAL INTERSTATE CORP	**NATL**
87	NATIONAL SEC GROUP INC	**NSEC**
88	NATIONAL WESTERN LIFE -CL A	**NWLI**
89	NAVIGATORS GROUP INC	**NAVG**
90	NEW YORK LIFE INSURANCE	
91	NORTHWESTERN MUTUAL LIFE INS	
92	OLD REPUBLIC INTL CORP	**ORI**
93	ONEBEACON INSURANCE GROUP	**OB**
94	PEKIN LIFE INSURANCE CO	**PKIN**
95	PHOENIX COMPANIES INC	**PNX**
96	PRESIDENTIAL LIFE CORP	**PLFE**
97	PRIMERICA INC	**PRI**
98	PRINCIPAL FINANCIAL GRP INC	**PFG**
99	PROASSURANCE CORP	**PRA**
100	PROGRESSIVE CORP-OHIO	**PGR**
101	PROTECTIVE LIFE CORP	**PL**
102	PRUDENTIAL FINANCIAL INC	**PRU**
103	PRUDENTIAL PLC -ADR	**PUK**
104	RLI CORP	**RLI**
105	SAFETY INSURANCE GROUP INC	**SAFT**
106	SEABRIGHT HOLDINGS INC	**SBX**
107	SELECTIVE INS GROUP INC	**SIGI**
108	STANCORP FINANCIAL GROUP INC	**SFG**
109	STATE AUTO FINANCIAL CORP	**STFC**
110	STEWART INFORMATION SERVICES	**STC**

111	SUN LIFE FINANCIAL INC	SLF
112	SYMETRA FINANCIAL CORP	SYA
113	TOKIO MARINE HOLDINGS –ADR	TKOMY
114	TORCHMARK CORP	TMK
115	TOWER GROUP INC	TWGP
116	TRANSAMERICA ADVISORS LIFE	
117	TRAVELERS COS INC	TRV
118	UNICO AMERICAN CORP	UNAM
119	UNITED FIRE GROUP INC	UFCS
120	UNITED INSURANCE HOLDINGS CO	3UIHC
121	UNIVERSAL INSURANCE HLDGS	UVE
122	UNUM GROUP	UNM
123	UTG INC	UTGN
124	WESTAIM CORP	WEDXF
125	WHITE MTNS INS GROUP LTD	WTM
126	XL GROUP PLC	XL

BEHAVIOR OF THE US MORTGAGE MARKET
FOLLOWING THE DEREGULATION OF 1980

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Abstract: Asymmetries in the US mortgage 1-month deposit rate spread (mortgage premium) were documented. Empirical results revealed that the mortgage premium adjusts to the threshold more slowly when the 1-month deposit rates fall relative to the mortgage rates than when the deposit rates move in the opposite direction. Estimation results further indicate that the massive deregulation of the banking industry of the early 1980s affected the US mortgage markets, as evidenced by the structural break of the mortgage premium at the beginning of 1981. This result suggests, however, that US lending institutions still exhibit predatory rate setting behavior over the sample period. Analyses also reveal a bi-directional Granger causality between the mortgage rate and the 1-month deposit rate, indicating that these rates mutually affect each other's movement. This finding suggests that the US countercyclical monetary policy matters in the mortgage market.

INTRODUCTION

Historically, the US has pursued a standing policy promoting home ownership through regulations and institutional arrangements. The introduction of Regulation Q and the creations of the Federal Home Loan Bank System, Ginnie Mae, Fannie Mae, and Freddie Mac are examples of how the U.S. government has encouraged and facilitated the channeling of funds from economic units with surplus funds to the home mortgage markets. The net effect was that it made mortgage funds available to consumers at affordable rates. Consequently, almost sixty seven (67) percent of American families own their own homes, and residential real estate is by far the largest investment for the average American as well as the largest component of individual wealth.

From the theoretical perspective of interest rate settings, including determinations of fixed-term mortgage rates, banks in a free market economy would incorporate all elements of risk and set a risk free equilibrium spread between the rates paid savers and the rates charged borrowers for the specific financial instrument—the intermediation premium. In the case of mortgage rate, it is the mortgage premium. If banks set a loan premium either too high or too low, market forces would drive an adjustment back to some equilibrium spread. Monopolistic/oligopolistic concentration thwarts the operation of such free market forces and leads to wider, asymmetric spreads and larger intermediation premiums. Asymmetries in the US financial sector illustrate this process, as economic conditions have been influenced separately by the rate charged borrowers and the rate paid savers and have resulted in an intermediation premium larger than a free market determined spread.

The US mortgage market has experienced phenomenal change over the last 35 years. Among many other changes, it has gone through a series of drastic deregulations in the early 1980s and a financial crisis of international dimension in the late 2000s. The focus of this paper probes the question: do asymmetries exist in the US mortgage premium, and if such asymmetries are present, how do mortgage and risk-free rates respond to these asymmetries? Are the responses independent or dynamically interrelated? The remainder of this study begins with a review of the literature on asymmetric interest rate setting behavior. Following this is a

summary of the US mortgage sector; the next section describes the data and the descriptive statistics used in the analysis; section 4 then describes the methodology used and the empirical results; and the concluding section provides observations and remarks.

A BRIEF LITERATURE REVIEW

The rationale for hypothesizing asymmetric responses to the national countercyclical monetary policy can be attributed to the documented asymmetric rate-setting behavior of the commercial banks in the context of rates of return on financial market instruments. Dueker (2000) and Tkacz (2001) have reported asymmetries in the U.S. prime lending rate in the past, and Thompson (2006) found asymmetries in the U.S. prime lending-deposit rate spread. Sarno and Thornton (2003) found asymmetries in U.S. Treasury securities. Frost and Bowden (1999) and Scholnick (1999) reported asymmetries in mortgage rates in New Zealand and Canada, and Hofmann and Mizen (2004) indicated asymmetric behavior of retail rates in the United Kingdom. Hannan and Berger (1991) and Neumark and Sharpe (1992) examined various deposit rates for the same asymmetric behavior. Several studies have found asymmetric cointegration between bank lending and deposit rates. For instance, Nguyen et al. (2008) documented similar asymmetries in Mexican lending and deposit rates. Nguyen and Islam (2010) reported asymmetries in the Thai bank lending and deposit rates, and similarly, Nguyen et al. (2010) found asymmetries in the Bangladeshi lending and deposit rates. Chang and Su (2010) reported nonlinear co-integration between the lending and the deposit rate in ten Eastern European countries. Lately, Haug and Basher (2011) found nonlinear co-integration in the purchasing power parity relationships for Canada, Japan, Switzerland, the U.K., Belgium, France, Germany, Italy and Netherlands.

From a theoretical perspective, there are three main approaches which help explain the rate-setting behavior of the banking sector: the bank concentration hypothesis, the consumer characteristic hypothesis, and the consumer reaction hypothesis[1]. The bank concentration hypothesis posits that oligopolistic banks raise lending rates quickly in reaction to favorable market forces but are much slower in raising deposit rates. The reverse is the case in declining markets as they react quickly to adjust downward the rates paid depositors and slower to reduce the rates charged borrowers (Neumark and Sharpe, 1992; Hannan and Berger, 1991). The consumer characteristic and consumer reaction hypotheses each posit that a greater proportion of unsophisticated consumers, coupled with higher search and switching costs, provide bankers with heightened opportunities to adjust rates and widen the spread, thereby increasing the banks' advantage and producing incremental profits (Hutchison, 1995; Rosen, 2002).

However, the asymmetric adjustment in lending rates may actually benefit consumers. As articulated by Stiglitz and Weiss (1981), the presence of asymmetric information may create an adverse selection problem in lending markets such that higher interest rates will tend to attract riskier borrowers. Therefore, banks would be reluctant to raise lending rates, even if the market rates rise. The expected cost to the banks of not raising the lending rates, when their marginal cost of funds increases, will be offset by the benefits of not encouraging the higher-risk consumers to borrow.

THE US MORTGAGE MARKET

Before exploring mortgage rates and mortgage premium further, it is useful to consider several salient characteristics of the U.S. mortgage market.

Deregulation and Securitization

In the mid-1900's, roughly from the Depression through the 1970's, banking regulations provided a stable, yet inefficient, context for growth. During this era financing for home loans was provided primarily through savings accounts, and the thrift industry was the medium to which low-cost deposits were directed (Mason, 2004). Multiple forms of regulation arose, the most famous of which was Regulation Q, which prohibited interest on checking deposits and capped other deposit rates. Further, the mismatch problem ensued, wherein regulators compelled the financing of long-term assets with short-term obligations as a result of making mortgages dependent on savings deposits (Modigliani and Lessard, 1975).

Nonetheless, Regulation Q and associated regulations (usury ceilings, interest-rate caps, limits on branching, and the like) did not create insurmountable difficulties for most of this time period. Eventually, however, inflation and interest rates began to rise in the 1960's, driving up banking costs. Thus began a series of Congressional actions that would ultimately reduce the mortgage market's dependence on deposits to finance mortgages and increase the influence of capital market financing. In 1968, the increased importance of government-backed securitization trusts began in earnest as Congress repurposed the Federal National Mortgage Association (FNMA, founded in 1938 and now known as Fannie Mae) by dividing it into a new branch called the GNMA (Government National Mortgage Association, later known as Ginnie Mae) and retaining the FNMA as the second branch. The GNMA purchased and processed mortgages guaranteed by the VA and the FHA, while the FNMA bought other mortgages. In 1970, the Federal Home Loan Mortgage Corporation (later known as Freddie Mac) was brought into the mix by the Federal Home Loan Bank Board (FHLBB) for the purpose of buying loans from its members.

Meanwhile, secondary markets had developed more slowly than anticipated, until the mortgage-backed security began to transform the mortgage market. The big innovation of the early 1970's was the advent of the mortgage-backed security, with all government-backed securitization trusts moving to this vehicle relatively quickly. Instability in the thrift market and high interest rates impelled regulatory changes; among others, these changes included the Depository Institutions Deregulation and Monetary Control Act of 1980, which phased out Regulation Q and made usury ceilings obsolete. Also critical was the change in accounting rules by the FHLBB in 1981, whereby accounting rules were changed in favor of lenders, allowing them to avoid booking large losses and increasing liquidity in the secondary market (Mason, 2004; Lewis, 1989). Later, the Real Estate Mortgage Investment Conduit (REMIC) created by the Tax Reform Act of 1986 increased the flexibility of issuers by increasing freedom of both legal form and type of permitted investment in the mortgage-backed security market. The secondary market developed at a spectacular rate, with Freddie Mac and later Fannie Mae being the largest issuers. Private-label issuances increased from 2001 through 2007, but backed off substantially in 2008.

Innovation in Mortgage Design

The unstable and high-inflation situation of the 1970's made innovation in the available types of mortgages both necessary and inevitable. Traditional mortgages—those with fixed rates and level payments—were assumed to be the gold standard well into the 1970's by both lenders and consumers alike. The regulatory environment, in particular, limited the utility of variable-rate mortgages by controlling how much and when they could change, thereby restricting their profitability. The traditional mortgages, though, were quite expensive for borrowers, particularly early in the loan period, and some would benefit from an even real cost

over time. As regulators deregulated the mortgage market, Graduated Payment Mortgages (GPM) and Adjustable Rate Mortgages (ARM) made their debuts in the late 1970s and early 1980s, respectively.

Even though these alternative mortgages addressed the problem of high inflation for regular households, they maintained their popularity into a period of low inflation. There was little response by regulators to the new environment of the late 1980's, and alternative mortgages were allowed to flourish. Unfortunately, as time passed, ARMs became a cornerstone of predatory lending practices and errors in interest rate calculations also abounded. A wide variety of ARMs ensued, such as interest-only ARMs, option ARMs, hybrid ARMs, and so forth, all of which enabled a riskier pool of borrowers to be financed at a higher interest rate, increasing risk all around.

Other Changes

Among the other changes influencing the mortgage market included the reflection of the anti-discrimination sociocultural trend into the mortgage markets in the mid-1970. The Equal Credit Opportunity Act (ECOA) was passed in 1974 and, as amended, prohibits discrimination on the basis of race, color, religion, national origin, sex, marital status, age, or receipt of public assistance. In 2010, the Dodd-Frank Act gave the Consumer Financial Protection Bureau (CFPB) the power to enforce compliance with ECOA within its jurisdiction, and the CFPB soon adopted the disparate impacts doctrine ("effects test") to prove discrimination under ECOA.

A distinct, though related, change was the advent of automated underwriting, including automated evaluation of creditworthiness. This both substantially reduced costs for lenders and removed some of the subjectivity of loan officers' processes out of the assessment of creditworthiness (Straka, 2000). Although the less discernible expressions of discrimination persisted, automated underwriting procedures did make it easier for lenders to avoid the appearance of impropriety because of the anonymous nature of automated applications.

Finally, the rise of the subprime mortgage had an initially salubrious effect on the secondary market. While traditionally low-risk lending to those with excellent credit histories and a prime rating continued to constitute the majority of mortgage approvals, subprime mortgages rose throughout the late 1990's until 2007. At the peak of this boom, subprime mortgages to those with shaky credit histories and a tenuous ability to repay constituted about 20% of the mortgage market; indeed, the subprime market grew from $65 billion in 1995 to $332 billion in 2003 (Chomsisengphet and Pennington-Cross, 2006). Affordability-based mortgages, such as interest-only loans, also rose in popularity during this time and precipitously declined after 2007 (Joint Center for Housing Studies, 2008). This trajectory was unsustainable and, due to a variety of factors, including predatory lending, resetting of ARMS, borrower overextension, and the like, led to the collapse of the subprime market.

THE DATA

This study uses weekly data on the US weekly 30-year, fixed-term mortgage rates and the secondary market 1-month CD rates as a proxy measure of the risk-free rates over the period from the first week of 1980 to the third week of 2013. The weekly 30-year fixed-term mortgage rates and 1-month secondary CD rates are denoted by MR_t and DR_t, respectively.

The difference between the mortgage rate and the CD rate is defined as the mortgage premium and is denoted by MP_t.

US 30-YEAR, FIXED-TERM MORTGAGE RATE, 1 MONTH CD RATE, AND MORTGAGE PREMIUM

January 4, 1980 to January 17, 2013
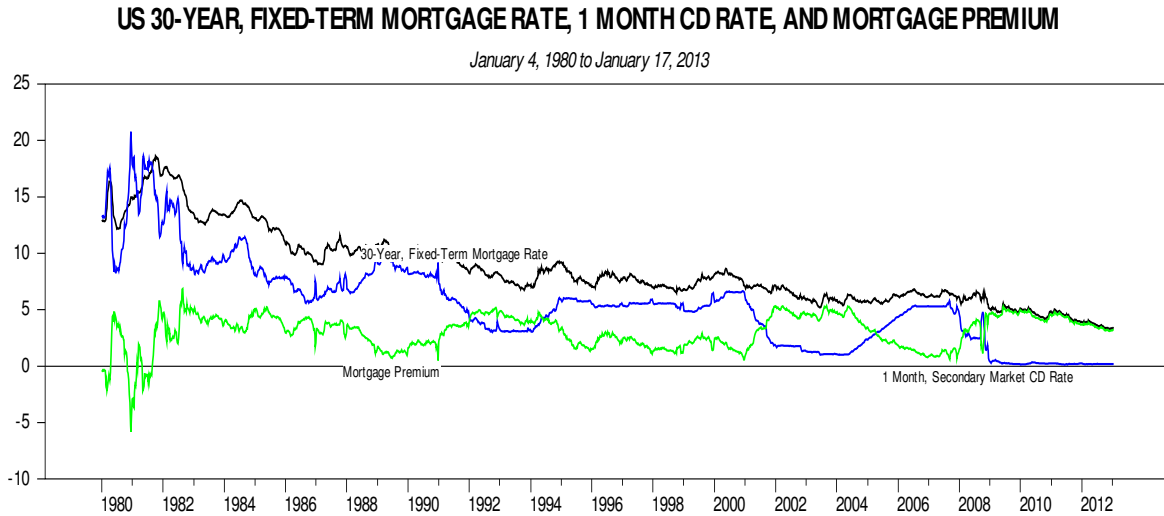
Figure 1: US mortgage Rate, Deposit Rate, Intermediation Premium, 1995:08- 2012:08.

Figure 1 displays the behavior of the weekly 30-year fixed-term mortgage rates, 1-month secondary CD rates and the mortgage premium over the sample period. As Figure 1 suggests, the 30-year fixed US mortgage rate oscillated around a fairly steep upward trend from the beginning of the sample period to early 1981. It then fluctuated around a moderately downward trend to the end of the period of investigation. The 1-month CD rate oscillated more widely around a steeper upward trend from the beginning of the sample until early 1981. The CD rate then oscillated around a moderate downward trend to late 2000. The 1-month CD rate declined rapidly over 2001, stabilized and then oscillated around a fairly steep upward trend until 2008. It then drop to almost zero and maintained at that level until the end of the sample period.

The mean mortgage rate during the sample period was 8.60 percent, and ranged from 3.31 percent to 18.63 percent with a standard error of 3.30 percent. The mean 1-month CD rate over the same period was 5.52 percent, and ranged from 0.14 percent to 20.76 percent with a standard error of 3.86 percent. Their correlation was 92.23 percent which is fairly high. The US mortgage premium oscillated fairly widely around its mean of 3.07 percent, ranging from -5.81 percent to 6.84 percent with a standard error of 1.52 percent during the sample period. Moreover, as suggested by Figure 1, it is likely that the US mortgage premium experienced a structural break over the sample period.

METHODOLOGICAL ISSUES AND ALALAYTICAL FRAMEWORK

Structural Break

To search endogenously for the possibility of any structural break in the US mortgage premium, this study utilized Perron's (1997) endogenous unit root test function with the intercept, slope, and the trend dummy to test the hypothesis that the US mortgage premium has a unit root.

$$MP_t = \mu + \theta DU + \alpha t + \gamma DT + \delta D(T_b) + \beta MP_{t-1} + \sum_{i=1}^{k} \psi_i \Delta MP_{t-i} + \upsilon_t \qquad (1)$$

Where $DU = 1(t > T_b)$ is a post-break constant dummy variable; t is a linear time trend; $DT = 1(t > T_b)$ is a post-break slope dummy variable; $D(T_b) = 1(t = T_b + 1)$ is the break dummy variable; and ε_t are white-noise error terms. The null hypothesis of a unit root is stated as $\beta = 1$. The break date, T_b, is selected based on the minimum t-statistic for testing $\beta = 1$ (see Perron, 1997, pp. 358-359).

Table 1: Perron's Endogenous Unit Root Test, US Weekly Data, and 1980:01:01 to 2012:01:17

$$MP_t = 0.2475 - 0.1553\,DU - 0.0052\,t + 0.0052\,DT - 2.2017\,D(T_b) + 0.9741\,MP_{t-1} + \upsilon_t$$

(3.0347*) (-1.9112***) (-2.8804*) (2.8760*) (-9.3383*) (233.9516*)

No. of augmented lags: $k = 11$ Break Date: May 1, 1981 $t(\alpha = 1) = -6.2226*$

Notes: *Critical values for t-statistics in parentheses: Critical values based n = 100 sample for the break-date (Perron, 1997). "*", "**" and "***" indicate significance at 1 percent, 5 percent and 10 percent levels, respectively.*

The estimation results of Perron's endogenous unit root tests are summarized in Table 1. The post-break intercept dummy variable, *DU,* is negative and significant at 10 percent level, while the post-break slope dummy variable, *DT*, is positive and is significant at any conventional level. The empirical results of these tests suggest that the US mortgage premium followed a stationary trend process with a break date of May 1, 1981. This could be attributed to the impact of the Depository Institutions Deregulation and Monetary Control Act of 1980, which phased-out Regulation Q over the next six years and made irrelevant state usury ceilings.

Nonlinear Cointegration

Additionally, as posited by Breitung (2001, p. 331), economic theory suggests in many cases a nonlinear relationship between economic and financial time series. This implies that MR_t and DR_t may be nonlinearly cointegrated. To discern this possibility, Breitung's nonparametric procedure is applied to test for their nonlinear cointegration.

Breitung's nonparametric testing procedure consists of the cointegration test, known as the rank test for cointegration, and the nonlinearity test, which is the score statistic for a rank test of neglected nonlinear cointegration. Following Breitung (2001), this study defines a ranked series as $R_T(MR_t)$ [of MR_t among $MR_1,...,MR_T$] and $R_T(DR_t)$ accordingly. Breitung's two-sided rank test statistic, testing for cointegration, denoted by Ξ_T^*, is calculated as follows:

$$\Xi_T^* = T^{-3} \sum_{i=1}^{T} (r_i^R)^2 / (\sigma_{\Delta r}^2) \tag{2}$$

where T is the sample size, r_i^R is the least squares residual from a regression of $R_T(MR_t)$ on $R_T(DR_t)$. As pointed out by Haug and Basher (2011, p. 187), $\sigma_{\Delta r}^2$ is the variance of Δr_i^R, which adjusts for the potential correlation between the two time series MR_t and DR_t. The critical values for this rank test are given in Table 1 in Breitung (2001, p. 334).

Given the positive result of the rank test, the first step in calculating Breitung's score statistic for a rank test of neglected nonlinear cointegration (testing for nonlinearity) is to regress

the US mortgage rate, MR_t, on a constant, the deposit rate, DR_t, the ranked series of the deposit rate, $R_T(DR_t)$, and the disturbance ζ_t.

$$MR_t = \delta_0 + \delta_1 DR_t + R_t^*(DR_i) + \zeta_t \tag{3}$$

where $\delta_0 + \delta_1 DR_t$ is the linear part. Under the null hypothesis, $R_t^*(DR_i) = 0$ implying that MR_t and DR_t are linearly cointegrated. Under the alternate hypothesis, $R_t^*(DR_i) \neq 0$ implying that MR_t and DR_t are nonlinearly cointegrated. The score test statistic is given by $T.R^2$, where R^2 is the coefficient of determination of the least squares regression of ζ_t, under the null hypothesis, on a constant, the ranked series of the deposit rate, $R_T(DR_t)$, and a disturbance term. T is again the sample size. As articulated by Breitung (2001, p. 337), under the null hypothesis of linear cointegration, the score statistic for a rank test of neglected nonlinear cointegration is asymptotically Chi-Square distributed with one degree of freedom.

Threshold Autoregressive (TAR) Model

If the results of Breitung's nonparametric tests are positive, this study follows Thompson (2006) to regress the spread, IP_t, on a constant, a linear trend and an intercept dummy (with values of zero prior to January 2010 and values of one for January 2010 and thereafter) to formally examine the US mortgage, deposit rates and their intermediation premium (the estimation results are reported in Appendix I). The saved residuals from the above estimated model, denoted by $\hat{\varepsilon}_t$, are then used to estimate the following TAR model:

$$\Delta\hat{\varepsilon}_t = I_t \rho_1 \hat{\varepsilon}_{t-1} + (1 - I_t)\rho_2 \hat{\varepsilon}_{t-1} + \sum_{i=1}^{p} \alpha_i \Delta\hat{\varepsilon}_{t-p} + \hat{u}_t \tag{4}$$

where $\hat{u}_t \sim i.i.d.(0, \sigma^2)$, and the lagged values of $\Delta\hat{\varepsilon}_t$ are meant to yield uncorrelated residuals. As defined by Enders and Granger (1998), the Heaviside indicator function for the TAR specification is given as:

$$I_t = \begin{cases} 1 & if\ \hat{\varepsilon}_{t-1} \geq \tau \\ 0 & if\ \hat{\varepsilon}_{t-1} < \tau \end{cases} \tag{5}$$

The threshold autoregressive (TAR) model allows the degree of autoregressive decay to depend on the state of the intermediation premium, i.e. the "deepness" of cycles. The estimated TAR model empirically reveals if the intermediation premium tends to revert back to the long run position faster when the premium is above or below the threshold. Therefore, the TAR model indicates whether troughs or peaks persist more when shocks or countercyclical monetary policy actions push the intermediation premium out of its long-run equilibrium path. In this model's specification, the null hypothesis that the US mortgage premium contains a unit root can be expressed as $\rho_1 = \rho_2 = 0$, while the hypothesis that the premium is stationary with symmetric adjustments can be stated as $\rho_1 = \rho_2$.

Results of the Cointegration Test with Asymmetric Adjustment

Empirical calculations indicate that Breitung's nonparametric rank tests and score test are 0.000154, which fails to reject the null hypothesis of cointegration, and 200.45965 which rejects the null hypothesis of linear cointegration, respectively. These test results reveal that the

US mortgage rates and deposit rates are non-linearly cointegrated at all conventional levels of significance. The estimation results of the TAR model are summarized in Table 2.

An analysis of the overall estimation results indicates that they are devoid of serial correlation and have good predicting power as evidenced by the Ljung-Box statistics and the overall F-statistics, respectively. The calculated statistic Φ_μ = 24.6675 indicates that the null hypothesis of no co-integration, $\rho_1 = \rho_2 = 0$ should be rejected at the 1 percent significant level, confirming that the US mortgage premium is stationary[2].

Table 2: Unit Root and Tests of Asymmetry, US Weekly Data,1980:01:01 to 2012:01:17

ρ_1	ρ_2	τ	$H_0 : \rho_1 = \rho_2 = 0$	$H_0 : \rho_1 = \rho_2$	aic	sic
-0.0169[*]	-0.1358[*]	-1.5662	Φ_μ= 24.6675[*]	F = 30.3211[*]	-2.7044	-2.6854
$Q_{LB (2)}$ = 0.00288[0.9857]			Ln L = -108.8980	$F_{(5,1716)}$=28.1313	D.W. = 1.9927	

Notes: *The null hypothesis of a unit root,* $H_0 : \rho_1 = \rho_2 = 0$, *uses the critical values from Enders and Siklos (2001, p. 170, Table 1 for four lagged changes and n = 100). "*" indicates 1 percent level of significance. The null hypothesis of symmetry,* $H_0 : \rho_1 = \rho_2$, *uses the standard F distribution.* τ *is the threshold value determined via the Chan (1993) method.* $Q_{LB (2)}$ *denotes the Ljung-Box Q-statistic with 2 lags.*

The estimation results further reveal that both ρ_1 and ρ_2 are statistically significant at the 1 percent level. In fact, the point estimates suggest that the US mortgage premium tends to decay at the rate of $|\rho_1| = 0.0169$ for $\hat{\varepsilon}_{t-1}$ above the threshold, $\tau = -1.5662$, and at the rate of $|\rho_2| = 0.1358$ for $\hat{\varepsilon}_{t-1}$ below the threshold. Additionally, the empirical results also reveal that, based on the partial *F = 30.3211,* the null hypothesis of symmetry, $\rho_1 = \rho_2$, should be rejected at any conventional significant level. This indicates statistically that adjustments around the threshold value of the US mortgage premium are asymmetric.

More specifically, given the finding of $|\rho_2| > |\rho_1|$, the adjustment of the US mortgage premium toward long-run equilibrium tends to persist more when the premium is widening than when it is narrowing. These findings reveal that US lending institutions adjust their mortgage rates differently to rising versus declining 1-month CD deposit rates. These findings can also be interpreted as an indication that these institutions react differently to expansionary monetary policy than to contractionary policy. Given $|\rho_2| > |\rho_1|$, the adjustment toward the long run equilibrium tends to persist more when the US mortgage premium is widening than when it is narrowing. This result parallels those reported by Thompson (2006) on the prime-lending rate behavior of the US banks and supports the hypothesis that banks adjust their mortgage rates differently to rising versus declining market rates. Therefore, the finding of $|\rho_2| > |\rho_1|$ suggests US lending institutions exhibit the predatory pricing behavior in the mortgage market.

Results of the Asymmetric Error-Correction Model

Given the results of the above asymmetric co-integration tests, an Asymmetric Threshold Autoregressive Vector Error-Correction (TAR-VEC) model is estimated to further

investigate the asymmetric short-run dynamics with respect to the US mortgage (MR_t) and 1-month CD deposit (DR_t) rates. The estimation results of this model can be used to study the nature of the Granger causality between the US mortgage and deposit rates. The empirically determined nature of the Granger causality will help to evaluate empirically whether and how the US mortgage and the 1-month CD deposit rates respond to changes in mortgage premium, induced by external economic shocks or countercyclical policy measures. Additionally, the following TAR-VEC model differs from the conventional error-correction models by allowing asymmetric adjustments toward the long-run equilibrium.

$$\Delta MR_t = \alpha_0 + \rho_1 I_t \hat{\varepsilon}_{t-1} + \rho_2 (1 - I_t) \hat{\varepsilon}_{t-1} + A_{11}(L) \Delta MR_{t-i} + A_{12}(L) \Delta DR_{t-i} + u_{1t} \tag{6}$$

$$\Delta DR_t = \tilde{\alpha}_0 + \tilde{\rho}_1 I_t \hat{\varepsilon}_{t-1} + \tilde{\rho}_2 (1 - I_t) \hat{\varepsilon}_{t-1} + A_{21}(L) \Delta MR_{t-i} + A_{22}(L) \Delta DR_{t-i} + u_{2t} \tag{7}$$

where $u_{1,2t} \sim i.i.d.(0, \sigma^2)$ and the Heaviside indicator function is set in accordance with (5). This model specification recognizes the fact that the mortgage and 1-month CD deposit rates may respond differently, depending on whether the mortgage premium is widening or narrowing (i.e., expansionary or contractionary monetary policy or economic shock).

The following are the estimation results for the TAR VEC model specified by equations (5), (6), and (7), using the US mortgage and 1-month CD deposit rates. In reporting the estimation results, $A_{ij}(L)$ represents the first-order polynomials in the lag operator L. F_{ij} represents the calculated *F-statistics* with the p-value in squared brackets, testing the null hypothesis that all coefficients of A_{ij} are equal to zero. $Q_{(2)}$ is the Ljung-Box statistic and its significance is in squared brackets, testing for the first two of the residual autocorrelations to be jointly equal to zero.

Table 3: *US mortgage and 1-month Deposit Rates, Weekly Data, 1980:01:01 to 2012:01:17*

$\Delta MR_t = -0.0017 - 0.0080 \, I_t \hat{\varepsilon}_{t-1} - 0.0035 \, (1 - I_t) \hat{\varepsilon}_{t-1} + A_{11}(L) \Delta MR_{t-i} + A_{12}(L) \Delta DR_{t-i} + u_{1t}$
(-0.5622) (-3.0362*) (-1.1419) F_{11}= 26.9231[0.000] F_{21}= 20.7743[0.0000]
$Q_{(2)}$ = 1.0160[0.6018] *ln L* = 1,427.9539 $F_{(10,1694)}$-statistic = 26.2272*
$\Delta DR_t = 0.0001 + 0.0059 \, I_t \hat{\varepsilon}_{t-1} + 0.0187 \, (1 - I_t) \hat{\varepsilon}_{t-1} + A_{21}(L) \Delta MR_{t-i} + A_{22}(L) \Delta DR_{t-i} + u_{2t}$
(-0.0937) (1.0519) (2.9675*) F_{21} = 5.8347[0.001] F_{22}= 37.9795[0.000]
$Q_{(2)}$ = 0.6690[0.7156] *ln L* = 191.8235 $F_{(11,1688)}$-statistic = 22.8075*

*Note:" *" indicates 1percent level of significance.*

An analysis of the overall empirical results indicates that the estimated equations (6) and (7) are absent of serial correlation and have good predicting power as evidenced by the Ljung-Box statistics and the overall *F-statistics*, respectively. As to the long-run adjustment, the estimation results of equation (6) of the TAR-VEC model reveal that ρ_1 is statistically significant at 1 percent level, while ρ_2 is insignificant. This finding indicates that when introducing a short-run dynamic adjustment to the model, the US mortgage rates respond only to the widening but not the narrowing of the mortgage premium. This also suggests that in setting their mortgage rates, US lending institutions respond to expansionary but not to contractionary monetary policy in the long run. With regard to the long-term adjustment of the 1-month CD deposit rates, the estimation results of equation (7) show that while $\tilde{\rho}_1$ is insignificant at any conventional level, $\tilde{\rho}_2$ is significant at the 1 percent level. These findings suggest that in setting the 1-month CD deposit rates, US lending institutions respond only to the narrowing but not to the widening of

the mortgage premium. This finding suggests that US lending institutions respond to only contractionary but not expansionary monetary policy in setting their 1-month CD deposit rates in the long run.

In addition to estimating the long-run equilibrium relationship and asymmetric adjustment, the estimated TAR-VEC model also allows for determinations of the Granger causality between the US mortgage rates and 1-month CD deposit rates. The partial *F-statistics* in equation (6) reveals that the mortgage rate responds to its own lagged changes and the lagged changes in the 1-month CD deposit rates. Similarly, the estimation results also indicate that the US 1-month CD deposit rate responds both to its own lagged changes as well as lagged changes of the mortgage rates. These findings suggest a bidirectional Granger causality between the US mortgage rate and the 1-month CD deposit rate in the short run. Economically, this bidirectional Granger causality indicates that the US countercyclical monetary policy does matter in the post deregulation era.

CONCLUDING REMARKS

This study estimated the Threshold Autoregressive (TAR) and the Asymmetric Threshold Autoregressive Vector Error-Correction (TAR-VEC) models developed by Enders and Siklos (2001) to investigate the behavior the US mortgage, 1-month CD deposit rates, and the mortgage premium.

First, following Perron's (1997) procedure, an endogenous unit root test function with the intercept, slope, and trend were specified and estimated to test the hypothesis that the US mortgage premium has a unit root. The results of this test suggest that the US mortgage premium followed a stationary trend process with a break date of May 1, 1981. This could be attributed to the impact of the Depository Institutions Deregulation and Monetary Control Act of 1980, which ordered the phase-out of Regulation Q. Additionally, Breitung's nonparametric rank test and score test indicate that the US mortgage and 1-month CD deposit rates are nonlinearly cointegrated.

Second, the finding of $|\rho_2| > |\rho_1|$ indicates that the adjustments of the loan premium toward the long-run equilibrium are asymmetric and tend to rise faster in the presence of countercyclical monetary policy or shocks which cause deposit rate to increase and fall slower when the 1-month CD deposit is declining. These findings can also be interpreted to demonstrate that US banks react more slowly to expansionary than to contractionary monetary policy. The finding of $|\rho_2| > |\rho_1|$ seems to support assumptions of the consumer characteristic and market concentration hypotheses which underlie commercial bank interest rate asymmetries. This finding also reveals the predatory pricing behavior of US financial institutions in the deregulated environment since 1980.

Third, the empirical estimation of the TAR-VEC model reveals a bidirectional Granger causality between the mortgage rate and the commercial bank 1-month CD rate in the short run. The finding of bidirectional Granger causality reveals US mortgage lending institutions asymmetrically respond to US countercyclical monetary policy, and the US monetary policy makers may utilize its monetary policy instruments to bring changes to the mortgage market in the short run. Taken together, the empirical results indicate that the US countercyclical monetary policy matters and illustrate the predatory behavior of US lending institutions in the mortgage market in the deregulated environment.

ENDNOTES:

[1] Scholnick (1999) provides the survey on these three types of explanations for commercial banks' interest rate asymmetries in the literature.

[2] As shown by Petrucelli and Woolford (1984), the necessary and sufficient condition for the basis to be stationary is: $\rho_1 < 0$, $\rho_2 < 0$ and $(1+\rho_1)(1+\rho_2) < 1$.

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APPENDIX I

Table 4: Estimation Results, US *Weekly Data, and 1980:01:01 to 2012:01:17*

$$MP_t = 0.4921 + 2.6940 Dummy_t + \varepsilon_t$$

$$(2.9001^*) \qquad (15.5500^*)$$

Ln L= -3,051.073 R^2 = 0.1226   DW statistic[a] = 0.0356 $F_{(1,1723)}$ =241.8014*

Notes*: "*" indicates significance at 1 percent level.*

[a] *As articulated by Enders and Siklos (2001, p. 166), in this type of model specification, ε_t may be contemporaneously correlated.*

THE WHY, WHAT AND HOW OF IP VALUATION: SPECIAL REFERENCE TO INDIAN SMES

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Abstract: As intellectual property (IP) has become an integral part of business strategy, the valuation of these assets has become more and more critical. Consequently, the strategic decisions of Indian SMEs also increasingly depend on understanding the economics affecting the value of these assets and most crucially appraising the approximate value of their IP. In this light, the paper reviews the principal approaches and methods used to evaluate an IP asset and proposes a framework to help the Indian SMEs to select an appropriate approach for effective valuation of their IP. In the background, paper discusses various scenarios where IP valuation is required and needed for SMEs and also explores some problems and issues generally faced/reported by the Indian SMEs in IP valuation. Further, the paper examines the broadening set of channels through which SMEs can exploit their IP. The paper provides five constructive building blocks (descriptions of IP assets, valuation purpose, influencing factors, valuation premise and Standardizing IP valuation) for Indian SMEs to choose a viable approach. The paper concludes that the selection of an appropriate method depends upon the circumstances surrounding the valuation, including the type of IP being valued, the purpose of valuation, the basis of valuation and most importantly the availability of information. The clear understanding of the underlying assumptions and theories behind the various valuation methodologies will assist the Indian SMEs greatly in negotiations for the sales or licensing of their intellectual property.

INTRODUCTION

There are several compelling reasons in the literature to protect the intellectual property[2] (IP). It encourages innovation (Kremer, 1988; Helpman, 1993; Jeffe and Josh, 2004; Chen and Thitima, 2005; Crosby, 2007) and rewards entrepreneurs (Gans, 2003; Boone, 2001 and Teece, 1987), drives economic growth (Schmookler, 1966; Falvey *et al*, 2004; Thompson and Rushing, 1999; Gould and William, 1996) and competitiveness (Landerman and William, 2003; Lai, 1998 and Chaudhuri *et al*, 2006), creates and supports competitive jobs (Vandenbussche *et al,* 2007; Burke and Fraser, 2007and Burke *et al*, 2002), protects consumers and families (Frank and Salkever, 1997; Hausman and Leonar, 2002; Giancarlo and Harvey, 1997), and helps generate breakthrough solutions to global challenges (Bruno,2009; GIPC, 2011; Norm *et al*, 2011). Most importantly, the shift towards knowledge and technology-based industries has placed increasing importance on intellectual assets as the source of competitive advantage for firms, thus increasing the need to have such assets protected (WIPO, 2004). All businesses today- big and small, public and private, high and low technology enabled- need to create and extract value from their intellectual capital. However, the capabilities to generate and develop, protect, level of usage and exploitation of IP varies significantly across the organization, depending on their sector, size, focus, resources and the business environment in which they operate. Larger sized firms give tremendous value to their intellectual property (Christine and Mark, 2007; Gould and Gruben, 1996; Sumanjeet, 2012). Today, between 60-80 per cent of the market value of

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[2] *"IP refers to creations of the mind- inventions, literary and artistic works, and symbols, names, images, and designs used in commerce. IP is divided into two categories: Industrial property, which includes inventions (patents), trademarks, industrial designs, and geographic indications of source; and Copyright, which includes literary and artistic works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs"* (as defined by WIPO).

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the companies on S&P is attributed to IP (Roberts, 2012). In 2007, 90 per cent of the Global 2000 enterprise value was attributable to 'intellectual assets' (up from 20 per cent in 1978). In 2011, the brand value of the Coke Company's intangibles (excluding goodwill) was estimated at around US$ 71,861 million, followed by IBM at US$ 69,905 million, Microsoft at US$ 59,087 million and Google at US$ 55,317 million (Table 1).

Table 1: Top Ten Most Valuable Global Brands

Company	Industry	2010 (US$ Million)	2011 (US$ Million)	Change in Brand Value (%)
Coca-Cola (US)	Beverages	70,452	71,861	2%
IBM (US)	Business Services	64,727	69,905	8%
Microsoft (US)	Computer Software	60,895	59,087	-3%
Google (US)	Internet Services	43,557	55,317	27%
GE (US)	Diversified	42,808	42,808	0%
McDonald's (US)	Restaurants	33,578	35,593	6%
Intel (US)	Electronics	32,015	35,217	10%
Apple (US)	Electronics	21,143	33,492	58%
Disney (US)	Media	28,731	29,018	1%
HP (US)	Electronics	26,867	28,479	6%

Source: Best Global Brands 2011, Interbrand, BusinessWeek (*compiled by the Researcher*)

Alike large firms, small and medium sized enterprises (SMEs), in both developed and developing countries[3] rely heavily on intellectual property[4]. But, in case of SMEs, more than a *'value game[5]'*, IPRs have strategic importance, as small firms require constant creativity and innovation to adapt to fast-changing market conditions, short product cycles and intense market competition. While some create new products, services and processes, others are specialized in adapting existing technologies for specific niche markets. In short, IPRs offer huge opportunities for SMEs to gain and maintain substantial competitive edge in the marketplace. Therefore, strong protection of IP may assist SMEs[6] in every aspect of their

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[3] In developing countries like India technology enabled SMEs propel long term growth by facilitating innovation and its diffusion across local, regional, national and international economies. In case of India, IPRs have spurred the development of huge industries (e.g. the software and film industry) as well as allowed small businesses to develop innovative business models (e.g. the franchising of fast food stands).
[4] The empirical evidence suggests that stronger IPRs in developing countries may encourage international technology transfer through market-based channels, particularly licensing, at least in countries with strong technical absorptive capacities. In the context of strong IP protection, businesses in developed countries are more inclined to transfer their technologies to developing countries through licensing rather than through exports and foreign direct investment (FDI), since such rights allow them to retain control over their technologies. In the presence of weak IPRs, multinational companies in developed countries seem to prefer to retain control over their technologies through intra-firm trade with their foreign affiliates in developing countries or FDI.
[5] Giuri *et al.,* (2007) suggests that small firms are much less likely to hold patents that are not 'worked', i.e., actively used but held as dormant property rights, which is what would be expected in light of the costs of maintaining IP in force.
[6]SMEs can acquire the following IP for their growth and value addition:
1. Patents for innovative processes which can be put in the manufacture for new products.
2. Copyright and other related rights for artistic work and computer softwares.
3. Trade marks for a distinctive brand name and strong brand recall value.
4. Industrial Designs for protection of their creative packaging and textile designs.
5. Protection for Circuits and integrated micro-chips.

business activities-from planning to business strategy; product planning to product development and design; product delivery to marketing and from raising financial resources to expand the business boundaries through licensing or franchising[7]. But, the value of IP is often not adequately appreciated and its potential for providing opportunities for future profits is widely underestimated by SMEs. This is particularly true in the context of developing countries like India. Evidence suggests (Maheshwari and Bhatnagar, 2008; Rizzoni, 1991; Kiran and Jain, 2011) that in India, most of SMEs are lagging far behind in the process of IP creations, protection and exploitation and are facing technical obscurity, being unaware about management of their knowledge based assets. In many sectors, SME innovations are mainly of an informal nature, without formal R&D investments, R&D laboratories or R&D personnel. Empirical evidence shows (Kitching and Blackburn, 2003) that SMEs utilizes, in the alternative or in addition to formal IP rights, other methods of defining the property of innovation, such as the secrecy of innovation or trade secrets, lead time advantage, complexity of design, technical measures such as (DRM) digital rights management, etc.

There are some important reasons why SMEs in India[8] appear to make less development, poor protection and less effective use of IP. First, still, most Indian SMEs are unaware about the concept of IPRs, their infringement and legislations to protect IP (Hussain, 2009). Second, SMEs investments in innovation, especially technology, which is in close connection with intellectual property, are very low in India. Third, IP rights are often ignored by SMEs due to several factors including high costs in patent acquisition, inadequate manpower to undertake the necessary groundwork needed for IP acquisition and inadequate in-house knowledge of IP rights and complex procedures for their protection. Fourth, even where SMEs are able to recognize the importance of IP protection and put in place appropriate measures, they may be at a substantial disadvantage in enforcing them. This is particularly likely to be the case with respect to larger firms who not only may have a sufficiently deep pocket to protect their own IP or challenge the IP of SMEs, but may have greater competence at both designing and defending their own patent positions against emergent rival patents.

Finally, one aspect all these problems have in common is the need of IP valuation. Despite the fact that IP is frequently bought and sold, in the IP community, there is a high degree of scepticism expressed by all constituents (buyers, sellers, lawyers, consultants etc.) when it relates to IP valuations. This problem arises principally because there is doubt as to whether the value can be measured reliably. In fact, the valuation aspect of IP is directly related to the protection and exploitation of IP[9]. Due to negligence of IP valuation, Indian SMEs are often concerned about the difficulties in enforcing their rights or defending an unjustified claim against them. Thus, as IP becomes an integral part of SMEs business strategy, its value should be understood before it is granted, not just when it is bought or sold.

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6. *Geographical indications for SMEs dedicated in manufacturing goods of a reputed quality in a particular geography.*
7. *Trade secrets for their process and for commercial exploitation at a later stage.*
8. *By acquiring and protecting their intellectual property, SMEs can ensure that IP turns into a valuable asset for their business.*

[7] Design rights, industrial design rights, copyrights, patents and trademarks are essential for numerous industries composed mainly of SMEs such as the textile, toy, publishing, biotechnology, and retail industries, to name just a few (Chaudhur *et al,* 2003; WIPO, 2006).

[8] SMEs are the pillars of the Indian manufacturing sector and have become instrumental in the steady economic growth of India. There are more than 100 lakh SMEs units in India with investment of above Rs. 1 lakh crore. The sector has recorded double digit growth during last four years. It contributes 40 per cent to industrial production and six percent to GDP. Around 70 percent of the employment growth comes from the SMEs in the Asian region and they contribute towards 90 per cent of industrial units in India and 40 per cent of value addition in the manufacturing sector.

[9] For instance, IP protection enables SMEs to claim ownership over its intangible assets and exploit them to their maximum potential. In short, IP protection makes intangible assets *"a bit more tangible"* by turning them into valuable exclusive assets that can often be traded in the market place.

DEVELOPING THE SENSE OF IP VALUATIONS FOR INDIAN SMEs

From the above discussion it is clear that in today's global economy, much of a business competitive advantage lies in the ability to identify, protect and exploit their IP. As a result, the strategic decisions of SMEs are also increasingly dependent on understanding the economics affecting the value of these assets; there is an increasing pressure for SMEs to know the approximate value of their intellectual assets (OECD, 2004). IP valuation may help SMEs select the most effective way in which their intellectual assets may be utilized or exploited. For example, accuracy in the valuation of IP will increasingly be a success indicator for business transactions[10] (e.g., Acquisitions, sales, licensing transactions, etc.). Added to this, there are many reasons why intellectual assets of SMEs may be valued[11]. First, as investors increasingly recognize IP as a key element in the value of a firm and the indicator of its technological and other capabilities, IP valuation is very significant in obtaining investments for SMEs (Stewart, 1999). While securitization appears to be gaining ground, conventional lending remains the main source of external finance for most SMEs.

The practice of extending loans secured solely by IP is not very common; in fact, it is practiced more by venture capitalists (VCs) than by the banks[12] (European Commission, 2006). If SMEs seek to use IP assets as collateral to obtain financing, IP assets stand a greater chance of being accepted as collateral if SMEs are able to prove their liquidity and that they can be valued separately from business. Furthermore, SMEs have to show that their IP assets are durable, at least for the period during which organizations have to repay the loan, and marketable in the event of foreclosure or bankruptcy. In this respect, it is critical to identify all the IP assets of SME and to obtain an objective valuation of the identified assets. Added to this, while investing in SMEs, investors are very conscious and want to know where an invention or innovation lies in the marketplace with reference to potential and existing competitors[13]. Investors and lenders stand to gain a lot from the more systematic valuation of IP. Investors could optimize their portfolios and increase their returns with more realistic IP valuations. Similarly, suppliers of credit could lend their money on term better in line with the risks. Moreover, a bank would be willing to provide financial support to SMEs only on the basis of valued intangible assets; not merely on the intangible assets (Meir, 2004). The core '*idea*' is any assets (tangible or intangible) must have some value and that value must be quantifiable. Thus, without proper valuation of IP, hardly any investments would be made into any new or growing businesses. Second, IP valuation is needed in the incident of a sale, merger or acquisition of SMEs[14]. In case of sale of SME to another business, proper valuation of IP is needed to arrive at a conclusive value that satisfies both seller and buyer. Further, proper valuation of IP may enhance the reputation of

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[10] Before valuing IP, the SMEs/evaluator must gain an understanding of the purpose of valuation, to determine the basis of valuation and appropriate valuation methodologies.

[11] The overriding reason for being able to assign a value to corporate intellectual property is the need to understand one's business in quantitative terms and to optimize use and maintenance of IP to the firm's utmost advantage.

[12] For VCs and Banks intellectual property is not the most important asset. The investment decision is based on the credibility of the company's management, employees and market prospects. VCs and Banks focus more on the overall evaluation of the company and the competencies of its management team and they assess the value of a patent portfolio always in relation to the business model.

[13] Investors/lenders are only interested in highly fungible collateral. The lender is not interested in using the monopoly right. Its aim is to sell it or to license it. The potential of IP assets as a way to secure financing is a matter of great interest among investors, particularly if supported by reliable and innovative valuation methodologies.

[14] Issues pertaining to M&A activity are not simply related to large, multinational corporations. Small and medium size businesses can add significant value and revenue by exploiting the full potential of their valuable intangible rights. In many instances, this means obtaining the necessary financing to acquire established properties and intellectual property rights in order to expand their business or to simply improve their performance and competitiveness. In the alternative, divesting certain intangible assets for a premium at the opportune time can yield significant financial returns for small or medium size businesses. Finally, intellectual property rights have enabled small or medium size businesses in relatively few years achieve large entity status with enormous capital values, such as Microsoft and Sun Microsystems.

the SME in the eye of a purchaser. In case of merger and acquisition (M&A), adequate due diligence and accurate asset valuations are crucial for the long-term success of any M&A transaction. In fact, a lack of proper due diligence[15] on IP valuation in M&A deals can be costly (Rohit, 2010). One classic case of IP due diligence gone wrong was when German car maker Volkswagen purchased the assets of Rolls-Royce and Bentley automobiles in 1998 but failed to realize, until after the deal, that the IP assets did not comprise the right to use the Rolls-Royce trademark. Volkswagen had therefore acquired all the rights necessary to manufacture the car, but did not have the right to brand it as a Rolls-Royce (Kahoo, 2010). Further, during a corporate bankruptcy and reorganization, often the most valuable assets remaining are IP-related. Valuation is required by the Court to properly dispose of the assets and reorganize the company, if necessary. Third, a high-profile purpose of intellectual property valuation is to compute damage awards in an infringement lawsuit. The valuation of allegedly infringed IP and the assumptions used to do valuation can be central issues in determining damages in IP litigation. If the acquired IP is later subject to an infringement claim, the valuation of the acquired IP will likely become a subject of discovery and significant discussion during the litigation (Michael, 2011; Ziedonis, 2004). Therefore, SMEs should be aware of the potential legal consequences of any IP valuation should the IP later become the subject of infringement litigation. Fourth, another strategic purpose for valuing IP is when one is considering buying, selling, or transferring the asset in a licensing arrangement or acquisition. In order to enter a beneficial license agreement, SMEs must know as accurately as possible the value of the IP concerned. Conducting an IP valuation will provide key information to assist with the licensing process by identifying problem areas, giving benchmark values, forecasting income and providing a market outlook. This information can be used in negotiating and drawing up the terms and conditions of the license contract. An accurate IP valuation allows both the licensor and licensee to estimate ideal financial terms and thus to address the specific needs of both parties. In this context, IP valuation process would enable a decision about (1) whether the license transaction is worthwhile, and (2) under what terms and conditions the SMEs should be willing to enter into such a transaction (HIPO, 2011). Fifth, over the recent years, issues surrounding the valuation of IP and intangible assets for tax purposes have become increasingly common and the values involved increasingly significant[16]. There are various circumstances in which a requirement to value IP assets or other intangible assets for tax purposes arises. Some of the main reasons are: (1) whenever an intangible asset is transferred within a group, in order to determine the appropriate disposal proceeds for tax purposes, particularly if the transfer is cross-border and a taxable gain may arise on the disposal of the asset; (2) performing base date valuations, where relevant, in order to establish the base cost of an intangible asset for the purposes of calculating a taxable gain on transfers, either within an international group or as a result of a third-party disposal; (3) potentially in support of transfer pricing[17] in a national or multinational group, in order to demonstrate that the transfer pricing arrangements are consistent with the allocation of intangible value within the group; (4) In multi-jurisdictional acquisitions, in order to understand the allocation of intangible asset value acquired to

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[15] Due diligence may be defined as-an evaluation, performed by investors or their agents, into the details of a potential investment or purchase, where the evaluation involves a verification of all the material facts relevant to the investment or purchase. It ascertains among other things ownership of the property in question, that all of the true and first inventors are acknowledged and will include such things as any third party interests, outstanding or due payments and relevant expiry dates of the IPR.

[16] For example, the U.S. tax code has several provisions that require IP and intangible asset valuation for tax planning and compliance. These include charitable donations of IP, the sale or license of IP across tax jurisdictions (inter-company pricing), taxable reorganizations, goodwill allocations, built-in gains, among other areas. Disputes in these areas are resolved in the U.S. Tax Court.

[17] Transfer pricing is the practice by which the price or fee for use of an asset is established for transfer from one affiliated company to another. In a simple example, two companies merge operations and the larger of the companies might have technology, trademarks or other intangibles that the newly acquired company would like to use. In that case, an arm's length royalty rate would have to be established for use of the intellectual property, and/or a fixed price would have to be negotiated for outright transfer of the asset from the parent to the subsidiary.

different jurisdictions and (5) in both national and multi-jurisdictional acquisitions, in order to determine the value of identifiable intangible assets that may qualify for tax amortisation deductions (John and Charles, 2012). In addition to strategic, transactional, tax and financial reasons, violations of intellectual property may also be required for legal reasons. Typical examples of this are conducting valuations for the purposes of determining damages or reasonable royalties that are to be paid in lieu of damages (Bull, 2012). Damages aim to compensate a plaintiff for the economic loss that the intellectual property holder has suffered as a result of the unauthorized use of intellectual property. The economic benefit that has been denied to the holder of intellectual property needs to be quantified (Bull, 2012). Last but not the least, for SMEs, IP valuation is needed in order to demonstrate a *"true and fair view"* which may assist SMEs in many ways like: raising finance, enhance the reputation of SME, periodic audit of IP, fair allocation of contribution, risk and rewards and to prove loss, financial reporting[18] and damage in litigation (forensic accounting).

Despite the fact that IP valuation is critical for success of SMEs in the global economy, IP valuation is either not practiced properly or often ignored by Indian SMEs. There are several possible reasons and explanations behind it. First, most Indian SMEs are not convinced with the benefits and opportunities offered by IP valuation. Second, IP valuation is costly affairs. Generally valuation is done by experts and they charge very high fees for their services. It is very difficult for SMEs to afford such costs as SMEs have fewer resources and smaller budgets relative to large firms. Third, SMEs typically has no in-house expertise it can rely on to approach the issue in a rational, strategic and ultimately business-focused way. In practice, this means that the SMEs generally has to choose between either ignoring the IP valuation issue altogether and hoping for the best or seeking out an external adviser whom it hopes can provide the necessary support services with the minimum of oversight[19]. Fourth, most traditional SMEs rely more on secrecy (Arundel, 2001) and prefer not to disclose their know-how. As a result, IP valuation is ignored. Firth, IP valuation depends on various factors including use of IP assets, market share of SME, openness of economy, legal protection of IP, economic growth and profile of SME. Due to limited managerial skills, SMEs find it hard to consider these factors. Fifth, valuing an IP asset is further complicated because such value is generally not stagnant their true value may not be readily apparent (Bishop, 2003). Sixth and perhaps most tricky problems, which is experienced by many SMEs and IP experts is inconsistency and reliability in IP valuation models. SMEs find IP valuation process difficult because there are many models, producing very varied results, which ultimately make the IP valuation problematic for SMEs and their investors and also undermine the confidence in such valuation. Thus, the quality and accuracy of IP valuations have become an important focus of SMEs.

APPROACHES TO INTELLECTUAL PROPERTY VALUATIONS

In the light of above discourse, it is apparent that there are good reasons for SMEs in emerging economies like India to now start adopting IP valuation exercise. This demands adequate methods for the valuation of IP[20] (Céline *et al,* 2010). Methods used for business

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[18] Valuing IP and other prescribed intangible assets for reporting on public financial statements. In 2001 the Financial Accounting Standards Board (FASB) established detailed new regulations for the reporting of certain intangible assets acquired through acquisitions and business combinations. These regulations specify the valuation, amortization and reporting of goodwill and other intangible assets. The end deliverable is usually a report specifying the value and change in value of the subject assets.

[19] For detail discussion, please refer "Supporting document DD-SME and IP Framework", Review of Intellectual Property and Growth accessed on *http://www.ipo.gov.uk/ipreview-doc-dd.pdf*

[20] The valuation of intangible assets is a relatively new analytical practice that evolved over the last two decades, emerging from the increased levels of patent litigation in the 1990's and the need to value patents and other intangibles in the context of litigation damages. The valuation of intangibles has moved into financial reporting, with the passing of new accounting regulations around purchase price allocation in M&A deals (under both US-GAAP and IFRS), and the need to calculate the price of intangibles that are included in an acquisition. IP

purpose can be generally divided into two groups: qualitative methods and quantitative methods. Quantitative methods attempt to calculate the monetary value of the IP asset. Qualitative methods provide a value guide through the rating and scoring of an IP asset based on factors that can influence its value. Quantitative valuation approaches give an indication of the estimated monetary value of the IP, and this approach is often insufficient as a basis for recommending development and exploitation decisions. Qualitative evaluation methods are often used to assist decision makers here. They are most useful for comparing, categorizing and ranking technologies within a portfolio or against competitors' technologies. They are also useful for assessing the uncertainties and opportunities related to individual IP assets[21]. As both IP valuation methods are essential, it is crucial for SMEs to develop a methodology that includes qualitative and quantitative methods to estimate the value of IP[22]. Both methods are discussed below:

Quantitative Methods: There are various quantitative methods and approaches developed over a period to economically evaluate IP. Russell & Parr divide all possible types of valuation of individual IP into Cost, Market and Income based methods[23], the latter of which includes simple DCF (discounted cash flow methods (Parr and Smith, 1994). Arthur Andersen in a report on valuing intangible assets divides valuation methods into Cost, Market Value and Economic Value methods (Arthur Andersen & Co. 1992). However for the purpose of this discussion it is perhaps better to classify valuation methods for individual IP by the extra features they account for over and above less sophisticated methods (Pitkethly, 1997; ICAI, 2007). These can be summarized as:
1.   Costs based Methods (based on Cost Approach),
2.   Market based Methods (based on Market conditions),
3.   Income Methods (based on projected cash flows)
•   *Discounted Cash Flow (DCF) Method*
•   *Relief from Royalty*
•   *Rule of Thumb-25% Rule*
•   *Options Pricing Technique (The Black-Scholes)*
•   *Monte Carlo Approach*

Cost Based Models: The cost-based approach has in its core the concept of cost, in particular the reproduction cost or replaces cost. Reproduction cost is the total cost, at current prices, to develop an exact duplicate of the intellectual property (Lopes, 2011). Replacement cost is the total cost, at current prices, to develop an asset having the same functionality or utility[24] as the intellectual property. There are also other costs definitions that may be applicable to a cost approach valuation (Schwelhs and Schwelhs, 2011). Some valuation analysts consider cost avoidance as a cost approach measure. This cost measure quantifies either historical or prospective costs that are avoided because the owner/operator owns the intellectual property. Whereas some other analysts consider trended historical costs as a cost approach measure. In this cost measure, historical intellectual property development costs are identified and trended to the valuation date by an inflation-based index factor. Regardless of the specific cost measure used, all cost approach methods include a relevant definition of cost (Reilly, 2011). The relevant costs may include research

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valuation is also heavily used in tax reporting, with the emergence of IP holding companies and transfer pricing compliance regulations that require the valuation of IP portfolios involved in transactions for tax purposes.

[21] For example, while the outcome of a quantitative valuation may be: "The IP asset is worth Rs 1 crore." The result of a qualitative evaluation may be: "The technology is of strategic importance for an attractive market; it can be enforced efficiently but only if significant investment is received or financially stable licensees are found.

[22] It is important to note that these methods are also used to value intangible assets.

[23] This framework is structured around methods based on the cost to create or recreate the asset (cost approach), methods based on sales of comparable intellectual property (market approach), and methods based on the future economic benefits produced by the intellectual property (income approach).

[24] Functionality is an engineering concept that means the ability of the intellectual property to perform the task for which it was originally designed. Utility is an economics concept that means the ability of the intellectual property to provide an equivalent amount of satisfaction.

and development (labour, materials and overheads), testing and regulatory approval costs, IP protection costs, equipment and other capital investments, a profit margin based on the usual profit the developer would expect to make on material, labour and overhead costs, plus a component for entrepreneurial incentive representing the amount of economic benefit required to motivate the developer to enter into the development process (Rowell, 2008). The entrepreneurial incentive component is essentially a measure of the opportunity cost of undertaking the development in terms of diverting resources. Once the components of cost have been determined, it is necessary to adjust for obsolescence (Reilly and Schweihs, 1999). The types of obsolescence relevant to intangible assets include functional obsolescence (inability to perform the function for which it was originally designed), technological obsolescence (improvements in competitive technologies) and economic obsolescence[25] (external factors that prevent the technology from earning a fair rate of return over its useful life). There are many fundamental problems with the cost approach. The most significant is that it fails to reflect the earnings potential of the IP. The value of IP is derived from its earning potential, and not its cost[26]. If the intellectual property offers significant economic advantages in an active market, the use of the cost method is likely to understate its value. If, on the other hand, development has been inefficient or lengthy, the use of the cost method might overstate its value (Rowell, 2008). Also, for many identifiable intellectual assets, it may not be possible to develop a replacement, or it may not be possible to estimate the replacement cost. Further, cost approach rarely provides a credible valuation of IP such as patents or trade secrets. In spite of the issues involved in using the cost approach to establish value, in certain instances, it may work well, such as determining the value of a trademark and the costs to modify from one brand to another in an M&A deal. This approach also gives a benchmark for IP value in case where the future uses and benefits of a technology are not clearly evident (early stage technology). Using the replacement cost approach is especially useful during license negotiations. Most importantly, this approach is very useful for SMEs as it is the simplest approach of IP valuation.

Marked based Models: It estimates the value of an intellectual property based on market prices of comparable intangible assets that have been bought/sold or licensed between independent parties. In other words, it provides indications of value by studying transactions of property similar to the property for which a value conclusion is sought (Terence and Keith, 2002). Appropriate and necessary adjustments are made in order to produce a realistic value indication of the subject IP asset. There are several approaches to establishing this value, depending on the desired value standard and value purpose. For example, if one desires the fair market value of licensing IP to another company, the valuation analyst would look to other recent licensing transactions in the same industry and use a similar royalty rate. Another way to value IP using the market approach is to use a gross multiplier such as a cash flow factor to arrive at a value. For example, IP generates US $1Million of free cash flow in year 5, and the valuation analyst uses a cash flow multiplier of eight, so the IP is worth US $8Million. Valuation analysts use other multiplier factors commonly as well and these factors are usually ratio based. Once the valuation analyst arrives at a value, then the valuation analyst adjusts the IP's value to account for identifiable differences, such as the remaining life of IP protections (Pellegrino, 2005). While this method appears simple at first glance, it presents considerable difficulties in practice. The intricacies of this method are due

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[25] To estimate the intellectual property value, the following cost approach formula is commonly used: replacement cost–physical deterioration–economic obsolescence–incurable functional obsolescence=intellectual property value.
[26] Future economic income potential, market timeliness, and profit potential drives the value of IP. Nike spent $35 in the 1970's to purchase rights to the "swoosh" emblem now universal to all of Nike's products. That swoosh today is instantly recognizable around the world. In fact, Nike no longer puts the word "Nike" near the swoosh because the public knows the symbol's meaning so well. Thus, the symbol is worth substantially more than what it cost Nike to purchase it.

to the unique characteristics of IP assets and the confidential nature of IP transactions. It is often difficult to find IP assets which bear ample resemblance to an IP asset subject to the valuation analysis. In addition, pricing information is also rarely disclosed to the public. Further, if a sale price/royalty rate is made public, the amount allocated to IP from the total purchase price is not reported or other terms of contract are unknown. The main advantage of the market based approach is the use of data from actual IP transactions. This approach is useful in situations where good quality market data exist and similar IP assets are sold. For example, music and film libraries. Added to this, observing the market is a relatively straightforward valuation method. It is also useful to check the reliability of other approaches. One may conclude that while market information can be very useful in analyzing and valuing IP, but it seldom is comprehensive enough to provide the basis for a satisfactory conclusion of value on its own (Gordon and Parr, 2005).

Income Based Model: While the cost approach has specific applications in certain situations, and with particular types of IP assets, and the market approach has its own limitations, the income approach is generally applicable to most situations and intellectual assets. This approach has been described as the *"bedrock"* of IP valuation (Smith, 2009). The income approach method of valuation[27] estimates present value of the subject IP asset from the estimated stream of income generated from the ownership/exploitation of the subject IP asset. Thus, this method relies heavily the expected 'income' produced from the ownership of the subject IP asset. Using this method, the valuation analyst projects the economic income generated solely from the IP over a discrete period, known as the remaining useful life (RUL) as well as any residual value after the RUL[28]. This approach is useful in situations where the IP can generate relatively predictable cash flows. Examples include patents in mature markets (Terence and Keith, 2002). The data/information required for this method include estimates of future revenues and costs as well as the fair market value or royalty rates for other assets used in the generation of the product or service revenue. The income approach does however have certain drawbacks. It is the hardest approach to apply, as it requires a full financial model that forecasts future cash flows of the subject business. This is not an easy task, as it requires analysis of the business, the economic and regulatory environment, the competitive landscape of the business and so on. The second disadvantage of the income approach is that at times of turbulence such as the current market, it is harder than ever to estimate the future cash flows (Fenigstein, 2003). However, using probability based option analysis to calculate the expected cash flows can refine this approach.

There are many income based valuation methods, each with variations according to the reason for the valuation and the type of industry. Some well-known include discounted cash flow (DCF), Relief from Royalty (RFR), Rule of Thumb-25% Rule, Monte Carlo and Real Option method.

Discounted Cash Flow Method: DCF is the most fundamental and widespread of the income based valuation approaches. This approach attempts to determine the value of the IP by computing the present value of future cash flows from the IP, over its useful life. The methods under this category are all centred around evaluating future cash flows and then

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[27] To conduct an IP valuation using an income based method, an evaluator need to estimate: an income stream either from product sales or the licensing out of the asset, the duration of the IP asset's useful life, and have an understanding of risk factors. These parameters are based on observations of relevant markets, including size, growth trends, market share dynamics among participants and overall market risk characteristics.

[28] The RUL is likely one of the most difficult attributes of the IP's value to determine when using the income approach. Unfortunately, it is also one of the most significant drivers for the IP's value. IP with a long RUL will be worth more than IP with a shorter RUL. The RUL will vary based on the IP under review. Utility patents lose their useful life 20 years after the filing date-the point at which the monopoly protection from the government ends. No company would pay royalties in the 21st year, because they can copy the IP owner's design and methods without fear of legal retaliation. Copyrights have a useful life well after an author's death. Trade secrets, such as the formula for Coca Cola, may have an indefinite useful life if they remain confidential.

discounting them back at a discount rate to achieve a present value (Paweł and Paweł, 2011). The two key factors that must be accounted for in a DCF calculation are *the time value of money* and the *riskiness* of the forecasted cash flows. These are dealt with through the use of a specific discount rate chosen specifically for the subject IP, which accounts for both factors at once. Alternatively, the forecasted cash flows can be adjusted to account for their riskiness and changing riskiness over time (Akaslan, 2011). These are then discounted at a risk free rate, which accounts for the time value of money (HPO, 2008). Both versions are widely used.

Relief from Royalty: Second popular income approach method is the relief from royalty method. The RFR method estimates the portion of a business's earnings attributable to an IP asset based on the royalty rate the business would have paid for the use of the IP asset if it did not own it (Miller *et al,* 2008). In other words, the value of the IP asset is equal to the value of the royalty payments from which the business is relieved by virtue of its ownership of the asset. The RFR method projects cost savings to the company. To apply the RFR method, the evaluator begins by selecting a royalty rate based on available market data/information for licenses involving similar assets, industries, territories and other characteristics. Next, the evaluator selects an appropriate, risk-adjusted discount rate to determine the present value of the royalty payments (Minnoti, 2012). To estimate the value, the evaluator calculates the present value of projected royalty payments over a certain period (10 or 15 years, for example) and then calculates the present value of the residual at the end of that period. This is a straightforward IP valuation method that avoids many of the shortcomings of traditional valuation approaches.

Rule of Thumb-25% Rule: The 25% rule is a rule of thumb used to estimate royalty rates for IP licensing transactions by approximating the risk/reward relationship between a licensee and licensor. The rule says that the licensor should receive 25 percent of the licensee's gross profit from the licensed technology. Thus it is not exactly a method for valuation of intellectual property, but the "ideal" distribution of the technology's value between licensor and the licensee (Freilich, 2011). Though simplistic, industry practice shows the wide application of the rule, this approach is difficult to apply to the valuation of early stage technology as the technology does not mature in the market. The Rule has been primarily used in valuing patents, but has been useful (and applied) in copyright, trademark, trade secret and know-how contexts as well (Robert, 2011).

Options Pricing Technique (The Black-Scholes[29]): Patent licensing shares at least one attribute with all other relevant business decisions: it involves risk. Where decisions involving financial risk are concerned, sound management principles suggest considering ways and vehicles to hedge that risk. One of the central vehicles to hedge risk in modern finance is an "Option." A financing option on a stock, for instance, is simply the right to buy the stock for a predetermined price before the option expires, but it does not entail any obligation to buy. Similarly, a patent can be seen as the right to invest in or to license (or enforce through litigation) an underlying technology or product line, during the term of the patent. Therefore, a un-commercialized patent can be valued from this "options" perspective using, for example, methods such as those derived from the famous "Black-Scholes" model. The application of option valuation analysis to patent valuation requires, nevertheless, careful consideration of similarities and differences to arrive at significant results.

Monte Carlo Approach: Advanced tools of income approach include complicated mathematical modelling tools, such as "Monte Carlo Analysis," to determine the value of an IP asset (Luis *et al,* 2010). It is a method to evaluate how possible future outcomes can

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[29] A highly complex method of valuation called Options Method is borrowed from the widely used method for valuing stock options known as the Black-Scholes formula (Gordon and Parr, 2004)

affect the decision of whether or not to use a new piece of IP based on possible value– remember that this methodology is most useful in valuing early stage, non-commercialized technology; and, in particular, where there are many unknowns and numerous scenarios about the future development of the technology. It is useful when a single discounted cash flow analysis is problematical at best, given the uncertainty (Weston, 2010). By using this approach, one runs simulated cash flow analyses for all the various scenarios, taking values from the probability of each scenario occurring, and then incorporating those probabilities into a large number of scenarios (often as many as 1,000 scenarios). The result of the analysis is a distribution of present values of the many possible future outcomes; and one can therefore predict first, second, third, and fourth quartile values based on the possible future outcomes.

The above discussed methods are well established and accepted. Added to these, there are some other methods of IP valuations. Some of these methods are permutations of traditional methods while, on the other hand, others of these are completely new approaches to the questions and issues of valuing very complex assets. In addition to the above discussed methods (based on Costs, Market and Income Approach) following alternative and specific methods should used by SMEs for valuation of their IP.

1.   *The Brand Value Equation Methodology (BVEQ)*
2.   *Binomial Lattices*
3.   *The Competitive Advantage Technique*
4.   *The Concept of Relative Incremental Value*
5.   *Decremental Cost Savings Valuation*
6.   *Disaggregation Mehtod*
7.   *Enterprise Value Enhancement*
8.   *Imputed Income Analysis*
9.   *Income Capitalization or Direct Capitalization Methodology*
10.   *Income Differential Analysis*
11.   *Incremental cash flow method*
12.   *Liquidation Value*
13.   *Premium Pricing Analysis*
14.   *Probability Adjusted Income Method*
15.   *Profit Split Methodology*
16.   *Snapshots of Value Approach*
17.   *Subtraction Method of Value or Benchmark Method of Value*
18.   *The Technology Factor Approach*
19.   *The ValCalc Methodology*
20.   *Valmatrix Analysis Technique*

QUALITATIVE APPROACH OF IP VALUATION

Qualitative methods provide a non-monetary value of the IP asset in question. Specific factors related to the IP asset are chosen for analysis, particularly those which have a significant impact on the value. Generally, these factors are called 'value drivers'. The factors are rated and scored to determine strengths and weaknesses and to create a value guide. Qualitative 'value driver' based approaches include those which analyse patent data, specific aspects of the patent application documentation (number or quality of claims, citations etc.). There are also qualitative approaches which analyze and score more general aspects related to the IP asset. These indicators can include aspects related to legal and IP protection backgrounds, the technology and development level, market details, financial factors and very importantly, the management competencies of the organization that will exploit it (Adam, 2010). There are three more prevalent methods, called PRISM Method, developed by QED Intellectual Property, IPScore® software developed by the Danish Patent and Trademark Office (DPTO) and 'Patent Evaluation Index for Technology Transfer' developed by Japan Patent Office (JPO) in 2000.

PRISM method[30] classifies patents into four basic management models (Shigeki *et al,* 2006), namely: (1) monopoly (patents for internal exploitation with high value); (2) defensive (internal exploitation, low value); (3) license (external exploitation, high value); and (4) joint venture[31] (external exploitation, low value). Classification is determined by a multiple choice questionnaire inquiring about patent coverage, defensibility, profitability, revenue growth, patent attributes, industry adoption, competitive position and company capability for persons inside firms (IPA, 2004).

IPScore® uses mainly qualitative measures and criteria to assess the significance of individual IP. The IPScore® measures represent a guide to the minimum criteria that an organization should apply to value an IP for intellectual property management purposes (Ali, 2003). They include:
- *Technical status of the IP (relates to patents and software)*
- *Market-related utilization potential*
- *The company's mission and resources relating to the utilization of the right*

'Patent Evaluation Indexes for Technology Transfer' is an initial evaluation tool for measuring the potential for technology transfer of patents from a large patent portfolio to respond to the request for the creation of a standard patent valuation method utilized for technology transfer (JPO, 2000). The model provides an evaluation of three specific aspects of IP (rights[32], transferability[33] and business potential[34]), as well as a comprehensive evaluation that weighs these factors according to the purpose of the evaluation (Shigeki *et al*, 2006). An assessment of the tool indicated that while all three specific aspects are related to actual licensing behaviour, only the business potential evaluation is statistically significant (JIII, 2004).

The main advantage of patent information related and non-patent value indicator is their relative simplicity. Once the relevant information has been researched and is available in a useable form it is relatively easy to classify and evaluate the IP without the need for complex methods. Another advantage is that the data for the evaluation is often publicly available. With sufficient expertise it is possible to value IP belonging to other parties. As a result, these qualitative methods facilitate the comparison and ranking of IP within a company's own portfolio or against competitors' IP (HPO, 2008). Valuing IP, using patent information related value indicators have many drawbacks. For example simply counting citations avoids taking a stand on questions such as how and why citations arise and what type of information they convey. Focusing on simple counts deliberately ignores any added information within the network of citations. Using value indicators as a proxy for value is only as useful as the level of expertise of those who are conducting the valuation. One must also decide which indicators are relevant to the value of a particular IP, and which are not. The quality and realism of the qualitative evaluation in IPScore®, for example, is greatly dependent on the quality of information used.

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[30] for detail please see, "PRISM: IP Portfolio Management Process", available at http://www.qed-ip.com/prism.htm

[31] For details please see "Intellectual Property as an Economic Asset: Key Issues in Valuation and Exploitation - Background and Issues", Organisation for Economic Co-operation and Development (2005), available on www.oecd.org

[32] Evaluation of rights: status of patent application, remaining period of rights, characteristics of the invention (basic technology, minor improvement, etc.), strength of the rights, possibility of a dispute with third parties, technological superiority compared to substitute technology, level of technological completion of the invention (product, prototype, idea, etc.).

[33] Evaluation of transferability: necessity for additional development for commercialisation, technical support at the time of technology transfer, license-constrained condition, obligation or co-operation of right-holder in response to infringement, etc.

[34] Evaluation of business potential: impediment (approval from a related authority, etc.), contribution of the patent to the business, probability of emergence of replacement technology, business size, etc.

TOWARDS DEVELOPING A VIALBLE IP VALUATION APPROACH

Given the dynamic and evolving nature of this field, several quantitative and qualitative methods have been developed all around the world. Quantitative methods of IP valuations are used to assign monetary value to intellectual assets. Some of these methods are specifically designed and developed to measure the value of certain intellectual assets, such a 'technology factor', while others are flexible enough to use on any type of assets. The qualitative methods typically give a score on a scale which SMEs can use as an indication of the value. At the same time, the qualitative methods often give a deeper insight into the strength, coverage and usability of the right in a specific situation. Quantitative approach is often insufficient as a basis for recommending development and exploitation decisions. Qualitative evaluation methods are often used to assist decision makers here. Thus, it is suggested that SMEs should develop a methodology that includes qualitative and quantitative methods to estimate the value of IP. In general, on the basis of the above discussion it is easy to suggest which methodology (quantitative, qualitative or combination of both) should be used or not for different assets. For example, market based approach is useful for valuation of early stage technology. But practically, apart from nature of subject IP assets and its stage, there are many factors which may influence the selection of IP valuation methodology. For example, when valuing IP, the question arises of how the subject IP will be exploited. For example, whether the intellectual property is being valued for financial reporting purposes or to support company decision making. Added to this, there are also some practices (accounting, reporting, ethical etc.) SMEs should follow while valuing their IP. Therefore, to develop a viable approach for IP valuation, wider spectrum is required. As discussed above, the choice of valuation approach and methods depends on many factors including- the assets being valued, cause and purpose of specific valuation, the valuation premise, the circumstances surrounding the analysis and availability of necessary information. Added to this, IP valuation, for whatever reason undertaken, must bear up to scrutiny by a diversity of third parties (whether investors, potential purchaser, a judge, trustees, or even company shareholders), and such parties often have conflicting interests (e.g. a venture capitalist wishes to invest at low value for a high shareholding, while the start up favours the opposite). In sum, the selection of a viable method relies on a thorough understanding of the valuation context and the business environment on the part of the analysis, as well as a solid grasp of the unique characteristics of the IP under consideration. In this light, Indian SMEs should consider five building blocks (each with an associated question) for developing a viable approach for effective valuation of their IP.

1.   *What is the asset? (Description of IP Assets)*
2.   *What is the purpose of valuation? (Valuation Purpose)*
3.   *What will influence IP valuation? (Influencing Factors)*
4.   *How will the asset be used or exploited? (Valuation Premises)*
5.   *How valuation approach will be exercised? (Standardising IP Valuation)*

Description of IP Assets[35]: In order to appraise an IP, the first step is to identify and understand the IP, its origin, nature, current and future uses and the potential to generate profits. In the lack of universally accepted definition of IP, some SMEs find it difficult even to identify and describe their intellectual assets. Presented below are the features associated with an intellectual assets which SMEs should consider:

1.   *Intangible in nature (product of intellect or mind)*
2.   *Be identifiable, i.e. can be differentiated from other assets. The rest of intangible assets that comply with the definition of an asset but cannot be separated or identified, have a different accounting treatment. They, in their turn, may be acquired by another company*

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[35] The description states the general characteristics of the IP.

(external goodwill) or generated internally (internal goodwill, intellectual capital, human capital, know-how, organizational capital, client capital, etc.).

3.   Potential to generate profit, for without this an object cannot be considered an asset.

4.   *A company should be able to control its intellectual assets.*

5.   Intellectual assets range from written contracts to the know-how embodied in products (including trade secrets). Certainly, it's impossible to leverage external value out of any such asset unless and until it's properly described.

Further, in order to develop a good valuation methodology, one has to be familiar with the elements that are going to be measured, what forms them and how they can be classified. In this first step simply document all intellectual assets, identify the class of assets belongs to e.g. Copyrights, Trademarks/Trade dress, Patent and most important and often overlooked by SMEs 'Trade Secrets'. Here is a suggested review list (table 2):

Table 2: Intellectual Property Identification and Classification

Trademarks/Trade-dress	Patents	Copyrights	Trade Secrets
Registered Marks (Foreign and Domestic) Business Names (Registered, DBA) Words, Slogans Logos, Icons, Graphics Domain Names Product Packaging/Configuration Website Design Sound, Colour, Scent Trade Dress: Packaging Point-of-sale Displays Website Design	Issued Patents (Foreign, Domestic) Pending Applications (Provisional, Non-Provisional) Invention Disclosure Statements Mechanical Devices Electronic Devices Medicine/Medical Devices Chemical Composition/Process . Computer-Based Business . Process (Software) . Mathematical Expression . having business application	Written Materials (Books, Manuals, Advertising) Photographs Illustrations Computer Software Music Film/Video Website Content	Customer Lists Pricing/Cost Data Customer Information and Sales Practices Business Plans Financial Data/Forecasts Manufacturing Techniques Design Manuals Production Processes/Specifications . Survey/Research Data (including . negative R&D) . Computer Software (source code) . Employee Knowledge

Source: Compiled by Researcher from various sources

The next step is to protect and develops each of the assets SMEs have identified. The final thing that SMEs should consider is whether these assets might be tradable (commercialize). There are a variety of ways in which IP can be commercialized. If they fall under the definition of IP, then usual property rights apply, meaning that these assets can be licensed, assigned or sold in just the same way as tangible items

Valuation Purpose: A second important step in the process of IP valuation is to understand the purpose of such valuation. In fact, the nature of IP and reason for valuation may affect the valuation method adopted. The valuation purpose refers to the prime usage of the valuation analysis. The purpose of the valuation defines the legal or regulatory statutes, jurisdictional court of resolution, acceptable methodologies and 'rules of thumb' that have developed in that particular field (Paula and David, 2006). The primary reason for valuing IP is to maximize its value and therefore the value of the owner organization through optimum management decisions. Added to this, there are some other reasons for valuations include:

financial reporting (purchase accounting and asset impairment analyses), tax reporting (establishing tax bases for acquisitions, liquidations and estates, and transfer pricing royalty rates), corporate planning (buying and selling of IP and corporate use of assets) and litigation associated with IP. Whatever be the reason of valuation, it should be considered as a critical aspect of the valuation process.

Influencing Factors: IP valuation exercise should not be undertaken by SMEs or evaluator in isolation. There are many factors which may influence IP valuation and due consideration should be given to these factors. First, the size of the business and its capacity to defend and the extent to which a company would be able to protect its IP. It therefore follows that the position of registered owner is more superior to that of a licensee or an unregistered user. Second, the capacity of an IP to generate income. Though past income is relevant, the intrinsic value of an IP is based on its ability to generate future income. Third, the period into the future in which the IP is valid is important. For instance, the duration of registration, whether the IP registration can be renewed or not. Fourth is economic environment, if the economic environment is recognitive of IP value, then the value will be higher (Vnzomo, 2012). If the legal and protection of IP regime is conducive, it will translate to high IP, and vice versa. Fifth, whether or not there is another class of IP related to the IP in question has relevance to the value. For example, a trademark would have more value where the proprietor also owns the patent for the manufacturer of the goods sold under the trade mark. Added to these, the competitive nature of the industry in which the SME operates and the SME's competitive ability in that industry; the market share of the SME in question; the access to credit; and whether or not it has insurance in place for the intangible asset. As IP valuation models are further developed, they will start to (or will need to) take into account these factors; however, having said this, it is much better to apply an existing model, even if it does not take into account all such factors, than to have no valuation of the intangible asset at all (Robert, 2010)

Valuation Premise: It refers to the underlying assumption on how the IP will be exploited in the future. Will the use of IP remains as it? (Valued under continues use). The assets may also be valued under as a specific use that may be different from historical usage, such as an acquisition. How SMEs will license their IP rights? One can license their rights exclusively to the licensee only or non-exclusively to licensee. Further, one can license reproduction rights, rental or lending rights. Further, SMEs should consider, what they are licensing (e.g. copyrights, trademarks, design rights) in what format (exclusively or non-exclusively) and how long for (e.g. are the term of the license for a fixed term, perpetual or terminal) and finally to whom (e.g. nature, size and structure of organisation) and where (e.g. national level, international level or global level) licensing to? Another area where the premise is of crucial significance is in bankruptcy, where the distinction between an orderly disposition and distressed dispositions can have a significant impact on the valuation.

Standardizing IP Valuation: An ideal IP valuation should retain transparency, produce consistent, reliable and comparable results; minimize unethical and incompetent valuations; define requisite evaluator knowledge; and provide a basis for clients and users to form expectations for IP value. This demands IP valuation standardization. IP valuation standardization refers to the characterization of value tied back to the valuation purpose. Though there are guidelines about which rules and principles to respect when conducting an IP valuation or setting up an IP valuation report, there is not presently a standard or generally accepted process. Though it is a complex task[36], SMEs should search various

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[36] There are numerous elements that complicate the development of a single standard of IP valuation. First, the role of IP valuation is not clear. Is it a financial accounting tool? Accountants would say yes, but lawyers may say no. Second, IP valuation must involve the cooperation of multiple communities (e.g. the IP practitioners and commercial markets players) as well as a myriad of industry sectors. Each harbours individual interests. Third, IP assets come in a variety of types and some do not fit neatly within particular boxes of IP protection (e.g. an invention that only garners patent protection fits within the patent protection box) but spans multiple IP types so

alternatives to define valuation standardization. Several businesses, academic, expert, regulatory, professional bodies and individuals have a stake in the valuation of IP. They view it through lenses that are polarized by the needs of their own community. Thus, one practical alternative appears to be the potential development of IP valuation standards from the perspective of the IP valuation community, the group most directly concerned with the quality and consistency of valuation results. In this background, SMEs can develop the following set of standards:

1.   *Financial Accounting Standards (for measurement and disclosure)*
2.   *Auditing Standards (to authenticate the 'true and fair' value of IP)*
3.   *Ethical Standards (professional code for accountant)*
4.   *Certification Standards (competencies that accountants are expected to posses)*
5.   *Methodological Standards (guidelines for systematic documentation of methodology and development, introduction, application and dissemination)*

Added to these, alternate standards include *'fair value'* which is often used in court cases to compensate a party for the involuntary use of an asset, such as eminent domain, where there is no reasonable assumption of a fair market value transaction. These standards can work best when they can be developed in recital with other standards that reinforce the desired conduct (Sullivan, 2009). Finally, IP value standards must have a high degree of 'transparency' and a common valuation 'language' to enable stakeholders to settle their negotiation and disputes in a much quicker, more harmonized and more profits sharing mode.

CONCLUDING REMARKS

There are approximately 2.6 crore SMEs in India that accounts for 95 per cent of industrial units, 45 per cent of manufacturing sector output, 40 per cent of exports, 6 crore employment and 6 per cent to GDP (Market Report, 2011). This sector produces roughly 8000 valuable products. Many of these units are functioning on the ideas of products manufactured, services offered and also the designs developed. Consequently, they use IP rights which range from patents to trademarks, copyrights and industrial designs. Added to this, some studies (James, 2011; Hughes and Mina, 2010 and Kingston, 2004) revealed that small firms produce significantly[37] more patents per employee than large firms and their patents are more technologically important, according to patent impact metrics. Despite, their high innovation intensity (in both terms-IP generation and usage), SMEs are not able to fully exploit their IP. One important way SME may acquire a better position to capitalize on the potential benefits of its IP assets and extract their full value is conducting an IP valuation[38]. In addition to this, IP valuation is necessary in many contexts such as investment analysis, out licensing deals, in house estimation of the worth created IP, capital budgeting, M&A deals, financial reporting and taxable events, as well as bankruptcy and litigation proceedings. Thus, IP valuation is vital for SMEs in many perspectives. But, one big hindrance to their being considered of significant value, is the lack of appreciation of practical methods of valuing them particularly at the embryonic stages of their life circle and more so under conditions of uncertainty about their future prospects. While a number of methods (more than 50) have been developed to assign the IP both quantitative as well as qualitative value-some of which are more robust than others. Unfortunately, their use is

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as to be capable of deriving several IP protections. Fourth, an inconsistent lexicon is applied to IP assets. This creates confusion about the scope of IP assets. For example, it is not unusual for two parties to talk about the same IP asset using identical terms, but each attributing very different meanings to these terms (Miller and Karen, 2009). These hurdles are but a few of the reasons why a single IP valuation standard has not been achieved, despite great efforts previously directed at such an outcome.

[37] In fact, when it comes to innovation, SMEs are in a privileged position because due to their size, SMEs can react quickly to new ideas and are able to develop and implement them in relatively little time. Further, due to smaller overhead costs, small businesses are usually able to launch innovations at lower costs than their larger competition. Thus, thorough realisation and exploitation of innovation is critical for Indian SMEs.

[38] How SMEs can exploit their IP through IP valuation has been well discussed in this paper

neither widespread nor consistent. Difficulties or inconsistencies in valuation method would obviously lead to imperfect decision making in the course of managing an IP portfolio and can also impede strategic decision of SMEs. As several valuation methods are available, selection of most appropriate method is only one and most visible aspect of the problem.

Another important and perhaps hidden problem in IP valuation is a lack of practical approach for IP valuation. To develop a viable approach for effective valuation of IP, SMEs should understand and analyze these problems in a broader perspective and then define suitable and structured layout of IP valuation process. In this process, it is important to comprehend the weight of above mentioned 5 building blocks: 1.) *descriptions of IP assets, 2.) valuation purpose, 3.) influencing factors, 4.) valuation premise and 5.) Standardizing IP valuation.* Due consideration to these building blocks will help the SMEs to frame the context of the valuation and define the focus, depth, completeness and general working parameters of the analysis. Moreover, this process will ensure the valuation is performed within the context of acceptable standards in the field associated with the issue area and that the valuation will address all relevant considerations. Further, building an accurate valuation of a company involves estimating its long-term prospects using sound methods of IP valuation. As discussed above, there are numerous methods which can be used to value IP. In valuing IP, three primary methodologies are considered and/or used: the cost based approach, the market based approach and income based approach. These methods are seldom used in isolation. As discussed in the paper, each of the methods offers certain advantages and has drawbacks that have to be taken into account depending on the situation. The selection of an appropriate method depends upon the circumstances surrounding the valuation, including the type of IP being valued[39], the purpose of valuation, the basis of valuation and most importantly the availability of information. Indian SMEs should also understand underlying assumptions and theories behind the various valuation methodologies which will assist greatly in negotiations for the sales or licensing of their intellectual property. To assign a fair value of IP assets, it is correct to combine quantitative and qualitative methods[40]. The value of an IP asset often changes over time. Consequently, an SME should periodically (e.g., annually) re-assess the value of its IP assets. Typically, more than one method should be used to derive conclusions of value for the subject IP. Finally, it is suggested that the chosen method should be applied consistently in order to obtain comparative and conclusive results.

At the policy front, there is a need to introduce 'awareness and training program for Indian SMEs' to generate consciousness regarding the need and benefits of IP valuation and train their officials about the methodologies of IP valuation. Also, the government along with some leading institutions like the Institute of Chartered Accountants of India (ICAI) should closely work with international organizations such as WIPO, OECD, International Accounting Standards Board (IASB), American Institute of Certified Public Accountants (AICPA), Association of Chartered Certified Accountants (ACCA) etc. to explore the ways to standardize the use of these methods to get an accurate and reliable value of IP.

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[39] In general, Cost approach is suitable for valuation of software/in progress R&D and early stage technology. Market based approach is suitable for Brand, Trademarks, software unique in nature. Income approach is suitable for valuation of Brand and Trademark.

[40] In some cases, the business's need to rank a number of rights is greater than the need to find an exact value for an individual right. It is often the case in situations of a more strategic character, where the business needs to decide whether it wants to maintain, relinquish, sell, buy or license the rights.

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