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Dodd-Frank and the Future of Banking

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DODD-FRANK AND THE FUTURE OF BANKING

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
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Master of Arts
Economics

by
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Abstract

The financial crisis of 2008-2009 set the globally economy into a free-fall, requiring massive government intervention in order to prevent the entire system from crashing down. The *Dodd-Frank Act*, the largest financial reform since the Great Depression, attempts to move the financial system towards a more stable foundation. Part 1 discusses the causes of the financial crisis and an overview of the *Dodd-Frank Act*. In part 2 explores the reform in the over-the-counter derivatives market with a focus on the impact to market participants, the impact on the systemic risk of the financial system, as well as the overall U.S. economy. Part 3 analyzes the remittance transfer rule, which also carries the theme of transparency within the cross-border payments space. However, the requirements of the rule will likely result in increased costs and/or decreased choice for U.S. consumers sending money abroad. In general, the Act does move the financial system towards a more stable foundation in some areas. It does not however fully address the drivers of the financial crisis, end “Too Big To Fail”, or prevent another crisis from happening again. Along the way it creates some unintended consequences that may hamper the economic recovery.

Table of Contents

	Page
Title Page	i
Abstract	ii
List of Figures	iv
Chapter	
I. The Financial Crisis and the <i>Dodd-Frank Act</i>	1
II. Reforming the OTC Derivatives Market	10
A Primer on Derivatives	12
Regulation of Swap Entities.....	15
Game Changer: A Central Clearing of Swaps?	25
III. Consumer Regulation and its Impact on Choice.....	32
Closed Looped vs. Open Networks: Trade Offs.....	38
Dodd-Frank 1073: The Industry Game Changer	44
Are Consumers Better Off?	52
IV. Conclusion	58
References.....	62
End Notes.....	65

List of Figures

Figure	Page
1.1 The Web of Financial Regulators	61

Chapter 1: The Financial Crisis and the *Dodd-Frank Act*

The global financial crisis that spanned the years 2008-2009 has left a very visible impact on the world economy. The world has a different view towards the world of finance. Main Street views Wall Street as greedy, excessive risk takers gambling with taxpayer money. Wall Street veterans, on the other end of the spectrum, long for the “good old days” without the newly created regulatory burdens collectively known as the *Dodd-Frank Act* (the Act) hampering, and sometimes crushing their business models. The focus of this paper is the *Dodd-Frank Act*, the largest financial reform since the Great Depression, and its intended and unintended consequences. However, before one can discuss the Act one must first cover the events that led to its creation.

Numerous scholarly papers, magazine articles, and books discuss the events that led up to the financial crisis and the weekend in September 2008 that became known as “The weekend Wall Street died” by people with a far greater knowledge than I possess. I will not attempt to offer an in depth analysis on the circumstances that transpired to create a perfect storm in the fall of 2008. Andrew Ross Sorkin’s novel, *Too Big To Fail*, chronicles the months leading up to that September weekend and the after-shocks of the Lehman bankruptcy. Michael Lewis’, *The Big Short*, offers insight into the murky world of credit default swaps and collateralized debt obligations that were at the center of the crisis. Besides these two popular novels, there are countless papers, articles, and other books that attempt to explain what happened to bring the financial system to the brink of collapse. I will, however, provide a brief synopsis of events that led the financial system into the perfect storm that only needed one little push to send the dominos tumbling.

In the wake of the financial crisis, the term *Glass-Steagall* has once again become a common phrase uttered by the general public. *Glass-Steagall* refers to the piece of legislation enacted in 1933 that separated commercial and investment banking. The goal was to protect customer deposits (the commercial banking side) from the riskier side of the world of finance (investment banking). This wall between commercial and investment banking lasted sixty-nine years until in 1999 the *Graham-Leach-Bliley* (GLB) Act tore down the remaining provisions of Glass-Steagall. The worlds of investment and commercial banking could now be housed under one bank-holding corporation and the largest financial institutions jumped at the chance to create these financial supermarkets that became economies of scale.

Another development we see in the final two decades of the twentieth century was the end of the private-partnership stand-alone investment bank. When investment banks were private partnerships, the senior partners had a lot of personal money at stake and this provided the right incentives to engage in sound risk management practices. However, after these partnerships went public, the senior “partners” had weaker incentives for sound risk management practices. There is always a risk vs. return trade-off and given that it no longer was the senior “partners” money that was at risk, but rather the shareholders’, the incentives for sound risk management practices began to disappear.

The changing landscape on the ownership of the country’s largest investment banks also coincided with the rapid financial innovation that began to move financing off balance sheet and into the “shadow banking system”. This area of finance is called *shadow banking* because it is done off balance sheet through various special purpose

vehicles that roll up under the traditional banking legal entity. This is where the phrases so commonly tossed around during the financial crisis, “credit-default swaps, mortgage-backed securities, collateralized debt obligations, asset-backed commercial paper, etc, reside in the world of finance.

The paper titled “Regulating the Shadow Banking System”, by Gary Gorton and Andrew Metrick focuses on this area of financial markets. Indeed there are many reasons for activities to move into the shadow banking world, not the least of which is the extra profits that can be made for these activities which are considered complex and opaque by the general public. Gorton’s paper focuses on the role of shadow banking in the financial crisis of 2008-2009 and the fact that for the most part the Act does not attempt to bring the shadow banking system under a greater regulatory microscope.

The analysis is focused on three activities within the shadow banking world that provided advantages to traditional financing leading up to the financial crisis: (i) money-market mutual funds (MMMFs), (ii) securitization to move financing off the traditional banks balance sheets, and (iii) repurchase agreements (repo) which used the asset-backed securities created by securitization and turned them into money like instruments.

Shadow Banking in the Financial Crisis

Gorton (2010) among others argues that the financial crisis was a run on various forms of what investors had believed safe, short-term debt. Much like in the past, when there were runs on time deposits, this financial crisis was a run on their “money like equivalents” in the uninsured space of the shadow banking system. The “run on repo” was at the center of the crisis and the increase in repo haircuts caused the crisis to spread

from the subprime mortgage market to other asset classes. As the repo market expanded in the two decades leading up to the crisis, this coincided with an increase in the amount of Treasuries held by foreigners and thus not eligible for collateral, we see a shortage of good collateral available.ⁱ With demand exceeding supply there are a few options to bring the market back to equilibrium. One of those options was to substitute other high-quality “AAA” rated securities to fill the supply shortage. However, as the financial crisis would later reveal, these “AAA” securities were imperfect substitutes to U.S. Treasuries and it became hard to distinguish good “AAA” from bad “AAA”. When it becomes impossible to segregate the good from the bad, the market response is as one would expect, a flight from all “AAA” securities; a run on repo had begun.

The crisis spread further when the Asset Backed Commercial Paper conduits (ABCPs) and Structured Investment Vehicles (SIVs) would purchase long run asset backed securities (ABS) and finance them with short-term debt. This practice was successful when there was a market for short-term, overnight funding.ⁱⁱ However, as discussed above, when this market dried up and overnight funding was no longer possible these ABCPs and SIVs struggled to meet their obligations. The interconnectedness of all the major financial firms and the fact that all of this happened off-balance sheet, sent the financial system teetering on the edge of a cliff. No one knew where their counterparties’ other exposures lied and feared a if a firm failed, despite having no or minimal exposure to the failed firm, they could be brought down due to a counterparty having a large exposure to the failed firm. MMMFs were also hit during the crisis and as they struggled to maintain their goal of a net asset value of \$1 per share there became a “flight to

quality” and the crisis in the MMMF space did not subside until the federal government stepped in an explicitly backed certain MMMFs.ⁱⁱⁱ Just like prior to the *Federal Deposit Insurance Corporation* where there had been bank runs on time deposits, the financial crisis can be viewed in a similar lens of a series of runs on near equivalents of time-deposits that were in the unregulated, shadow banking system.

An Overview of The Dodd-Frank Act:

On July 21, 2010 President Obama signed the *Dodd-Frank Wall Street Reform and Consumer Protection Act*, known as “Dodd-Frank” bringing into effect the most comprehensive overhaul of financial regulation since the Great Depression. Coming in at a final form of 849 pages it trumps past pieces of financial legislation. To provide some comparisons to the sheer size of Dodd-Frank, *The Sarbanes Oxley Act*, which resulted in the wake of the Enron scandal, is only 66 pages. Glass-Steagall, which separated commercial and investment banking during the Great Depression and to which a call to return has gained steam following the Great Recession, comes in at a mere 34 pages.^{iv} The proposed Volcker Rule, “a 21st century *Glass-Steagall*”, is over 400 pages and its request for comment works out to approximately 1200 questions.

However, before we jump to analyze the consequences of specific sections and rules of Dodd-Frank, lets take a step back and look at the legislation as a whole. The Act is made up of 16 Titles, which are further subdivided into sections. While a majority of the Act focuses on the overhaul of institutional aspects of financial regulation two of the titles focus on consumer protection (X and XIV) and within title X of the act we see the creation of a new regulatory body, The *Consumer Financial Protection Bureau* (CFPB).

This new bureau is intended to bring consumer protection under the eye of one regulator but as will be discussed further the unique power granted to this regulatory body has already created much conflict already in Washington. Dodd-Frank also creates a new council to oversee all of the financial regulatory bodies. The Financial Stability Oversight Council (FSOC) is chaired by the secretary of the Treasury and also contains the head of the Federal Reserve, OCC, SEC, CFTC, FDIC, FHFA, NUCA, and CFPB.^v The goals of the FSOC are to : identify risks to U.S. financial stability, eliminate the expectations of government bailouts, and respond to emerging threats to financial stability.^{vi} The FSOC is supposed to cover any gaps in the regulatory landscape that arise from different regulators charged with certain aspects of the world of finance. Figure 1 shows the complex nature of Dodd-Frank and the authority of the different regulatory agencies.

The goals of Dodd-Frank can be summarized into two major categories that are separated but also related. David Skeel's, *The New Financial Deal*, does an excellent job at analyzing the Dodd-Frank Act and keeping the big picture view that can be difficult given the size and complexity of the Act. The first aim that Dodd-Frank intends to achieve is to limit the systemic risk of the financial system.^{vii} During the crisis of 2008-2009 the systemic risk was so great that a crisis in one small particular area of the financial world (sub-prime mortgages) spread like wildfire infecting the rest of the system and bringing the world financial system as we know it to the edge of the abyss.

Dodd-Frank does many things in an attempt to limit the systemic risk of the financial system including removing the ability to rely on credit ratings, requiring hedge

funds to register with the Securities and Exchange Commission, changes to the securitization landscape (via risk retention, ABS disclosures, and representation and warranties filings.) , and designating certain financial institutions as systemically important financial institutions (SIFIs) which will face additional capital surcharges. However, there is also a benefit that comes along with the SIFI designation. While Dodd-Frank explicitly says that there will be no federal bailouts of financial institutions, it is very hard to imagine that the government will not step in to prevent a SIFI from failing given their sheer size and reach in the financial world. Since it is likely that the government will be forced to bailout a SIFI, these institutions will be able to borrow money at a cheaper cost than smaller financial institutions.^{viii} While all of these changes are intended to limit the systemic risk of the financial system, there are two other huge overhauls that this paper will focus on in greater detail: the regulation of OTC derivatives and changes to the remittance transfer landscape. The former being directly related to the financial crisis while the other played no role in the events of 2008-2009. The regulation of OTC derivatives falls under Title VII of Dodd-Frank and is intended to bring increased transparency to the derivatives market while the intent the remittance transfer rule is to bring transparency to the consumer around cross-border payments.

The other major goal of Dodd-Frank is the ability to orderly resolve a failed financial institution without causing further damage to the rest of the financial system. This stems directly from the chaos that ensued following the Lehman bankruptcy in 2008. Dodd-Frank gives the FDIC the authority to place the failed firm into receivership and unwind the firm in an orderly fashion.^{ix} One way that Dodd-Frank attempts this is via the

piece of the Act that requires the largest financial firms to submit “living wills”.^x This living will is suppose to be a roadmap for the regulators to orderly unwind the firm.

The argument goes that the FDIC can handle ordinary bank failures now so they should be able to handle the failures of the largest, systemically important institution failures with a similar model.^{xi} Anyone with any statistical background knows that you simply can’t take a model that is significant for one set of data and extrapolate it to data outside the range. This logic is roughly the same. The FDIC may be successful at handling smaller bank failures but there are vast differences between a small, community bank and a systemically important financial institution such as Citigroup or J.P. Morgan Chase.^{xii} The sheer size and increased complexity associated with the SIFIs compared to a small, community bank would be like a bike manufacturer entering into the aeronautical business. Both can take you where you want to go, they just use very different means to do it. Skeel argues that the resolution authority laid out in Dodd-Frank is far from the “orderly” adjective placed in front of it in section 210 of the Act. In fact the way the Act structures the resolution authority will lead to a series of ad-hoc interventions that don’t provide managers of a firm the right incentives to prepare for an orderly resolution. The “living will” is a good idea on paper, but in practice it may be much more troublesome to execute.

Now that we have discussed the general overview of the Dodd-Frank Act we will take a deep dive into some specific rulemakings that have arisen from the Act and analyze their intended and unintended consequences to the financial system and the general public. Parts of Dodd-Frank are good, some are bad, an some are just plain ugly.

The reform of the Over-the-Counter derivatives market is a radical change but is generally viewed as the “good”. While that section reform is aimed at limiting the systemic risk of financial institutions another rule analyzed in this paper is the first rule issued by the Consumer Financial Protection Bureau. The intent of the Remittance Transfer rule is good-natured in theory; to provide greater transparency to consumers sending money overseas. However, as the rule is written and the challenges it poses, consumers could end up being harmed through increased costs for international money transfers. Furthermore, this rule played no part in the financial crisis. The following sections will provide a greater analysis of these topics.

Chapter 2: Reforming the OTC Derivatives Market

The mere mention of the word “derivatives” in the context of finance gets a horrid reaction from most of the general public. During the financial crisis, financial derivatives jumped into the mainstream vocabulary, an example for what is wrong with the financial system that led the country to the edge of an economic collapse. While almost everyone agrees that derivatives did play a role in the financial crisis, there is less agreement on how to fix the derivative markets in order to prevent a repeat of the events leading up to the fall of 2008. Naturally derivatives are a key component of the Dodd-Frank Act; they get an entire title all to themselves.^{xiii} Before we jump in and analyze the impact of Dodd-Frank on the derivatives markets lets take a step back and talk about some of the characteristics of these markets.

The majority of trading derivatives occurs in what is known as the Over-the Counter (OTC) marketplace. The OTC market dominates the exchange-traded market for derivatives in terms of notional value. According to the Bank of International Settlements, at the end of 2011 the global outstanding notional value of OTC derivative contracts was around \$648 trillion.^{xiv} Notional amount means the amount of the asset underlying the derivative (e.g. a interest rate swap on a \$100 million dollar loan) compared to what a party would be required to swap with its counterpart. The notional value of the market is sometimes misconstrued as the risk the derivative market places on the world economy. It is very convenient for opponents of OTC derivatives to use this number in describing the risk posed by these markets. However, the true risk to the derivatives market is much smaller than the notional value. The true risk posed by a

derivative contract is the amount that changes hands between the counterparties. A \$1 billion interest rate swap does not equate to a \$1 billion at risk if interest rates move. The true risk is a small fraction of the notional value. In this example if the contract requires one counter party to pay a fixed percentage of notional value while the other pays a floating amount based on market rates the at-risk amount is the difference between the fixed percentage and the market rate. For simplicity's sake let's set both at 4% at the time the contract is entered into. If the market rate shifts by 50 % dropping down to 2% or rising to 6%, which is an unusually large change, the at-risk amount becomes \$20 million or just two percent of the \$1 billion notional amount.

The term, over-the counter describes the fact that these contracts are privately negotiated between the two counterparties. There is little to no regulatory oversight as these contracts happen away from the regulators playground of exchanges. There are many reasons for entering into an OTC derivative compared to an exchange traded derivative but essentially the custom nature of the OTC contacts (it is specifically drawn up and agreed by both counterparties) is one of the main reasons firms enter into OTC derivatives. The problem with OTC derivatives is that you are relying on your counterparty to make good on their commitments. This becomes troubling when you do not know the exposure your counterparty has to other parts of the market. As discussed in the introduction, the world of shadow banking makes uncovering counterparty exposure a very difficult task. In the financial crisis, firms feared the worst of the exposure their counterparties had to the broader OTC market and assumed the worst and retreated from the market by closing out open trades.^{xv} When this became systemic we saw a rapid

liquidity drain that exacerbated the financial crisis that resulted in the extinction of a major stand alone investment bank in the United States

Dodd-Frank attempts to change the OTC market and bring it away from the shadow-banking world and into a more exchange-like market. The CFTC and SEC are the main two regulators of the OTC market. The CFTC handles swaps while the SEC is in charge of security-based swaps. For simplicity's sake this paper will focus on the CFTC regulated swaps but a natural link to security based swaps can be made. The major difference between the two definitions is the underlying assets of the derivative. At a very high level view the reforms laid out for the OTC derivative market can be thought of in two groups: increased oversight for swap dealers and major swap participants and increased transparency. While many of the derivative rules are still being finalized, the core elements of Dodd-Frank, Title VII, will allow us to analyze the impact to the OTC markets. Prior to focusing on Dodd-Frank's reform of the derivatives market we will cover some basic functions a derivative contract plays.

A Primer on Derivatives

Financial derivative is a very general term for a set of financial products that have the same underlying theme; that their value is derived based on an underlying asset. That underlying asset can be essentially anything. Derivatives have been constructed based on interest rates, commodity prices, foreign exchange rates, credit receivables, etc. Derivatives allow users to hedge against unexpected price movement in the markets.^{xvi} For example, a farmer wants to hedge against price fluctuation of his corn crop and thus

sells a futures contract locking in a set price for that season's harvest. This allows the farmer to better manage his risk in that his livelihood is no longer subject to the whims of the weather.

The social gain of derivatives is that it shifts risk away from those who are willing to pay to avoid it towards those who can be paid to accept it. They allow for a more efficient allocation of risk. That said, it is easy for a detractor of derivatives to say that the banks should not be the ones accepting this risk. However, banks are in a better position than an individual to manage risks like this. We return to our farmer example to explain this concept. The farmer enters into a futures contract with the bank that shifts the risk of a weather event negatively impacting his crops and thus reducing the amount he receives for them to the bank. The bank can then turn around and offset the risk gained by entering into the futures contract with the farmer by an offsetting position with another customer. The bank acts as the market maker bringing buyers and sellers together. This is a much more efficient process than the time it would take the farmer to find the counterparty willing to take the other side of the futures contract. Thus we have a social gain from derivatives when banks facilitate the more efficient shifting of risk among counterparties. Another key benefit that derivatives play is in lowering the financing costs for firms who use derivatives as risk mitigating devices. A firm that uses derivative contracts to hedge against credit risk, exchange rate risk, interest rate risk, etc., is more likely to receive better financing terms from a bank extending credit than a firm that is not hedged. A well-hedged firm is much more likely to repay its loans compared

to a firm that is exposed to shocks in the market that could potentially bring the firm under, thus resulting in a loss for the bank who extended the credit.^{xvii}

Of course there are two sides to every coin and certain entities can use derivatives to speculate. How one speculates in derivatives is by acquiring a large position in derivative contracts without a hedge on the underlying asset value. For example amassing a large position in credit default swaps that are profitable as long as housing keeps going up without having hedges in place in the event that housing prices move the other way. However speculation is a natural by-product of risk mitigation and the market over time typically makes the speculators bear a cost for their position. Barrings Bank, Long-Term Capital Management, Lehman Bros, and many other firms would be able to verify this if they were still around to tell their story.^{xviii} As free market enthusiast and ex-CEO of BB&T John Allison describes, firms who speculate and poorly manage their risk should fail.^{xix} It is an economic cost of their business strategy. One point to note, before all three firms mentioned above crashed, rather magnificently and publicly, they all had runs of above average profitability.

In its simplest form derivatives shift risk from those who lack the appetite to those who are willing to accept it. Derivatives typically benefit both parties in the contract otherwise the contract wouldn't be accepted. It is illogical to think that a firm would willingly enter into a contract that will harm its financial condition. Banks play a key role in this market by bringing buyers and sellers together with the bank acting as a counterparty to each side of the trades. We now turn our attention to the increased oversight of the major players in the swaps market.

Regulation of Swap Entities

Many of the legal entities in which OTC derivative trading occurs are not subject to the same regulatory oversight as some of their sister entities under the same parent company umbrella. Dodd-Frank attempts to change that by requiring Swap Dealers and Major Swap Participants to register with the CFTC subjecting them to oversight that did not exist prior to Dodd-Frank.

These requirements include business conduct standards, recordkeeping, and reporting requirements. One of the big requirements of registration is a set of capital requirements, which for many entities that will become swap dealers it will be something that they were not previously subject to or the new requirement is at a higher level of capital than previously held. As defined by the CFTC a “Swap Dealer” is anyone who: holds itself out as a dealer in swaps, makes a market in swaps, enters into swaps as part of its regular course of business, or is known by the Street as a dealer in swaps.^{xx} The spirit of this requirement makes logical sense, these swap entities were undercapitalized in the financial crisis exacerbating the crisis. Therefore, increasing capital requirements for these entities would allow them to better withstand any “storm” that could lead to a government bailout. One of the broad themes of Dodd-Frank is to reduce systemic risk. By subjecting the key swap entities to capital requirements the risk of a bailout due to undercapitalization is shrunk. On paper this fits right in with one of the central themes of Dodd-Frank.

The cause for concern here being echoed by the industry is that this will increase the cost of entering into a derivative contract. If banks have to hold additional capital

requirements for their swap entities one can be assured that some of this additional cost will be passed along to the counterparties who are entering into the swap contract. This will in turn reduce the benefit for a firm to enter into a swap as part of a risk mitigating hedging strategy.

A very contentious requirement imposed on swap entities is known throughout the industry as the “push-out” provision; it is also known as the “Lincoln Amendment” for the senator from Arkansas who introduced this into the Dodd-Frank Act. Section 716 of the Dodd-Frank Act requires all swaps not covered by the National Banking Act of 1864 to be pushed out of entities receiving assistance from the Federal Government.^{xxi} This rule only applies to Swap Dealers and Major Swap Participants; end –users are exempt from the push out provisions. However, almost every derivative contract involves at least one entity that will either become a Swap Dealer or Major Swap Participant. At first glance the intent of this portion of the regulation makes sense; it separates certain swap activities perceived by the public as “risky” from the assistance of the federal government. The hindsight reaction of the financial crisis is that there was little downside risk or incentives to not engage in swap dealings since the firms believed the federal government will step in and bail them out if they get in trouble. This rule alters the incentives for swap dealers to take on the same level of risk as, for the most part, they will be removed from the backstop of federal assistance. The problem with this analysis is it is very difficult to analyze a Dodd-Frank rule in a silo. In the broader context of the derivatives market and looking at actual data the swap “push out” rule loses the strength that it is limiting speculative swap trading. This paper will analyze the

swaps push out rule in two lenses: first are the asset classes required to be “pushed out” truly reducing systemic risk by discouraging speculative swap trading and second turning an eye to the international impacts of this rule.

The three asset classes that are required to be “pushed out” of federally insured entities are commodities, equities, and non-investment grade credit default swaps. First off, two of these asset classes had little role in the financial crisis. Commodity or equity swaps were not impacted by the financial crisis; the price volatility discussed in detail later provides evidence of their lack of involvement in the financial crisis. Before we compare the riskiness of these asset classes let’s take a look at the broader market and examine their market share of the OTC markets. One would think that given the CDS market and all the problems caused by CDS during the financial crisis this would be a significant portion of the swaps market. The devil lies in the details; the interest rate OTC market dwarfs all other asset classes combined. At the end of 2011 out of the \$648 trillion notional amounts outstanding, approximately \$505 trillion falls in the interest rate asset class. Commodities and equities combined add up to slightly less than \$10 trillion.^{xxii} Even at the height of the financial crisis the swaps that are to be subject to the push-out provision only accounted for 5% of the total notional amounts outstanding.^{xxiii}

Now that we see the “push-out” market share is very small in the grand scheme of the OTC market let’s analyze the objective that this rule will end risky speculative trading by entities receiving federal assistance. Since some asset classes are permitted by the National Banking Act of 1864 and thus are not required to be pushed out by section 716 there can be an analysis using price volatility to test the assumption that these asset

classes are riskier comparatively to the interest rate and foreign exchange asset classes. If these asset classes are indeed riskier and should be pushed out to limit the risk of a public bailout due to a commercial bank engaging in risky swap trading, then these asset classes should exhibit riskier price volatility than those of interest rate and foreign exchange asset classes. Using moving averages of trading revenue as the indicator of price volatility the data shows the opposite to be true.^{xxiv} Foreign exchange and interest rate swaps exhibited greater price volatility than credit, commodity, and equity asset classes. In fact, commodity and equity asset classes exhibited the least price volatility and experienced no shock due to the financial crisis. Credit swaps did see a level of high volatility during the crisis but have since tempered off.^{xxv} The lack of volatility in equity and commodity swaps augments the statement that these asset classes are unnecessarily characterized as risky. While sub-investment grade credit derivative swaps did play a substantial role in the financial crisis, the swaps push-out rule tends to unfairly punish two innocent asset classes.

When the push-out provisions take effect in the summer of 2013 what are the options for the banks? The options for banks to consider are (i) stop trading in the push-out derivatives, (ii) push these asset classes out into another entity, which will subject that entity to the additional capital requirements or (iii) push out all derivatives into the new entity. Since derivative trading is a profitable business one would not expect the big commercial banks to stop trading in these asset classes. Let's examine the consequences of option (ii): pushing out the equity, commodity and non-investment grade derivatives into a separately capitalized entity. These separate swap entities are not as highly rated as

their federally insured counterparts and therefore the cost of the swap contract is now increased as the dealer's cost of capital is greater than those when the contract could be traded with a federally insured institution. For equity and commodity swaps this increased cost seems unjustified since they played no role in the financial crisis and the data indicates they are no more likely to spark a future crisis.^{xxvi} Also, many firms are currently able to engage in loans and derivatives from the same entity thus reducing the overall credit risk of that firm to the bank and thus allowing for a cheaper cost of borrowing for the firm. Once the push-out provisions become effective the firm will now have to enter into a loan and derivative contract with two different entities of the parent company thus the borrowing costs are increased both explicitly (new swap entity is not as highly rated and thus requires additional collateral) as well as implicitly (opportunity cost of time of setting up all the new legal agreements required to enter into a swap) for the firm.^{xxvii}

Another unintended consequence of the push-out provision is that the cost of creating a separately capitalized entity may push those banks that are on the margin out of the business thus increasing the concentration of derivative holdings to a smaller set of firms thereby countering the goal of reducing systemic risk across the industry. These smaller community banks provide risk mitigation for their clients through offering commodity swaps, which allow the firms to hedge the risk of price fluctuations for their product. Ms. Richardson's analysis shows that for banks falling into the mid-size regional banks, between \$10-\$50 billion in assets, the main type of derivative held was in-fact commodity derivatives and not the sub-investment grade credit default swaps that

were a contributing factor to the financial crisis.^{xxviii} These banks may not find the cost of setting up a swap entity worth the gains achieved from remaining a participant in these asset classes. The result would be less choice for clients as the amount of swap dealers shrinks for these markets. One point of note here is that the concentration of push-out derivatives held by the big banks is skewed due to the fact that the sub-investment credit derivatives are likened to commodity and equity derivatives. According to the Bank of International Settlements at the end of 2011 the notional amount outstanding for non-investment grade credit default swaps was \$5.49 Trillion. Comparatively, the total notional outstanding for equity swaps and commodity swaps was 1.738 and 1.745 Trillion respectively.^{xxix} That said, the push-out provision will have implications that go far beyond the banks commonly referred to as “Too Big to Fail” and may actually increase the importance of these banks as the regional banks exit from the market due to the increased costs from having to “push-out” equity, commodity and sub-investment credit derivatives into separately capitalized entities. Firms will be deterred from entering the market because of the significant barriers to entry.

Another major concern is the extraterritoriality applications of the Title VII Reforms of the OTC Derivatives market. Indeed the market for derivatives has been expanded as the globalization boom has taken hold in the past few decades. US dealers can enter swaps with foreign companies and US companies can enter swaps with foreign dealers. This becomes a big issue as various foreign governments are attempting to reform each of their respective financial systems after the crisis. One of the big concerns here is international coordination; one only needs to look within our own country to see

the problem of coordination at the governmental level. The European Monetary Union's struggles implementing austerity measures in return for a bailout of the PIIGS also augments the problem with coordination at the international governmental level. Coordination is key or we could have instances such as double swap clearing and double-reporting as both sides of the trade are required to clear & report the swap locally. ^{xxx} One of the major concerns is that the US, being the leader at the regulatory forefront, would adopt rules governing OTC derivatives that are not universally adopted. The "push-out" provision is a case in point. Even though other areas of the globe have begun drafting their proposals to overhaul the OTC derivative market there seems to be little sign of following the US down the path of requiring certain asset classes to be "pushed out." ^{xxxi}

Well, if foreign regulatory bodies do not follow suit with the "push-out" rule what are the implications to US banks? For one, foreign banks are now at a competitive advantage compared to US banks. For simplicity's sake let's assume each bank, one US and one foreign, uses their insured depository institutions to house a majority of their swap dealing business. Also these banks' insured depository subsidiaries have the same credit ratings. As discussed above, one the advantages of doing this is the cheaper cost of capital. Now the US bank has to "push-out" certain or all swaps to a separate capitalized entity. This entity now has an implied higher cost of capital because it is not as highly rated compared to its insured depository institution brethren. It lacks the government backing that keeps the cost of borrowing low. So now it becomes more expensive for this new swap entity to deal in swaps. Naturally, one would assume, some

of this cost will be borne by the other side of the trade entering into the swap with the dealer, the consumer of the swap. This cost could come to fruition in many different ways. For one, the counterparty must now post higher amounts of collateral at the swap entity compared to the swap dealer. Also, the benefits of cross netting are reduced as a counterparty keeps its interest rate and FX swaps at the insured entity and its equity and commodity swaps are now within the new swap entity. Meanwhile, the foreign bank counterpart does not have to push out its swaps and the counterparty could keep all of the trades with the insured depository entity. This is cheaper because a) the dealer has a higher credit rating, which means less collateral need be posted, and b) the benefits of cross-netting can be realized as the counterparty holds all swaps with that dealer under the same entity.

The impact of the “push-out” rule has two unintended consequences. The first is that it harms the banks on the margin that would exit the market as the cost of creating a separate swap entity to continue to act as a dealer would not be worth the gains. This would further concentrate the market for these asset classes as only the larger banks who have extensive swap business, which already make up greater than 95 % of the market would pick up additional market share. Also, as a group, US dealers would be at a competitive disadvantage compared to their foreign counterparts who will most likely not be subject to a similar push out provision. This could result in a shift of business from the US to foreign locations where entities are not subject to these provisions. Ignoring the direct affect this has on the American economy through the loss of business, this also undermines one of the goals of Dodd-Frank. That is, to reduce systemic risk through an

overhaul of the OTC derivatives market by driving trades that would currently happen in the US outside of our shores and away from the eyes of the US regulatory authorities. Now that we have analyzed the impacts of the Title VII rules to the swap entities we can take a look at the regulations impacting the particular swap transactions to discuss their impact on the future of banking.

The Regulation of Swap Transactions

As discussed before, one of the main issues in the financial crisis was the lack of insight firms had into counterparty exposure, more formally known as, counterparty credit risk. In plain English, counterparty credit risk is the risk that the counterparty on the other side of the transaction will not be able to meet its obligations. This is a common component across the banking world. For example, there is counterparty credit risk when the bank issues a mortgage so a couple can buy a home. The counterparty credit risk is the risk that the couple will not be able to meet their obligations to pay back the mortgage and the bank stands to lose the money they lent to the couple. If the couple fails to payback the mortgage the bank can step in and foreclose on the house, i.e., they take over ownership of the house. This ability to foreclose if the couple does not meet their obligations serves as a form of collateral; the bank is not at a complete loss for the principal amount they lent out in the mortgage because they are able to acquire the house which has some monetary value attached to it and thus offsets a portion of the loss on the mortgage loan.

The concept is similar with derivatives. If a situation worsens and it looks more likely that the counterparty will not be able to meet its obligations the firm can require that party to post collateral, known as margin, to offset the new change in events leading to a higher likelihood of not that the party will not be able to fulfill their obligation. The problem in the derivatives market that is not as prevalent in the housing market is what constitutes acceptable collateral. In a mortgage “trade” one party receives a physical asset, the house, while the other party is promised that their money will be repaid plus interest. The physical asset becomes the piece of collateral the one party can collect in case the counterparty fails to meet its obligations. However, in the derivatives market there is no physical asset easily posted as collateral. A derivative trade involves the exchange of funds based on the change in underlying value of a financial asset, although as evidenced by Mortgage Backed Securities (MBS) there can be a connection between physical assets and a derivative trade. As mentioned earlier, Gorton and Metrick argue that the lack of high-quality collateral contributed to the financial crisis.^{xxxii} Typically, margin calls, request for additional collateral, are invoked when the counterparty’s situation worsens. This makes logical sense. However, in the world of OTC derivatives it is very difficult to determine when the counterparty’s situation worsens since the positions taken are all done bilaterally off-exchange which makes calculating exposure very difficult. The fall of 2008 showed what happens when firms assumed the worse about their counterparty’s exposure.

Game Changer: Central Clearing of Swaps?

One of the main goals of Dodd Frank is to increase the transparency of the derivatives markets in order to provide greater security to the financial system.^{xxxiii} One of the main ways Dodd-Frank attempts to increase the transparency of the financial system is the introduction of a new major player to the swaps game: the central clearinghouse. Dodd Frank gives the regulators the power to determine which swaps will be required to be centrally cleared through a clearinghouse (CCP).^{xxxiv} The concept of central clearing changes the game for how swap trades are settled. Prior to Dodd Frank, clearing and settlement for OTC derivatives happened bilaterally between the counterparties whereas in the post-Dodd Frank world the counterparties will use a middleman, the clearinghouse, who backstops each of the parties in the swap trade. The counterparty risk is shifted over from the parties in the swap transaction to the clearinghouse. In return for accepting this risk the clearinghouse will require margin to be posted by both parties of the transaction to help the clearinghouse absorb shocks in the markets. Margin comes in two forms; initial margin, which is posted at the point of initiation, as well as variation margin, which are adjusted to reflect changes in the underlying assets of the swap.

This shift in risk from the various financial firms to a central clearing party should help with the uncertainty of counterparty credit risk that exacerbated the financial crisis in 2008. Well, that depends on what the market for the number of central clearing parties ends up as. If there are one or two central clearing parties then we will not see the end of the “Too Big to Fail”, but rather a shift from the country’s largest banks to the central

clearing houses. A very small number of clearinghouses takes risks currently spread out across many firms in the derivatives market and centralizes them into one or two places, the clearinghouses. The failure of one of these clearinghouses could devastate financial markets.^{xxxv} The prospect of multiple clearinghouses poses another set of risks, albeit these may be the worse of the two. The presence of multiple clearinghouses leads to competition for business and thus the risk that competitive forces lead to lax standards required for a clearinghouse to accept a swap for central clearing counteracting the effect of requirement.^{xxxvi}

Another view of the requirement of central clearing suggests a limited number of clearinghouses will be the likely outcome. It is embedded in human nature that the ability to conduct all your needs in the fewest spots possible is desired, providing evidence that there are economies of scale in serving consumer choice. The rise of Wal-Mart, sporting good stores, major department stores, and many others support this statement. People would rather go buy their meat, fruit, vegetables, bread, and snack food at one grocery store instead of going to a butcher shop, bakery, and farmers market to get the same products. The opportunity cost of time is a vital component of the consumer utility function, which we will revisit in the second half of this paper when we focus on another aspect of Dodd Frank.

Firms have similar behaviors to that of consumers in that they want to conduct their business in the most efficient way possible. As mentioned in discussing the implications of the swap push-out provisions where firms would rather deal with one entity for all of their swaps to take full advantage of the benefits of cross-netting the same

logic can be applied to the swap entities. A swap entity would rather post collateral at one clearinghouse for all its swaps, to take advantage of cross netting, instead of posting collateral at multiple clearinghouses.^{xxxvii}

A regulatory requirement that goes hand-in-hand with central clearing is that a swap required-to-be cleared must be traded over a newly created Swap Execution Facilities (SEFs). Along with central clearing, requiring swaps to be traded over a SEF is a huge shift in moving towards an increase in transparency of the swaps market. The bilateral nature of the current way the OTC market deals in swaps leads to very opaque pricing, which allows for sizable profits for the dealing entities that benefit from the asymmetric information advantage. While other market participants could attempt to acquire the information to ensure a level playing field the cost to acquire the information tends not to be worth the incremental gain that the participant would realize from the extra information. Requiring swaps to be traded over the SEFs attempts to put an end to the opaque nature of pricing in the swaps market. There will be significant impacts on the revenues the largest firms earn in this space. As information becomes more publically available one would expect some price compression among the market makers who have benefited from the opaque nature of OTC derivatives as well as their asymmetrical information advantage. According to a Deloitte study for the Swaps and Derivatives Market Association (SDMA), the predicted loss in revenue could be as great as 30-35% due to the increased transparency.^{xxxviii} In aggregate terms that is a reduction in \$15Bn in revenues according to the New York Times.^{xxxix}

Given the expected compression in profit margins in dealing with swaps that are required to be cleared one would think there is a strong incentive for the major swap players to do everything in their power to keep the majority of swaps away from the mandatory clearing requirements and their corresponding exchange trading requirements. There is, however, an additional twist for un-cleared swaps; these are subject to additional margin requirements. The margin rules for un-cleared swaps have yet to be finalized but there are two corresponding proposed rules that lay out the basic framework the regulators are considering. One rule is issued for swap entities that are regulated by a prudential regulator (e.g. OCC) and another by the CFTC for swap entities not regulated for a prudential regulator. While there are some differences between the two proposals, there are common themes, including that margin be segregated at a third party custodian, and the big one, that the margin is greater compared to a cleared swap of similar characteristics.^{x1} So there is an increased cost in trading in un-cleared swaps that presents itself by the additional margin requirements.

Now that we have discussed the requirements for both cleared, exchange traded swaps as well as those for un-cleared bilateral swaps, we roll things up to a higher level: what will the derivative market look like 5 years from now? Ideally the goal of the regulators is to move as many swaps as possible to a centrally cleared, exchange-traded environment. This increases transparency and thus limits systemic risk by reducing the uncertainty of counterparty credit risk, although it also potentially concentrates risk in the central clearinghouses. The ability to reduce the risk lies in the ability of the regulatory

bodies to catch any signs of trouble earlier than if the risk is spread out among many financial institutions.^{xli}

The ability to move the majority of swaps into the centrally cleared category is another component that impacts the success of increasing transparency. One can naturally expect the first swaps to migrate toward a central clearing model to be the “plain-vanilla” swaps, these are relative common standard swap transactions that make themselves the most eligible candidates for central clearing environments. As evidenced by the Bloomberg study the main reason banks enter into swaps is to mitigate risk rather than speculate on price fluctuations. Of course banks do profit from their market making activities as well so derivatives serve dual purposes. One benefit of the current business model of off-exchange bilateral swaps is the customizable nature of the contracts. As firms became bigger and more complex their risk profiles followed suit. Firms can enter into very customized swap contracts that allow them to better mitigate their risks than a standard “plain-vanilla” swap. That is one reason the OTC market developed the way it did. It provided banks with the ability to tailor specific swap contracts to fit their unique risk portfolios. If the “plain-vanilla” swap satisfied the bank’s risk mitigation strategy there would not have been a need to undergo the costs to develop the more customized swaps for risk mitigation. However, as the interest rate and credit risk profiles of the banks became more complex due to evolutions in financial products the demand for customizable swaps soon followed. Professor Darrell Duffie, who has done extensive work on the derivatives markets, predicts that about 80 % of swaps will be subject to mandatory clearing.^{xliii} We are now faced with the 80/20 predicament; that is will 80% of

the swaps entered into be the 20% that are still traded off-exchange thus minimizing the effect of increased transparency provided by central clearing and exchange trading? Like everything else, that determination comes down to a favorite tool of economists, the cost-benefit analysis. For a bank to satisfy a particular demand, they must determine which path will yield the biggest spread in benefits compared to costs, or in other words, for the same level of benefit, which will be the least costly for the banks. To determine this it all comes down to the compression in profit margins on the cleared swaps compared to the increased costs for an un-cleared swap. While there are additional costs for trading in un-cleared swaps, these could be potentially offset by the profit margin gained due to asymmetric information on the side of the swap dealer. Essentially there is a trade-off. The cleared swaps are cheaper, but yield less return and also potentially don't mitigate risks as well as the more customizable swap and the swaps that better mitigate risk are more expensive. This contradicts the goal of Dodd Frank of reducing systemic risk.

One possible solution would be for the regulators to issue rules in a manner where a bank has more of an incentive to trade in centrally cleared swaps. Presumably this would occur through margin requirements for un-cleared swaps that would erase any asymmetrical information advantage, the driver that boosts profit margins and could pose serious challenges in determining the right amount of additional margin requirements. While only time will tell what happens, banks will have a strong incentive to keep their most lucrative swap contracts away from the transparent exchange trading environments. This should not be overly difficult in the near to immediate term as the most customizable swaps, and arguably the most profitable, will be difficult to standardize to a

level needed to move onto a centrally cleared, exchange like environment. Even when regulators find a way to move these swaps to the centrally cleared exchanges, there will be some “new” product created that is traded off-exchange and thus can reap the rewards of the profit margin. There need to be proper incentives in place to see the majority of the swaps business move onto centrally cleared environments. According to the author Satyajit Das’s extremely insightful, yet cynical portrait of the derivatives markets is there are two categories that everything in derivatives falls into. It is a combination of “knowns” and “unknowns”.^{xliii} What is “known” about Dodd-Frank’s overhaul of the OTC derivative markets is that Dodd Frank will increase the transparency of derivatives and thereby ease some of the uncertainty that was present in 2008 and which exacerbated the financial crisis. The “unknown” is just how much will we see the systemic risk reduced by increased transparency. Central clearing does not eliminate counterparty credit risk or end “Too Big to Fail”. Swap dealers still have incentives to keep swaps off-exchange to utilize the increased profit margins caused by asymmetrical information. While the new regulations are an improvement from the pre-crisis regulation of derivatives, the outstanding question remains on the magnitude of the improvement. That magnitude is contingent on the regulatory bodies implementing rules that provide the right set of incentives for the players and also their ability to enforce the requirements necessary to realize the gains of central clearing and exchange trading.^{xliv} One thing that is a “known” is that banks will always attempt to create new financial products that will not be subject to the current regulatory rules that compress profit margins. There is too

much money at stake to not expect institutions to come up with new creative ways to realize some of the gains to be had.

Chapter 3: Consumer Regulation and its Impacts on Choice

While a majority of the Act focuses on reform of the institutional sector of financial products and use of those products that pushed the system to the edge of the precipice there is an entire section of Dodd-Frank allocated to the reform of consumer finance. There is no debate that subprime mortgages played their part in the financial crisis with the blame spread across consumers, banks, and the government. However many consumer reform items that are contained Section X of the Act have nothing to do with mortgages and contributed nothing to the root causes of the financial crisis. Section X, which resulted in the creation of the Consumer Financial Protection Bureau (CFPB), is an example of pork-barrel legislation at its finest. One of the big differences between the CFPB and the other regulatory bodies is the lack of congressional oversight on the CFPB. They are unique from their regulator brethren in that they are not subject to the congressional appropriations process. This feature, as well as the recess appointment of Richard Cordray as director, has led to a lawsuit challenging the constitutionality of the CFPB.^{xlv} While there are many elements relating to consumer protection the Act this paper will focus on only one of those sections and its impact to consumers. Its official name is “The Final Remittance Rule (Amendment to Reg E).” However, it is known by a whole assortment of names including “Remittance Transfers” and “Dodd- Frank 1073”.^{xlvi} For purposes of this paper, we will refer to this regulation as “Dodd-Frank 1073”.

Prior to jumping into the analysis of Dodd-Frank 1073 let’s revisit some of the basics elements of consumer theory, one of the building blocks of microeconomic theory.

Consumer theory rests on a couple of basic assumptions, first of which is that individuals are rational decision makers. Despite the fact that an individual may make an irrational decision, it is thought on the whole that consumers make decisions rationally. Another underlying assumption of consumer theory is scarcity. That is, there are a limited number of resources available for consumption. Expanding on the concept of scarcity we see the emergence of consumption bundles where each bundle is a set of goods available for consumption. As Jehle and Reny (2001) point out a consumer's goal is to seek the specific consumption bundle from the set of available bundles that is most preferred.^{xlvii} The bundle that is "most preferred" is measured by the notion of utility. Utility is a way to measure things that are hard to quantify, specifically how a consumer is "better off" from the consumption of a good. We now come full circle back to the concept of the rational individual. The rational consumer seeks to maximize his or her utility given a fixed budget. In other words they consumer the best possible combination of goods as given their set of preferences and budget. Mathematically, Jehle and Reny represent this as: $\max u(\mathbf{x}) \text{ s.t. } \mathbf{p} * \mathbf{x} \leq \mathbf{y}$. Where $u(\mathbf{x})$ represents the utility for consuming consumption bundle \mathbf{x} subject to the constraint that the price (\mathbf{p}) of consumption bundle \mathbf{x} is less than or equal to the budget \mathbf{y} .^{xlviii}

Everything an individual does in the course of the day, week, or year makes up a component of their utility function for that time period. One of these elements is the movement of money or payments. There are countless reasons for making a payment and nearly as many mediums to deliver that payment. The simplest of these mediums is also the oldest, physical delivery. The payment space is not isolated from the advances in

technology. Some of the largest banks in the US allow you to pay bills from your mobile phone, money can be transferred from one individual to another over the internet, and the clearest example is the rise of credit and debit cards for transactional based payments. As Jonkey and Kosse [2008] point out, consumers favor the speed and safety of electronic credit transfers compared with their paper counterparts.^{xlix} From the comforts of a chair at the beach one can pay their car bill, mortgage, and electric bill all with a couple of taps on their smartphone.

What factors caused the market to develop in the way that it did? Part of the market development can be attributed to the rise of the Internet. The Internet has connected the world in such a way that now with a couple of clicks one can see the weather in Sydney, check the news in New York, and search for hotel rooms in London. Naturally, markets have developed allowing consumers to buy and sell goods over the Internet. As a result of remote buying and selling there developed need for remote payment systems needed to handle such transactions. There are Point of Sale transactions where debit or credit cards are the common mediums of payment, as well as transfers of funds for remote settlement. The former mainly involves payments between an individual and a retailer or other entity. The latter is usually on a more individual-to-individual basis or for something of high value where the amount of the payment is typically not paid via credit card. Another factor is the increase in global migration. In simplest terms, the world's population is moving farther away from their respective place of birth; more people in absolute terms are migrating to another country.¹ The causes of this go beyond the scope of this paper but in general the collapse of the Soviet Union, the

rise of free market centers in Asia and the Middle East, and the economic environment of some traditional economic centers have turned many workers into expatriates, in search of a better life. This results in an increase in demand from consumers to send money back “home”. From a cross-border payment perspective, an electronic credit transfer has many benefits over their paper-based counterparts, of which, speed of transaction time being the predominant one. Also, the transaction costs borne by banks are cheaper for electronic credit transfers when compared to paper-based. Thus there is an incentive for banks to push consumers toward these products.^{li} However, when compared to their domestic counterparts cross-border electronic transfers are perceived as more confusing and costly from a sender’s perspective. The International Bank Account Number (IBAN) and Bank Identifier Code (BIC) required on most cross-border transactions exemplify this point. A survey conducted as a part of Jonkey and Kosse’s research points out that 58% of their population did not know what the purpose of the IBAN and BIC codes as well as a staggering 67% also stated that they would not know where to find them.^{lii} By removing this confusion in the minds of consumers, one would expect to see further increases in the number of consumers using cross-border electronic credit transfers to deliver funds. This is precisely the payment space that is the focus of the Dodd-Frank 1073 rule and for those payments subject to Dodd-Frank 1073, the new regulation is truly a game changer.

The focus of the Dodd-Frank 1073 regulation is centered on reforming cross-border electronic funds transfers initiated by a consumer. The intent of the statute is to provide increased consumer protections with respect to cross-border payments. The

underlying cause of this regulation stemmed from individuals sending money to family members abroad and the amount expected was not always the amount that arrived.

Senator Daniel Akaka from Hawaii, author of Dodd-Frank section 1073, had these comments on the final rule issued by the CFPB.

"Now, simple disclosures will empower consumers with important information, including the amount of currency that the recipient will receive, the promised date of delivery, and the rights of the sender regarding the resolution of errors. This is the information that consumers need to know so they can properly compare the rates and fees deducted from their remittances."^{diii}

The new regulation requires a disclosure of all fees and taxes associated with the payment, the exchange rate used in the transaction, the date the funds will be available to the recipient, as well as provisions for cancellation and error claims. Simply put, the consumer that is initiating the payment will receive a disclosure stating all of the charges associated with the cost of the transaction that will allow the consumer to “price shop” to determine the remittance transfer provider that can provide the desired service for the best cost. This all sounds great on paper. The consumer has more information about the costs of the transaction and can make the decision that is the most cost effective. Based on our consumer theory discussed above this should allow for an increase in consumer utility as their decision to select the most cost-effective provider maximizes the amount of income available for consumption of other goods.

The regulation does not prevent institutions from charging the sender and/or receiver for these services. A role of financial intermediaries is to bring market participants together creating transactional efficiency. They have asymmetrical information advantages based on their position and are thus able to realize gains from

brining buyers and sellers together. However, in the broader picture, they serve as a key function in society. We would not have the globalized market that we do today if buyers and sellers had to spend all their time searching each other out. Intermediaries serve that function allowing for buyers and sellers to spend time on other things leading to a greater benefit for all. A presumed additional benefit to the consumer's consumption is the notion that the increased transparency in charging practices should foster price competition that will drive down the cost to send a cross-boarder payment. The question becomes, do the facts support these presumed benefits. We now examine the two major types of payment systems to see if the expected result of improving consumer utility through price transparency and reduced costs will come to fruition.

Closed-Looped vs. Open Networks: Trade Offs

The first payment type we will examine is known as a "closed loop payment network". A key characteristic of the closed network system is that the entire flow of the payment stays within the network of the provider. Western Union is a classic example of a "closed loop network" provider in that funds are sent from one Western Union office to another. The payment never leaves the Western Union network and thus the provider can exhibit greater control over the payment. This greater control should lead to a burden of compliance that is relatively straightforward to implement. Since the payment travels in a closed network the amount of charges applied, exchange rate used, and date the funds will be available should be readily available and thus would be just be required to be disclosed, if they aren't currently disclosed.

Since closed networks seem to have desired result in the payment space, how come they aren't used exclusively for sending cross-border payments? It comes back to consumers' utility maximization. The positives of a closed loop network are also drivers of a big negative in terms of presence. A closed looped network requires that there are branches of the closed loop at both ends of the transaction, which can lead to significant costs for a company. However, given the presence of a Western Union agent in over 200 countries and 500,000 locations that burden of a closed looped network does not seem to be as big of a burden for a consumer's choice.^{liv} That said, the requirement to be on site for both sides of the transaction does pose a significant barrier to entry for aspiring competitors to Western Union, MoneyGram, and the likes. The bigger downside to the closed looped network is the timing of delivery. In a fully closed loop system there is a requirement for both the sender and the recipient to physically be present when sending and receiving funds respectively. These money transfer organizations' specialty is the cash-to-cash transaction space. The opportunity cost of time negatively impacts the utility functions of the sender and the recipient.

There is an option available when sending a payment via a money service provider to have funds deposited into a bank account at the receiving end. However, this takes the payment out of the completely closed looped space. Let's walk through an example to illustrate this. John, located in the United States, wants to send \$1,000 USD to his grandmother located in country B. However, he doesn't want his grandmother to have to travel somewhere to get the funds but, would rather the payment just be deposited into her bank account. Whether it is implicit or explicit, John is helping his

grandmother maximize her utility by not having to make a trip to pick up the funds. So, John initiates the transaction with a money service provider to transfer funds from the US office to his grandmother's bank account at the National Bank of Country B. Once John has made the payment for the transaction, the first leg of the payment travels in the closed network environment from the US to country B all within the money service provider's system. It is the next part where the break from the closed network happens. The money service provider may or may not have an account at the National Bank of Country B. If they do, they would initiate a SWIFT message^{lv} (in this case an MT 103) instructing National Bank of Country B to pay John's grandmother. If instead, they have an account at the Commercial Bank of Country B they would send the SWIFT MT 103 to the Commercial Bank of Country B instructing payment to be made to John's grandmother at National Bank of Country B. Commercial Bank sends the payment through the local clearing system to National Bank who credits the funds to John's grandmother account. The latter half of this transaction, the portion that results in the funds being credited to John's grandmother's account, enters the open network environment. Of course, this extra step to credit the funds to an account is not done for free, and depending on the arrangements of the particular situation, either can affect the amount of funds John's grandmother receives and/or is borne by the money service provider, who in turn could pass the cost off to John.^{lvi}

The alternative to the closed loop system is the open loop network where many participants send payments to each other via various settlement and communications systems. The parties involved in an open loop network usually are deposit taking

financial institutions, but may also include broker-dealers and other non-bank financial institutions (NBFIs). The most common form of an open network payment type is the wire transfer. Wire transfers provide a quick and secure method to deliver high-value payments across the globe. This is one reason why the market developed; there was a demand for the ability for consumers to deliver large amounts of money in a quick and secure manner. Since wires are the most common cross border open network transaction, that will serve as our focus for analyzing the open network market. We begin with the basics of a cross-border wire transaction.

While certain financial institutions do offer variations, the standard among wire transactions are account-to-account transactions. In an account-to-account transaction both the sender and the receiver must have established accounts with the sending and beneficiary institutions. Also, there is no delivery of physical funds as the payment goes from one account to another. Since Dodd-Frank 1073 focuses solely on US originated payments, we will focus the description of a cross-border payment flow to a US originated transfer in US dollars. The sender of the payment holds an account at a US bank and wishes to initiate a cross-border payment to an account at a bank in a foreign country, known as the beneficiary bank

1. The customer selects the amount of funds he wants to transfer and the process begins with internal movement through the US bank's operations center

2. Here is where we see if there is a difference in domestic wire payments (sent directly through Fedwire to the receiving bank) and cross-border wire payments which typically take one of two paths:
 - a. The beneficiary bank has a direct relationship with the US bank initiating the transaction; the foreign beneficiary bank has an account on the books of the US bank. In this case, what is known as a “book transfer” is made by the originating bank from the sender’s account to the foreign beneficiary bank’s account by including an accompanying SWIFT MT 103 to the beneficiary bank with instructions for further credit to the recipient’s account.
 - b. The beneficiary bank does not have a direct relationship with the originating US bank but rather has a relationship with another correspondent bank in the US. In this case the originating bank sends the payment through one of the US clearing systems (CHIPS or Fedwire^{lvii}) to the US correspondent of the beneficiary bank and either advises the beneficiary bank directly, known as “advise and cover” in the industry, or through the US clearing payment message by sending the message serially. The US correspondent then preforms a book transfer crediting the funds to the beneficiary bank’s account.
3. The beneficiary bank now has the funds in its account and processes the payment for further credit to the recipient’s account. If the recipient’s

account is denominated in a currency other than USD, a foreign exchange will also be performed prior to crediting the funds.

In some instances there may be additional intermediary banks involved in the transaction. The route of the wire or transfer is all driven based on the relationships established between the originating and beneficiary banks. Now that we have described the steps in the payment flow, let's look at how charges are typically applied. As previously stated, the heart of Dodd-Frank 1073 is full transparency in the amount of charges that affects the net amount received by the sender. The first charge we will review can simply be called the "outgoing wire fee." This would be the fee that the originating bank charges the sender to initiate a wire transfer. The amount associated with this charge is dependent on the sender's arrangement with the originating bank. Naturally, some clients may receive this service for free. This charge is typically debited from the account in addition to the amount being sent. So, if a sender wants to wire \$1,000 USD and it costs \$30 to send USD internationally, the sender's account will be debited for \$1,030 with \$1,000 sent for processing. The originating bank will then make a book transfer to the beneficiary bank and depending on the relationship arrangements made between the two banks, the beneficiary bank may elect to be charged separately to receive the incoming wire or have the charge deducted out of the proceeds. This deduction from the proceeds is known as a "lifting fee" in that the fee is lifted from the principal of the transfer instead of charged separately. The number of intermediary banks involved in the payment chain could affect the number of lifting fees applied. However, market practice is for there to be a two lifting fee maximum deducted from the payment. Although in many instances,

there may be only one or no lifting fee applied. The third type of fee that may be applied relates to the crediting of funds to the beneficiary by the beneficiary's bank. Similar to the fact that there is an outgoing wire fee to send a payment, typically there is a fee charged to receive an incoming payment to an account. This fee is known as an "incoming wire fee." How this fee is applied, either deducted from principal or charged separately, depends on the beneficiary bank's fee structure and varies from bank to bank. The method of application of the incoming wire fee does not affect the recipient's utility because the recipient bears the cost either way, but is just a timing difference.

Dodd-Frank 1073: The Industry Game Changer

While briefly discussed before, we will now explore the Final Remittance Rule published by the CFPB on February 7, 2012, as well as the revised proposal made to the rule on December 21, 2012, . The main theme of the rule is the increased consumer protections as they relate to cross-border electronic transfers initiated by an individual in the United States, whose account is domiciled in the US, to any recipient located in a foreign country. For purpose of this rule transfers to and from the US to the five official US territories are not considered to be cross-border electronic transfers. The protections the sender receives includes a transparent description of all charges to be applied, foreign exchange rate if there will be a currency exchange during the transaction, as well as any taxes deducted out of the payment that are a result of an institution providing the servicing of the payment. So theoretically, in the end, the sender will see a full picture and know exactly the net amount the beneficiary will receive. The disclosure must also include the date that the funds will be available to the recipient. Additional protections

include the ability to cancel the transaction up to 30 minutes after authorization of payment, as well as 180 days to file a claim where there was an error with respect to any item on the receipt disclosure. For example, if the receipt said that the funds would be available in three days time but something caused the funds to be delayed, that would result in an error and cause a list of remedy options available to the sender. In light of the previous description of cross-border wire transfers, we will examine how this rule will impact the process and where some elements of the rule will be very difficult to implement.

There are five specific elements that may affect the payment amount that are required to be clearly displayed on the disclosure in order that the sender may understand the true cost of the transaction. While the disclosure contains numerous other information, these five elements are at the heart of the intent of the regulation, along with the date the funds are available to the recipient (which appears on the receipt once the customer has authorized payment of the transaction). As mentioned before, this disclosure is a positive and should improve consumer utility because consumers are now more informed and can choose the remittance transfer provider that will suit their needs the best. This disclosure requirement is in line with the theorem that a rational consumer makes decisions based on their utility maximization. These five disclosure elements are: (1) the fees charged by the remittance transfer provider (“Transfer Fees”), (2) the taxes collected by the remittance transfer provider (“Transfer Taxes”), (3) the exchange rate used in the transaction, (4) the fees charged by parties other than the remittance transfer provider (“Other Fees”), and (5) taxes collected by parties other than the remittance

transfer provider (“Other Taxes”). The intent is that the sender now can see a transparent view of the elements that impact the net amount received by the recipient. The first two elements, “Transfer Fees” and “Transfer Taxes” are the easiest requirements for remittance transfer providers to provide since they already have this information at their disposal; they are the charges and taxes the remittance provider collects. The other three elements may pose some challenges and thus we will examine these three requirements in more detail.

Let’s first examine the disclosure of the exchange rate when there is an exchange of currency, as, on paper, this seems to be relatively straightforward. Currently in the market, cross-border transfers initiated within the US are typically sent in US dollars (USD). Data shows that in 2012 USD represented over 88% of the traffic going from the US to another country.^{lviii} This includes traffic initiated by all individuals and corporations, which may present some bias in the data, but directionally the data tells a very interesting piece in that most of the traffic flowing out of the US is going out in USD. The reasons for this could be endless: familiarity, obligation must be paid in USD, beneficiary’s account is denominated in USD, foreign country uses USD as local currency, beneficiary is likely to get a better FX rate at his/her bank, etc.. However, it is safe to say that there is a large portion of this traffic that prior to settlement into the beneficiary’s account is converted to a currency other than USD and then credited to the beneficiary’s account in that converted currency. Now that we have described the current market practice, let’s examine the impact of the requirements in the Dodd-Frank 1073 regulation.

The regulation requires the exchange rate that is used must be quoted in a consistent standard and rounded to an amount between two and four decimal places. The easiest way for the remittance transfer providers to meet this requirement of the regulation is to apply the foreign exchange upfront and make the payment in the other currency. While this is fairly straightforward for the providers to comply with, this may result in a limit of consumer choice. Institutions may limit the consumer's ability to send USD to an account known to be denominated in a foreign currency because of the difficulty in disclosing the exchange rate as required by law. There may be additional costs to the consumer because the rate of exchange used by the consumer's remittance transfer provider may be less favorable than the rate applied when the funds are being credited at the beneficiary institution. Overall, the requirement of disclosing the exchange rate to the sender should not have a negative impact on consumer utility. Actually, it will produce some positive benefits to the remittance transfer providers by shifting the revenue that stems from the foreign exchange conversion from the foreign institutions upstream to the remittance transfer providers.

Now let's move to the disclosure of foreign taxes collected by the recipient institution, the "Other Taxes" element of the disclosure. This disclosure of tax requirement is isolated to taxes that are required to be collected as a direct result of servicing a wire transfer. The regulation originally required that all taxes imposed by parties other than the remittance transfer provider must be disclosed, including non-national taxes such as provincial or regional. This would be very challenging for the remittance transfer providers to comply with because of the sheer number of possibilities.

There are roughly 200 countries in the world and if required to capture each of the possible local and regional taxes, the number of data points required increases exponentially. Also, after research among the industry relating to collecting tax information at just the national level, the data shows that taxes are not regularly imposed on servicing of a wire transfer. Furthermore, the amount of the tax being collected is typically much smaller in magnitude compared to the fees imposed. Essentially the cost burden required to collect the information at the level of detail needed didn't yield the incremental benefit of disclosing these sub-national taxes to the consumer. On December 20, 2012, the CFPB provided a reprieve from this sub-national tax requirement by issuing a revised proposal of this provision of the final regulation, along with a few other provisions. The revised proposal gives the remittance transfer providers the ability to disclose only national level taxes, provided they inform the consumer that this amount of "Other Taxes" is an estimate and sub-national taxes may be imposed.^{lix} Also, the revised proposal provides flexibility in that if a particular recipient institution imposes the tax in a manner differently than described by the letter of the law. In addition it also allows the remittance transfer provider to assume the worst possible tax bracket of the recipient, if that variable affects the tax collected and the sender does not know the specific variables that will affect the tax rate. While the proposed rule allows for the disclosure of taxes imposed only at the national level has not been finalized, it is widely expected to be adopted without significant change. The excessive cost burden required to collect and maintain sub-national taxes placed on the transfer providers did not yield enough of a benefit to the consumer. Furthermore, it is likely that this requirement would

have driven providers out of the market as well as resulting in a portion of the cost burden being passed onto the consumers. The biggest challenge with this requirement is the on-going maintenance of the information. Collecting the information will be strenuous, but keeping the information current and fresh on a real-time basis will be a much bigger hurdle for remittance transfer providers to comply with. Since this element of the regulation is independent from a consumer's choice of remittance transfer provider, this is one area where collaboration is possible without giving away any competitive advantage as well as possibly helping to ease the total cost burden across the market participants.

The aspect of the transparency requirements that is causing the most headaches among the market participants is the display of third-party fees; "Other Fees" on the disclosure documents. As previously discussed, it is very common during a cross-border payment transaction for there to be multiple stops in the payment flow. As a result of servicing the transfer along the way, many institutions charge a fee for this service. There are many ways for payment providers to apply these fees. One way would be to bill the institution that sent the payment to them. For example, bank A (US bank) sends bank B (foreign bank with account at bank A) one thousand wire transfers per month and at the end of the month bank A sends bank B a bill for the cost of crediting those one thousand transfers to bank B's account. Over the years a practice has developed among institutions to shift some of the cost burden off to others. Instead of being charged separately, institutions would strike agreements to take the fee off the principal of the cross-border payment. The beneficiary of the payment now bears the cost burden

because the beneficiary receives a lesser amount due to a portion of the payment being lifted off of it as a service fee by market participants. The specific aspects of this fee are typically unknown to both the sender and the beneficiary. Also, depending on the type of relationship the beneficiary has with the beneficiary's institution, a charge may be applied to credit the funds to their account.

The challenge facing the remittance transfer providers is how to disclose to a customer the total amount of fees that will be applied as a result of the payment. First, let's examine the lifting fees that institutions take off the principal of the payment. One option institutions have is to use an approach where they instruct the other institutions not to take any fees off the payment and for not taking a fee off the payment they can claim a charge back to the sending institution. We will call this the "charges OUR method." This approach of guaranteeing that the principal of the payment is not touched is executed in practice by placing a code word in field 71 of the SWIFT message. However, it is not common practice today for institutions to provide this service on all cross-border payments. Moving to a "charges OUR method" will result in additional costs to remittance transfer providers through increased claim backs for charges and it would not be surprising if a portion of these incremental costs are passed off to the customer. However, this still does not solve the remittance transfer provider's requirement to disclose the fees the recipient institution charges the beneficiary, which we analyze shortly. Another option that remittance transfer providers can undertake is to keep the payment practice as is and just disclose the fees taken. Dodd-Frank 1073 does not prevent institutions from taking fees off consumer cross-border payments, but just

requires that if there are fees then they must be disclosed. While there needs to be significant work done to make this a reality, is it possible for a remittance transfer provider to be able to disclose these fees every time? In some cases a provider could disclose these fees because the beneficiary institution holds an account with the remittance transfer provider. Since the transfer happens all within the provider's books, it would be possible for the provider to know what amount, if any, is deducted from the principal of the payment. In other cases though, the payment must be sent to a correspondent of the beneficiary bank because the beneficiary bank does not hold an account with the remittance transfer provider. It would be very difficult to know the exact arrangement the beneficiary institution has with its correspondent. Remittance transfer providers do have the authority to estimate this fee, but that authority expires in July of 2015, roughly two years after the regulation is expected to take effect.

The December revised proposal provides further authority to estimate when it comes to the fee the recipient institution charges the beneficiary to credit the funds to the beneficiary's account. Prior to the revised proposal, the authority to estimate this fee was also set to expire in July 2015. This would have been very challenging for remittance transfer providers. A particular institution may have endless arrangements depending on the status of the beneficiary. It would require remittance transfer providers to know the exact status of the beneficiary with the recipient institution. The revised proposal allows institutions to rely on published fee schedules, as well as fee schedules of similar institutions in the event that the recipient institution does not have a published fee schedule. Substantial effort is still required to collect this information, even with the

further relaxations from the December revised proposal, but it is possible for an institution to accomplish if given the proper resource devotion. Essentially, the revised proposal allows a remittance transfer provider to assume the beneficiary is a typical average customer of the recipient institution who would not have any special arrangement. An element that is not part of the pre-payment disclosure, but provided on the receipt after the payment is authorized is the date the funds will be available to the recipient. The revised rule allows for banks to estimate a date and note that funds may be available sooner. This, coupled with the elements of the pre-payment disclosure, provides the end-to-end transparency for the sender of the payment. The sender now has the ability to know how much the recipient will receive net of all charges and when they will receive it.

Are Consumers Better Off?

While there are significant challenges to the sender in collecting and maintaining all the information required to be disclosed upfront, it is possible for the sender to meet the requirements of the regulation. Since it is possible to meet the requirements, will the consumer experience the utility boost provided by transparency? According to a survey conducted by the technology firm Fundtech, most financial institutions believe, with a resounding consistency, that the overall impact of this regulation will be negative. Consumers will see little, if any, gains and there will be significant negative impact to small firms in the payments business.^{lx}

So the question is, will the regulation have the intended impact or will there be the consistent theme of negative unintended consequences due to a poorly implemented

regulation? Well, it is likely that the significant increased costs incurred by remittance transfer providers will be passed off in some form to the consumer. The question then becomes, does the benefit of transparency outweigh the incremental cost the consumer bears? One case can be made that transparency of prices will result in price competition among producers and thus the consumer will be better off. While that theory holds true, it also hinges on the number of producers in the market remaining fixed. The significant cost required for compliance as a remittance transfer provider is likely to push some of those market participants who are on the margin out of the business.

One variable affecting the compliance cost is the size of the remittance transfer provider. Small providers may benefit from less complexity compared to their larger counterparts but they are also harmed by their size. The financial supermarkets of the largest banks realize gains from economies of scale. They have a global presence and deep correspondent networks that are lacking in the small regional banks. The multinational component of the largest remittance transfer providers presents them with a competitive advantage in the opportunity cost required to collect the information needed for the disclosure elements of the regulation. Their size benefits them in other aspects as well. Such as, dedicating sufficient resources to the efforts needed to transform their payment platforms into becoming compliant with the regulation. Keeping in line with the classification of banks in relation to the Derivatives section of this paper, Mid-Size regional banks are defined as those institutions with \$10-50 billion in assets. Meanwhile, according to Federal Reserve data collected in September 2012, the four largest financial institutions in the US each have over \$1.3 trillion in assets; institutions 11-15 have a

combined asset value of \$1.2 trillion.^{lxi} In other words, merging these institutions would only create the 5th largest bank in the US. One can argue that this is the evidence of “Too Big to Fail” and while that topic is not the theme of this chapter, Skeel points out that the *Dodd-Frank Act* does not address the “Too Big to Fail” size of the banks at the top and may further enhance their systemic importance as the entrants to the market are turned off by the costs of regulation, a view shared by Jamie Dimon of JP Morgan Chase.^{lxii} The “big four” institutions^{lxiii} are all significant participants in the retail banking market in which the clientele that falls under the scope of Dodd-Frank 1073 reside. Even if the cost for compliance was double for the big banks compared to the mid-size regionals, their sheer size makes it easier to allocate the resources needed for compliance. For many of these smaller providers who provide cross-border payment services as an ancillary benefit to their clients, they will have to examine and make a determination whether to continue to provide these services when compliance with the Dodd-Frank 1073 requirements is in effect. One institution has already decided that it will no longer offer cross-border wire transfers due to the requirements of Dodd-Frank 1073. On November 20, 2012, the Federal Home Loan Bank of New York announced that it was exiting the international wire business at the end of the year as a result Dodd-Frank 1073.^{lxiv} Another option would be for these mid-size regional banks to leverage the larger banks payment systems to process their Dodd-Frank payments. These largest financial institutions, which have extensive retail banking divisions, also have wholesale banking units. As certain mid-size regional banks can no longer afford to be a direct participant in the cross-border payment market, there is an incentive for the bigger banks to develop

solutions that they can sell to other banks in addition to their own retail solution. Again the economy of scale advantage favors the big banks and here the question becomes what is the net effect to the consumer? As discussed in the description of cross-border payments, adding intermediaries to the payment chain correlates directly to an increased cost of the transaction. The mid-size regional bank will face increase cost since they will have to go through a US intermediary instead of being a direct participant in the cross-border payment market. It does not take much imagination to envision that at least a portion of this incremental cost will be passed off to the sender. This reduction in the supply of remittance transfer providers will temper the effect on prices of providing transparency. Furthermore, the consumers whose institutions no longer offer cross-border payment services will have to find a new provider for their cross-border payment services.

Another likely outcome of this regulation is a reduction in the supply of destinations where a cross-border payment can be sent. Even the largest institutions, whose scale yields them a competitive advantage to collect information, will face struggles getting the necessary information needed to deliver payments to the same set of markets that they do today. The December proposal eased some of the burden, but did not completely lift it. From a risk management perspective it would not be surprising to see institutions begin to limit Dodd-Frank 1073 payments to markets where they have sufficient information to reasonably disclose the charges to the customer. As mentioned earlier, there is likely to be limits in the currencies available for delivery because if a foreign exchange is to occur, the rate used to convert the funds must be disclosed.

Expanding on that, it would not be surprising if entire markets, regions, and institutions are no longer available to receive a Dodd-Frank 1073 payment because the remittance transfer provider lacks sufficient information to meet the requirements of the regulation for that particular payment. This clearly has negative implications on the consumer who must now find another method to deliver the payment to the consumer's desired location. The opportunity costs tied to finding another method to execute the payment have a negative impact on the consumer's utility, the exact opposite intention of the Dodd-Frank 1073 regulation.

Yes, some consumers will experience an increase in utility from this transparency, but for many the cost that is imposed on them because of this transparency may exceed the benefit. It is unlikely that Dodd-Frank 1073 will result in a reduction of prices borne by the sender of the transaction. Some portion of the cost for compliance is likely to be passed off to the consumer. Also, the number of market participants is likely to decrease as those near the margin exit the business in the face of the new costs. This reduction in the number of remittance transfer providers means it is less likely we will see prices driven down as a result of transparency. We may see institutions strike bilateral agreements with foreign banks for special processing of Dodd-Frank 1073 payments. That may make the costs associated with a cross-border payment more consistent across the various countries of the world, but it is unlikely to bring prices down on a global scale. In the end, the Dodd-Frank 1073 regulation has good intentions, but in practice will unlikely have as much of a positive impact as regulators envision. Consumers will likely have less choice of remittance transfer providers and increased costs, which

counteracts any utility benefit gained by transparency and additional protections of Dodd-Frank 1073. The only one who truly benefits from Dodd-Frank 1073 is the beneficiary of the payment. The sender will now be able to tell the beneficiary the amount of funds the beneficiary will receive and that they will be available by a particular date. Also, if a majority of the industry moves to a “charges OUR method,” the beneficiary will receive added benefits because they no longer bear the cost of having a fee deducted from the principal of the payment. It shall be very interesting to see how this develops once in practice. If there is a successful implementation of the rule, it would not be surprising to see similar regulations established in other countries.

US consumers whose utility should experience an increase from transparency are likely to experience the opposite effect driven by a combination of higher prices, more restrictive options, and potentially the need to find a new medium to execute the cross-border payment if their traditional providers decide to exit the market. Remittance transfer providers are also likely to experience negative effects driven from the high cost of compliance and the ability for some people to game the system, although the recent proposal in December helped ease this concern by shifting some of that risk from the provider to the sender. International banking practice is to rely on the account number when crediting the funds, but the original rule required that if the recipient named did not receive funds because the account number was wrong on the transaction, then the provider was on the hook for the full amount of the payment. Once a payment is sent there is no legal obligation to return the funds. This provides a ripe opportunity for fraudulent schemes. However, the revised proposed rule relieves the remittance transfer

providers of this burden and puts the onus on the sender.^{lxv} Some of the larger remittance transfer providers will see some offsetting benefits because of increased market share as the smaller providers on the margin exit the business. Overall, there will be fewer market participants for the consumer to price shop the transaction as the regulation intended. The only group that will likely benefit, although the magnitude of the benefit is uncertain, are the recipients of the transactions. Indirectly they will receive the benefits of the regulation, certainty on the amount received and when the funds will be available. Naturally, they will need to be informed of this by the sender, but, nonetheless, they will see the benefits of the regulation with little to no incremental costs borne by them. It is unlikely that foreign financial institutions will raise their prices for crediting incoming wire transfers due to a U.S. regulation that has little impact on them. While this rule is a true game changer in the payments business, it is unlikely that the outcome to the various market participants will yield the intended consequences the CFPB and Congress envisioned. That is, enhancing consumer utility in the US through transparency and greater protections around cross-border payments.

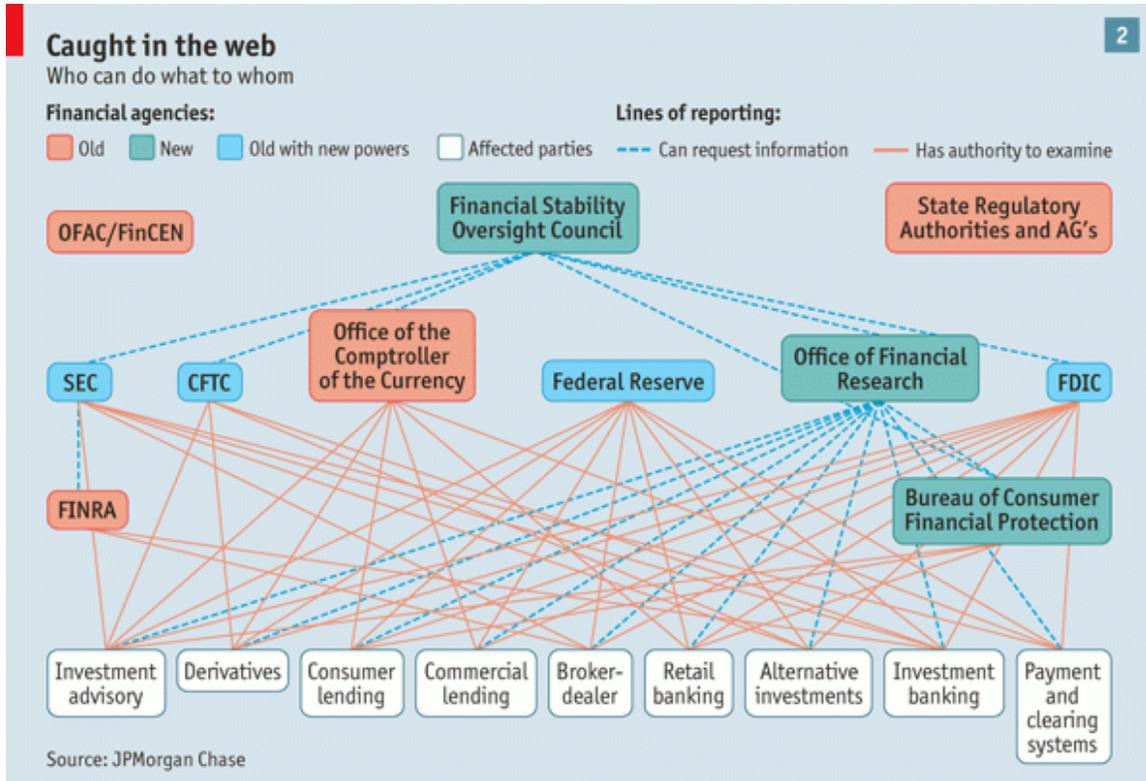
Chapter 4: Conclusion

Although we have only examined two aspects of the broader Act, it does allow for some conclusions to be drawn related to the overall effectiveness of Dodd-Frank. While there are many good things that will be accomplished as a result of Dodd-Frank it is hard to envision that the intended consequences will come to their full effectiveness. For one Dodd-Frank does not end “Too Big to Fail”. In fact, it likely increases the importance of the largest financial institutions. The increased cost to become compliant with the various rules of the Act will be a deterrent to new firms entering into the industry. Furthermore, many of the smaller firms whose pool of resources is no where near the size of the biggest banks will struggle to meet the costs of compliance, which could lead to further consolidation.

The overhaul of the OTC derivatives market, while designed with good intentions, may actually have the opposite effect on limiting the systemic risk those financial instruments pose to the safety of the overall financial system. The cost of compliance will prevent new firms from becoming swap dealers, the concentration of exposure at the CCPs could be catastrophic if one were to fail, and the increased cost borne by end-users who use swaps to mitigate risk, all counteract the good intentions of bringing transparency to the OTC derivatives market and the benefits to go along with that transparency. Consumers will likely be worse off as a result of the CFPB’s Remittance Transfer rule through either increased costs to transact, limited choice in their ability to make a payment to their intended recipient, or a combination of the two.

Overall, Dodd-Frank does some good things and takes needed steps towards a safer financial system. However, there are many missteps on the way that will limit the overall effectiveness of the Act and its goal of preventing another financial crisis like the 2008-2009 one that brought the financial system and the global economy to the brink. The financial system of the 21st century is a global one and, as such, meaningful reform will require coordination at the global level.

Figure 1- The Web of Financial Regulators



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End Notes

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- ⁱ Gorton and Metrick (2010) p.17-18
- ⁱⁱ *ibid* p.21-22
- ⁱⁱⁱ *ibid* p.22
- ^{iv} Easglschem, Jean “Financial Overhaul Grows and Slows” *The Wall Street Journal* May 2, 2011
- ^v Section 112 *Dodd Frank Act*
- ^{vi} Morrison & Foerstor “The Dodd-Frank Act: A Cheat Sheet” p.4
- ^{vii} Skeel, p.4
- ^{viii} Johnson and Kawk (2010) p. 80
- ^{ix} Section 210 *Dodd Frank Act*
- ^x Section 165(d) *Dodd Frank Act*
- ^{xi} Skeel p. 118
- ^{xii} Skeel argues that the FDIC isn’t as successful as proponents claim p.124-125
- ^{xiii} Title VII of Dodd-Frank is aimed at derivative reform.
- ^{xiv} Petre, D. & Von Kliet, K. (2012, May 9) “Statistical Release: OTC Derivatives Statistics at the End of December 2011” *Bank for International Settlements*”
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liii Statement from Sen. Akaka on Jan 20th 2012 <http://akaka.senate.gov/press-releases.cfm?method=releases.view&id=44a4fe83-3720-468e-8eb5-8a0fc5dff72f>

liv From Western Union's Corporate Website,
http://corporate.westernunion.com/global_organization.html

lv SWIFT (Society for Worldwide Interbank Financial Telecommunication) is the standard messaging system that institutions use for communication in cross-border payment transactions

lvi In certain countries it is also possible for the latter half of the transaction to be conducted via low-value clearing-system (ACH) depending on the presence of such a system and the money-service providers bank being a participant in the low-value clearing system

lvii Typically cross-border USD traffic settles via CHIPS, which is made up of mostly large global banks, compared to Fedwire which contains mostly regional and local US banks

lviii Source: SWIFT Watch Value Analyzer; MT103 traffic initiated in the US with a beneficiary institution located outside of the US

lix Electronic Funds Transfers (Regulation E), Proposed Rule 77 FR 77192 *The Federal Register* December 31st 2012

lx "Banks Believe Dodd-Frank 1073 Will Have Negative Impact According to Fundtech Survey" http://www.fundtech.com/media/ugc/pdf/FINAL_Dodd-Frank_Survey_Results_25Jan2013_1.pdf

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lxiii JP Morgan Chase, Bank of America, Citigroup, Wells Fargo

lxiv FHLNNY to Stop Processing International Wire Transfers at Year -End
<http://www.fhlbny.com/news-events/press-releases/prior-releases/2012/press112012.aspx>

lxv Providers are relieved of this burden as long as the follow steps laid out in the regulation to inform senders that their funds may be unable to be recovered and they will make a reasonable attempt to recover the funds