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The Industrial College of the Armed Forces
National Defense University
Fort McNair, Washington, D.C. 20319-5062

Since the early days of international conflict, the focus of national power has most often been on each nation's military might. This focus, however, was frequently misplaced. A review of history will find that although military power was important for winning battles and even wars, a strong economy has more often been the key to enduring national survival. Even during the Cold War, the military power of nuclear weapons created détente, but strength of economy was the deciding factor in peacefully ending the stalemate.

In today's increasingly complex world of international geopolitics, one cannot rely solely—or even primarily—on military power to maintain national security and achieve national interests. Every instrument of national power—diplomacy, information, military and economic—must be brought to bear. Moreover, senior strategic thinkers cannot confine themselves to a stovepipe in their own area of expertise. In order to effectively employ the instruments of power, they must be considered and applied in a holistic manner that leverages not only the unique attributes of each instrument, but also capitalizes on the complex interaction and synergies of the instruments in combination.

Unlike traditional war colleges, the Industrial College of the Armed Forces (ICAF) combines study of classic military strategy with a focus on evaluating, marshalling, and managing national resources, including significant curriculum on economics and industry. Although not synonymous with the economy, the nation's financial services industry serves as a critical underpinning for the nation's economy, providing the needed capital that fuels a healthy economy. ICAF students electing to study the financial services industry spend five months focusing on the various elements of the finance and banking industry, giving specific consideration to the relationship between finance and national security. As senior military officers and civilians employed in the defense industry, the students' significant military experience gives them a unique perspective as they consider the relationship between the economy, finance and military power in support of national security. The purpose of this paper is to provide an assessment of the financial industry's status and health, particularly as it pertains to national security and achieving U.S. national interests.

U.S. National Interests, National Power and the Financial Services Industry

The advancement of U.S. interests- an economic system weighted heavily towards capitalism, liberal democracy, freedom, and global security has been a hallmark of U.S. foreign policy for decades. America's ability to apply power in international relations and project these values to the world depends on the ability to deliver benefits; not just to America, but also to all those who adopt a similar liberal, democratic, capitalist system.[1] At its best, the financial sector enables U.S. interests and national power, by providing vital operational and transactional abilities which in turn deliver results to U.S. citizens and allies. It is through such processes that the United makes good on its promises. At its worst, the financial industry is a liability for national interests as it introduces reputational and operational risks, fosters boom and bust cycles and transmits destructive greed. It is worth examining the relationship between each interest, power, and the financial services industry to understand the industry's contributions and threats to the U.S. government. The national interests are defined in the most recent U.S. National Security Strategy as:

> Prosperity: A strong, innovative, and growing U.S. economy in an open international economic system that promotes opportunity and prosperity;

Values: Respect for universal values at home and around the world;

International Order: An international order advanced by U.S. leadership that promotes peace, security, and opportunity through stronger cooperation to meet global challenges; and

Security: The security of the United States, its citizens, and U.S. allies and partners.[2]

National power is defined in relative terms as political power. In the zero sum game of the international balance of power among nation states, a nation requires influence and power commensurate with its goals. For the purpose of this paper, the financial services industry is defined as the public and private organizations that manage money through banking and investment, regulate the sector, or support its operations.   As a relatively minor contributor to the U.S. GDP, the financial industry contributed 1.5% of U.S. GDP in the mid-19th century[3] and has grown to 8.4% of GDP[4] and six percent of non-farm employment in 2010.[5] Financial services and product exports totaled $70.9 billion in 2009 with a surplus of $8.9 billion.[6] While closely aligned, the U.S. economy and the financial services industry are not synonymous. Further, several national interests and sources of national power are closely linked to the broader U.S. economy, but have less direct associations with the financial sector. This paper will focus on the influence on the financial services industry on the U.S. national interests and power.

There is a manifest relationship between the financial sector and the national interest of economic prosperity. Although many industries contribute to the U.S. GDP, the financial services industry provides a uniquely critical underpinning to the U.S. economy and its relationship with global markets. As specified in the National Security Strategy, a nation garners a source of its leadership from economic strength.

The financial services industry supports economic national interests and power through several key characteristics. The industry can be seen as the grease lubricating the gears of the U.S economy. Financial sector firms enhance price discovery, lower transaction costs, provide access to capital, and mobilize capital for most private sector firms. Additionally, the U.S. financial sector connects many U.S. firms to the global market by providing such critical services as easier access to export markets, international currency exchange, and foreign direct investment.[7] In line with the National Security Strategy's call for innovation, the financial services industry provides unique capabilities and opportunities to the U.S. private sector. Venture capital, private equity, initial public offerings, debt issuance, and mergers and acquisitions represent just a few of the financial services required by small firms during their expansion. These small businesses are often cited by the current administration as the source for job creation, energy independence and economic revitalization.[8] Further, the financial sector enables the U.S. federal government to fund its operations by facilitating the primary and secondary markets for Treasury bonds.

Unfortunately, some aspects of the financial sector can detract from national interests. Notably, the same innovative spirit that helps make the financial industry strong can result in unmonitored financial innovation that creates systemic risk to the U.S. economy. As stated in The Economist , "In simple terms, finance lacks an "off" button."[9] In the past several years, the industry has begun spinning out new specialized financial products at a speed beyond the ability of regulators to assess systemic risk implications.[10] This innovation can lead to excesses which threaten the health of the U.S. economy and degrade national power. The industry's excessive search for yield and sometimes accompanying moral hazard threaten the U.S. economic national interest. Private profit motives foster real costs to the U.S. government during episodes of systemic risk where taxpayer dollars are used to bailout large firms and restore balance to the system.

In addition to the financial industry's tangible effects, it plays a crucial role in the United States' soft power and the nation's ability to provide moral leadership through example. The fundamental U.S. value proposition states that representative style government and open capitalistic markets are the most efficient ways to promote economic growth and improve human condition. The contributions and risks related to this national interest center mainly on reputational risk instead to the operational risk discussed above. The financial sector supports the U.S. interest of values and national influence by providing an example of positive performance and resilience through an industry regulated by a representative government. Further, the system of capitalism has provided undeniable benefits to U.S. citizens and allies by allowing the government to focus on social needs at home and human rights issues abroad. This international trust in the U.S. system is reflected in the dollar's status as the world's reserve currency, the continued low borrowing costs for the U.S. federal government, and the influx of capital to the safe, yet low yields of U.S. Treasury bonds during periods of uncertainty.

For many years, the United States' position as the paragon of the financial industry was unchallenged. A combination of recent missteps by the American financial system and other nations growing in financial and economic stature has introduced question about the United States' future leadership role. As a result of the 2008 financial crisis, Americans lost 25% in household net worth[11] and the U.S. government was rightfully forced to tip the scales of its mixed economic system away from free capitalism towards heavier government intervention to prevent another great depression.[12] Countries slower to adopt America's economic system have weathered the crisis much better. China and Brazil, which have more tightly controlled financial systems, were in a much better position to withstand the crisis. Although growth rates in China have slowed relative to initial historic highs, they are still well above most western nations including the United States. The strong performance by more controlled systems and newly revealed weaknesses in the U.S. system may lead some to reconsider whether the United States' financial system still provides an optimal model.

In addition to the economically-focused effects, the finance industry is an element of maintaining national security (distinguished from national interests). For decades, the U.S. has enjoyed an overall sense of freedom and security uncommon to many other nations in the world. The large U.S. economy plays a major role in funding federal security spending. With the exception of its contribution to prosperity mentioned above, the financial services industry's direct contribution is less significant. However, the financial sector plays an enabling role is sustaining the health of the U.S. defense industrial base, which will be described in detail in a later section.

With greater reliance, however, comes a commensurate increase in vulnerability. The U.S. financial industry is a center of gravity for the nation and, as such, it represents a vulnerability. The National Security Strategy emphasizes the intent to remain a global leader with strength and influence well into the 21st century by utilizing other tools and partners rather than the sole use of military forces. The scope and realities of the day illuminate the reasons for the administration's change in methodology.[13] However, the facts remain that the U.S. is faced with slow growth, economic uncertainty, and high debt. Each of these factors was negatively influenced by the financial crisis and proceeding recession of 2008 in which the financial sector played a central role.

In conclusion, there is a key difference but interconnection (cause and effect relation) between national interests, power and the financial sector. To advance interests, a nation requires relative political power in a zero sum game with other nations. In contrast, economic relationships related to the financial industry often represent mutual, vice relative, gains or "win-win" situations. Mutual gains in the economic arena and competitive gains in the relative power arena place the U.S. in a dilemma. The financial sector is designed to seek mutual gains and connect the U.S. economy to the global market. With careful balance, the United States can use the financial industry to both pursue national interests, primarily through soft power by setting a positive example, and simultaneously leveraging a strong financial industry as a latent element of national power.[14]

U.S. Defense Industrial Base and the Financial Services Industry

The U.S. defense industrial base is a critical element of national security. The health of the defense industrial base directly impacts the nation's ability to field the forces needed to secure the nation and advance national interests. The financial services industry plays a critical role in enabling the defense industrial base, and by extension, the U.S. national security.

Many defense experts believe that the U.S. industrial transformation from a domestically focused industrial base in the 1940-50s to defense oriented system was a critical component to the national security the U.S. enjoyed for decades. As the U.S. industrial base shifted, America experienced great economic expansion in gross domestic product (GDP) and wealth. The combination of increased American resources, focus, innovation, and research and development (R&D) resulted in American military's dominance and power. In his 2003 paper on the world's reaction to American preeminence, John Ikenberry concluded that the U.S. was a unipolar global power based on the magnitude of its economy and peerless military force with regards to defense spending, R&D, and capability. Ikenberry emphasized how the entire world validated this conclusion regarding American power through the lens of war in both Iraq and Afghanistan.[15] Clearly, in terms of military strength, capability, and global reach America has the competitive advantage.

Like other firms in the private sector, defense companies require financial services to expand and to finance the growth of their business. They require access to financial markets for both short term and long term capital needs for operations, independent research and development (IRAD) funding and to extinguish old debt and leverage new debt. Additionally, defense industry must comply with regulatory requirements, accounting standards and possess favorable credit ratings in order to attract investors. This requires the large defense manufacturers such as Northrop Grumman, Lockheed Martin, Boeing and Raytheon to have sophisticated internal treasury operations that are experienced in dealing with complex financial products and services including derivatives, swaps and hedging.

Large and mid-size defense companies often have a layered structure of senior and subordinate debts. Defense companies must pay significant fees to have their debt rated by the three ratings agencies (Moody's, S&P and Fitch). They seek to work within a rating range that is between A2 and Baa2. If a company's rating falls much below the Baa1 range, its debt is considered non-investment quality (i.e. junk bonds) and it must then pay an interest rate premium to access capital market. Not only does the cost of capital increase as a company's rating drops, but it may also face more restrictive loan covenants when borrowing capital. Lower ratings also affect a company's ability to access the corporate paper market, making it difficult to fund short term capital needs. The criteria for the highest rating categories (AAA and AA) in terms of profitability, liquidity, revenue and cash flow are extremely high, making it difficult for defense companies to meet such criteria. Overall, the downside of lowering of a company's rating is worse than the positive effects associated with an upgrade, and defense companies seek to avoid downgrades. They routinely meet with the defense sector analysts from the ratings agencies to provide current and accurate information to optimize their perspective rating. Recently, defense sector corporate ratings have suffered from the government's trend in fixed-price contracting to reduce risk and control cost. While defense contracts are historically viewed as stable and low-risk, the ratings agencies perceive large fixed-price defense contracts negatively as risk is shifted to the contractor. This rationale was specifically cited as justification for the downgrade of the major defense contractor URS in 2011.[16]

Defense companies are actively growing their global market footprint and must access the international banking sector, which introduces the added complexity of international banking. As an example, the sovereign debt crisis of the European banks can adversely impact access to foreign credit for U.S. defense firms. Foreign credit in the form of Letters of Credit is a normal requirement as part of international contracts. Defense companies are also exposed to fluctuations in foreign currency exchange rates. While the initial defense sales typically occur in U.S. dollars, there is exposure in the supply chain where transactions and payments occur in the local currency. To mitigate this risk, defense companies work directly with the banks using over-the-counter derivatives to hedge this foreign exchange exposure. These transactions are not undertaken as a profit making venture but rather a risk management strategy. The transactions allow the companies to limit risk and have predictable future revenue estimates which are important in developing quarterly and annual earnings projections. This interest rate parity hedging typically occurs on fixed price contracts with defined future payment schedules and can have durations lasting over ten years. With the low cost of borrowing, large defense companies are carrying out additional hedging in the form of interest rate swaps. Corporations have debt structures with varying maturities and interest rates. By working with the banks and bondholders, companies extinguish existing fixed rate debt and swap it for new floating rate debt. While there is inherent volatility and risk with this form of hedging due to the uncertainty of future interest rates, regulatory assurances of continued low interest rates, the associated tax benefits for bond repurchases and the potential to save millions annually on interest payments make this an attractive financial service transaction for defense corporations.

Increased financial regulation has both a direct and indirect impacts on the defense industrial base. The Sarbanes-Oxley legislation enacted following the Enron scandal has driven corporate restructuring and costly requires controls over internal financial and accounting (F&A) procedures. Complying with this legislation is particularly onerous for smaller defense companies that do not have the internal F&A resources and incur significant overhead costs to comply with these regulations. Indirectly, the increasing regulatory costs of Dodd-Frank will be passed along to bank customers including defense companies. Bank operating costs will rise and profit margins will be reduced as increased regulatory capital reserve requirements decrease the funds available to the banks for lending purposes. Banks, as they did during the 2008 crisis, will reduce credit access which is viewed as a balance sheet liability. While large defense corporations are currently very liquid with significant amount of cash reserves, these companies are not applying the available capital towards business expansion. Instead they have been returning value to the shareholders in the form of increased dividends and stock repurchases rather than investing in new business capital. This unwillingness to expand will likely continue until the full impact of the developing regulations and government policies is known.

Undervalued companies with large sums of cash on their books frequently become acquisition candidates. However, there is diminishing demand for defense companies as merger and acquisition (M&A) targets. Large U.S. companies have gone through a period of deleveraging following the significant M&A activity in the late 1990s and 2000s. Current M&A activities are limited and focused on high growth defense markets such as cyber security and unmanned vehicles. There is also less acquisition activity on the part of Private Equity (PE) firms which have historically been a catalyst for acquiring and preparing small and midsized firms for merger into larger corporations. Historically, the objective valuation for an acquisition is in the four- to five-times range of EBITDA.[*] PE firms specializing in the defense sector have commented that recent acquisitions have been double or triple these factors. For this reason, PE firms and large U.S. defense corporations see small and midsize defense acquisition candidates as overvalued. Thus, it is unlikely that there will be another round of defense consolidation like that which occurred following the defense budget drawdown of the 1990s. One area in which activity remains high is foreign defense companies acquiring U.S. firms. For example, when a major European firm recently acquired a large U.S. defense company, the U.S. company was valued at $2.8B but was acquired for a price of $5.6B. While this is double market valuation, it highlights the investment that foreign corporations are willing to make to penetrate what they view as a lucrative U.S. defense market.

In conclusion, this section has introduced the linkage between national security, economic health, and the requirements of the defense industrial base to fully understand and regularly access a broad array of banking services and products across the financial services sector. Defense companies are facing challenges to both the structure and dynamics of the defense industry over the next several years as defense budgets decline. As in past draw-downs, those companies that have a solid financial posture and the ability to access the markets to raise capital, execute foreign exchange hedging, perform mergers and acquisitions, and

[*] EBITDA is Earnings Before Interest, Tax, Depreciation and Amortization. It is considered an indicator of a company's profitability, calculated as revenue minus expenses, excluding interest, tax and amortization. The EBITDA valuation ranges cited were expressed by a treasury executive at a major defense manufacturing firm.

execute debt and interest rate swaps are better positioned to adapt to the tighter budgets and increased competition. Because our approach to procuring weapon systems is via a competitive, market-based defense industrial complex, the financial services industry plays an integral role in the basic business model of global defense companies. Thus, this healthy and robust relationship between the defense industrial base and the financial sector is fundamental to our nation's ability to project power and promote our national interests.

Stabilizing and Destabilizing Forces

As a critical component of American national power, it is important to guide and nurture the financial services industry to maintain its potency. In order to do so, one must understand the factors stabilizing and destabilizing influences that can have widespread implications. Among the most important of these influences are complexity, globalization, and uncertainty. These elements, if properly managed, can help prevent economic crises, mitigate the impact of crises that do occur, and allow the nation to reap the benefits of this important sector. Yet, an inability to comprehend these influences and properly act with an integrated view of them can erode American power and harm the global economic system.

Complexity

The static, classic financial services industry model of two decades ago, described in humorous shorthand as a "3-6-3" business (borrow at 3%, lend at 6%, and be on the golf course by 3 PM) is dead.[17] It has morphed, and continues to rapidly change, into a fiercely competitive global industry marked by a high degree of interdependence among the participants and fine nuance in the shape, structure, and substance of financial instruments. This industry doggedly attempts to attract capital, deliver profitable returns, and mitigate risk which has led to rapid-fire innovation and advancement fueled by the desire to find new avenues for profit. In doing so, its dynamic nature is one of the greatest challenges to maintaining a healthy financial and economic system. These forces can have stabilizing effects, which can rapidly turn to destabilizing influences if improperly managed.

The American ability to mobilize capital and efficiently allocate resources is essential to national power with a direct implication to economic growth. Leveraging the synergies of financial institutions through the maintenance of an efficient operating environment enhances the robustness of the financial system and mitigates financing challenges that can impede economic growth. Liquidity and credit availability are critical indicators of economic market capacity, access, and health. Market making, hedging, and global portfolios are all important elements of such a system. Yet, these activities require the ability to navigate operations globally and adjust to the entry of different market participants who challenge the competitive structure through the innovative use of technology, product development and appetite for risk. Financial engineering has been the means with which to compete in such an environment.

Financial engineering has evolved over time within the financial services industry, created with the intent to counter resource concentration and diversify risks. Financial engineering products were created by sophisticated market makers to facilitate market participants' desire to hedge risk and expand risk adjusted opportunities. Sophisticated counterparties knowingly entered balanced transactions based on their risk versus reward tolerance and accept terms on the premise of advanced scientific probabilities and statistics. Emotional instability and human unreasonableness could be nearly eliminated, advocates would contend, while critical decisions would instead focus on hard data.

Financial engineering, though, can quickly turn from useful to catastrophic. While evidence clearly supports financial engineering's contribution to effective markets, participants have incorrectly applied, understood, or relied upon these instruments to abdicate their ultimate decision making responsibilities. These situations create the potential for destabilizing events, typically in the form of speculative bubbles, with shock waves that spread to the real economy due to flawed, emotional or automated decision-making that precludes rational human judgment. In the recent US crisis, derivatives and credit swaps originally designed to mitigate risk were used instead as vehicles to turn a quick, apparently risk-free profit. In this situation, straight-forward financial engineering instruments intended to mitigate risk were converted into complicated swaps and derivatives with parties who had no apparent counterparty interests. The instruments quickly became opaque, exacerbating and concentrating risks they were initially intended to mitigate.

As policymakers struggle to implement measures aimed to mitigate systematic risks, they face real challenges in striking a balance with complex financial instruments, particularly derivatives. Financial professionals typically agree that derivatives perform important risk transfer functions within modern capital markets. Yet, they disagree on the motive and resulting incentive for utilizing these complex financial instruments. Satyajit Das, a financial consultant specializing in financial derivatives, argues that publicly traded companies utilize derivative trading to supplement traditional earnings and that "institutional and retail investors utilize derivatives to improve returns through leverage and access to different risks."[18] At same time, he concludes that modern derivatives have little to do with risk transfer and more to do with creatively manufacturing profits, explaining that "derivatives are used to speculate, manufacture exotic risk cocktails, keep dealing off-balance sheet and out-of-sight, increase leverage and arbitrage regulatory or tax rules."[19] Thus, the redeeming value of innovative financial instruments is at times difficult to reconcile.

With such complexity and potential impact on financial services industry and the broader economy, the wicked problems surrounding modern complex markets filled with innovative products will not be easily achieved. In many cases, it is difficult to separate greed-induced speculation from reasonable hedging activities or market-making to provide adequate liquidity. Regulators agree with the inability to distinguish such activities. Implementing overly restrictive regulatory policies will lead to either a decline in available capital or an exponential increase in the cost of credit. Failure to implement an adequate oversight system capable of containing and managing risks will ultimately led to a financial system that provides unchecked individual incentives to exploit short-term benefits without long-term considerations.

As an example of the complexity of financial engineering instruments, the recent announcement from JP Morgan Chase regarding their $2 billion loss was shocking on several levels. First, the complexity of these instruments was substantial, indicating that even the very capable leadership of this stalwart company often praised for a robust risk management culture either was unaware of the downside potential of their investments or chose to disregard that potential. Second, it appears that these loss-generating investments were not due to speculation, but instead were part of reasonable hedging activities.[†] Third, the glut of recently enacted legislation and proposed regulation would not have limited these investments because they were not purely speculative nor were they traded on the company's own account. The characteristics of this incident not only reveal the complexity of the financial services industry, but should also inform legislation and regulation as much for what it cannot do as for what it can do. Examples like these may illustrate the challenges of a modern economy far more than typical economic theory. As will be more thoroughly discussed in the Balance section later in this paper, finding a means to usefully mitigate systemic risk created by this type of event presents a substantial challenge.

The continuous evolution, speed and dynamics of the financial markets threaten to make traditional financial theory obsolete. Much of what can be considered standard theory is built around innocuous assumptions about market dynamics that are not comprehensive enough to cover the complexity of a global system driven by a new age of pursuing profit.[20] Market making today requires the ability to navigate operations globally and adjust to the entry of different market participants who challenge the competitive structure. This environment spurs even greater complexity and increases exposure to systemic risks. Thus, consideration must be made as to whether the means to identify or prevent systemic risk can keep pace with market evolution.[21]

Globalization

The challenges of increased market complexity are magnified by globalization. Every country or corporation that becomes a major player in the financial industry adds a new dimension to an already highly complex system. Moreover, these added dimensions increase the number of available avenues for financial instability through various permutations and combinations of systems, structures and instruments. Understanding the depth and breadth of exposure is essential, as made evident the by the volatility induced in American stock markets due to ongoing European debt concerns. The interconnectivity of markets and economies created by globalization emphasize the necessity for a contemporary financial system that can adapt to the evolution of financial markets with comprehensive considerations in order to be effective. With this in mind, there are several reasons why globalization itself should be carefully considered.

The issue of national moral hazard is a major factor of globalization. A single nation that is unwilling to address deficit and debt concerns may do so with the implicit understanding that others will step in to prevent collapse because of the globalization tie that impacts many nations due to the errors of a single one. An additional avenue for such a hazard exists because nations may be inclined to weaken domestic financial regulations to attract financial service companies, offering their own financial industry a competitive advantage over others. Yet, because of the interconnectivity due to globalization, the problems induced by insufficient regulation can spread globally, creating international crises out of national competitive opportunities. The natural extension of such challenges is a race to the bottom in terms of regulatory burdens. The

[†] At the time of writing this paper, significant questions remain about the complete circumstances surrounding JP Morgan's loss. As further reviews are conducted, some initial assumptions may prove incorrect.

challenges, then, stem from the lack of coordination and enforcement structures in areas of regulatory agencies, banking, trade, commodities, debt, and others. Innovative solutions are required to resolve this and other globalization pitfalls.

Differing values and cultures also make the economic and financial links between nations difficult to manage. It is clear that western nations are more open to accepting financial risk with the intent of maximizing return. This is a result of a more risk tolerant culture as well as a more advanced economic system that has structures to enable more advanced risk taking. As an example, financial institutions in the United States embrace opportunities to use complex instruments such as derivates, while financial institutions in China and Vietnam are hesitant to engage in such activities and are therefore not structured to allow them. At the same time, American investors are more apt to invest in the stock market as a way to increase returns while Chinese and Vietnamese investors value the surety of savings accounts while accepting the opportunity costs that accompany such low risk, low return investments. A risk averse mindset in developing countries has only been furthered by their observation of the recent economic crisis, resulting in a further hesitancy to embrace capital markets. Yet, these differences create problems in reconciling the international financial system.

Variations in risk tolerance and return expectations create a divergence between economic systems that are closely linked. The nations with greater risk tolerance reap the rewards of greater returns during strong economic times. At the same time, those with the greater risk tolerance must endure the greatest losses during economic downturns. Yet, these losses quickly spread to others through globalization. Thus, risk is magnified even in those nations that attempt to minimize risk. This moral hazard problem between nations is a challenging one that must be addressed by the international community in a way that accepts cultural differences and acknowledges varying financial system maturities while damping behavior that may be mutually harmful.

Uncertainty

The 2008 financial crisis revealed a financial regulatory system that was antiquated and inadequate for current economic realities.[22] Federal regulatory agencies and their accompanying regulations lacked the comprehensive authority to provide oversight in an environment of financial innovation.[23] The Dodd-Frank Wall Street Reform and Consumer Protection Act was enacted in mid-2010 to modernize and strengthen the corresponding regulatory system. Yet, since its passage very few of the necessary rules have been issued to codify and enforce it. Additionally, the legislation itself was enacted amongst much passion but prior to the actual findings regarding the root cause of the preceding economic crisis. The result has been a behemoth piece of legislation with massive uncertainty for the markets that has hindered stability.

The delay in implementing regulations has in many ways crippled the financial services sector. The markets continue to hedge while awaiting finalization of new regulations. Additionally, banks and investment firms continue to hold on to capital due to uncertainty surrounding the new regulations' content, thus continuing the sustained credit crunch which may be extending the current economic downturn. Financial companies, concerned about the future, are holding large amounts of cash instead of investing it, thereby damping innovation, investment and recovery. Such a situation harkens to concerns expressed by James Madison in the Federalist Papers:

> "The want of confidence in the public councils damps every useful undertaking, the success and profit of which may depend on a continuance of existing arrangements. What prudent merchant will hazard his fortunes in any new branch of commerce when he knows not but that his plans may be rendered unlawful before they can be executed? What farmer or manufacturer will lay himself out for the encouragement given to any particular cultivation or establishment, when he can have no assurance that his preparatory labors and advances will not render him a victim to an inconstant government? In a world, no great improvement or laudable enterprise can go forward which requires the auspices of a steady system of national policy."[24]

Financial firms have not stood idly by in expressing their opinions about the current uncertainty and its impact on the economy. These companies have used the delay as an opportunity to engage with regulatory agencies and Congress to provide their perspectives on potential implementation of new regulations. The CEOs of the major banks and investment firms have been adamant in the need for prudent regulations that do not stifle financial innovation, drive excessive costs, or prohibit growth and profitability. The CEOs advocate the elimination of regulations which increase costs and limit their market-making capability, such as the Volcker rule which would prohibit proprietary trading while at the same time posturing their firms by discontinuing such trading in the United States and shifting it to international branches. Yet, it is unclear how much their opinions will be implemented.

Interestingly, the uncertain tension between lawmakers, regulators, corporate financiers, and investors is not a uniquely American phenomenon. Even in more centrally orchestrated economic systems, such as China and Vietnam, there is resistance between these economic entities. Corporations—even state controlled ones—want the freedom to allocate capital without restrictions that would hinder operations. Lawmakers and regulators, sometimes at odds with one another due to excessive legal mandates that cannot be properly enforced or inadequate attention to the intent of legislation, desire to protect investors and corporations from corporate excesses. Even with five-year plans and centralization, these differences in actors are evident. While the differences themselves are often healthy in that they allow for a diversity of opinions that provides a certain level of checks-and-balances, divergences become excessive when they paralyze economic activity through uncertainty.

There are several additional concerns that may be exacerbated by recent legislation. First, there is an overwhelming sense within the industry that the regulation is backwards-looking and not forward-looking. By creating legislation to 'fight the last war,' the rules and regulations may actually be shifting focus away from future problems in favor of lingering on past problems. Second, by creating more regulatory specialization, the legislation may remove the ability for a comprehensive and integrated understanding of the markets. The lack of a holistic and reasonable focus on the challenges of the entire industry creates a harmful condition of regulatory myopia that may actually create systemic risk instead of eliminate it.

In many ways, the current uncertainty is worse than clear but imperfect regulation. Regulators have been consumed with understanding new legislation and creating new rules instead of enforcing those rules that already exist. In fact, the shape of the regulatory structure is sufficiently unclear such that the regulatory bodies lack clarity as to their future roles and responsibilities. Financial companies themselves are paralyzed in creating future strategies and innovative products, unclear as to the shape of the financial system following the implementation of Dodd-Frank. These corporations thirst for clarity so that they can operate within a sector with known parameters. In lieu of this clarity and an appropriate balance within the financial services industry, the financial services industry and the economy will suffer.

Government and Balance in the Financial Sector

In 1964, Justice Potter Stewart issued one of the most well known phrases in Supreme Court history on a case regarding pornography, uttering "I'll know it when I see it." In seeking to define a balanced financial services industry, unfortunately, the opposite is true. A functioning financial services industry often is simply overlooked as a matter of due course, in stark contrast to the national and global crises felt (and seen) which when the industry is out of balance. Recently history, whether 1989, 2001, or 2008 demonstrate "seeing" an industry out of balance, unfortunately in hindsight. Invariably, post-crises actions are largely reactive with the dual intent to restore balance and prevent a recurrence under repeated conditions.

With respect to the financial industry, the word "crisis" has become overused with respect to any ill-effects felt within the financial services industry. Given its increasing size and complexity, growing pains or shocks to the system are expected; these are different from true crises. Although there is not scientific or mathematical definition of crisis, a crisis occurs when an event or series of events result in either catastrophic effects or require unprecedented actions to prevent catastrophe. The Great Depression of 1929 is one example of a crisis with catastrophic effects. The financial crisis of 2008, while still having significant global impact, was not catastrophic given the immediate actions of the United States and other governments.

As evidenced by financial crisis and system shocks over these past two decades, it is unrealistic to believe government influence, whether proactive or reactive, will eliminate these events. Instead, a dual goal with respect to industry balance is desired: to decrease the frequency of crises/shocks and to minimize their severity when they occur. Taking the childhood character Goldilocks approach to balance, the financial services industry must find the right gauge settings for liquidity, risks, and industry structure. Too much or too little creates an imbalance (resulting in negative effects); the industry must achieve a balance in the range of *just right*. This is largely accomplished via government influence/action, but also supported through monitoring a set of macro indicators.

Supporters of a free market decried the scale and scope of government intervention in 2008 even with the intent to prevent a collapse of the global financial system. The prevailing argument was this violated the principles of democracy and free markets, where in fact government(s) influence in the market has existed—albeit perhaps more subtly—for centuries. The U.S. government has long established numerous laws, regulations, and policies governing and shaping industry operations which continues as the industry develops. The government has exercised legal authorities, with both fiscal penalties and even criminal prosecution, with respect to industry oversight. The U.S. government continues to use the tax code to promote or discourage activities through tax incentives or penalties which influence customer and corporate behavior. Finally and perhaps most visible, the Federal Reserve Bank control of the money supply and interest rates influence and dictate a market response.

Interestingly, the international travel for the Industry Study group visited two communist countries, China and Vietnam. Historically, Communism's tight government control of markets was the antithesis of a free market. Modern day communism, however, seems to be moving to a more free market compared to the Soviet Union communism model. The Chinese government's domestic stimulus package was similar to a U.S. government-instituted measure. Both the Chinese and Vietnamese governments use their central banks with the intent to moderate inflation and foreign currency exchange rates. In the U.S., where some previously private companies now have a portion or majority government ownership, China and Vietnam are partially unwinding state-owned enterprises to public private partnerships.

The ultimate goal of the balancing efforts must be to restore a sense of coherence to the financial sector comprised of a myriad of disparate actors. Profit has always been, and remains, the prime motive of the financial industry with increasingly fierce competition. In previous years, however, the industry simultaneously concerned itself with overall health of the industry. Perhaps this was born of some level of gentlemanly agreement; perhaps out of genuine concern for the industry. Whatever the reason, this concern lately appears to be overshadowed by pursuit of profit. Granted, the concept of overall industry health was easier when the finance industry was almost wholly based on Wall Street, London, and Switzerland. The need for balance and industry health, however, is even greater today given the growth in size and complexity of the industry combined with the emergence of systemic risk (which carries catastrophic effects). International agreements, such as the Basel accords or in common accounting standards, are a good first step in making this a collective goal.

A healthy, growing economic environment must allow room to grow and sufficient constraints to prevent unhealthy or out-of-balance conditions. Although it is easy to agree on the environmental conditions, it is far more difficult to devise the means to actually achieve and maintain that environment amidst an industry that continues to evolve. A natural inclination may be to subscribe to governmental regulation as a panacea, but that may not always be the most effectual means. Moreover, ill-conceived regulation can cause more harm than good while simultaneously producing a false sense of security. Governments have a variety of tools, which also include no action, to maintain a healthy environment. Any attempts to balance the financial industry must rely on a combination of means; there is no single "silver bullet" that can universally create a system devoid of risk.

An effective system should rely on both industry and governmental policing that uses both "carrots" to promote good behavior and "sticks" to deter bad behavior. By far, the greatest carrot is profit. One existing carrot is the lower tax rate on long-term capital gains than the rate assessed against short term capital gains. Conversely, sticks must find some means of threatening loss of profit for bad behavior. The higher tax rate on short-term capital gains is one example, but some behaviors are so detrimental that a more ominous penalty must be threatened. According to deterrence theory "increasing the certainty that crime will result in some punishment" has far greater dissuasive value than the severity of the punishment itself.[25] In cases where actions are forbidden, the sanctions against transgressors must be credible. Potential violators must perceive the sanctioning agency has the ability to detect violations and both the capability and will to punish transgressions. Some behaviors and practices, however, remain so enticing that the rewards for successfully negotiating the perils defy any potential incentive for restraint. The size of the carrot is being increasingly balanced a stick of corresponding size. Nonetheless, the use of the "stick" characterized by the number of cases, number of criminal prosecutions, and overall size of the fines, has increased dramatically since 2008. Amidst of the slew of new regulations and requirements soon to be enacted, one takeaway is that it is more important to properly implement fewer rules than provide inadequate oversight over more rules.

At the macro level, one of the most fundamental issues of balance is between restorative and preventive measures. Preventative measures seek to forestall collapse; a restorative approach focuses on creating a system which can recover on its own from a financial collapse. Naturally, the optimal solution lies in some blend of these two approaches, but it is difficult to say exactly where on the spectrum the optimal solution resides. Prevention is appealing in many ways, but misguided regulation in the interest of preventing collapse risks squelching healthy growth. Conversely, a focus on recovery presupposes the effects on any crisis or substantial shock will be sufficiently manageable that the system can recover. The Japanese economy, for example, struggles to return to balance more than 23 years after its economic shock. In the 2008 financial crisis, both preventative and restorative measures were used. Preventative measures came in the form of significant government intervention, while restorative measures are ongoing, from low interest rates to a number of housing initiatives. Four years later, the U.S. has not fully recovered and whether restorative measures designed to soften the full effects of the crisis will inevitably be successful remains to be seen.

The financial industry's complexity presents both opportunity and challenges for effective means of governance, both internally and internationally. Recent discussions of "too big to fail" highlight the issue of size and represent the basis for systemic risk. The United States' largest banks have grown to a size that makes their failure a catastrophic prospect for the entire nation, and possibly the world's financial health. Canada, China and an increasing number of other countries have banks which exceed or rival in size those of the United States. One answer to this concern is to limit the size of banks, but large multinational corporations need large banks to support their business. Great bank size can also lead to efficiencies, which is necessary to attain a competitive advantage and profitability. This highlights the structural challenge of balance. Similar dichotomies exist for other dimensions such as limiting lines of business as done via the Glass-Steagall Act, or proprietary trading under the Volcker rule.

In order to be truly effective, balance measures must address fundamental and structural enablers and root causes of imbalance rather than targeting surface-level symptoms and practices. This is particularly challenging because in the wake of a failure, there is a tendency to "fight the last war" and adopt regulations that may have prevented the most recent crisis. While there is merit in addressing these areas, it is more important to find some means of mitigating the next potential problem. The Volcker rule, establishing central clearing houses, and changes to derivatives and other synthetic banking instruments are excellent examples of chasing the symptoms of the previous crisis. This is not to suggest these changes are unimportant, and while likely necessary, the results lie in the implementation. As noted previously, proper oversight is a crucial component to regulation. Additionally, particularly with industry changes of this scale, there will likely be unforeseen effects or cross currents across the industry.

Instead of taking a narrow, specifically targeted approach towards maintaining balance, balance should be maintained using natural, structural-level “fire breaks” where regulators have flexibility to adjust in a dynamic environment. For example, the New York Stock Exchange has a procedure in place to automatically halt trading if the market drops more than a prescribed percentage over a given amount time during the trading day. Industry regulators should consider measures of this genre, albeit at a more strategic level, to maintain balance in the industry. The Risk Weighted Asset provisions in the proposed Basel accords are a step in this direction. Under Basel-3, the amount of financial reserves institutions are required to maintain would be dictated by their risk exposure. Basel’s designation of the largest financial institutions as “Systemically important financial institutions” and imposition of additional reserve requirements against them represents a positive step toward mitigating the concern over banks being “too big to fail.” Another example is the U.S. Federal tax code’s distinction between short-term and long-term capital gains also provides a model for achieving balance. Taxing short-term capital gains at a higher level than investments held longer than one year encourages value-based trading and dissuades more volatile short-term positions that rely on short term market fluctuations for profit.

Another example of a structural “fire break” focuses on bank solvency and the relationships between banks. Banks are now subject to a stress test that evaluates their balance sheet and predicted solvency under a series of potential adverse economic conditions. Banks that fail a stress test are closely monitored and required to make balance sheet adjustments. Accompanying these stress tests is the requirement for banks to have a ‘living will;” a plan for the orderly unwinding and dissolution of the bank. This was not present in 2008, where the government required significant time to understand the status and disposition of the failed banks which quickly came under their control. These actions alone will not prevent another shock or negative effects, but do represent an increased level of preparation to speed recovery. A fitting analogy is occupants who practice building evacuation during a fire drill; the fire still may occur, but the intent is to limit the spread of the fire and minimize the damage.

The growth of globalization presents a particularly difficult problem for creating a balanced system because not all parties view the problem the same, nor do they all play by the same rules. The American banking industry has complained that restrictions levied by Dodd-Frank unfairly hamper them and put them at a disadvantage compared to foreign banks. For example, Chinese and Vietnamese banks operate under a different set of rules, similar in some aspects, but vastly different in others. The Basel accords are a step forward in this area, given the international membership of the conference. This is not a perfect solution, however, because the accords are non-binding and not all nations subscribe to the Basel Committee on Bank Supervision. Basel has been around since the 1980’s and did not prevent financial industry shocks over this time, but it is a platform on which to build common ground. At a broader level, differences among sovereign financial cultures and degrees of governmental control create complex challenges to achieving balance on a global scale.

An increase in public and private sector collaboration is a consistent theme across studies of the financial services sectors in United States, China and Vietnam. Given the disparity in forms of government, the realization of the importance of the financial services industry requires private partnership represents a perhaps surprising common ground. With respect the United States, public and private sector should aim to produce responsive regulations that retain competitive flexibility to flourish in foreign markets, but not at the expense of jeopardizing the integrity and stability of the US financial system. Other efforts that can contribute to this include controlling the national debt, management of foreign cash inflows and promoting equality of access to foreign markets. While it is essential for the United States to adopt effective legislation and implement regulations, it is critical to do so in concert with the international community. Truly, the United States "cannot be a regulatory island among competing nations of the world" and any further regulations must be coordinated with others.[26]

Despite the above-cited recognition of the need for public-private collaboration, actual incidents of collaboration in the United States are isolated and there is not a comprehensive collaborative platform. Variability in operational tempo amongst the two sectors creates misalignment and ultimately challenges trust. Lingering uncertainty created by the lack of federal budgets and the potential of sequestration also stifle strategy development and mobility within US markets. A stable financial market system is an essential element of our national core strength and the ability to counter crisis and mitigate threats requires a unity of effort from all participants to preserve and promote the nation's capital markets.

The government and private sector utilize a myriad of statistics and mathematical models in assessing risk, making business decisions and evaluating overall performance. Like any model, they are imperfect approximations, but the models can still provide useful lenses to analyze activity in the industry and broader economy. The information from these tools can also be utilized as an early warning indicator for a system potentially out of balance. Given a goal to reduce the frequency of crises or significant system shocks, these statistics and models can help inform decisions and shape appropriate preventative measures.

Challenges in oversight and regulatory uncertainty in the industry has been exacerbated by a patchwork conglomeration of agencies responsible for governing portions of the financial industry. The multitude of regulatory and policy agencies, such as the Federal Reserve Board, SEC, CFTC, FINRA, Consumer Financial Protection Board, FDIC, Office of the Comptroller of Currency, plus state regulatory agencies have created incomprehensible web of both redundancies and gaps in which some areas are over-regulated while others fall between lanes of responsibility. Moreover, this system is enormously inefficient while creating stovepipes of expertise and oversight. In order to streamline and simplify oversight for both the government and the industry, these oversight functions should be consolidated into a single organization that can provide unity of command, thereby allowing integration and synergy of regulatory efforts.

As a fundamental underpinning of the economic instrument of national power, the financial industry plays a critical role in US national security. Traditionally, a powerful military has been the hallmark of a global power. While the military remains an important instrument of national security, the explosive growth of globalization and importance of economic interdependence makes a healthy economy an increasingly critical means of pursuing national interests and maintaining security. A healthy economy prevents foreign nations from achieving a position of economic dominance that would allow them to exert influence or even menace the United States. A powerful economy also provides a credible means of exerting influence over other nations, particularly in cases where the situation does not rise to use of military means. Without both real and perceived balance within the financial system, the economy is not likely to present a credible means of exerting national will.

Conclusion

A healthy financial system is a key to achieving national interests. It plays a critical role in sustaining and lubricating a healthy national economy as well supporting broader application of national power and influence. As an element of the economic instrument of power, finance provides a key leverage point and when carefully managed and used effectively, the financial system is a tremendous attribute. It directly enables the broad economy, providing for the overall welfare and prosperity of the nation as well as supplying a means to assist other countries. Additionally, as an instrument of soft power, a healthy, well-managed financial system allows the United States to lead by example and demonstrate the positive attributes of U.S. national values. If used recklessly with little regard for its long-term health, however, the system can become a source of weakness and liability.

The United States has traditionally maintained a powerful military force supported by some of the best weapon systems and technology in the world. In order to maintain this position, the nation depends on a healthy military industrial based to produce ever-more advanced technology and capability. Like any industry, the defense industry relies on readily available capital to foster innovation and sustain production. Without adequate financial resources, the industry would quickly wither and take with it a significant portion of the nation's military capability. Put simply: the defense industry cannot produce what it cannot finance. This reliance provides a poignant example of the critical relationship between the economic instrument of power and the military instrument of power.

In order to remain healthy, the financial system must be agile enough to fuel innovation and economic growth, as well as able to both resist crisis and recover when crisis does occur. With agility, however, comes an inherent element of risk. This risk is healthy if allowed in reasonable amounts. Too much risk, though, courts financial crisis and potential economic collapse. Conversely, creating a financial system immune to crisis will stifle its ability to fuel a healthy economy. It is impossible to eliminate economic risk and simultaneously maintain a useful, competitive economy. The key, then, is to strike a healthy balance which accepts a reasonable level of risk while still maintaining the ability to fuel economic growth. Ideally, this balance should rely primarily on risk-based regulation that targets the fundamentals of a healthy industry, eschewing to the maximum extent possible compliance based regulation that targets specific symptoms of instability.

The recent financial turmoil illuminated significant elements of instability in the financial system. To large extent, the United States appears to be recovering from the 2008 crisis, but the specter of sovereign debt crises remains. It is unclear whether the United States' recovery from the 2008 crisis is based solely on lessons that will fade into obscurity with time or if the government and industry can enact enduring controls to lessen both the likelihood and severity future collapse. Moreover, national efforts toward an enduring recovery will likely be confounded if there is significant collapse of sovereign debt in Europe.

Despite the best efforts of economists and financial experts around the world, the threat of financial crisis cannot be eliminated; it will remain an immutable fact of life. Recognizing this, the United States, and indeed the entire world, must continually strive for a balance between allowing economic growth and dampening the risk and severity of crisis. Although this principle simple in concept, it is exceedingly difficult to achieve, particularly in the face of an increasingly complex global economy.

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