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Third Way's Capital Markets Initiative (CMI) helps policymakers and their staffs better understand why capital markets matter—how they work, what value they add, and when they can go off course. CMI produces a range of timely and accessible financial primers and policy papers, hosts a popular Capital Markets 101 Lecture Series with top speakers such as Paul Volcker, Sheila Bair, and Mark Zandi, and conducts a "B-School Day" for Congressional staff at the Wharton School at the University of Pennsylvania.

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# Why Capital Markets Matter

# A PRIMER ON AMERICA'S FINANCIAL SYSTEM

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# "New auction on eBay! Vintage Cabbage Patch Kids!"

If you ask Wall Streeters what capital markets actually do,

they'll say something like, "They allocate capital efficiently." When you nod and smile cluelessly, they'll clarify, "They help make markets." All clear?

In the wake of the economic crisis, many Americans are confused at best—and dubious at worst—about the value that capital markets provide to our economy. Unlike manufacturers or retailers, the financial sector now 8.4% of our economy—does not produce tangible products, which often renders them an enigma.1

This primer seeks to unravel that riddle and explain why capital markets matter. We will describe what capital markets do for Main Street, unpack their opaque but important functions, and warn policymakers what problems to look out for. In short: the **good**, the **complex**, and the **ugly**.



"The evolution of credit and debt was as important as any technological innovation in the rise of civilization...without the foundation of borrowing and lending, the economic history of our world would scarcely have gotten off the ground."

> NIALL FERGUSON LAURENCE A. TISCH PROFESSOR OF HISTORY HARVARD UNIVERSITY



### WHY MARKETS MATTER TO MAIN STREET

### Let's get back to the auction on eBay.

Suppose instead of selling your Cabbage Patch Kids on eBay, you had to hold a yard sale and were forced to wait for people to randomly drive by to browse your vintage doll collection. Getting a sale would be a lot tougher. But with eBay, thousands of buyers can instantly browse the selection and price of your dolls.



Like eBay matching buyers and sellers, capital markets exist to bring people together-investors and entrepreneurs, lenders and borrowers, hedgers and

speculators, innovators and risk-takers. And when capital markets function properly, they ensure everyone finds a match and our economy is far better for it.



This section explores the good: how our capital markets matter to average Americans who buy homes, have jobs, insure their lives, and save for old age.

### **Inside the Good:**

YOUR HOME

YOUR JOB

YOUR DINNER

YOUR SCHOOL

YOUR RETIREMENT

YOUR LIFE

YOUR COUNTRY



It is for this reason that historian Niall Ferguson says, "The evolution of credit and debt was as important as any technological innovation in the rise of civilization...without the foundation of borrowing and lending, the economic history of our world would scarcely have gotten off the ground."2

Without an organized system of credit and debt, people had far fewer options. If family or friends were unable to provide money for your business, you were out of luck. The development of capital markets provided a wide range of options for financing, just as match.com provides singles with a greater variety of choice in partners.

Fortunately for Main Street, American capital markets are the largest and most robust in the world. U.S. total market capitalization—the total value of all listed shares on U.S. stock exchanges—is \$15.6 trillion, compared to the United Kingdom with \$1.2 trillion and Germany with \$1.1 trillion.3 Bonds issued in America that finance projects like factories and bridges make up 44% of the global total.4

Having the world's deepest and most robust capital markets is an important economic advantage for America. It ensures that businesses have access to an array of affordable funding options and it provides liquidity.

"The United States is widely recognized as possessing the deepest, most liquid, and most efficient capital markets in the world."

> **HOWARD DAVIES** former Chairman of the **Financial Services Authority** (Regulator of all providers of financial services in the UK)

**LIQUIDITY** | The ability to easily buy or sell an asset.

Make no mistake—liquidity matters. If investors feel that they can't sell their assets quickly, they will be much more hesitant to invest in the first place. Less liquidity means less capital will be available for business to invest and grow—and the capital that is available will be more expensive.

The rest of this section describes how our robust capital markets provide significant benefit to average Americans, from buying a home to sending your kids to college to saving for retirement.











**VALUE OF ALL LISTED SHARES** IN GERMANY









# Your Home

What if you had to renegotiate your mortgage every year? That's the way it was in the 1920s. Back then, mortgages had large down payments, variable interest rates, short maturities, and were typically renegotiated annually.5 In response to a rash of foreclosures during the Great Depression, the U.S. government created 12 regional Home Loan Banks that used capital markets to increase the amount of funding available for mortgages.6

These Home Loan Banks created far greater lending capacity allowing banks to make more home loans and helping to create the fixed-rate, self-amortizing, long-term mortgage. The advent of securitization in the 1970s made it even cheaper and easier for borrowers to buy a home. Powered by capital markets, homeownership in the U.S. grew steadily from 46% in 1900 to 55% in 1950 to 66% in 2000. It peaked at nearly 70% in the middle of the last decade.7

**SECURITIZATION** | packaging mortgages or other assets and selling them to investors.

Of course, we learned in 2008 that too much of a good thing can be a very bad thing. Unrealistic homeownership goals, a long period of low interest rates, and the false notion that the price of real estate would always rise contributed to the housing bubble. Bad underwriting standards and egregious mistakes by some financial institutions exacerbated the crisis. Nonetheless, over the course of nearly a century, capital markets have succeeded in making owning a home a building block of the American Dream.





HOMEOWNERSHIP

HOMEOWNERSHIP

HOMEOWNERSHIP

# Your Job

Companies depend on capital markets to provide money to grow and create jobs. Even Fortune 500 companies rely on capital markets to meet weekly payroll through the *commercial* paper market.

**COMMERCIAL PAPER MARKET** | A market for short-term loans that typically range from 1 to 90 days.

Early-stage investors, such as venture capitalists, rely on capital markets as one way to realize profits from their investments. They make what are often risky and time consuming investments in new high-tech companies and other firms that require large initial capital investments. These investments are illiquid, which means an investors' stake in the company is not easy to sell.



Venture capitalist sells shares

THE NUMBER OF VENTURE-BACKED **COMPANIES THAT WENT** PUBLIC IN 2011 By taking a company public—selling shares of the company on a public stock exchange—venture capitalists are able to realize a return on the capital and expertise they provide to startups.

The immense power of investment capital and its impact on your job can be seen most strikingly, perhaps, when one looks at early-stage funding. The following chart shows how \$100 million, invested in a handful of companies, eventually led to nearly 3 million jobs.

		FOUNDED	EMPLOYEES IN 2011	2011 REVENUES (MILLIONS)	AMOUNT OF EARLY FUNDING
Walmart :	WalMart	19628	2,100,0009	421,84910	\$4.5 million from going public in 1970 <sup>11</sup>
FedEx	FedEx	197312	245,109 <sup>13</sup>	34,73414	\$80 million from venture capitalists in 1971 <sup>15</sup>
	Home Depot	1978 <sup>16</sup>	255,195 <sup>17</sup>	67,99718	\$2 million from investment banker Ken Langone in 1978 <sup>19</sup>
CVS	CVS	1963 <sup>20</sup>	161,500 <sup>21</sup>	96,413 <sup>22</sup>	\$12 million from a merger in 1969 <sup>23</sup>
É	Apple	1976 <sup>24</sup>	49,400 <sup>25</sup>	65,225 <sup>26</sup>	\$250,000 from angel investor Mike Markkula <sup>27</sup>

# **Your Dinner**

Be thankful your livelihood (or your dinner) doesn't depend on whether it rains next Tuesday. Farming isn't for the faint of heart. Who knows what the price of corn will fetch next fall, seed next spring, or feed and fertilizer over the summer?

Farmers have always had to worry about being CME wiped out by price volatility and random

events, but capital markets have developed financial instruments that allow farmers to breathe a bit easier. From its humble origins as the Chicago Butter and Egg Board in 1898, the Chicago Mercantile Exchange currently trades more than 1 million agriculture derivatives a day.28



One such instrument is a *futures contract*. By selling a futures contract, farmers can lock in a price for their crops before they are even planted—shifting the risk of a steep price decline to investors who are willing and able to risk possible losses for potential gains.



By reducing their risks through capital markets, farmers are able to produce and distribute their crops more efficiently, making dinner more affordable for the rest of us.



1/3 of Harvard's operating budget comes from its endowment, which allows the school to offer scholarships to any qualified candidate, regardless of financial need.

# Your School

Of course, many Americans borrow to get a college degree, but student loans are only a slice of how the financial sector creates educational opportunities. America's public and private colleges hold \$408 billion in endowments.<sup>29</sup> That's equal to the entire annual economic output of Norway (or, if you're a Tar Heel fan, the size of North Carolina's economy).30

**Endowments support scholarships, pay for professors, fund** cutting-edge research, and bankroll extracurricular activities. But it's not just the cash they collect from alumni; it's their investments in capital markets that really make a difference for schools. Endowments are managed by some of the most sophisticated investors in the country, and their financial successes are part of the reason that almost half of the top universities in the world are located in America. 31 Yale earned a 21.9% return on its investments in Fiscal Year 2011, the University of Arkansas earned 21.2%, the University of New Mexico earned 19%, and the University of Virginia earned 12.5%.32 One-third of Harvard's operating budget comes from its endowment, which allows the school to offer scholarships to any qualified candidate, regardless of financial need. 33



**COLLEGE ENDOWMENTS** IN 2011





**ECONOMIC OUTPUT OF NORWAY** 

**ENTIRE ANNUAL** 







THE SIZE OF

**ECONOMY** 

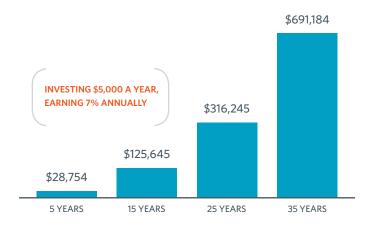
**NORTH CAROLINA'S** 

## **Your Retirement**

Social Security was never intended to be enough to live on in retirement. Through pension funds, 401(k)s, and mutual funds, capital markets allow ordinary savers to realize returns from the stock and bond markets without being experts in finance.

For example, the invention of index mutual funds—which give people the opportunity to buy a basket of stocks through one easy-to-understand instrument-provides regular investors builtin diversity and an opportunity to build a nest egg without trying to pick individual winners in the stock market. The increased ease of investing gives Main Street a chance to earn better returns than they could with traditional savings products.

Below is a chart that shows how putting \$5,000 a year in an index fund, and reinvesting the returns back into the fund, can multiply small savings into an ample nest egg over time.34



# Your Life

It seems like a magic trick, but a 45-year-old can pay \$80 a month and her spouse can get \$500,000 if she dies before 70. It may sound dramatic, but capital markets enable life insurers to offer most Americans affordable policies that will make large payouts.



How so? While insurers collect your premiums—and set those prices based on actuarial tables and demographics that predict people's likelihood of living or dying through their term-

that alone would still leave a huge gap in what insurers could pay out.35 Only by investing premiums in capital markets can insurers have sufficient certainty of making that payout in the event that a policyholder passes away.

U.S. TREASURIES

IN OUTSTANDING

**MUNICIPAL BONDS** 

# **Your Country**

The United States might still be a British colony if not for capital markets. In addition to loans from the Dutch and the French to help finance the Revolutionary War, the nascent federal government's consolidation of colonial debts laid the foundation for the colonies to unite as one nation.

Since the 19th century, U.S. government bonds, or Treasuries, have funded the building of the nation—including railroads under Lincoln and highways under Eisenhower.<sup>36</sup> Treasuries also helped defend our nation by successfully funding the prosecution of two world wars. As of April 30, 2012, the federal government has \$10.4 trillion in outstanding Treasuries.37

### Municipal bonds help pay for:





From driving to work to sending your kids to school to taking a shower or flushing the toilet, it is hard to go a day without using infrastructure funded by municipal bonds sold in American capital markets.

The federal government auctions Treasury bonds to a limited number of financial institutions, called primary dealers. These specialized dealers sell Treasuries to both domestic and foreign investors. Similarly, municipalities have \$3.7 trillion in outstanding bonds.<sup>38</sup> Unlike Treasuries, these bonds can be bought directly through a wide variety of bond dealers and brokers. Who buys these bonds? In addition to individuals, commercial banks, insurance companies, and institutional investors are the largest holders of municipal bonds.39

**CONCLUDING THOUGHT** | For many on Main Street, Wall Street seems a world away—numbers zipping by on a ticker with little connection to the lives of most Americans. But this misconception shouldn't stand. Without healthy capital markets, it would be far more difficult to buy a home, get a job, grow crops, go to college, save for retirement, protect your family, or build a strong country.

"Complexity can be beneficial...to the extent it adds efficiency and depth to financial markets and investments."

STEVEN L. SCHWARCZ
STANLEY A. STAR PROFESSOR OF LAW & BUSINESS
DUKE UNIVERSITY SCHOOL OF LAW

# THE COMPLEX

### WHAT MARKETS ACTUALLY DO

If you crack open The Wall Street Journal on any given morning, the paper is filled with stories about market making, hedging, and securitizing—complex concepts that seem quite removed from Main Street. Last year, close to \$5.5 trillion worth of bonds were issued.<sup>40</sup> In a single, ho-hum day—April 21, 2012—the New York Stock Exchange handled more than 4.3 million trades involving more than a billion shares of stock worth more than \$39.1 billion. 41 Many Americans hear about these activities and transactions and wonder: "Is all of this doing any good?"

When done properly, these often complex activities provide significant benefits to average Americans and the overall economy. Many people have more money than they can spend immediately; many businesses need more money than they have on hand. Efficient markets provide savers a return for parting with their excess cash and lending it to the businesses and individuals that can make the best use of those funds. In addition, efficient financial markets allow individuals and businesses to successfully manage risk. The more robust the market—in other words, the more market participants there are and the more capital that is present—the better the system works.

This section will unpack five of these complex but fundamental market activities and explain why they help make the American economy run better.

# **Market Making**

In the world of capital markets, everyone needs a date. With 1 billion shares of stock worth roughly \$40 billion traded everyday on the New York Stock Exchange alone, a lot of

This section unpacks five common but often opaque financial activities and explains what value they actually provide.

### **Inside the Complex:**

MARKET MAKING

**HEDGING** 

SFCURITIZING

SHORT SELLING

**SPECULATION** 

buyers and sellers are being matched. We wrote earlier about how the markets are like a giant eBay, matching buyers and sellers. They are also like match.com. With healthy markets, going stag is not an option. Every seller must have a buyer. And the fact is, on any given day, there may not be the same number of people willing to buy and willing to sell Alcoa stock or pork belly futures. That's where market makers come in.

MARKET MAKER | A financial institution willing to quote a price to buy a security at any time, even if the institution does not have a buyer already lined up.

**Investment banks are examples of market makers.** They make money on the difference between the price they offer to buy a particular security and the price at which they will sell the security. This is known as a bid-ask spread.

### HOW ARE MARKET MAKERS COMPENSATED FOR RISK?



A market maker may be willing to sell GE stock for \$20, but will pay only \$19.95 for the stock.

Since the value of a stock could go down while a market maker is holding the stock as it looks to locate a buyer, the market maker is taking a risk, and the bid-ask spread is compensation for that risk. The bid-ask spread is typically small, but multiplied over thousands of transactions, it provides market makers an adequate return. For example, a market maker trading 150 million shares annually at a bid-ask spread of \$.05 would make \$7.5 million dollars.



MARKET MAKERS ACTIVE IN THE UNITED STATES™ Market making is particularly important for the bond market. It is relatively easy to sell the stock of a well-known publicly traded company such as GE; a municipal bond supporting infrastructure projects in Boulder, Colorado is not as easily sold.

Without market makers, investors would be more hesitant to purchase securities in the first place—resulting in less capital for businesses, individuals, and governments. That new sewage plant in Boulder may never get built. And with the same number of borrowers chasing less capital, borrowing costs would increase.

# **Hedging**

If you ever bought a bargain plane ticket six months out, you may unknowingly have benefitted from hedging. Airlines can sell these tickets ahead of time because capital markets allow the impact of such unknowables as oil price spikes to be minimized. Airlines use derivatives to protect themselves from a steep increase in oil prices by locking in the price they will pay for fuel in the future—directly benefitting both airlines and consumers.

Successful businesses try to limit the risks that can hurt their bottom line. Capital markets offer products that shift uncertainty from risk-averse companies to investors who are willing to take on what can be significant risk—allowing businesses to focus on their core mission of delivering the best and most affordable products and services to their customers.

THE PERCENTAG **CORPORATIONS THAT USE DERIVATIVES TO HEDGE RISKY** 

### USING FUTURES TO HEDGE RISK



From design and assembly to distribution and advertising, Ford's employees are focused on making and selling their product. But Ford sells

some of its cars in Japan. These cars are priced in yen, which means there is a risk that the exchange rate between dollars and yen can change from the time a car is made in America until the time Ford receives payment for that car when it is sold in Japan. A decrease in the yen's value would mean that Ford gets fewer dollars for their cars sold in Japan, reducing profits.

Capital markets help companies protect themselves from the drop or increase in the value of international currencies. Ford uses a foreign exchange future—a contract to trade foreign currency at a specific price—to protect itself from exchange rate movements that could hurt its bottom line. They've transferred risk from the assembly line to Wall Street.



Futures are one of the many types of derivatives that help businesses manage risks, including changes in interest rates that could increase borrowing costs or supply shortages of vital inputs—like steel for carmakers—that can increase production costs. These products help companies like Ford focus on producing and distributing cars in the best and most efficient way. And it is not just companies that face risk, investors do too. Take the investment managers at university endowments; they have large portfolios of assets whose returns are affected by changes in interest rates. They use products like derivatives to hedge against interest rate fluctuations that would hurt their investments.

Without hedging, businesses would be missing an essential tool to manage risk and protect themselves from uncertainty.





# Securitizing

Open an account at your community bank and you get a balloon and a checkbook to keep track of what you spent and what you saved. This same bank also takes deposits from your neighbors, and uses the funds it collects to make loans.

The number of loans a bank can make is restricted by the amount of deposits it collects because of government reserve requirements. For example, with reserve requirements set at 10%, a bank with \$100 million in deposits could make \$90 million worth of loans. Before securitization, once a bank made a loan. that loan stayed on the books to maturity—profiting from interest payments and the eventual repayment of principal.

Securitization made it far easier for banks to sell the assets (loans) on their books to investors, allowing banks to make more new loans that help people buy homes and start businesses.

**SECURITIZATION** | Converting loans made by banks into bonds that can be purchased by a wide range of investors.

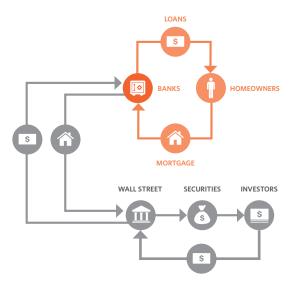
Securitization is done by investment banks that purchase thousands of loans from commercial banks and pool them together into a trust. The trust then issues securities to investors that are backed by the interest and principal payments from the underlying loans. The newly created securities represent a slice of thousands of loans from across the country, providing investors with more diversity and less risk than an investment in an individual loan.

pooled into securities are called mortgage-backed securities. However, any loan with a regular stream of payments can be securitized, including car loans, business loans, and credit card receivables—these are called asset-backed securities.

When a lender sells a loan to an investment bank, it frees up lending capacity, allowing the lender to make an additional loan for the same amount. Take your community bank. If it sells some of its mortgages, it has the cash to make more loans to you and your neighbors.

### After Securitization

- BANKS MAKE LOANS
- INSTEAD OF HOLDING LOANS. BANKS SELL LOANS TO WALL STREET
- BANKS CAN MAKE MORE LOANS



MORTGAGE-BACKED SECURITIES & ASSET-BACKED SECURITIES | Mortgages

securitization offers significant economic benefits by allowing investors to more easily diversify risk and to match investments with risk tolerance. This expands the number of mortgage investors, reduces costs to mortgage borrowers, and increases the availability of mortgage credit."

"The right kind of

**ECONOMISTS MARK ZANDI** AND CRISTIAN DERITIS<sup>VI</sup>

### **Before Securitization**

- BANKS MAKE LOANS
- BANKS HOLD LOANS



Securitization allows individual and institutional investors to provide capital to the market for consumer loans that otherwise wouldn't have been available—expanding loans to consumers and making them more affordable. The more capital that is available for loans, the cheaper loans are. Since its advent in the 1970s, securitization—by making more efficient use of capital—has made it more affordable for millions of Americans to buy a home, purchase a car, or get a credit card.

"Unsound loans are the surest route to disaster."

**BETHANY MCLEAN** AND JOE NOCERA Authors of "All the Devils are Here" vii There is a downside to securitization. Its success depends on the quality of the underlying assets that are being packaged. Banks (the originators of loans) may be less careful about whom they lend to if they can easily ship the loan off to a third party investor. In other words, if banks do not have any "skin in the game," they do not have the same incentive to make good loans. As the financial crisis has shown, securitization will not work if the loans that are being bundled are poor quality, particularly if market participants believe they are of high quality.



Underwriting standards must be maintained for securitization to benefit investors, average Americans, and the overall U.S. economy.

# **Short Selling**



No one wants it to rain at their wedding, but someone had better be looking at the sky.

Short selling is the act of borrowing a stock and selling it immediately with the intent of profiting from a drop in price. In this arrangement, the borrower believes the stock price will be lower in the future and is predicting (and even hoping) that the stock price goes down.

**SHORT SELLING** | The act of borrowing a stock and selling the stock into the market, with the expectation that the stock will be repurchased at a lower price when the stock is repaid.

Say the short seller borrows 100 shares of stock. If the price of the shares goes down when he returns to the market to repurchase the stock, he'll make money. However, he must keep a margin account with his lender to ensure that he is capable of repurchasing the shares to pay back the loan. If the price



increases, he'll have to post additional collateral with his lendertaking money out of his pocket. By borrowing the shares and selling them, a negative signal is sent to the market indicating the stock is overvalued. If you bought the shares and then sold them, the market signals would cancel each other out.

How is that good for the economy? Well, someone has to be looking for the rain. Short sellers often provide an early warning signal that a company is not as strong as its stock price suggests. Short selling allows investors with a negative view about a company-based on publicly available information-to trade on that view without actually owning the stock. Since shareholders of a stock have a bias in wanting the price of the stock to rise, short sellers provide a needed counterweight. And ultimately, the



goal of capital markets is not just to allow people who own stock to make money, but to see that the money people invest goes to productive investments. Short sellers are motivated to detect problems at businesses and to share that information with the broader market.

Some argue that the housing bubble was larger because it was more difficult for short sellers to intervene in the housing market. We discussed how stocks are shorted. However, large swaths of the housing market were being financed through mortgagebacked securities, which were bonds, not stocks. The financial instruments available to short these bonds were complex and more difficult for many investors to use.

Some investors saw problems in the mortgage market and made money shorting housing. But it was harder to bring negative information about housing finance vehicles such as mortgagebacked securities to the market. Author Michael Lewis colorfully describes these challenges in his book The Big Short, Since it was difficult—though possible-to short the mortgage market, it was far too easy for the housing bubble to keep inflating.

"Short sellers devote considerable time, effort and resources to establishing the reality behind corporate rhetoric."

**ANDREW BAKER** CEO of the Alternative Investment Management Associationvi

### HOW DOES SHORT SELLING WORK?





Once upon a time, Enron was the 7th largest company in the United States—a cutting-edge energy firm with a high-flying stock. Short sellers

were among those who exposed Enron's fraudulent books to the public, eventually leading to Enron's bankruptcy.<sup>42</sup> Without short sellers, Enron's fraud could have continued even longer, raking in more unsuspecting capital, until the bubble burst with even greater shareholder losses.

Without short selling, markets would be missing important price signals, making them less efficient allocators of capital. Asset bubbles would be more likely to form; weak companies would be more likely to receive capital at the expense of more productive companies—hurting overall economic growth and job creation.

# **Speculation**

The rule of thumb for a new stock is that it goes up the first day it is listed on an exchange. Buying Facebook's initial public offering (IPO) based on this hope—whether you're an investment banker or a toddler with an

**E**\*TRADE E\*TRADE account—makes you a speculator.

These "speculators" sought to ride the psychology of a popular IPO for a day and make a quick profit by selling it in the afternoon.

Whether you believe that's good for America (or the E\*TRADE baby), or not, there are major market functions that too often get pejoratively labeled as speculation, but that in reality add significant value to Main Street and the U.S. economy.

For example, financial firms buy derivatives contracts without the intent of using or taking possession of the underlying asset. Someone who buys a futures contract for corn, but does not ever plan to take possession of a bushel of corn, might be considered a speculator by many. Yet speculation in this case is absolutely essential to enable businesses to protect themselves against risks that could destroy their companies.

A few pages back, we discussed how capital markets allowed businesses to hedge against a variety of risks by entering into a derivatives contract. But who is on the other side of that important contract? In short, so-called speculators.

### HOW DO SPECULATORS HELP AIRLINES?

Take an airline that wants to protect itself against a steep rise in fuel prices. The airline will enter into a contract to purchase a set amount of oil at a specific price, but it needs to find somebody willing to take the other side of the contract. Someone who is willing to risk that oil prices won't rise too much or too fast.

That someone: a speculator. Without speculators, the airline might not have a trading partner. That's because it is very unlikely that there are enough producers of oil—who want to protect themselves from a drop in prices—to enter into a contract with all of the companies that need to hedge their oil risk. Commodity markets would not be able to function well; there would not be enough liquidity in the market for all businesses to hedge their risk. This means many businesses would face increased uncertainty and volatility, creating higher prices, fewer jobs, and less economic growth, not to mention wildly fluctuating airline tickets.

Of course, speculators aren't angels either. Commodity markets can be manipulated, causing significant economic damage. This is why we have laws against rigging markets. Regulators must preserve the integrity of the market and mitigate the dangers of

excessive speculation.

But, as Yale economist Robert Shiller wisely (if unconventionally) asserts, "speculative activity is central to the functioning of the modern economy."43

Someone has to step up and take on the biggest risks-and speculators do just that, helping make sure your \$200 discount ticket stays at \$200.

**CONCLUDING THOUGHT** | As the financial crisis showed, not every single complex activity or innovation in financial markets works. But just as a jet engine is an intricate machine that can break down, its very complexity is what gives lift to 747s. Complexity and innovation matter, and when done right can help power the U.S. economy.



"The market system is not an end in itself but an imperfect means to raising living standards. Markets are not magic, they are not immoral. They have impressive achievements, they can also work badly. Whether any particular market works well or not depends on its design."

JOHN MCMILLAN
JONATHAN B. LOVELACE PROFESSOR OF ECONOMICS
STANFORD GRADUATE SCHOOL OF BUSINESS



### WHAT CAN GO WRONG WITH MARKETS

We argued that eBay provides people more choices and a better outcome. But maybe the motorcycle you bought is not the shiny one in the photo, but a beat up one from the 1980s. That Rolex you bought on Craigslist is actually a Roll-Ex from Guandong. That 35-year old single lawyer online is really a 44-year-old married Congressman from Buffalo.

Markets are human constructs. They did not spring forth from the divine hand of God. Too often, political discussions about market regulation rely on simplistic clichés—markets are either infallible or the cause of great evil. Yet the real world is significantly more complex. Economist John McMillan sums it up well, "The market system is not an end in itself but an imperfect means to raising living standards. Markets are not magic, they are not immoral. They have impressive achievements, they can also work badly. Whether any particular market works well or not depends on its design."<sup>44</sup>

That is why proper regulation of capital markets matters so greatly to investors, companies, and the country. The truth is, there are enough bad actors out there who cast doubt on the financial system. There are enough mistakes to misallocate trillions in capital. And everyone wants to be protected from fraud and the errors of others.

Among the many reasons the U.S. has robust capital markets are the rule of law and the protection of property rights. No investment is completely safe, but a variety of laws, regulations, and practices are designed to instill confidence and limit the risk of an investment to market factors, not malfeasance or misrepresentation.

What follows are some of the bedrock principles policymakers need to follow to keep markets as healthy and robust as possible, and to ensure that the U.S. retains its place as the global capital markets leader in the 21st century.

### Inside the Ugly:

TRANSPARENCY

CONFIDENCE

**OBJECTIVITY** 

**ACCOUNTABILITY** 

**STABILITY** 

**BALANCE** 

**ENFORCEMENT** 

That is not so in many countries. How would you like to invest your retirement in the Russian stock market, where corruption and fraud are rampant? Generally, when a company lists its stock on separate exchanges, their listing on American exchanges is priced higher. Why? One reason is because our disclosure requirements are more comprehensive than those of other countries.

Thus, to get the best out of markets, regulations must be designed to root out bad behavior and get incentives right.

What follows are some of the bedrock principles policymakers need to follow to keep markets as healthy and robust as possible and ensure that the U.S. retains its place as the global capital markets leader in the 21st century.



"One of the keys to public confidence is transparency."

> SHEILA BAIR former FDIC Chairmanix

# Transparency—Everyone Can See the Same Data

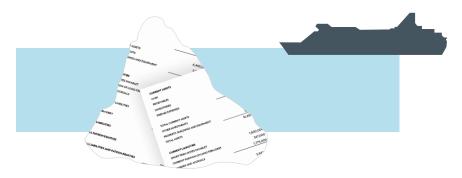
If you buy a house, you have a right to know whether it's infested with termites, what other houses in the neighborhood sold for, and if it's built in a floodplain. In capital markets, transparency is meant to ensure that investors have equal access to the information necessary to make informed choices with their money.

Transparency is fundamental to the successful functioning of capital markets and the American economy. Transparency helps to ensure a level playing field, promote the better allocation of capital, and protect the financial system from instability and panic.

Theoretically, every market participant—from George Soros to George Costanza—has the same access to information. In addition, information should be disseminated to all market participants at the same time to prevent anyone from getting an unfair advantage. Thus, a financial titan's advantage is not the ability to see data that others aren't allowed to view, but the expertise in interpreting the information.

Disclosure requirements are the most common tool used to provide transparency. The Securities and Exchange Commission (SEC) requires all companies listed on American stock exchanges to publicly disclose specific information to potential investors revenue, expenses, liabilities, sales, gross profit margins, etc. This information must be audited by third parties to verify the accuracy of company finances.45

### A LACK OF TRANSPARENCY TURNS COMPANIES INTO ICEBERGS



Without complete information, investors can't make proper decisions about how to allocate their savings. Since robust economic growth depends on savings going to the most productive businesses, when poorly run or fraudulent companies receive capital, the economy can't reach its full potential.

There is another critical aspect of transparency. Regulators need to know the true condition of a financial institution's assets and liabilities, as well as the financial relationships between financial institutions. This is to prevent excessive risk from building up in the financial system, exposing the economy to serious damage.

We have seen the devastation that a lack of transparency can cause. According to The Financial Crisis Inquiry Commission, in the run-up to the financial crisis:



"Key components of the market—for example, the multitrillion-dollar repo lending market, off-balancesheet entities, and the use of over-the-counter derivatives—were hidden from view, without the

protections we had constructed to prevent financial meltdowns. We had a 21st-century financial system with 19th-century safeguards."46

Off-balance-sheet transactions that distort the true financial condition of capital markets participants expose the system to significant harm.

Without relevant and accurate information about financial assets and investment opportunities, capital will be misallocated and the most promising businesses will find it harder to get funding. In addition, a lack of transparency turns companies into icebergs—with much of their value and exposure hidden below the surface. The unseen can allow risks to build up and potentially threaten the entire financial system.



"Financial markets trade in promises—that assets have a certain value, that numbers on a balance sheet are accurate, that a loan carries a limited risk. If investors stop trusting the promises, financial markets can't function."

### ROBERT REICH

former Secretary of Labor in the Clinton Administration<sup>x</sup>

# **Confidence—Counterparties** Can Be Relied Upon and Trusted

If someone told you they lost their wallet, needed twenty dollars to get home, and promised to send you a check later—you might very well wonder if you were being scammed. In capital markets, billions of dollars are traded between strangers each day without a moment's doubt that each party is good for their part of the transaction.

Trust is the essential ingredient in vibrant financial markets—the integrity of counterparties is critical. Businesses and investors must have confidence that contracts will be honored and enforced, and that a firm's balance sheet reflects its true financial condition.

Many financial institutions attempt to build a brand name with a reputation for honesty and integrity. That's all well and good, but formal mechanisms are required to promote trust-regulations must ensure financial institutions are accurately reporting their true financial condition.

### A LACK OF TRUST CAN FREEZE CAPITAL MARKETS

Credit default swaps are a type of derivative that allow institutions to buy insurance on bonds that they own in case the company that issued those bonds defaults on its obligations. AIG—one of the world's largest insurance companies—issued massive amounts of credit default swaps under the assumption that few issuers would default.

AIG's counterparties were not completely aware of AIG's true exposure to a housing collapse because this type of derivative was traded **over-the-counter**—meaning a private transaction that was not publicly reported. Other firms obscured their true financial picture from their counterparties and regulators. For example, Lehman Brothers engaged in accounting maneuvers that disguised the full extent of their borrowing.<sup>47</sup>

LEHMAN BROTHERS When the full extent of Lehman Brothers' and AIG's liabilities was

revealed in September 2008, it was clear that they could not meet their commitment to counterparties; trust evaporated. Lehman Brothers failed, financial institutions stopped lending to each other and to clients, and the economy went into free fall. Ultimately, AIG was rescued from failure by the taxpayers and the Federal Reserve to prevent credit markets from collapsing.



Both Lehman Brothers and AIG were large firms with many counterparties—including many of the biggest financial firms in the country. Market participants must be able to reasonably determine the creditworthiness of their trading partners.

Counterparties will default from time to time, but financial firms need all relevant information to assess whether to engage in a contract with a counterparty, and to accurately price such a transaction based on the risk involved. When financial firms misrepresent their true financial picture-particularly large and interconnected firms—the financial system is prone to a loss in confidence that leads to instability and panic.

# **Objectivity—Guarding Against Conflicts of Interest**

Pete Rose is banned from baseball for betting on his own team to win games. Tim Donaghy went to prison for fixing basketball games in which he was the referee. In sports, the integrity of the game is so essential that any attempt to fix the outcome is met with swift and severe punishment. The game cannot survive if people doubt that the competition is real.

Conflicts of interest can be equally debilitating in the world of **capital.** Credit rating agencies assign ratings to the issuers of bonds. These ratings express how likely it is that the bond issuer will fail to make payments, as well as how large the expected loss would be to bond holders. Some investors—such as pension funds—can only invest in bonds that have received a high rating from one of the three major credit rating agencies.

However, ratings agencies have a conflict of interest: they are paid by the same companies and financial institutions that they rate. During the run-up to the housing bubble, credit rating agencies gave AAA ratings-their highest rating-to many mortgage-backed securities that turned out to be worth much less. Because the credit rating agencies were being paid by the banks that issued these securities, they had a strong incentive to provide high ratings in order to get banks' business. Otherwise, the banks could take their business to one of the other credit rating agencies. This was called ratings shopping, and the ratings agencies were certainly aware that giving a security a bad rating could mean losing business.



THE PERCENTAGE OF SUBPRIME MORTGAGE-BACKED SECURI-TIES GIVEN THE HIGHEST RAT-ING (AAA) IN 2006 THAT HAVE **BEEN DOWNGRADED TO JUNK** STATUS (BB+ OR BELOW)xi This conflict of interest was a significant contributor to the financial crisis. As economist and Nobel Laureate Joseph Stiglitz points out, "[credit rating agencies] were the party that performed the alchemy that converted the securities from F-rated to A-rated. The banks could not have done what they did without the complicity of the rating agencies."48

Mitigating conflicts of interest in financial markets is crucial to the markets' health. At a minimum, conflicts of interest should be transparent to all market participants, and some need to be eliminated altogether.



On the baseball diamond as on Wall Street, we need to know that players and umpires are not compromising the game.

At an open bar, people may drink too much because the



# Accountability—Minimizing Moral Hazard

booze is free. This is a microcosm of moral hazard. Because of the rules of the game, people's behavior can change for the worse. To compensate, we have strong drunk driving laws and penalties that one could argue provide a check on behavior. If you had to pass a breathalyzer test when you left the party, it would be a built-in check.

The term *moral hazard* originated in the insurance industry.<sup>49</sup> It is the idea that a person with fire insurance is less likely to be careful if there are no financial penalties for a fire in the first place. Deductibles are a tool that insurers use to minimize moral hazard, i.e. a fire insurance policy will require policyholders to pay a certain amount of the damage before the insurance kicks in, to give the policyholder an incentive to be responsible.

One example of moral hazard in the financial world is referred to as an agency problem. This can occur "whenever one person acts in the interests of another."50 For example, a mutual fund manager may not have any of his own money in the fund he manages. He still wants to do well for his clients, but he may not be as motivated to get the best returns as he would be if he had more of a stake in the performance of the fund.

MORAL HAZARD | In the world of finance, moral hazard can refer to the tendency of financial institutions to take excessive risks because they are not likely to pay the full costs when things go wrong—taxpayers will likely pick up part of the tab.

During the run-up to the financial crisis, there were financial institutions that were considered "Too Big To Fail" because the failure of one or more of these large, diversified, and interconnected firms would have a devastating impact on the wider economy. There was an implicit belief that the government would rescue these financial giants in the event they became insolvent. These large firms had incentives to take excessive risks-they would receive all of the benefits if things went well while the taxpayer would shoulder a significant part of the costs in case things went wrong.

### MORAL HAZARD: TAKING RISK WITHOUT PICKING UP THE TAB WHEN THINGS GO WRONG



Fannie Mae and Freddie Mac may have represented the most significant moral hazard risk before the crisis due to the public-private nature of these

government sponsored entities (GSEs). While many assumed that large private financial firms would not be allowed to fail, government involvement in Fannie Mae and Freddie Mac made the taxpaver backstop even more explicit.

And of course, it turned out that these beliefs were correct. Fannie Mae and Freddie Mac were taken over by the government and placed in conservatorship on September 7, 2008 when their insolvency became clear. The failure of Lehman Brothers just eight days later, which rippled through the financial system, put the solvency of other financial institutions in doubt and froze credit markets. After Lehman's failure, the government used taxpayer resources to avert a financial meltdown by supporting the remaining systemically significant institutions. Even with the unprecedented assistance provided to the financial system, the Lehman collapse helped fuel a major recession.

Many employees at these firms lost jobs and savings, stock and bondholders in these companies suffered losses. It is not that these companies thought that everything would be fine if they failed. But, if one gets full credit for success and bears only partial responsibility for failures, incentives are skewed and excessive risks are significantly more likely be taken. These risks, and the ensuing failures, proved devastating for the economy during the financial crisis.

### 1970



### 2012





The actions government took to save the financial system were not perfect, but intervention saved the economy from even further devastation (see Europe). This is why laws and regulations must minimize moral hazard in the financial system in the first place.

Just like insurers, policymakers are right to ensure that there is a "deductible" policy that will act as a counterweight and encourage firms to act responsibly.



# Stability—Controlling Leverage

To paraphrase Dunkin' Donuts, America runs on borrowing. The United States has a \$15 trillion economy. and commercial banks alone have \$7 trillion in outstanding loans.<sup>51</sup> Unless a distant relative left you a large inheritance, chances are you're going to have to borrow money to buy a house. If you start a business—you'll borrow. Send kids to college borrow again. And big companies ... they are continually borrowing. Borrowing to purchase assets is referred to as leverage.

Leverage in the financial system is like oxygen. Just as humans need oxygen to breathe, financial markets and institutions must use some leverage to function efficiently. However, oxygen is also what gives fire its destructive power. Similarly, excessive leverage can cause widespread damage to individuals, financial firms, and the wider economy. Just as society has created mechanisms such as fire departments to mitigate the destruction of fire, policymakers must create mechanisms to control the potential damage of excessive leverage.

### LEVERAGE IN AN UP MARKET

Leverage is attractive in capital markets because it allows financial institutions to increase returns. To see why, consider the following example. If a firm pays \$100 for a share of stock, and sells it at \$120, the firm has made a 20% return (a \$20 profit on \$100 invested). However, a firm could also put up \$20 in cash and borrow \$80 to purchase the stock. If the stock is sold at \$120, the return for the firm would be roughly 100% (after paying back the \$80 loan, the firm would have a \$20 profit on \$20 invested, minus the interest costs of the loan). The success of financial institutions is often measured by the return on capital, so one can see why a financial manager might want to use leverage—it can significantly increase the return on capital.



But leverage can be a double-edged sword; it can increase gains, but it can also magnify losses. The act of borrowing to buy a stock is called **buying on margin**. When stock is purchased on margin, one can be forced to sell when the market goes down. That can create a vicious downward spiral.

### LEVERAGE IN A DOWN MARKET

Suppose instead of the stock price increasing to \$120 in the previous example, the price of the share decreases. The financial institution that lent the firm \$80 to buy the stock keeps that security as collateral for the loan. When the value of the collateral approaches the amount of the loan, the lender will ask the firm to give it additional collateral to ensure that it does not lose money. This is called a *margin call*. If the firm cannot provide the lender with more collateral, the lender will sell the stock to recoup what they can from the loan. This makes the stock price drop further.



If margin calls happen to a lot of leveraged investors at once, a self-reinforcing downward spiral occurs, with more margin calls contributing to more asset sales and a further drop in price. Given the interconnectedness of our financial institutions, this deleveraging process can have a widespread negative effect on the economy-restricting credit and putting the solvency of many financial institutions into doubt.

The critical point is that when a firm is leveraged, it cannot hold onto an asset in a down market. It must be sold. If a firm owns an asset outright, it doesn't have to sell. It can hold the asset



to maturity, riding out a market storm. The higher the leverage ratio of a financial firm, the less the market has to drop for margin calls to occur. The firm that borrowed in the above example is leveraged 5:1, which means that they have \$1 in equity for every \$5 in assets. The market had to fall 20% for the firm in our example to be asked to post more collateral. Before the financial crisis, some large firms had leverage ratios as high as 30:1; this means a 4% drop in the market triggered margin calls and asset sales.52

Regulators have a compelling reason to ensure the stability of the financial system by preventing financial institutions from becoming too leveraged.

The more important the financial institution is to the overall economy, the more important it is to restrict leverage. The existence of large, interconnected, and systemically important firms with excessively high leverage ratios exposes the financial system to real dangers.



# **Balance—Protecting Against** Mismatched Time-Horizons



Would you want to finance a 3-year construction project with a 90-day loan?

It may seem counterintuitive, but a mismatch in time-horizons as referenced above—is a fundamental part of the financial system. In our commercial banking system, millions of people deposit money that they can withdraw at a moment's notice. Nonetheless, these short-term deposits are how 30-year fixed mortgages are financed.

Yet the mismatching of time-horizons—a necessary reality within capital markets—can lead to great economic devastation. To make time-horizon mismatches work, a series of safeguards were put in place to protect all parties against potential instabilitybut these safeguards only applied to commercial banks. These financial institutions are required to keep a certain amount of cash on hand at all times. The Federal Deposit Insurance Corporation (FDIC) insures their deposits up to \$250,000. The Federal Reserve provides assistance to solvent but illiquid commercial banks to prevent problems from spreading throughout the financial system. As a result, commercial bank runs are rare and time-horizon mismatches are, for the most part, benign.

But in other cases, time-horizon mismatches can pose serious hazards for which the financial system is not adequately equipped.

For example, before the 2008 crisis, some financial institutions operating without the safeguards of commercial banks set up what were known as structured investment vehicles (SIVs). These were off-the-books entities that funded themselves with short-term commercial paper. But with these short-term funds they bought long-term assets like mortgage-backed securities.53 Mortgages last years; commercial paper lasts weeks—a classic mismatch of time horizons.

This would have been fine so long as housing prices continued to climb. It would have been fine if mortgage-backed securities continued to behave like liquid assets that could be sold for cash in a snap, just like Treasury bonds. It would have been fine if the AAA ratings that these mortgage-backed securities received reflected their real risk. But housing prices were dropping, mortgage-backed securities were hard to sell, and their value started to slide. Suddenly, trillions of dollars of long-term mortgages wrapped up in complex investments depended upon the refinancing of short-term loans.

Markets run into trouble when individuals start believing that long-term assets are really short-term assets, deceiving themselves and each other about the liquidity of their investments.

When the financial crisis hit and credit markets seized up, institutions discovered that these mortgage-backed securities were not the short-term liquid investments they thought they were.

The SIVs could not renew their short-term loans in the commercial paper market. Other financial institutions could not use mortgage-backed securities as collateral.

# \$5.5 trillion

\$972.5 billion

COMMERCIAL PAPER MARKET xiii **REPO MARKET** | The market where financial institutions obtain short-term loans from other financial institutions or companies with excess cash by using high-quality securities as collateral.

The inability to obtain funding in the repo and commercial paper markets had the same effect as a bank run—it was as if all depositors showed up at once to ask for their money out. Without the same regulatory system that was in place to protect commercial banks with time-horizon mismatches from bank runs. the crisis threatened to spin out of control.

At AIG, the extent of the asset-liability mismatch was not known to counterparties. Large and interconnected financial firms that hedged risk with AIG were left scrambling when it became clear that the insurance giant could not meet its liabilities. The government stepped in to prevent an unraveling of the financial system.

Because asset-liability mismatches are both integral and potentially dangerous to the financial system, they must be regulated properly. Transparency is essential so that regulators and counterparties are aware of the time-horizon mismatches at financial institutions, and a backstop is necessary to protect the financial system in case these institutions run into trouble.

# **Enforcement—Fearing Getting Caught**

The "ugly" can get awfully ugly. Capital markets need the proper level of enforcement so that everyone plays by the same set of rules.

#### LIKE HIGHWAYS, CAPITAL MARKETS NEED SPEED LIMITS

Think of financial markets as a system of highways. We may not love to see the state trooper on the side of the road pointing that radar gun, but we're glad she's there. It makes responsible drivers tap on the brakes and remember to drive safely. It reassures you that others are being watched—that the jerk doing 90 mph weaving through traffic will be stopped. It makes people think again before drinking and driving.





The same is true for financial markets. Properly done, regulations add value to markets and make them function in the most efficient way.

There is a lot of evidence, however, that as markets have become more complex, the number of state troopers on the financial highway has not kept up. The financial sector has grown at a remarkable pace, while funding for regulatory agencies has not.

For example, the Securities and Exchange Commission (SEC) is responsible for overseeing approximately 35,000 entities, including 11,800 investment advisors, 9,500 public companies, 4,200 mutual funds, and 5,400 broker-dealers with 175,000 branch offices.<sup>54</sup> The SEC's budget was \$1.3 billion in FY 2011 with 12 examiners for every one trillion dollars under management.55 Comparatively, in 2009 Citigroup and JPMorgan Chase spent \$4.6 billion each—roughly four times the SEC's entire annual budget—on information technology alone.56

In short, there are a lot of cars on the roads and not enough cops. In addition, given the increasing complexity of capital markets, it is important to have knowledgeable and experienced regulators even if this requires paying them more.



THE SECURITIES AND **EXCHANGE COMMISSION** IS RESPONSIBLE FOR OVERSEEING:

**INVESTMENT ADVISORS** 

PUBLIC COMPANIES

**MUTUAL FUNDS** 

**BRANCH OFFICES** 

Consistent enforcement of financial laws and regulations is important for several reasons:

- 1. The vast majority of financial market participants play by the rules, and they shouldn't be at a disadvantage for doing this.
- 2. The basic principles that were outlined in this section only work if they are effectively and consistently enforced-if there are enough cops with the right tools to do so.
- **3.** Enforcement is part of America's competitive advantage. Would you rather invest your life's savings in a well-regulated or loosely-regulated market?

Even the most ardent free-market champions, such as former Federal Reserve Chairman Alan Greenspan, agree that these principles were violated in some way during the run-up to the financial crisis in 2008:

- TRANSPARENCY—investors were misled about the quality of the mortgages they were purchasing;
- **CONFIDENCE**—AIG didn't have the capital to cover its promises;
- OBJECTIVITY—credit rating agencies failed to provide unbiased assessments;
- **ACCOUNTABILITY**—only Lehman Brothers suffered the ultimate price for excessive risk;
- **STABILITY**—financial institutions took on too much debt;
- **BALANCE**—similar activities weren't regulated in the same way;
- ENFORCEMENT—too many regulators failed to turn on their radar guns.

**CONCLUDING THOUGHT** | Making these principles the compass by which we steer policymaking and regulation, and ensuring that they are effectively and consistently enforced, will help avert or lessen the damage from a future crisis.



**BALANCE ~ ENFORCEMENT** 

"Banks and capital markets match savers and those who need capital. You don't have to hug your banker, but what he does is essential to economic growth."

GREG IP
U.S. ECONOMICS EDITOR
THE ECONOMIST\*iv

# CONCLUSION

#### CAPITAL MARKETS MATTER

The imperfections of markets are legion. As economist John McMillan says, "They are an imperfect means to raising living standards."57 Markets need checks and balances, proper regulation, and ample enforcement-but also the freedom to grow and innovate.

Capital markets have become this era's political piñata. They played a starring role in the 2008 economic collapse. And their complexity makes it difficult to understand the value of much of what capital markets do on a daily basis.

But capital markets are essential to a vibrant U.S. economy. If the U.S. is going to restore long-term growth and middle class opportunity, we must retain our status as the global capital markets leader. A 21st century America without a robust and extensive financial system is "Pottersville"—the desolate town from It's a Wonderful Life.

How can we get the best out of capital markets while minimizing the worst?

- Policymakers must develop a far better understanding of capital markets—what they do, how they work, how they add value, and how they can go off the rails.
- Policymakers must also design strong, efficient, and sensible regulation that will preserve our capital markets leadership. These regulations should be based on the principles we've outlined.

Hopefully this primer provides some balance and guidance to the debate on the future of America's financial sector and will serve as an important reminder that healthy capital markets matter a great deal to all of us, and to the economic destiny of the nation.

Capital markets—love 'em or hate 'em, we need 'em.

Capital markets have become this era's political piñata.



# **About the Capital Markets Initiative (CMI)**

Third Way's Capital Markets Initiative (CMI) helps policymakers and their staffs better understand why capital markets matterhow they work, what value they add, and when they can go off course. In particular, CMI aims to unpack complex issues related to capital markets and explain why healthy and robust capital markets are essential to a strong U.S. economy and middle class.

CMI has three primary ways to communicate to policymakers how capital markets add value and help spur economic growth.

- Hot Issue Briefs | These briefs help policymakers demystify issues in the news by digging beneath the headlines. The aim is to simplify a topic related to capital markets, explain why it matters to the economy, and show how it adds value.
- Capital Markets 101 | Our distinguished speaker series educates Congressional staff on a wide range of capital markets issues, from banking regulation to housing finance to the global economy. Speakers include former Federal Reserve Chairman Paul Volcker on "Unraveling the Mystery of the Federal Reserve," Economic Minister at the German Embassy Peter Fischer on "The European Debt Crisis," and The Wall Street Journal economics editor David Wessel on "The U.S. Fiscal Cliff and our Growth Path."
- **Congressional B-School Series** | CMI, in collaboration with the Wharton School at the University of Pennsylvania, hosts bicameral and bipartisan trips to Philadelphia. The "B-School Day" goes beyond the 101 sessions and delves more deeply into capital markets topics, including: Inside an IPO, Currency Manipulation, and Derivatives and Risk Management.

For more information please visit www.thirdway.org/cmi

# **About Third Way**

Third Way is a think tank that answers America's challenges with modern ideas aimed at the center. We advocate for private-sector economic growth, a tough and smart centrist security strategy, a clean energy revolution, and progress on divisive social issues, all through a moderate-led U.S. politics.

A major profile in *POLITICO* noted that Third Way has emerged as the new leader of the moderate movement and is positioned "front and center' on the main issues in the national debate." Reuters proclaimed in 2011 that Third Way is "the future of think tanks," and The New York Times wrote Third Way "has become a constant presence in . . . Washington."

For more information please visit www.thirdway.org

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