WORLDQUANT UNIVERSITY

Financial Markets
Module 2

MSc Financial Engineering

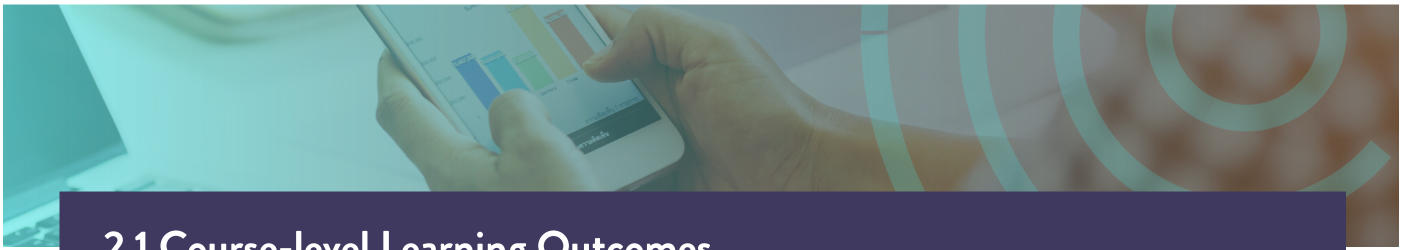
Table of Contents

1. Brief

This document contains the core content for Module 2 of Financial Markets, entitled Market Regulation. It consists of four video lecture transcripts, four sets of supplementary notes, and a peer review question.

2. Course Context

Financial Markets is the first course presented in the WorldQuant University (WQU) Master of Science in Financial Engineering (MScFE) program. The course sets the tone for the wider program, providing the context for the field of financial engineering, while introducing you to the financial markets, the analysis of market events and the valuations of financial instruments.



2.1 Course-level Learning Outcomes

Upon completion of the Financial Markets course, you will be able to:

1. Describe the types and components of financial markets.
2. Identify and define the key characteristics of financial instruments.
3. Evaluate the different ways in which financial instruments can address risk.
4. Perform valuations of simple financial instruments (especially bonds and options).
5. Understand the impact of credit risk within financial markets.

2.2 Module Breakdown

The Financial Markets course consists of the following one-week modules:

1. Introduction to Financial Markets
2. Market Regulation
3. Interest and Money Markets
4. Fixed Income and Bond Markets
5. Stock and Equity Markets
6. Futures, Options and Derivatives
7. Market Making and Trading

3. Module 2

Market Regulation

Beginning with a brief description of regulation in general, the second module introduces key components such as the different types of regulations, role-players within regulation, and the functions regulation serves. Later in the module the focus shifts to the process of creating and implementing regulation, as well as an assessment of regulation and deregulation.

3.1 Module-level Learning Outcomes

Upon completion of the Market Regulation module, you will be able to:

1. Understand the purpose of financial regulation.
2. Identify the various regulatory role players.
3. Provide insight into the consequences of financial regulation.
4. Understand the basic processes of regulatory formation through to implementation.
5. Understand the cases for both regulation and deregulation within financial markets.

3.2 Transcripts and Notes

3.2.1 Transcript: What is Financial Regulation?

In the first module we focused on developing a foundational understanding of financial markets. In this video we will build on this knowledge by looking at regulation within financial markets.

In general, regulations refer to the extent to which rules, and oversight of those rules, are applied to a particular system, process or environment. Let's begin by thinking about the need for regulation – or rather, the appropriate amount of regulation – in any system involving participants with conflicting interests.

First, an analogy. Most would agree that the experience of being stuck in traffic is very frustrating. In fact, I'd be willing to bet that you've never heard a friend or family member say, "I love being in traffic". Sometimes these experiences are made even worse when other frustrated drivers ignore a traffic light or blatantly push in front of you instead of waiting their turn. I'm sure this is a situation we've all been in, probably many times.

Now, think back to such a moment, but this time imagine there are no such things as rules of the road. At first, this may sound quite appealing, as you would be able to drive on yellow lines, cut corners, overtake, and accelerate as fast as you wanted to. The absence of laws would mean you were no longer restricted. And yet, the more you think about it, the more you can imagine the potential it has to cause outright chaos.

Without any driving regulations, no one would have to wait at intersections, as everyone could just drive when they pleased. But what would happen if one driver's actions got in the way of another's? For instance, if somebody, or several people, wanted to cross an intersection at the same time as you?

Naturally then, a total absence of regulation is not a viable condition. But what about the opposite scenario? Imagine that there are traffic lights every 20 meters and a toll plaza every kilometer. In this case, it would probably be better to walk when travelling, though it is likely the amount of damage to property would be less Wthan in the first example.

Without rules, there would be no recourse for damages to property and people as there would be no standard to measure these damages against. On the other hand, as in our second example, with excessive rules there may well be less of these events. In both scenarios regulation comes at a cost. The cost of damage and destruction when too lenient, or the cost of having to oversee every aspect of traffic when regulation is too burdening. Financial markets face this very same trade-off.

Like the function performed by road rules within a transport system, market regulations are the mechanisms or frameworks used to fulfil certain outcomes within a market. Striking a balance between stringently regulated markets and loosely regulated markets requires constant correction. Markets that have very little regulation, although they may excel, are often prone to manipulation, exploitation of participants and other harmful behaviors. As with our example, loose regulation can speed things up, but cause significant damage in the process. On the other end of the spectrum, when markets are burdened with regulation to the point of over-regulation, participants are harmed in a different way. Their suffering may take the form of stagnation, high costs of business, and ultimately, they may be forced to leave the market altogether. Striking this balance in the real world means finding the balance between rules that promote safety and order, and the absence of rules that allow total chaos.

Having established a basic idea of what regulations are, in the notes we will now apply this concept to global financial markets, allowing us to understand how these markets are influenced by regulations. Understanding the specific regulations that apply to a particular market is probably the most insightful way of interpreting events within that market.

3.2.2 Notes: The Role of Financial Regulation

Background context

In the USA, the early 1920's was considered a golden age of prosperity. Even while the aftermath of World War I was still taking its toll on the European economies, the American industrialist movement was already in full swing. In the US economy, businesses were prospering, lucrative deals were being struck, and money was fluid.

The prevalence of these economic activities translated into serious economic growth. Between 1925 and 1929 the New York Stock Exchange grew from $27 billion to $87 billion. Had you placed your money in the stock market in 1925, you were likely to have seen a tripling of your initial investment in profits. Under these economic conditions, the US economy had grown to be the largest in the world, and the American people had become highly optimistic.

Then, over the course of a few days, devastation occurred. On October 24th, 1929 – now known as Black Thursday – the New York Stock Exchange saw the most significant stock market crash in US history. Instigated by a sudden panicked sell-off by stockholders, it continued for weeks and reached its lowest point in mid-November. By that time, substantial damage had already been done to the American economy.

Over 40% of the value of stocks had been erased from panic selling within the stock market, and this soon extended to money markets. Banks were among the most affected. Most saw massive withdrawals as people took their savings deposits home out of fear of losing them. As a result, an estimated 744 banks closed over the following 10 months alone.

The stock market crash is considered to have been the starting point of the USA's 12-year-long Great Depression. During the latter period, more than 11,000 banks closed and 1-in-4 people who had been employed were left jobless, meaning that a vast number of working- and middle-class citizens had to depend on soup rations to stay alive.

How could something like this have happened? How could the world's economic super-power fall so far and so quickly? The answer is certainly not as straightforward as a stock market crash. Stock market crashes can be severe, but they do not bring down a nation's banking systems. Ultimately, it was the faulty regulatory foundations of US financial systems that led to this catastrophe.

Banking practices during the Golden Era

The economic prosperity of the early 1920's created a frenzy among investors for investment and credit. A lot of this was financed by margin, which meant that Americans were taking out loans to finance their investments in the stock market. This practice, however, was not as pervasive as the effects of the crash. Only 10% of the US population had invested in stocks at the time, but nearly 100% were affected. Why, then, was there such widespread devastation? The answer to this lies in how banks were operating during the investment frenzy of the golden era.

During this period, commercial banks were able to take clients' savings-deposits and use the capital to invest in speculative opportunities. Even while managing loans on a large scale, there was no guarantee of security. Up to this point in US history, it was not common practice for the federal government to safeguard deposits, as they thought it would lead to a Socialist, dole-like relationship between the government and the people. This was the primary reason behind the high rate of 'bank runs' (i.e. the mass withdrawals of savings) and the subsequent bank failures. Without security, individuals had no assurance that their savings were safe.

President Herbert Hoover, who served his term from 1929 until 1933, had taken a political stance that desired minimal federal government intervention. This meant that he did not want to nationalize key industries, nor offer state backing for banks. Instead, Hoover and his cabinet sought to implement agencies and support networks to promote collaboration between market participants. He thought this would create a healthier, longer-term answer to the financial downturn by enabling them to lift themselves out of the Depression.

FDR's regulatory response

After Hoover's term ended in 1933, Franklin Delano Roosevelt was elected to office and began to address these issues differently. FDR and his cabinet created regulatory frameworks and oversight bodies that would prevent an economic downturn of this magnitude from ever happening again. They also added safeguards, detailed below, which restored investor confidence in the banking sector.

FDR's assessment and application of financial policy over these years remains iconic as an example of well-actioned market regulation. Three of the most significant regulatory changes that were enacted during his term include:

1. The Banking Act of 1933 (the Glass-Steagall Act) which sought to separate the roles of commercial and investment banks. This act drew a legal distinction between these entities, so that the savings of the ordinary person could not be used for speculative investment purposes.
2. The Federal Deposit Insurance Corporation (FDIC) which was a regulatory body that guaranteed that the savings of individuals would be backed by the government in the event a bank failed.
3. The Securities Act of 1933, which gave rise to the regulatory body called the Securities and Exchange Commission (SEC). The SEC is an agent of the USA's federal government responsible for monitoring and regulating market activities, as well as enforcing laws related to American securities markets.

Once these and similar regulations were put in place, the American economy recovered. This historic period offers great insight into the effects of regulation. Firstly, it shows a direct and powerful correlation between social well-being and financial well-being. This has important implications for financial regulation which is the framework for poor or prosperous financial standing.

Secondly, we see that both presidents enacted regulation in order to stem the devastation of the Great Depression. Both presidents worked hard to rectify the situation and cared for their people, but only one was effective in their outcome. The difference between them was the ability to assess the market and social environment and implement the right kind of regulation at that point in time. To elaborate on the traffic example in the earlier video, what Hoover did was try to let people get themselves out of their own jam. What FDR did was to build more roads and avenues so that they could.

This illustrates the role of regulation within financial markets in curbing the kinds of behavior that the very same markets produce, from the creation of financial instruments, to trading and the ethical or unethical treatment of investor funds in market activity.

3.2.3 Transcript: Levels of Financial Regulation

Understanding financial regulation thus requires an understanding of the various levels at which regulations are applied, as well as how higher-level, overarching regulations can have an impact on more specific, localized regulations – and vice versa.

To begin, we'll examine some of the levels by which markets are differentiated and to which distinct regulations are applied.

International versus Domestic

In a globalized world of trade and industry, there is potential for overlap and contradiction when markets are regulated. This is the tight-rope that nations must walk when aligning their domestic regulations to international ones, as it impacts on their ability to participate in international financial trade.

International regulation refers to policy and oversight that is applied at an international level for the purpose of providing stability, transparency and efficiency to international financial markets. It is applied mainly in institutions which operate globally, such as central banks.

Domestic regulation is applied to a specific country. Since countries are usually governed by one central authority, domestic regulation can be applied more stringently and with greater focus than it can when accommodating multiple countries. Domestic regulations may even affect a country's eligibility to participate in international trade.

Though the aims of these types of regulations are usually the same, the methods and extent of their impact can differ significantly. To illustrate the dynamic between domestic and international regulations, consider criminal prosecutions of a domestic court versus those of an international court. Even though both may have the same verdict in mind, the international criminal court may have additional factors to consider, such as international jurisdiction, while weighing up domestic criminal policies.

Governmental versus Non-governmental

Regulation is implemented and monitored either by a government (or a government agency), or by an institution that operates outside of government scope, providing concentrated and specialized oversight.

Governmental regulation is implemented by government agents within a particular country's borders. It takes the form of regulatory frameworks and oversight – such as legislation – which are applied to economically and socially critical markets and industries, for example the mining sector in the Republic of South Africa, and the oil industry in Saudi Arabia.

The need for non-governmental regulation is due to the inability of governments to provide oversight and regulation for every single industry and market. In these cases, Non-Governmental Organizations (NGOs) offer the required regulatory oversight. This can be domestic or international, such as the International Financial Reporting Standards Foundation (IFRS) which standardizes accounting practices, however it often varies from country to country. NGOs which serve this oversight function are often funded by government due to the mutually beneficial nature of their work.

Industry-specific versus Market-wide

Regulations are either applied to specific industries or formulated on a broader scale, so as to apply to all participants in an economy/market.

Industry-specific regulation is necessary to address specific issues within a certain sector that may not be applicable to other sectors of trade. For example, it is not necessary for retailers to maintain a certain level of their revenues in the form of cash as collateral for business activities. However, it is necessary for banks – whose primary activity is lending – to have significant capital reserves on hand in the case of financial turmoil, so that they can maintain their lending function.

In contrast, market-wide regulations do not discriminate between industry types, as these regulations are deemed appropriate, regardless of a sector's primary business function. Again, we can use the IFRS as an example, which provides a universal way of reporting financial activities, regardless of the sector.

Direct versus Indirect

And finally, as alluded to in the opening statement, regulation is complex because financial markets are complex. In part, this complexity is due to both the indirect and direct effects that regulation has on markets.

Direct regulation involves the application of regulation to a particular industry or environment with the specific aim of enacting change or oversight within that environment. An example of direct regulation would be Basel III which was compiled as an answer to the risky financial activities that were experienced in the 2008 recession in the banking sector.

Indirect regulation refers to the effect(s) of certain regulation on an industry the regulation was not specifically aimed at changing. Indirect regulation can be seen as a knock-on effect in this regard. An example of indirect regulation could be International Environmental Law which governs international laws surrounding pollution and global warming. This regulation has an impact on energy companies and commodities markets, as coal and oil are no longer feasible long-term sources of energy.

It is therefore important to be aware, not only of regulation that is directly aimed at influencing financial market behavior, but also to be cognizant of other regulations and policies that influence markets.

As you can see, regulation can be applied at many different levels, and each level has its own circle of influence. In the notes to follow, we will take a look at key regulatory role players.

3.2.4 Notes: Regulatory Role Players

We will now examine the various institutions that influence, apply and oversee regulation within international financial markets. At this point it is necessary to understand that one institution can implement a regulation but is not necessarily the entity that supervises the regulation's enforcement. For example, the creation of the Securities and Exchange Commission (SEC) was established in the Securities Exchange Act of 1934, in response to the poor financial practices which contributed to the Great Depression. The US Congress (a leg of the US legislature) established the SEC as well as the Act, but the US Congress does not oversee the implementation of the SEC's regulations.

Below, when we speak about role players, we refer to pure regulators, pure oversight entities, and those entities that perform a mix of both regulation and oversight.

Central banks

Central banks, which were outlined in our very first lesson, refer to banking institutions that are primarily concerned with maintaining an economy's monetary supply. Their primary roles are regulatory in nature, and their regulatory functions may be detailed as follows:

1. The security of deposits

The first regulatory function central banks serve is to guarantee commercial bank deposits and to maintain fiscal stability in times of financial turmoil. This provides security to commercial bank deposits and in turn prevents people and businesses from withdrawing their funds and causing bank runs. By safeguarding these commercial deposits, central banks allow commercial credit lending (an essential economic function) to continue (as deposits are used to finance lending).

2. Controlling reserve requirements

The second, and arguably most important regulatory role played by central banks is to control reserve requirements. Reserves refer to the percentage of commercial bank deposits that the banks must maintain with the central bank at a given time, i.e. the percentage of their clients' deposits that must be deposited with the central bank.

One of the ways in which central banks can control interest rates is by controlling the amount of capital that must be held in reserve. This is because a central bank can raise interest rates by increasing the reserve requirements for commercial banks. Increased reserves, in turn, mean that commercial banks will have less cash to lend out, in essence creating a shortage in the monetary supply that causes the interest rate to rise due to the effect decreased supply and increased demand has on price. This function is so integral to central banks' operations that many central banks are known as 'reserve banks'.

3. The monitoring of risk

A third set of functions that central banks perform relate to oversight and regulation of commercial banks' risk-related features, which are enforced through regular audits and asset/liability valuations. Central banks research and identify practices that constitute risk that would otherwise be unknown or unquantified. This form of regulatory oversight ensures that commercial banks operate within the safe limits that have been set out by the central bank to prevent excessive risk-taking. The continuous nature of central banks' investigation and oversight enforced by this regulation helps promote transparency in the banking sector.

4. Prevention of discrimination

The fourth regulatory function is the prevention of discriminatory practices by commercial banks. Such regulations mandate that banks are not allowed to discriminate against creditors according to race, ethnicity, religious creed or other non-financial variables – a practice called 'redlining'. This regulation is essential as there have been cases where commercial banks have charged higher interest rates to clients based on their ethnicity or race. For example, in the USA, banks were found to be charging Hispanics and African Americans higher interest rates on loans, requiring the Federal Reserve to step in and address the discrimination.

5. Monitoring of conflict of interest

Finally, central banks' regulatory roles include activities which closely monitor conflicts of interest within the commercial banking sector. Of particular importance is the central banks' ability to regulate or monitor loans issued by commercial banking institutions to businesses that may be considered 'close' to senior executives at the banks in question.

Four regulatory institutions

The International Monetary Fund (IMF)

The International Monetary Fund (IMF) is an institution created in 1945 under the Bretton-Woods Agreement (which also led to the establishment of the World Bank). Their primary functions relate to lending, technical assistance (education and upskilling), as well as surveillance.

Through lending, the IMF often seeks to influence the lender to introduce some form of financial or structural reform. As lenders, in this context, are countries and not individual people, the IMF exercises significant influence on global financial markets. Therefore, the IMF is not a regulatory authority in the traditional sense, but due to its international reach and size it is able to instigate regulation within the countries to which it lends funds.

For example, in mid-2015 Greece was on the brink of defaulting on its debt obligations. The IMF was willing to extend the Mediterranean nation a substantial loan to help the nation avoid defaulting. However, the IMF would only do so if Greece agreed to implement certain austerity measures. These measures resulted in a lot of social unrest, partly because they included tax hikes on individuals who were either unemployed or underpaid due to the ailing economy.

The Bank for International Settlements (BIS)

The Bank for International Settlements (BIS) was founded in 1930 as a vehicle for repatriation of assets after World War I. After its original function was complete, it became a forum for financial cooperation among its members, which are primarily central banks (their current membership is comprised of 60 central banks). Today, it is best described as a 'central bank for central banks', as its primary function is to support central banks in their 'lender of last resorts' function, which is achieved through:

- Providing the member central banks with access to liquidity, by buying back tradeable instruments from them at competitive rates,
- Offering research and statistics, and facilitating workshops, discussions and think-tanks related to pertinent financial issues,
- Providing the member central banks with access to gold- and foreign-exchange transactions, and
- Acting as a holder of reserves for central banks.

The BIS has significant influence and input into global financial market regulation due to its role as a statistical researcher and disseminator and its membership in other committees and regulatory bodies.

Financial Stability Board (FSB)

The Financial Stability Board (FSB) (previously named the Financial Stability Forum) is an international institution which brings together participants from regulatory bodies, central banks and finance ministries from around the world. It coordinates the formation and dissemination of regulatory policies and practices from various participants with the aim of creating standards for international regulation and policies that are aligned to the represented parties.

Because the parties involved have great influence over the financial sectors of their respective countries, the FSB has substantial influence in the agreements that result from their engagements. This brings many influential members of financial markets to the same table and encourages them to debate and agree on policy and regulatory direction. The FSB also follows upon the agreed-upon actions, which in turn encourages the implementation of these agreements.

World Trade Organization (WTO)

The World Trade Organization is an intergovernmental institution that governs the rules of trade between its member nations. The WTO has 164 member-countries which have ratified trade rules in their respective parliaments. The WTO employs many secretariat members (lawyers, economists and analysts) who ensure that these trade regulations are being upheld by all members. Members of the WTO are subject to periodic evaluations to ensure their policies are in line with trade agreements.

The WTO also provides auxiliary functions such as:

- Trade negotiations
- Dispute resolution
- Trade capacity development
- Outreach

As indicated by these examples, in addition to countless others which are not mentioned here, the markets are influenced by a multitude of regulatory participants which operate both directly and indirectly.

3.2.5 Transcript: Types of Regulations and their Objectives

Regulation and oversight affect the stability and efficiency of markets and are therefore imposed very strategically. In this video we turn to three important types of regulation, looking at their objectives and the manner in which they are used.

Prudential regulation of banks

Prudential regulation refers to regulation that require banks (and other financial institutions) to hold a certain percentage of their capital as reserves. The percentage is based on the risk of the assets they hold (in the case of risk-weighted assets). This means that the riskier the assets, the higher the percentage of capital reserve required, in order for the bank to meet its regulatory requirements.

This reserve percentage I just mentioned is termed the Capital Adequacy Ratio (CAR) and it indicates a financial institution's exposure to risk through its assets. The CAR breaks capital up into two categories:

1. Tier 1 – capital that can absorb losses while the bank is still in operation, and
2. Tier 2 – capital that can absorb losses upon insolvency of the institution.

Prudential regulation seeks to protect people's savings-deposits by ensuring that banks and other financial institutions are always able to meet payment obligations to their clients even in severe financial downturns. This in turn provides greater investor confidence in the institutions themselves, making them less vulnerable to bank runs.

Regulation of investment products

A second 'high-level' form of regulation is the regulation of investment products. This differs significantly from prudential regulation, as it seeks to protect the consumer from risk directly. The regulation of investment products applies to market contexts in which the risk is located with the investor, for instance the risk of a unit trust investment depreciating mainly lies with the investor. This type of regulation is designed to cater for this.

Regulation of investment products protect individual investors from risk by setting requirements for product disclosure, such as:

- Requirements for the transparent disclosure of the risk connected to an institution's products,
- Requirements for fee reporting (related to the fee and charge implications of an institution's products or services), and
- Requirements for the disclosure of the terms and conditions of an institution's contracts.

In this regard, the task of regulatory bodies is to clearly define the rules of conduct related to the various financial products it oversees, thereby ensuring that these requirements are always adhered to.

Regulation of financial markets

The third form of regulatory activity is concerned with the regulation of the financial markets and seeks to achieve and safeguard the following objectives:

1. To protect consumers or investors,
2. To ensure the solvency of institutions (their ability to meet payment obligations) and the financial stability of the financial sector, and
3. To promote fairness, efficiency and transparency in the markets.

If you recall our example from the beginning of this module – where traffic is either over-regulated or not regulated at all - it becomes clear that the regulation of the financial markets has these objectives in mind.

1. Protection of the drivers (consumers) can't happen without some form of road rules.
2. There would be no stability if people could never reach their destination owing to over- or under-policed roads.
3. And finally, any kind of efficiency would be impossible where drivers are either gridlocked or being pulled over all the time.

Regulation to promote competition

Our last form of regulation is one which seeks to facilitate, indirectly, the creation and maintenance of efficient markets. This is achieved through the direct promotion of competition, as competition is critical for efficiency and important for the following additional reasons:

Firstly, competition between market participants drives prices down for consumers and investors (due to the market forces of supply and demand). This is a topic we will look at in more detail in Module 7.

Secondly, competition fuels innovation. The more participants there are looking to get ahead, the more rapidly technological innovation will occur. Think about the space race in the 1960s. The competition between Russia and the USA was so intense that astronautical technology leapt forward several decades.

And finally, competition in markets means that there are more participants to prevent collusion among big market players. With greater competitive participation, it becomes harder for large institutions to attempt price-fixing and bullying.

When implemented strategically, regulation can open up markets to realize their full potential, while still protecting their participants and advancing the processes within them. These abstract principles should always be the implicit goal when designing concrete and practicable regulations.

3.2.6 Notes: The Process of Regulation

Up to this point, we have developed our understanding of what regulation is, who designs and implements it, and what effects it can have. Now we will examine the processes involved in creating regulations, from inception to implementation and oversight. A key point of this development is that the phases do not take place in isolated, linear parts; instead, they overlap with one another due to the dynamic nature of this process and the systems to which they apply.

Phase 1: Identification of the need for change

The first phase of any sort of regulation depends on the identification of specific and necessary changes that the regulation seeks to address. It does not simply start with the assumption that regulations are needed. Instead, it is a response to undesirable market conditions or activities. The creation, formulation, implementation and monitoring of regulation is costly in terms of money and time. Therefore, before parties attempt to create regulation there must be an identified need that the regulation seeks to address. This need must also be significant enough to warrant change.

During the identification phase, the regulatory party experiences the need in terms of significant discomfort under the status quo. This can take a multitude of forms on the different market levels, but from a high-level view, the discomfort usually comes from either:

- **Obstacles** in the market that prevent a desired outcome. For example, excessive legal requirements for starting a business and outdated technology that holds back an industry (think about the introduction of cryptocurrencies to the markets).
- **Activities** in the market that prevent a desired outcome. For example, discrimination of investors due to non-financial variables, such as race or ethnicity.

Once this need is large enough or presents a significant challenge, the identification phase draws to a close and gives way to the next phase, in which the person, organization, community or state which has brought the issue forward for change is known as the initiator.

Phase 2: Proposal for change

Once the need is brought to light, the initiators are required to provide a proposed solution to their identified need. This is the embryonic stage of regulation during which both the problem and solution are shaped and take their first form.

Stakeholders must first address the need in detail, by:

- Clearly defining the need/problem,
- Identifying who the issue affects, and to what degree these parties are affected,
- Proposing legislation or policy that may address this issue,
- Drafting a proposal for the implementation of a regulatory oversight body, or the creation of one if none exists.

These proposals are formulated in conjunction with legal professionals and industry experts who collaboratively compile a draft which is submitted for debate. This phase is often undertaken alongside the following phase.

Phase 3: Research gathering

The reason the second and third phase often overlap is due to the information requirements presented by the second phase, in which instigators and their collaborators submit a coherent draft for deliberation. Although this phase of research compilation forms part of the proposal phase, it is distinct, going beyond simply compiling the original draft proposal.

The legislative body overseeing the conceptualization of the regulatory process (for example, a government ministry) will begin an independent research initiative aimed at:

1. Identifying the social, business, technological and financial impact of the problem versus the impacts of its proposed solution, and
2. Verifying the information contained in the draft proposal submitted.

During this phase, the proposal will be made accessible to the public for public comment and to industry-members for broad consultation. This may be done through media, workshops, censuses, and publication in governmental articles, such as gazettes.

Phase 4: Drafting and vetting of regulation

Once sufficient research has been collected and both society- and industry-members have provided input, the draft proposal will be assessed against the feedback provided. During this phase any oversights or incorrect data in the original proposal will be amended to reflect the more accurate data.

At this phase, the proposal should contain the following key elements, with the appropriate statistical data:

- Clear problem definition – What is the real issue?
- Stakeholder identification – Who is affected by the problem, who can help change legislation, and who should implement and oversee the regulation
- Proposed solution – What should be done to solve the problem or address the need?
- Value proposition – What are the benefits of this change?
- Budgetary requirements – How much will implementation and oversight cost?

Once these key elements are present and substantiated by research, the proposal is sent to the appropriate legislative body for debate, amendment, rejection or acceptance. If the entity recommends that an amendment should be made, stakeholders will be required to engage the public, industry and legal experts again, as well as to provide an impact assessment of the proposed amendment(s).

If the regulation is rejected, the stakeholders can take the rejection on appeal and fight the rejection. This is usually done in the relevant court. Alternatively, the stakeholders can re-engage and seek a regulatory compromise, while their third option is simply to accept the rejection.

If the regulation is accepted and passed by the legislative arm of the government, it is then published, typically in a gazette so that all parties are informed of the change and the required timelines for implementation. At this point, the process moves into the implementation phase.

Phase 5: Implementation and oversight

This phase is only reached once a regulation has been accepted. Once a regulation is passed, and the appropriate stakeholders have been made aware of it, the overseeing body needs to implement the regulation in the relevant markets. In a case where there is no overseeing body – for instance, during the creation of the SEC – then this body will first need to be set up in accordance with the relevant legislation.

The overseeing body will establish and monitor the standards for the following activities:

- Reporting requirements – Which information must be reported?
- Frequency of reporting – When are parties required to report (e.g. monthly, quarterly, annually, etc.)?
- Format of reporting – Which type of reporting is required (for example, IFRS is used for financial reporting)?
- Punitive measures for non-compliance – Which punishment is enforced for which issue of non-compliance?

Following the implementation of regulation, the effects of the regulatory changes should then be monitored to assess and identify any changes of behavior within the market. Any abstract and unacceptable behavior that arises from the implementation of the regulation may give cause to amend or even repeal the regulation.

Some caveats

As mentioned at the start of this section, this process is described at a high-level and is generalized in order to give you an idea of regulatory formation and implementation. This is not a globally recognized framework and not all regulation will be formulated in this manner.

The above process makes certain assumptions. It assumes the existence of an open democracy in which the society and industry at large is encouraged to engage with its government in solution creation. Under certain dictatorships, for instance, this may not be the case.

This process will also vary in its details according to the myriad governmental frameworks around the world. The system followed by the Japanese government is different from that followed by the UK government, and that of the UK government differs from that of the US government, and so on. This will obviously have an impact on the speed, quality, and overall influence of the regulation in question.

3.2.7 Transcript: The Role of Ethics in Financial Regulation

The realm of ethics rarely lends itself to consensus. After all, it is concerned with establishing the principles that determine what is right and wrong. Unlike the sciences, there are no finites or facts when it comes to ethics – in Euclidean Geometry I can know from the Pythagorean theorem that a right-angled triangle's squared hypotenuse will always equal the sum of the squares of the other two sides. However, there is no such formula for ethical values or behavior.

Some argue that ethical principles are formed by one's upbringing and childhood experiences. Others say that they exist intrinsically, meaning within each person, and therefore each person has their own set of values independent of any absolute standard.

With a greater emphasis on commonality, some believe our modern ethical standards are a step forward in humanity's ethical progression over time; that our principles represent the sum of the values of the generations before us. This school of thought asserts that modern society is conceived of 'higher' ethical values, developed and expanded on those of previous generations.

Regardless of your belief about the basis of ethics, you can no doubt grasp the complexity of establishing ethics in practice, as it applies to the highly complex and interconnected boundaries of behavior and activity. For the sake of this module, let us agree on a broad definition of ethics in relation to regulation of financial markets – namely, a 'morally upright behavior' in terms of:

1. Compliance to regulation within financial markets, and
2. A personal and individual value system.

For our discussion, regulatory compliance is adherence to the regulation which is in place (such as not committing fraud, for example). A personal value system refers to one's personal drive to act a certain way regardless of the law at the time (for instance, you may believe speculative investment is wrong, even though it is not illegal, and therefore you choose not to partake in it).

With this broad definition of ethics in mind, we can now examine some ethical considerations as they relate to regulation.

Regulation as a framework for ethical behaviour

As we know, the markets are ever-changing, and forever-advancing in the financial instruments they produce and the technology they leverage. This means regulation will never be able to – and arguably should never be used to – legislate every aspect of finance. Firstly, this is because the rate of change in markets is higher than regulators' ability to implement policies to cater for those changes. Secondly, the purpose of regulation is to enhance efficiencies in the market, as opposed to stunting them, which, as you may recall from our traffic example, over-regulation would do.

Regulation therefore should act as a framework that encourages ethically prescribed behavior. Regulators should understand that financial markets are firstly incentivized by profit, which can lead to unscrupulous behavior, and therefore the measures should be adjustable to cater for this. Ethical regulation can adjust unscrupulous behavior in the following ways:

1. Encourage transparency within markets by providing guidelines for financial products and market activities.
2. Facilitate cooperation with other international bodies so that regulation and oversight is aligned across borders.
3. Enable effective prosecution and punishment when participants are non-compliant.
4. Have efficient and effective mechanisms for reporting compliance and non-compliance (it is no good identifying infringements years after they occur). For example, agencies that deal with anonymous tip-offs could assist with reporting non-compliance.
5. Ethical regulation should incentivize compliance. If a profit incentive leads participants to fraudulent behavior, then it stands to reason that incentivizing through financial rewards should help combat this.
6. Create a firewall between the regulator and the participants they regulate. Currently no mechanism separates Wall Street firms and the Securities and Exchange Commission (SEC) which regulates them.
7. Encourage inclusion to ensure that all participants' ethical views are represented.

Regulation is a powerful mechanism in the creation of a highly ethical financial culture. Ultimately, ethical practices can be improved within financial markets through creativity, inclusion and well-formulated regulation to guide market behavior. But the opposite is also true, as poorly-drafted policy and oversight can lead to a financial culture which festers and harbors damaging behaviors as participants seek profit over all else.

3.2.8 Notes: Regulation versus Deregulation

Market regulation is a hotly debated issue within both political and financial forums. The stakes are always high and there are lobbyists on each side of the fence, promoting their own side's agenda and detracting from their opponent's. Politicians who have the ability to enact or repeal the regulation also have constituents to whom they answer, so political agendas often hold sway when much-needed regulation runs against campaign promises.

In this section, we examine the 'pros and cons' of regulation and deregulation. Rather than trying to convince you of a particular view, this section simply aims to equip you with facts that apply to both sides of the argument in order to make an informed decision in a given context.

First, let us turn to deregulation.

Deregulation - An argument 'for'

Lower costs

Regulation is expensive – shortly after the 2008 financial crisis the IMF estimated that the various regulations put in place would affect an increase in lending rates as follows:

1 **Europe** – 17 basis points (bps)
2 **Japan** – 8 basis point (bps)
2 **USA** – 26 basis points (bps)

This meant consumers would pay between 0.08% and 0.26% more interest for credit due to the associated regulatory costs, which are passed on to the consumer.

Market participation

Fewer rules means fewer hurdles to jump to get to market with a product or service. This feature correlates with greater market participation. Greater market participation leads to increased competition and employment. Increased competition drives down prices. Lower prices lead to savings for consumers which means greater spending in other areas of the economy, or savings increases.

Increase response rate

Market participants have greater flexibility in their responsiveness to changes in the market environment. The speed at which a company can adjust to a significant opportunity or threat is substantially different when they do not have to spend crucial time and effort getting regulatory approval.

Rate of advancement

As previously mentioned in our section on market participation, deregulated environments are prone to faster rates of advancements in:

- Technological advancement,
- Industrial expansion, and
- Product and service creation.

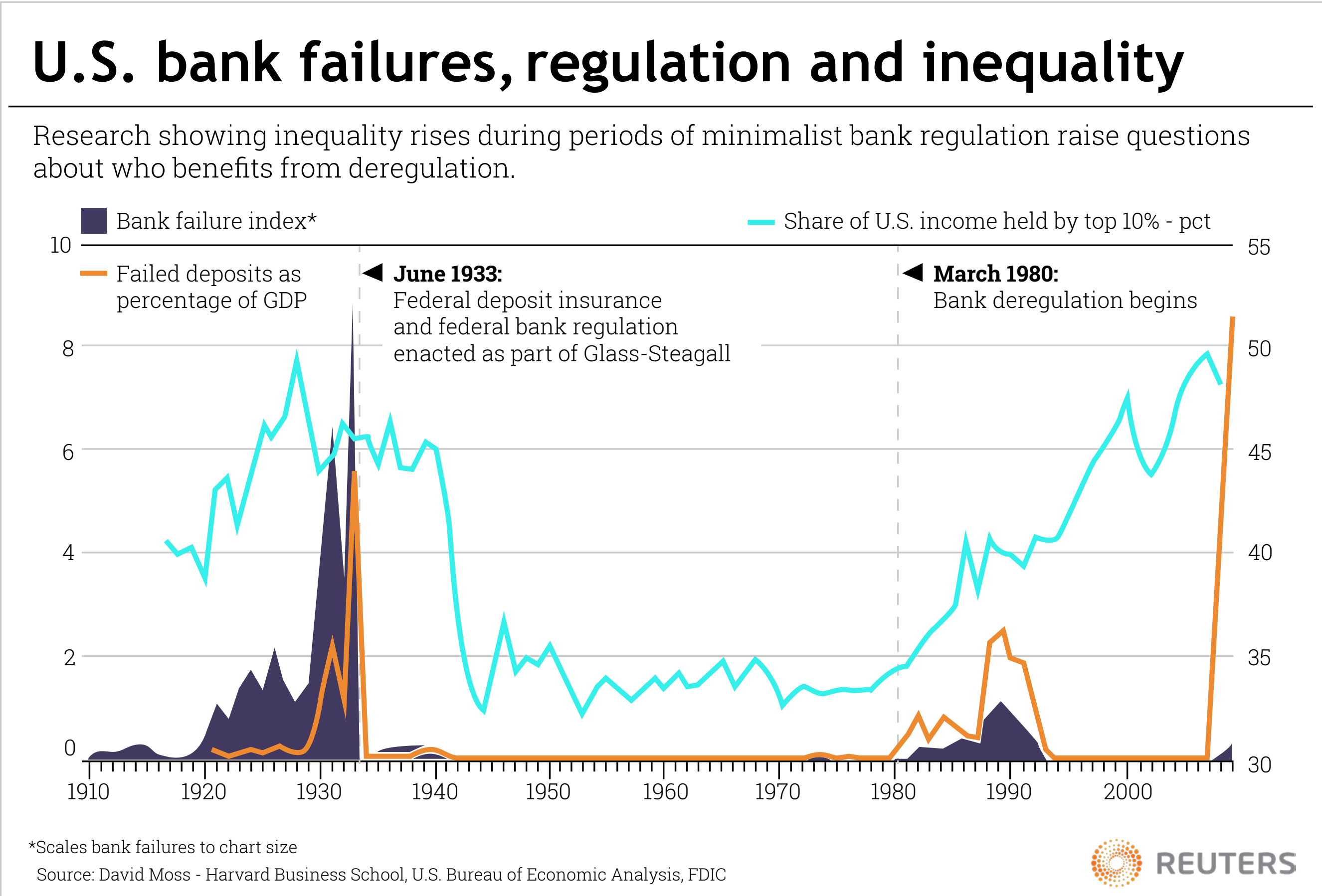
To look at an example of the benefits of deregulation in non-financial sectors, see the following linked example of [the effect of deregulation of the US Railroad industry in the 70s and 80s.]

We see from the example that productivity soared, and prices dropped significantly.

In summary, the benefit of deregulation is that it allows businesses to focus on doing what they do best without added distractions, constraints and costs of regulation – reducing the need for time, money and resources.

Inequality reduction

An argument in favor of deregulation is often substantiated by the belief that it results in greater employment and income wages due to some of the factors mentioned previously. However, the research detailed in the graph below shows that periods of deregulation are characterized by higher rates of inequality.



Reuters graphic/Stephen Culp 02/12/11

The research the graph is based on examined the years in which regulation was imposed on US the financial/banking sector and the years in which regulation began to be repealed.

The aforementioned study focused on the US financial and banking sector over the last century to gauge the effect of regulation on the following areas:

1. Bank failures,
2. Share of income of the top 10% of the population (economic inequality), and
3. Failed deposits as a % of US GDP.

Who do you think benefits from deregulation? Interestingly, the graph shows that regulation in the financial sector has reduced inequality, reduced the rate of bank failures, and reduced deposits lost.

Less selfishness

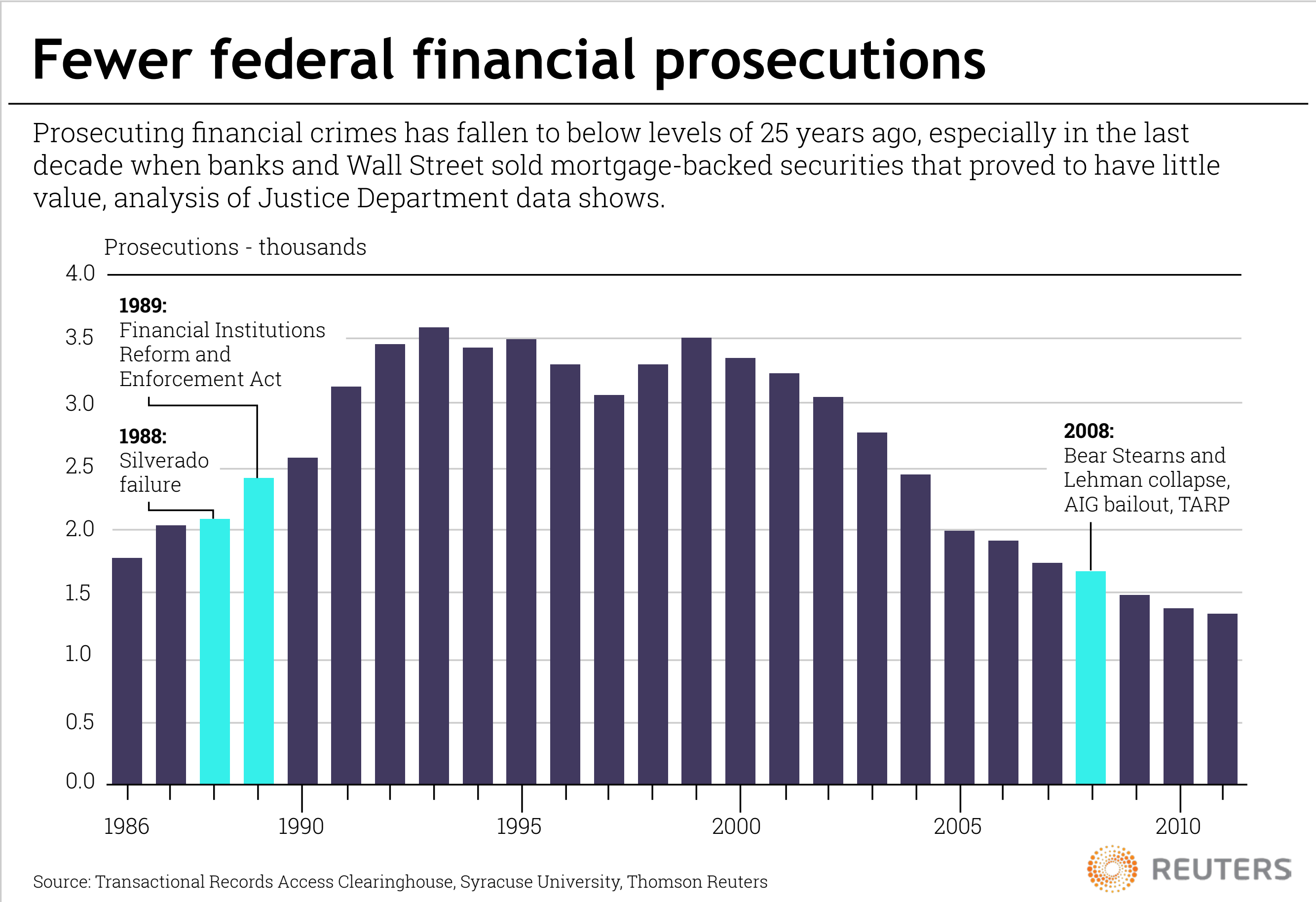
Research also shows evidence that periods of deregulation in the financial sector tend to result in significantly higher average wages for individuals employed in the 'deregulated' sector – suggesting that there is less selfishness when distributing wages. However, this evidence may also illustrate why so many in the financial sector are vehemently against regulation if we view it as a demonstration of self-interest. If regulation means their commission, salary and bonuses are negatively impacted, it's highly unlikely they will be advocates of regulation.

http://gulzar05.blogspot.co.za/2010/05/history-of-us-economy-over-past-three.html

Justice and accountability

Below we see a graph compiled from research findings, conducted by Reuters, showing the rate of prosecution of financial crime in the United States after regulation was passed to enforce accountability.

Prosecutions



Reuters graphic/Stephen Culp 02/12/11

Prosecutions for financial crimes can clearly be seen increasing after the passing of the Financial Institutions Reform and Enforcement Act, showing that simply enacting legislation is insufficient as unethical parties will continue their activities until regulation is enforced. Prosecution of financial crimes, however, tended to decrease during the periods that followed the financial crisis of 2008. This was primarily due to the guilty parties (the big investment banks) settling out of court.

Accountability is a key aspect in preventing history from repeating itself. Regulation seeks to hold those who are guilty to account for their crimes. Ultimately, you cannot have any kind of justice without regulation.

Consumer protection

When the goal is profit at any cost, the consumer can end up losing out badly. The reason behind most large financial scandals across the world can, in some way, be put down to greed that goes unchecked. Regulation seeks to put checks and balances in place so that participants in financial markets do not let their pursuit of profits overrule their responsibility to clients.

It is important to concede that the benefits of regulation are highly correlated with the quality of the regulation in question and how that regulation is applied within the context of the market at that point in time (think Hoover's regulation vs FDR's). The benefits we saw in the previous arguments did not come purely because of regulation for its own sake. In each case, regulation would have to have been creatively identified, and thoughtfully applied in order to have a powerful positive effect. The same rings true for any repeal of existing regulation.

In conclusion

The context of each event is important to understand. Regulation or deregulation for its own sake does not lend itself to effective regulatory policy. One should always consider the market dynamics, the political and economic climate, and ultimately the human beings who are affected by the decision.

3.3 Collaborative Review Task

In this module, you are required to complete a collaborative review task, which is designed to test your ability to apply and analyze the knowledge you have learned during the week.

Question

Case study: The savings and loan crisis

Often when we see failure in financial markets it's usually quite clear (after the fact) what the cause was. Often times there is under-regulation to some degree, and the aftermath of the failure sees the enactment of new policy to 'plug the gap' which caused failure(s). Take the banking crisis of 2008 for example, investment banks, insurance companies and ratings agencies were colluding and trading in high risk investment products with insufficient collateral to cover their losses. The policy created to counter this was known as Dodd-Franks which – among many other things - stipulated capital reserve requirements for banks, to ensure they could cover their debt obligations.

The Savings and Loan crisis of the 1980s and 1990s however, was not triggered by poor policy necessarily, but instead came about due to inflationary/stagflationary* pressures at the time. Policy makers then attempted to manage this inflation risk through regulatory changes which ultimately lead to the demise of the entire savings and loan market.

Your task is to read the articles below and use your insight into market regulation to provide answers to the following questions:

1. Identify key role players from the inception to the demise of the S&L market.
2. Identify and analyze shortfalls of the regulation which affected the S&L market. Your answer does not need to be contained to the crisis years.
3. In reference to article 2, make an argument for which level of regulation (see Transcript 2) the Garn-St.Germain Depository Institutions Act was.

* Stagflation is a process whereby an economy experiences stagnation in wages, employment and economic activity, while still experiencing high or growing inflationary pressure.

Articles

1 https://www.federalreservehistory.org/essays/savings_and_loan_crisis

2 https://www.thebalance.com/savings-and-loans-crisis-causes-cost-3306035