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Regulation and Financial Crisis in OECD Countries

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The financial crisis in the United States has shaken the global economy. Today, many observers see the crisis as a proof of the free market's weaknesses. They think the solution lies in greater use of regulations and government intervention in the financial markets.At the same time, there are many signs that the crisis was created by regulations and government meddling. This has not been a market failure; it has been a failure of politics. The objective of this paper is therefore to describe the relationship between regulation and current financial crisis in OECD countries. To determine what causal relationship exists between regulation and financial crisis, dynamic model was used and define causality along the lines established by Granger (1969). This study will use the growth previous period share price as a measure of the severity of the crisis. The result of Engel granger causality test about the relationship between regulation and financial crisis in OECD countries; show that there is reciprocal relationship between regulation and financial crisis. Regulation and financial crisis have positive relationship. The results show that increasing regulation increased financial crisis but regulation conclude regulation in labor markets, credit market and business market. Change in the some of them change regulation and different effect on financial crisis.

Field of Research: Regulation, Financial Crisis, Causality Test, Panel Data.

1.Introduction

The subject of regulation has been one of the most contentious, with critics arguing that regulations interfere with the efficiency of the market, and advocates arguing that well designed regulations not only make markets more efficient but also help ensure that market outcomes are more equitable.

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Interestingly, as the economy plunges into a slowdown, if not a recession, with more than 2 million Americans expected to lose their homes (unless the government intervenes), there is a growing consensus: there was a need for more government regulation. Responding to these calls—as if to close the barn door after all the horses have gotten out—the Federal Reserve has tightened some regulations. If it is the case that better regulations could have prevented, or even mitigated, the downturn, the country, and the world, will be paying a heavy price for the failure to regulate adequately. And the social costs are no fewer graves—as hundreds of thousands of Americans will not only have lost their homes but their lifetime savings. Home ownership has long been thought of as contributing to the strength of communities; with the share of home ownership falling, communities too will be weaker. The foreclosures will exacerbate the decline in housing prices, and property tax bases will erode—a further knock on effect of inadequate regulation. Financial crises not only impose short-term economic costs but also create enormousregulatory risks. The financial crisis that is currently gripping the global economy is already producing voluminous proposals for regulatory reform from all quarters. Previous financial crises—most obviously the Great Depression—brought significant financial regulatory changes in their wake, most of which were subsequently discredited by economists and economic historians as counterproductive.

This paper considers several important areas of response (or nonresponse) of regulation to the financial crisis. I begin with an overview of the causes of the financial crisis and the ways in which the crisis has highlighted the need for regulatory reform. I have shown that causes and consequence of financial crisis with model and Granger test.

2. Literuture review

Some forms of regulation and government intervention in the financial market aim to reduce risk taking, whereas others (such as the US mortgage crisis) tend to increase risk taking. It is easy to call for more regulation in times of crisis. Bernanke (2009) notes that the crisis revealed the need for improvement in supervisory practices and internal communication, particularly the need for maintaining strong risk-management practices in good times as well as bad. Buiter (2007) points to a number of flaws in the financial system that existed at the peak of the boom. These include excessive securitization, as well as investors and regulators placing too much faith in the opinions of private rating agencies. Spence (2008) argues that the asset price bubble was fuelled by a combination of excessive leverage and a widespread underestimation of increased systemic risk. Coval et al, (2009) argue that the excessively high ratings received by structured instruments are attributable to the excessive confidence that rating agencies had in their own abilities to assess risk. In addition to its preferential treatment of securitized assets, regulatory frameworks may have encouraged risk taking through the (implicit) designation of larger financial institutions as “too big to fail.” These guarantees likely encouraged these institutions to expose themselves to greater risk than they otherwise would have.

In addition to formal regulatory weaknesses, Bernanke (2009) argues that flaws also existed in the structure of competition and the improper incentives for risk-taking in financial institutions. He called for reforms ensuring that bonuses and other forms of compensation aligned the incentives of employees with those of their institutions. Institutional changes along these lines have been highlights to proposed reforms of the global financial system under Basel II [Basel Committee on Banking Supervision (2009)]. Buiter (2009) argues that as the economic boom persisted, regulatory capture and corruption became commonplace.It should be stressed that these regulatory weaknesses were not confined to the United States. Buiter (2007) faults the regulatory structure of the Financial Services Agency and deficient banking insolvency laws for throwing Britain's financial sector into disarray. He argues that the separation of power in Britain's financial regulatory institutions left the agency that had the best information about financial sector difficulties (the FSA) incapable of conducting lender of last resort activity. However, Gieve (2009) argues that there were benefits to getting insurance and securities dealing under the same regulator at a time when the lines between these activities was breaking down.

The deterioration in institutions also extended beyond the formal regulation of the financial system. Krugman noted that as the boom continued, the share of financial transactions outside the umbrella of traditional banking regulation increased.9 Many have also argued that the quality of corporate governance also deteriorated over the boom years; Buiter (2009) refers to a "… steady erosion in business ethics and moral standards." As in the case of poor financial regulation, as long as firms were increasing markedly in market valuation, there was little incentive for equity or other stakeholders to rein in the activities of corporations. The extent of poor practices was revealed only after the bubble burst. However, few are those knowledgeable of the US mortgage crisis that would approve the wisdom of forcing banks by regulatory fiat to lend money to low-income households with low credit worthiness, or by subsidizing high-risk loans through interest rates or government backed credit institutions. Conversely –regulations which restrict financial markets' risk taking– today seem an attractive solution to many. However, for a number of reasons, we should be cautious about over-regulating financial markets. For a start – and this is essential – free markets are the foundation of wealth creation worldwide. The relatively free financial markets have played a decisive role in making economic development possible throughout the world. Studies have established the link between the degree of competition and openness in the financial sector and the economic growth of a given country, which is also reinforced by the globalization effect in the financial sector (Bloomberg ,2008). As Calomiris (2009a) shows, on an ex ante basis, subprime default risk was substantially underestimated during 2003–7. Reasonable, forward-looking estimates of risk were ignored, and senior management structured compensation for asset managers to maximize incentives to undertake underestimated risks.

3. The General Theory of Regulation

The general theory of regulation begins with a simple question: Why is regulation needed? This is, in turn, divided into two sub-questions: Why do markets by themselves not suffice? And if there is to be government intervention, why does it take the form of regulations?

3.1. The need for government intervention

i. conventional market failures
Adam Smith (it is widely believed) argued that markets by themselves are efficient. Arrow and Debreu established the sense in which that was true (Pareto efficiency, i.e. no one could be made better off without making someone else worse off), and the conditions under which it was true (perfect competition, no externalities, no public goods). Subsequently, Greenwald and Stiglitz(1986) showed that whenever information is imperfect or markets incomplete that is, always there is a presumption that markets are not (constrained) Pareto efficient. Thus, the notion that markets, by themselves, lead to efficient outcomes has, today, no theoretical justification: no one believes that the conditions under which that statement is true are satisfied.
Some advocates of free markets take it as a matter of faith that the magnitude of the inefficiencies are small (though no one has suggested how one might prove that); but more commonly advocates of free markets take it as a matter of faith that government attempts to correct market failures by and large make things worse. To be sure, there are examples of badly designed government regulations, but the disasters associated with unfettered markets at least provide a prima facie case for the desirability of *some* regulation. Other forms of market mechanisms, it is now realized, also are insufficient reputation mechanisms help but do not ensure efficiency.Regulations can thus play an important role in addressing market failures.

There are several particular categories of market failures to which I want to call attention. We have regulations designed to mitigate the extent of *externalities*. These include, for instance, zoning restrictions and environmental regulations. We have regulations designed to maintain competition (restrictions on anti-competitive practices), and to ensure that natural monopolies do not abuse their monopoly position (utilities regulations). We have a large set of regulations aimed at protecting consumers (ensuring that the banks where they deposit their money are sufficiently sound, that food and products are safe, or that they are not taken advantage of by unscrupulous merchants, advertising, or lenders). In several of these cases, as we shall note, disclosure is important; but the regulations go well beyond disclosure, for reasons which I explain below. There are two further categories on which I want to comment, both related to *information problems.* The first concerns insurance. Private sector contractual arrangements often have what would appear to be “regulatory” structures. A fire insurance firm requires that the insured install sprinklers. Sometimes, insurance companies use the price system, i.e. they give a discount if sprinklers are installed. But sometimes they simply will not write the insurance policy if sprinklers are not installed. Many government regulations are similarly motivated: government absorbs risk, and

to reduce its risk exposure, imposes constraints; it provides flood and earthquake insurance (explicitly in some cases and implicitly in others if an earthquake occurs, it knows that it cannot deny assistance to anyone) and demands that houses be constructed so as to reduce the risk of loss. Because of moral hazard or even because of a failure to perceive accurately the magnitude of the risk individuals will take insufficient care.

The second category concerns what might be called certification. The meatpackers wanted certification that their products were produced in a safe and humane manner.They also knew that the only credible source of such certification was the government if the meatpackers paid the certifiers directly, there would be a conflict of interest. Recent troubles in accounting and rating agencies highlight the problems of private certification. The Enron scandal highlighted that the accounting firms' incentives were distorted; and while Sarbanes-Oxley improved matters, it did not fully resolve them. Similarly, with the rating agencies being paid by the financial firms to rate the complex products they were creating, it is perhaps no surprise that they gave AAA ratings to highly risky products. Information is a public good. All individuals want to be assured that if they put money in a bank; the bank will be there when it comes time to withdraw the money.

Government bank regulation is in part certification: it sets certain standards that a bank must satisfy—and inspects that it fulfills those standards. It could, of course, stop there, allowing individuals to deposit their money in "uncertified" banks (and in a sense, it does that—there are many non-certified financial institutions). But it goes beyond that: it does not allow banks to operate unless they satisfy certain conditions. And that, in part, is because it knows that if a bank fails, it may have to be bailed out. As one astute observer put it: there are two kinds of governments those who provide deposit insurance and know it; and those who do so and don't know it. This in turn means that in order to mitigate the moral hazard problem, restrictions on banks have to be imposed (stiglitz,2008).

ii. Irrationality

The market failure approach growing out of an analysis of the standard assumptions required to establish the Pareto efficiency of the economy (the First Fundamental Theorem) is, however, only one of at least three strands of analysis underlying the demand for regulation. A second focuses on *market irrationality.* The standard competitive equilibrium model assumed that all individuals were rational; it explained why rational individuals (households) interacting with profit (or value) maximizing firms in a competitive marketplace might not result in Pareto efficient allocations. But individuals may not be rational and may deviate from rationality in systematic ways. Individuals (and even more so societies) have to be saved from themselves. Markets suffer from irrational exuberance and irrational pessimism. Individuals may not save adequately for their retirement. Until the recent work on behavioral economics, economists typically looked askance at such paternalistic arguments for government intervention. Why, it was argued, should there be any presumption that governments are more rational or better informed than

individuals? Who are we to impose our beliefs of what is rational on others? Part of the answer was provided by the classic theory of market failure: one might argue that so long as the individual only harms himself, there is no reason for government intervention. But individual actions may adversely affect others (there are, in effect, externalities). Regulation may reduce the likelihood of these adverse effects occurring and their impacts when they do. There is a special category of externalities that arises in democratic societies. Societies cannot stand idly by when it sees someone starving even if it is a result of the individual's own mistakes, say, not saving enough. Society will bail out the individual (or a bank which is too big to fail). Knowing that, individuals have an incentive to save too little (or banks to take too much risk). Knowing that, government should impose regulations to ensure that individuals do save enough (or banks do not undertake excessive risk) (stiglitz,2008).

iii. Distributive justice

There is a third category of rationale for government interventions: the best that can be said for the market economy is that it produces *efficient* outcomes; there is no presumption that it produces outcomes that are viewed as socially just. Regulations may be an important instrument for achieving distributive objectives, especially when governments face tight budgetary constraints (or other administrative constraints). CRA (Community Reinvestment Act) lending requirements or health insurance mandates may be an effective way of helping poor individuals when the government cannot afford other ways of helping them.

3.2. Regulations vs. other forms of intervention

Critics of regulation argue the objectives of regulation can be achieved better at lower costs by using "market based" interventions, i.e. taxes and subsides.If greenhouse gases give rise to global warming, tax greenhouse gas emissions. Price interventions have much to commend them: they are general, simple, and often have low transactions costs. But research over the last quarter century has clarified an important set of limitations. Indeed, the very conditions (such as imperfect and asymmetric information) that imply that markets by themselves do not in general lead to (constrained) Pareto efficient outcomes also imply that price interventions by themselves will not suffice.

i. Imperfect information and incomplete contracting

Most importantly, in the presence of imperfect information and incomplete contracting, optimal incentive schemes typically are highly non-linear (they do not take the form of a price intervention) and may even impose constraints (like rationing and terminations). In a sense, most regulations can be recast as (typically simple) forms of non-linear price schedules; but few price schedules, used in the private or public sector, are in fact anywhere near the complexities of those that emerge from optimal incentive schemes.

Whether a particular regulatory structure is better or worse than a particular simplified non-linear price system may be hard to ascertain; and in any case, viewed through lens, the distinction between regulatory systems and (non-

linear) price systems is morel a matter of semantics than anything else. There is, of course, a literature contrasting polar forms: a pure price system or a pure quantity (regulatory) system. But there is seldom reason to resort to such extremes, and in many cases, the standard formulation is simply not relevant.

ii. Prices vs. quantities

Nonetheless, much of the literature has been couched in exactly these extremes.[14] It has been argued, for instance, that, depending on the nature of the shocks (to the demand and supply curves), quantity interventions (regulations) may lead to a higher level of expected utility than price interventions (Weitzman ,1974).Consider, for instance, the problem of greenhouse gases. Some have suggested that this is a classic case where quantity regulation is to be preferred. With price interventions, the level of greenhouse gas emissions is uncertain; a change in the demand or supply curve will mean that we will have less or more emissions than is desirable.

But the argument is hardly persuasive: global warming is related to the level of concentration of greenhouse gases in the atmosphere, and what matters for this is not the level of emissions in any particular year. There is, in fact, even some uncertainty about the relationship between emission levels and changes in concentration levels and about the relationship between the level of concentration of greenhouse gases and the (precise) change in climate. There will have to be, in any case, adjustments to the allowable levels of emissions over time. Using prices (emission taxes), there will have to be adjustments too, with one additional factor of uncertainty: the relationship between taxes and emissions. But provided that adjustments are made in a relatively timely way, there is little additional risk in the variables of concern, the level of concentration of greenhouse gases, and climate change.

3.3. Laws and regulations

While we typically think of regulations in areas of environment, safety, banking, and utilities, many of the other laws affecting economic activity can be looked at through a regulatory lens. Bankruptcy laws restrict the set of contracts that parties can draw up with each other no matter what the contract may say about what happens in the event that a debtor cannot meet his obligations, bankruptcy law will prevail if those provisions are in conflict. Similarly, corporate governance laws restrict how corporations may govern themselves. Much of the difference between “regulation” and these areas relates to the processes by which regulations get adopted. Typically, in the case of regulations, there is some delegation: the legislature delegate's authority to a regulatory agency, which is assumed to have greater expertise in addressing the complex technical issues. The delegation raises concerns about democratic accountability, particularly given the frequency with which regulatory agencies are captured by special interests. These concerns may not be fully obviated by legislative review processes. Regulations on how regulatory agencies design regulations (e.g. on the regulatory process) are designed to enhance democratic accountability (including transparency), but there is concern that these too have not been fully effective.

Related issues are raised by central banks, where recent doctrines have held that independent central banks lead to better performance. The evidence on that is less than compelling; what it shows is that independent central banks focusing on inflation do achieve lower rates of inflation it would be really surprising if that were not the case but do not succeed in achieving economically significant or even statistically significant better performance in other more relevant metrics, like growth, unemployment, or real wages. Central banks effectively control a critical price in the market, the interest rate, not so much by price regulation but by intervention. In many economies, they control a second critical price, the exchange rate. There are many doctrinal disputes over whether government should control the exchange rate, but ironically, almost none about whether government should control the interest rate (though there are many disputes about *how* it should control the interest rate). The controversy over central bank independence is part of a broader debate of democratic accountability. One can have an independent central bank which is more broadly representative some countries insist that there be representation of labor (which is likely to be more concerned with unemployment and less with inflation), others have limited participation of financial sector representatives.

3.4. Government Failures

Anyone who has watched the U.S. government in the last seven years is well aware not only of the possibility of government failure but also of its reality. In some cases it is a matter of incompetence, in others of corruption; in some cases it may be hard to distinguish the relative role played by each. Government programs can be subverted. The analytic questions are, first, are these problems *inevitable*? Secondly, when they occur, are there corrective processes? Thirdly, are there some regulatory measures (and some regulatory processes) which are less likely to be subverted? Just as much of recent economic research has been directed at the question of how we mitigate the consequences of economic failure, we can ask, what can we do to mitigate the likelihood and consequences of government failure?

Government failure at least on the scale that we have seen it in recent years is not inevitable. Indeed, the Reinventing Government initiative showed that concerted efforts to improve the efficiency and responsiveness of government could succeed. Beyond that, some of the same reforms that work in the private sector are relevant in the public: increasing competitiveness and transparency, and improving incentive structures, where outputs can be reasonably well-defined and attributed to particular individuals.So long as there is sufficient transparency and competition, there are corrective processes. Governments that fail will be replaced; they lose their credibility and legitimacy. To be sure, those in the political process try to reduce competitiveness (e.g. by gerrymandering) and to hide failures (through a lack of transparency) just as do those in markets. Finally, some regulatory processes are more subjected to “public failure” than others, and part of the art of the design of regulatory regimes is to identify those which are less likely to be captured or abused. One of the arguments for disclosure requirements is that they are less subject to abuse, and one of the arguments against barter

arrangements (zoning variances in return for providing certain public goods) is that they are never perfectly transparent and are therefore subject to abuse. Improvements in incentives and accounting frameworks will help, but they will not suffice. Financial markets have been plagued with manias and bubbles that inevitably burst. One can never be sure that one is in one a bubble until after it bursts—but as prices soar beyond historical ranges, the probability that one is in such a bubble increases. For all the sophistication of modern risk management techniques, they have done little to affect the occurrence of these bubbles, perhaps as we learn how to manage risk better, we take more risks, and the new financial innovations have facilitated the ability to take on these additional risks. (Some argue that the use of modern risk management actually makes crises more frequent) In the case of many of the new financial products, it was difficult to ascertain what their *economic* function, i.e. they were not really tailoring risk products to meet the particular risk profile of particular investors. Indeed, what was going on was stripping assets apart and reassembling them, in ways that contributed to a lack of transparency? It is clear that no one really understood fully the risk characteristics. These products, rather than helping individuals manage risks, made it more difficult. Financial markets have innovated, but these innovations have resulted in hundreds of thousands of loans that go beyond individuals' ability to pay. Even many those that are making their payments are facing hardship, anxiety, and stress. Clearly, the financial sector has not done a good job at analyzing the consequences of the products that they produce. Defective products can clearly have disastrous effects both on those who buy them, and on our economy. In the current instance, those evaluating risk have made a number of systematic mistakes to which we have already called attention.

A financial products safety commission could help fill in the gap, particularly in relationship to products being produced by and invested in by regulated entities. Each product would have to have a stated. Its risk characteristics would be identified, using conservative models which paid due attention to the failures previously noted. The Financial Products Safety commission would evaluate whether products provided significant risk mitigation benefits of the kind purported by the product. There would be a presumption that there "is no free lunch," i.e. that higher returns could only be obtained at the expense of greater risk; and a strong presumption against complex products, the full import of which are hard to analyze.The Financial Products Safety Commission would establish transparency standards that all those dealing with regulated financial entities would have to satisfy (including hedge funds and sovereign wealth funds.) It would it have the power to ban certain products from the balance sheets of these regulated entities (just as there are currently restrictions on the assets that they can hold. These reforms are particularly important given the scope for regulatory arbitrage that has been exposed in the recent crisis. Sub-prime mortgages were transformed, as if by financial alchemy, into AAA assets, so that they could be placed in fiduciaries who otherwise would not have been allowed to hold these risky products. Limitations in our accounting system similarly provide scope for "accounting arbitrage." We understand better now some of the *wrong* motivations for the production of new financial products.

Not all the regulatory instruments that could have been used have been used to control the bubbles that have imposed such costs on the economy. For instance, increasing collateral requirements (margin requirements, down payments) was a natural instrument to have employed, both in the stock bubble of the 90s and the housing bubble of today. The problem, noted earlier, is that the Fed (partly out of ideology) has been reluctant to use these instruments.In the current regulatory framework, the focus is mostly on individual institutions (is a particular bank "safe and sound"). Little attention is placed on the overall framework.

Financial markets have become increasingly interrelated. One cannot look at the system focusing on banking alone, or on securities markets alone. There is a need for a Commission that looks at the financial markets overall, and assesses whether the various regulatory agencies are doing what they should be doing to maintain financial market stability. This Commission, like the Financial Products Safety Commission, should not be dominated by those from the financial markets, but should rather be more broadly representative, with, e.g. economists who take a broader systemic view, and reflect the concerns and views of main street and labor as well as financial markets.

Government has a legitimate argument for imposing regulations on entities that threaten the stability of the financial system. There has long been a view that investment banks do not need to be regulated, because their owners, and not the public, bears the risk if they make bad investment. The government financed bail-out of Bear Stearns has laid to rest such claims. The rationale for the government bail-out (as for the government orchestrated bail-out of LTCM) was that there would be systemic consequences if a failure occurred. This means that any entities that are closely interlinked with those parts of the financial system over which government has regulatory responsibility (banks, pension funds, other fiduciaries, etc) need to be regulated. The extent and nature of the regulation should presumably depend on the nature of the systemic risks which problems in each entity (or from correlated behavior in a group of firms) might pose.

Thus, one might argue that gambling between consenting adults should be allowed: only the parties to the gamble are at risk. On this reasoning, hedge funds that do not sell financial products to or receive loans from banks or other regulated entities should have at most limited regulations, e.g. certain behaviors might be proscribed. Hedge funds (or similar entities) wishing, however, to sell financial products to or receive loans from banks would have to register as "qualified financial entities," and be subject to more extensive regulation, including regulations concerning disclosure and incentives.Each country, in designing its own regulatory framework, has a tendency to focus on impacts within its own country. And just as each bank ignores the externalities to which its actions give rise, so too for individual countries. For instance, some countries have expanded their banking system by *regulatory competition,* including weakening regulations designed to ensure compliance with the tax code. There is a worry, noted earlier, that regulatory competition will result in a race to the bottom.

The first best solution would entail coordination in the design of good regulatory standards. The limitations of Basle II have already been noted. If appropriate regulatory standards are not established, then it will be necessary for each country to design its own regulations to protect itself. It cannot rely on regulations of others. European banks' losses from sub-prime mortgages now appear to be greater even than those of U.S. banks. It would be easy to enforce good standards, especially on those countries that have become noted for the role in evading regulations and taxes. There is little reason that so much financial activity occurs in many of these off-shore centers, except to avoid taxes and regulatory oversight; but this undermines the integrity of the global financial system.

These off-shore centers survive only because we allow them, and there is no reason that this should continue. America, for instance, has already shown that it can enforce its standards concerning financial relations with terrorists groups. It could do so as well with those who are engaged more broadly in tax evasion, money laundering, or other such anti-social activities. (The recent response of Germany and others to the tax evasion disclosures out of Lichtenstein highlight that much more can be done that has been done in the past.) Similarly, restricting Regulated American or European financial entities in their dealings with financial institutions and other entities in jurisdictions that have filed to comply with OECD transparency standards or other regulatory standards that U.S. or Europe might agree upon, and which did not cooperate in providing records of accounts to tax authorities in the United States, would shortly either put these "rogue" financial institutions out of business—or force them to change their behavior.

4. The Methodology and Model

According to Willem Buiter (2007), financial crises are inherent to capitalism. Even though they can be very painful, it is an illusion that financial crises can be fully ruled out by better government regulation. In fact, a case can be made that perverse regulations, in combination with the creation of too much liquidity, played a key role in the creation of the current crisis. This, of course, is not to say that we can do without government regulation of financial markets and institutions altogether. This paper would also not argue against government actions in case of a crisis. Effective government intervention may help the recovery of the financial sector, many of the government actions taken in the current financial crisis were not effective, and may in fact have prolonged the crisis. The current worldwide crisis is unprecedented. This implies that the evidence presented here that is based on crises taking place in the past may not capture the impact of the current crisis fully. As most countries in the world are in a serious economic downturn at the same time, it will be much harder to get out of this recession.

Buiter (2007) argues that as the economic boom persisted, regulatory capture and corruption became commonplace.It should be stressed that these regulatory weaknesses were not confined to the United States. Buiter (2007) explained causes and origin of financial crisis in form of theorical but in this paper; I have shown that causes and consequence of financial crisis with

model and Granger test. Factors at work in this crisis may be classified in the money and equity and capital market .then this paper used for changing bank return on equity and exchange rate and interest rate for cause of financial crisis, each of them represent structure of these markets. With used Granger-test, regulation selected for cause of financial crisis. To determine what causal relationship exists between regulation and financial crisis, dynamic model was used and define causality along the lines established by Granger (1969).

A test for Granger causality asks the following question: Can you predict yt better using past values of both yt *and* xt than just past yt? If the answer to this question is yes. Than we say that xt Granger causes yt. Then we say that the variable x is causing y if we are better able to predict y using all available information than if the information apart from x had been used. That is, if we control for the information contained in past values of y and past values of x add significantly to the explanation of current y, then we say that x Granger-causes y. this study will use the growth pervious period share price as a measure of the severity of the crisis and the regulation of the world Index as a measure of economic freedom. Economic freedom Index published Fraser institute per year.

The result of Engel granger causality test about the relationship between regulation and financial crisis in OECD countries; show that coefficient past of crisis in table 1 is significant, so there is reciprocal relationship. The result represent that regulation cause of crisis because coefficient past of regulation in table 2 is significant but it not mean that government is the solution. In fact, the central banks in any nation have performed as the lender of last resort, providing credit in every economic crisis. Therefore, the latest government rescue packages are not a violation of the principles of the market economy.

Table 1: Granger-test: dependent variable regulation in OECD countries

Variable	**Coefficient**	**t-statistic**
Regulation(-1)	0.59	11.64
Crisis(-1)	0.012	3.76
c	2.86	8.76

Adjusted R-Squared: 0.82

Table 2: Granger-test: dependent variable Crisis in OECD countries

Variable	**Coefficient**	**t-statistic**
regulation(-1)	7.81	5.97
Crisis(-1)	0.079	0.96
c	-51.23	-6.1

Adjusted R-Squared: 0.58

The relationship between regulation and financial crisis is the main idea of paper. Following econometric model were used for showing relationship.

$$CRISIS = C + a1* EQUITY_{i,m} + a2* EXCH_{i,m} + a3*I_{i,m} + a4* Reguli,m$$

Where i=1, 2 …n are observation and t=1, 2...m are countries. regul is regulation, EXCH is exchange rate, I is interest rate, CRISIS is growth previous period share price, EQUITY is Bank return on equity. Panel data methodology was used for estimation of the model. The model estimated for OECD countriesduring (2000-2008) and results were illustrated in following table.

5. The Finding

The model was estimated for OECD countries by panel data methodology and the result shows in following tables:

Table3: Test cross section random effect-Hausman test

Variable	**Fixed-Effect Coefficient**	**Random-effect Coefficient**
Bank return on equity	-0.23	-0.076
Exchange rate	-0.044	-0.033
Interest rate	-0.34	-0.027
regulation	9.17	3.69
Chi-Squared: 92.75		R-Squared:0.67

Table 4: Fixed-Effect Estimation (dependent variable crisis in OECD countries)

Variable	**Coefficient**	**t-statistic**
c	-55.6	-9.25
Bank return on equity	-0.23	-1.66
Exchange rate	-0.044	-1.68
Interest rate	-0.34	-2.93
regulation	9.17	9.91

Adjusted R-Squared: 0.67

In table 3, in Hausman-test and selection between fixed effect and random effect, Chi-squared statistic is 92.75 and is significant then fixed effect selected.

According to the table 3, regulation and financial crisis have positive relationship. Exchange rate and interest rate have negative relationship. Increasing bank on equity decreased in financial crisis and improving capital market and stability stock market control the financial crisis. The results show that increasing regulation increased financial crisis but regulation conclude regulation in labor markets, credit market and business market. Change in the some of them change regulation and different effect on financial crisis. The market would dictate the money supply through market forces and price signals, eliminating the need for a central planning body, and removing the current monopoly the Fed holds. The burden of bureaucracy, regulation, and fiscal irresponsibility must be lifted in order to allow the American economy to recover. The massive debt of the State will be a continued source of instability in this nation until it is addressed. Economic freedom should be restored, and the American economy will surely recover and continue to thrive.

Table5: cross section estimation (dependent variable crisis in OECD countries)

Countries	**Coefficient**	**t-statistic**
Australia	12.1	1.69
Austria	21.3	3.36
Belgium	13.3	2.22
Canada	15.7	2.2
Denmark	10.8	2.69
Finland	11.13	2.1
France	12.2	1.92
Germany	13.2	1.52
Greece	23.5	3.76
Hungry	7.37	3.2
Iceland	12.26	4.23
Ireland	10.2	1.68
Italy	16.13	2.6
Japan	12.3	1.43
Luxemburg	19.43	1.71
Mexico	11.7	2.58
Netherlands	9.96	2.48
new Zealand	3.45	1.11
Norway	15.4	3.01
Poland	5.83	2.18
Portugal	8.1	1.85
Spain	8.4	1.49
Sweden	11.4	1.97
Switzerland	4.75	1.27
Turkey	6.46	0.89
United kingdom	5.73	1.28
United State	11.88	2.18

Table 5 show that the relationship between regulation and financial crisis in countries. The effect regulation on financial crisis in Germany, Japan, New Zealand, Spain, Switzerland, Turkey and United Kingdom are not significant. The other countries effects are significant. Then relationship between regulation and financial crisis related on operation government and credit market. For instance, the financial systems in Norway and Sweden, which were dominated by a few, large commercial banks offering wide-ranging financial services that also played an important role in the non-financial sector due to the predominance of debt financing, were liberalized. Before liberalization, there were various interest-rate regulations, quantitative lending restrictions, and capital controls in place, while foreign bank subsidiaries were, until 1984 (Norway) and 1986 (Sweden), not allowed. As a consequence, there was low price competition, while banks had extensive branch networks. Profits of banks were stable, but in Sweden they were low compared to bank profits in other European countries. The financial deregulation and liberalization of capital flows led to a credit-financed surge in private consumption and investment. In addition, the liberalization coincided with external impulses. Norway, for instance, benefited from the rise in oil prices in the early 1980s. In the absence of strengthened banking supervision, many banks expanded their lending and risk-taking excessively. In Norway, the ratio of bank loans to GDP increased from 40% in 1984 to 68% in 1988. The surge in lending in Sweden took place somewhat later, reflecting differences in the timing of financial liberalization and macroeconomic conditions. Bank loans as share of GDP increased from 41% in 1984 to 58% in 1990. Moral hazard, due to (implicit or explicit) unlimited deposit insurance and the acknowledgement by the central banks that no bank would be allowed to fail in case of a crisis, stimulated higher risk taking by banks that did not sufficiently adjust their internal control systems to the new environment. The credit surge, in turn, contributed to a jump in asset prices, especially real-estate prices. Before the liberalization, banks relied almost exclusively on deposits for funding but, in the course of time, they relied increasingly on (more expensive) money-market and foreign funding (Drees & Pazarbaşioğlu, 1998).

The situation of Norwegian banks started to improve rapidly in 1993. After the crisis, the government gradually sold its bank shares. Fokus Bank was privatized in autumn 1995, while Christiania Bank was sold more gradually. It was eventually merged with the pan-Nordic group, Nordea. Similarly, shares in Den Norske Bank were gradually sold, although the government still owns 34% of the bank DnB NOR, which was formed in the merger between Den Norske Bank and Union Bank of Norway. In the end, the Norwegian taxpayer was a net beneficiary because the government's support of the banks has been more than covered from the sale of the nationalized banks. Sweden's main form of assistance consisted of guarantees of banks' liabilities. The guarantee did not cover equity capital; in case of financial support by the government, owners generally lost their equity stakes. The Swedish government still has a significant ownership (19.9% in 2008) in Nordea.

One response to the current crisis is to contemplate building better defenses against a recurrence by improving, or at least changing, regulation. Barrell(2008) argue that a Single Financial Market in Europe necessitates a single regulatory approach that would cover all members of the European Economic Area, including Iceland and Norway. Unfortunately no such framework was put in place. A set of directives on prudential regulation was in place, but they were interpreted differently. No single framework for crisis management exists, as is reflected in the disparate approaches to bank guarantees in Europe in late September and early October 2008.

It is clear that there is a need to improve the regulatory structure in the UK and elsewhere, and that those changes will involve tighter regulation. Changes in bank regulation change the structure of bank costs, and the implications can be analyzed using dynamic stochastic general equilibrium models. If banking markets are competitive these changes in costs will be passed on to the users of bank services in either increased costs for using services or increased charges on loans. These in turn will affect behavior, and change consumption and investment. The best way to model these implications is to presume that the change in costs comes through as an increase in the margin between borrowing and lending rates. The change in costs and the increase in margins, or spreads, will affect both consumers, who both deposit money and borrow from banks, and firms who finance part of their investment from bank or market related borrowing.

6. Summary and Conclusions

The recent financial crisis that has emanated from the US mortgage market has been driven by excessively risky lending disguised by complex financial products. Default rates have risen as high as 20 per cent. Losses have worn away at the capital base of the banking system in the US, the Euro Area, Switzerland and the UK. We appear to be in the middle of the largest financial crisis since the Second World War. Complex products were sold to people inside and outside the US who did not understand the risks they were taking, and they have lost money. There are calls for improvement in regulatory structures and for coordinated actions. Coordination of European regulators should also be discussed, as countries do not have full oversight of their banking systems in the current dispersed responsibility structure.

Financial markets improve the efficiency of the economy and the welfare of citizens. Regulation can make them operate more effectively but also induce costs. Although the direct effects of regulation might be to reduce output and consumption marginally, the general reduction in risk in the economy could have beneficial effects that could more than offset the costs. A quantification of impacts on margins and default risk is needed before a cost–benefit analysis can be fully undertaken. The result of Engel granger causality test about the relationship between regulation and financial crisis in OECD countries; show that there is reciprocal relationship between regulation and financial crisis. Regulation and financial crisis have positive relationship. Exchange rate and interest rate have negative relationship. Increasing bank on equity decreased in financial crisis and improving capital market and

stability stock market control the financial crisis. The results show that increasing regulation increased financial crisis but regulation conclude regulation in labor markets, credit market and business market. Change in the some of them change regulation and different effect on financial crisis.

References:

Arrow, K.J. 1951, "An Extension of the Basic Theorems of Classical Welfare Economics", University Press, PP. 507-532

Barraell R. & Hurst, S.K. 2008 , "Financial Crisis, Regulation and Growth", National Institute Economic Review , vol.206, no.56.

Bloomberg ,2008, "Wall Street Firms Cut 34,000 Jobs Most Since 2001",from www.Bloomberg.com

Buiter, W. 2007,"Lessons from the 2007 Financial Crisis", Background Paper Submitted to the UK Treasury Select Committee .

Bernanke, B.S. 2009,"Four Questions about the Financial Crisis", speech at Morehouse College, Atlanta, Georgia.

Bernanke, B.S. 2009,"Lessons of the Financial Crisis for Banking Supervision" , speech at the Federal Reserve Bank of Chicago Conference on Bank Structure &Competition, Chicago, Illinois, May 7.

Drees, B. & Pazarbaşioğlu C. 1998, "The Nordic Banking Crisis: Pitfalls in Financial Liberalization", IMF occasional Paper, No. 161.

Friedman M. & Schwartz A.J. 1963,"A Monetary History of the United States: 1867-1960".

Greenwald B. & Stiglitz J.E. 1986, "Externalities in Economics with Imperfect Information and Incomplete Markets", Quarterly Journal of Journal of Economics,Vol.101.PP.229-264.

Munkhammar J. 2009, "The Financial Crisis: a Gigantic Failure of Politics", European Enterprise Institute,from www.european-enterprise.org.

Stiglitz, J. E. 1985, "Credit Markets and the Control of Capital", Journal of Money& Banking& Credit, vol.17,no.2 , pp. 133-152.

Stiglitz, J. E. 2008, "Regulating Multinational Corporations: Towards Principles of Cross-Border Legal Frameworks in a Globalizes World Balancing Rights with Responsibilities" ,The Ninth Annual Grotius Lecture, *American University International Law Review*, vol. 23 , no. 3 , pp. 451-558.

Stiglitz, J. E. 2009,"Lessons for Economic Theory from the Global Financial Crisis", Presidential Lecture to the Eastern Economic Association, *Eastern Economic Journal*, Forthcoming.

White, L.H.2008, "How Did We Get into This Financial Mess?" *Cato Journal*, pp. 1-12.

Weitzman M. 1974, "Prices vs. Quantities" ,The Review of Economic Studies,vol. 41,no.4,PP. 447-491.l