# WILFUL IGNORANCE: THE CASE OF GLOBAL FINANCIAL CRISIS

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## Abstract

*Wilful ignorance implies an unwillingness to ask questions, even when the need to challenge past decisions might be in order. Financial regulators in the United States failed to question and, therefore, adjust their policies when faced with the possibility that the existing regulatory regime might be leading to financial instability. This abysmal failure that ended with the global financial crisis may have been driven by the biases of the regulators and their unwillingness to accept likely losses for their preferred clients resulting from the changes. In the face of such financial and societal repercussions, it is imperative that we understand the implications of allowing policy makers to be wilfully ignorant.*

**Keywords**: Collateralized debt obligations; Credit default swaps; Federal Reserve Board, Financial regulation; Financial instability; Global financial crisis; Mortgage markets; Subprime loans; Wilful blindness; Wilful ignorance.

## 1. Introduction

Economists have largely ignored the idea of wilful ignorance even as other behavioral concepts have led to significant improvement in our understanding of economic outcomes. Wilful ignorance, also known as wilful blindness, imputes knowledge to an actor and rests on the principle that "you are responsible if you could have known, and should have known, something which instead you strove not to see" (Heffernan 2012, pp. 1-2). Thus far, the most extensive application of this concept has been in law. This paper postulates that wilful ignorance may have led to one the most serious economic crisis since the Great Depression – the global financial crisis.

The financial crisis of 2007-09 required large government bailouts, resulting in serious fiscal shocks for many countries, loss of life savings for many investors and large losses

for numerous financial institutions.[1] While we continue to debate the causes of the crisis, it is safe to say that US regulatory policies were center stage in this crisis. Regulators accept a certain degree of responsibility for imposing light and lax regulations (Andrews 2008) and for allowing "…regulations that for decades had failed to keep pace with changing market realities and rapid financial innovations" (Bernanke et al 2019, p. 3) but shift the blame for the crisis to the financial institutions (Bernanke 2009, Greenspan 2015).[2] Policies designed to encourage financial innovations "… encouraged financial institutions (to prioritize) short-term profits while increasing long-term fragility" (Barth et al 2012, p. 85-120).[3]

In this paper, we argue that the inadequate responses of the financial regulators, as well as their failure to ask necessary questions, answers to which would have required them to impose stricter regulations, reflects wilfully ignorant behavior. Regulators left it to market forces to require banks to adjust their lending behavior and raise capital (Davies 2010). "In easing the net capital rule … the SEC became wilfully blind to excessive risk-taking …" (Levine 2010, p. 8).[4] Admati (2017, pp. 308-12) accepts that wilful blindness may have

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[1] The crisis led to the largest bank failure in the United States: Washington Mutual Bank with assets of $307 billion in 2008. Reinhart and Rogoff (2009, pp. 199-222) place the consequences of this crisis in perspective. See Romer and Romer (2019) for observations about fiscal responses required to fight the crisis.

[2] Bernanke (2009) laid the responsibility for the crisis upon "… weaknesses in the risk-management practices of many financial firms, together with insufficient buffers of capital and liquidity" and "… , flawed compensation practices at financial institutions" while recognizing that "[U]nfortunately, regulators and supervisors did not identify and remedy many of those weaknesses in a timely way." Greenspan (2015) believed that "Had bank capital been adequate and fraud statutes been more vigorously enforced, the crisis would very likely have been a financial episode of only passing consequence." The World Bank takes a similar view: "… the GFC was caused by excessive risk-taking by financial institutions and thin capital cushions …" (Anginer et al 2019, p. 2). The Federal Reserve, however, did very little to restrict these practices: "…fewer than 1 percent of all mortgages were subjected to restrictions…" under the Home Owner Protection Act of 1994 – an act that gave Federal Reserve "… broad authority to prohibit deception lending practices …" (Andrews 2008). Coffee (2009) adds rating agencies to this list. It should be noted that no bank was ever cited for having inadequate capital under Greenspan or under Bernanke.

[3] The most important reason for the global financial crisis, according to a survey of US and European economist carried out by the University of Chicago, was "flawed financial sector regulation and supervision" (https://promarket.org/blame-2008-financial-crisis/; posted on October 17, 2017 by Luigi Zingales). A committee of the US House of Representatives did not mince words (Committee 2008, p. 4):

> *'The Treasury Department could have led the charge for responsible oversight of financial derivatives. Instead, it joined the opposition. The list of regulatory mistakes and misjudgments is long, and the cost to taxpayers and our economy is staggering…. Our regulators became enablers rather than enforcers'.*

Two more examples illustrate this point. "Banking and other supervisors had performed badly. Glaring gaps in the regulatory apparatus had been exposed. In perhaps the most egregious case, no one seemed to have been responsible for the national mortgage market, nor to have protected gullible consumers" (Blinder 2013, p. 264). "The Great Financial Crisis of 2007-2009 exposed the ineffectiveness of the relevant regulations in place at the time… Policymakers who repeatedly fail to protect the public are not accountable partly because false claims obscure reality, create confusion and muddle the debate" (Admati 2017, p. 293). Moschela and Tsingou (2013, p, 413) cite a number of studies carried out by supervisory authorities. Also see Albo et al (2010), Lagoarde-Segot (2010), Huertas (2011), King (2013), Razin (2014), Desai (2015) and Golub et al (2015, section 2). Barth et al (2012, p. 86) identify six important policies that may have made the US financial system more fragile.

[4] Davies (2010), commenting on Levine, attributes the regulatory behavior to "groupthink."

contributed to bringing about the financial crisis.[5] Levine (2010) believes, without presenting evidence to support the conclusions, that "… the financial regulatory authorities: (i) were aware of the problems associated with their policies, (ii) had ample power to fix the problems, and (iii) chose not to" (ibid). This is a text-book description of wilful ignorance.

We provide evidence for regulators' wilfully ignorant behavior through an examination of the FED documents including summaries of Federal Open Market Committee (FOMC) meetings. We assume that these include all the documents that regulators used to arrive at their decisions. Our conclusion about regulators' wilfully ignorant behavior presumes that the documents reviewed fully reflected the nature of their deliberations, discussions, and analyses and their actions were the result of their decisions. Wilfully ignorant regulators did not question their past assessment of risks: we demonstrate their inaction following their cursory examination of the increased risks of collateralized debt obligations, credit default swaps and systemic risks. Review of their action regarding the regulations of financial institutions reveals their bias for a preferred client. In addition, we rely upon post-crisis statements of regulators as they tried to explain the crisis. We cannot "prove" that regulators indulged in wilful ignorance: wilful ignorance is a state of mind. We present analysis that strongly suggests wilful ignorance as being the most charitable explanation of the regulators' behavior.

The first section of this paper will elaborate on the idea of wilful ignorance. The second section outlines the role of regulation in an uncertain financial environment. The third section identifies risks created by the financial innovations in the mortgage market and presents evidence on the actions, as well as inaction, of the US regulators. The last section integrates the analyses and illustrates that wilful ignorance is the most plausible explanation for the behaviour of regulators.

## 2. Wilful ignorance

In our legal system, the doctrine of wilful ignorance "imputes knowledge to an accused whose suspicion is aroused to the point where he or she sees the need for further inquiries, but deliberately chooses not to make those inquiries."[6] The law does not permit "attempts to self-immunize against criminal liability by deliberately refusing to acquire actual knowledge."[7] Wilful ignorance holds people responsible for their actions even if they were not aware of the potential consequences, perhaps because they failed to ask pertinent questions.

The idea of wilful ignorance, however, has not yet been widely accepted in economics. There has been no attempt, to date, to delineate the conditions or processes by which wilful ignorance becomes the most plausible explanation for economic behaviour.[8] Wilful

[5] Also see Reiff 2017. Bernanke et al (2019), however, do not even mention the term "wilful ignorance" or "wilful blindness" when trying to draw lessons from the crisis.

[6] "Contrived ignorance: wilful blindness," Lexocology.com/library/details.aspx?g=dddfad7b-2f6c-41d5-9c86-7e70064870.

[7] This citation includes reference to legal cases; http://criminalnotebook.ca/index.php/.

[8] A recent summary (Samson 2015, pp. 28-46) identified 79 concepts related to behavioral economics of which only three would cover some aspect of wilful ignorance or wilful blindness: confirmation bias, inertia

ignorance challenges the idea that economic rationality, arising from objective and unbiased assessment of all available information, should be the sole foundation for economic analysis.[9] Wilful ignorance goes beyond the cost of gathering, or the ability to process, large amounts of information.[10] It addresses the importance of biases and hubris.[11] Relying partially on our desire to reduce cognitive dissonance, it emphasizes a decision maker's resistance to change a past decision especially when the change is not likely to lead to a more desirable outcome for the decision maker.[12] The decision maker has to be able to rationalize away the apparent conflict that the existing decision may not be optimal or may prove costly under some circumstances. More than the ability to gather and process information, wilful ignorance emphasizes our desire to lock-in perceived gains and our unwillingness to accept the consequences of full information. Sometimes, "[T]he idea is not that we cannot do better, but that we do not want to know that we can, and indeed should, do better" (Wieland 2017, p. 105).

Three important beliefs on the part of decision makers appear to lead to wilful ignorance. First, they must believe that the existing decision best serves their own interests. Second, the decision must conform to the accepted norms of how such decisions are made. Such norms neither challenge the expertise of the decision maker nor require further information or re-evaluation. Third, decision makers must suspect that full information, if it were to be collected, may lead to a change that may not be in their best interest. Wilful blindness is motivated primarily by a perception that not changing the decision will preserve the gains that the existing decision is expected to bring.

## 3. Financial innovations and regulatory challenges

Financial regulators have to balance the interests of their two primary clients: the financial services industry and the rest of the economy.[13] Regulations such as capital adequacy ratios ensure that the financial institutions neither take risks that could threaten the stability of

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and status quo bias. Heffernan (2012) provides some examples of poor economic decisions that could be attributed to wilful blindness.

[9] Economists have established the existence and importance of behavioral concepts such as loss-aversion, endowment effect, prospect theory, mental accounting, identity-priming, and overconfidence that challenge the assumption that rationality dominates human decision-making processes. Avgouleas (2009) does not distinguish between imperfections associated with efficient markets and behavioral characteristics that have an impact on the decision-making process. Economists tend to dismiss biases as "imperfections" or "distorted incentives." In an otherwise excellent discussion of the role of supervision of the financial sector, World Bank report (2012, chapter 2) succumbs to the same tendency.

[10] Regulators such as Alan Greenspan seem to resist the idea. Writing about how Greenspan made his decisions, Shiller (2008, pp. 42-43) concluded that "(Greenspan) espoused the idea that the mathematical econometric models of individual behavior are the only tools that we will ever have with which to understand the world…. He does not seem to respect research approaches from the fields of psychology or sociology." As we will demonstrate below, however, Greenspan's reliance on economic models did not lead him to reject estimates of risks based on very imprecise data and models.

[11] It is recognized that most people tend to be biased and succumb to preferences that are inconsistent with the assumption of an objective assessment (Thaler 2015, p. 6).

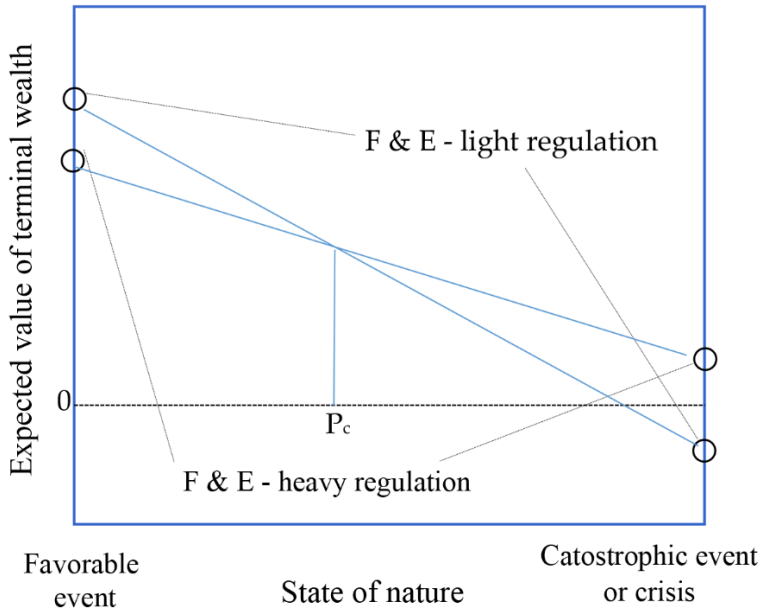
[12] Wieland (2017) proposed, therefore, that ignorance could be affected, motivated or strategic.

[13] "The challenge of financial sector regulation is to align private incentives with the public interest without taxing or subsidizing private risk taking" (World Bank, 2012, p. 48).

the financial system nor engage in unethical behavior (Bernanke, 2013, Chapter 1).[14] Such regulatory restrictions may limit the profits of the financial institutions but they may provide greater financial stability.[15] Regulators protect the industry by ensuring liquidity in the markets and by being ready to play the role of the lender-of-last-resort. Two important tools – capital/asset ratios and compliance reports – allow regulators to balance the conflicting interests of their clients.[16]

Consider a regulator that has to optimize the combined wealth of two clients, F and E, with a choice between light or heavy regulation.[17] Assume that the clients' payoffs depend only upon the level of regulation in two (exogenous) states of nature: a high probability "favourable" event and a low probability "catastrophic" event. For simplicity, we assume that the two clients receive identical payoffs in each of the two states. These clients prefer light regulation unless the probability of catastrophe exceeds a critical point – point $P_C$ in Figure 1.

Figure 1 – Expected terminal wealth of clients




[14] Better Markets (2021) provides a list of manipulation of markets and fraudulent behavior by banks. Zingales (2015) lists fines paid by financial institutions in the United States between 2012 and 2014. McDonald (2019, pp. 262-267) provides a list of fines imposed on banks for manipulating various markets including interest rate, foreign exchange and metals markets.

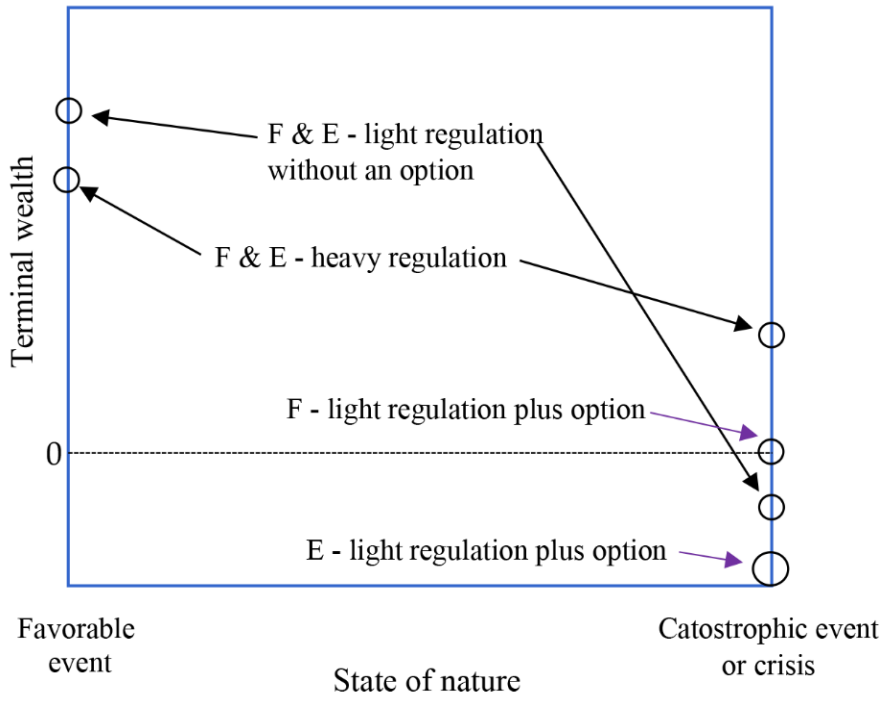
[15] Banks' financial reporting requirements affect financial stability through three routes: "… by altering the likelihood that banks violate regulatory capital requirements, by altering banks' internal discipline over risk management and financial reporting, and by altering external market and regulatory discipline over banks" (Ryan 2018, p. 102).

[16] See Table 1 in Panico et al (2014, p. 13) for details of these regulations. Walter (2019, p. 4) provides an example of such a balancing act. Requiring banks to hold higher levels of capital would reduce the risks of bank failure but that would also reduce the banks' ability to engage in maturity transformation and provide deposit services.

[17] A light regulatory regime creates risks of financial instability but allows financial institutions to maximize their profits by applying financial innovations indiscriminately. A heavy regulatory regime promises higher stability for the economy as well as for the financial institutions themselves by restricting the activities and profits of the financial institutions.

Before the regulators decide the level of regulation, F is able to purchase an option that allows it to transfer its losses to E. F exercises the option only in the case of a catastrophic event under light regulation since heavy regulation prevents losses. Figure 2 shows these situations.

Figure 2 – Expected terminal wealth of clients with an option



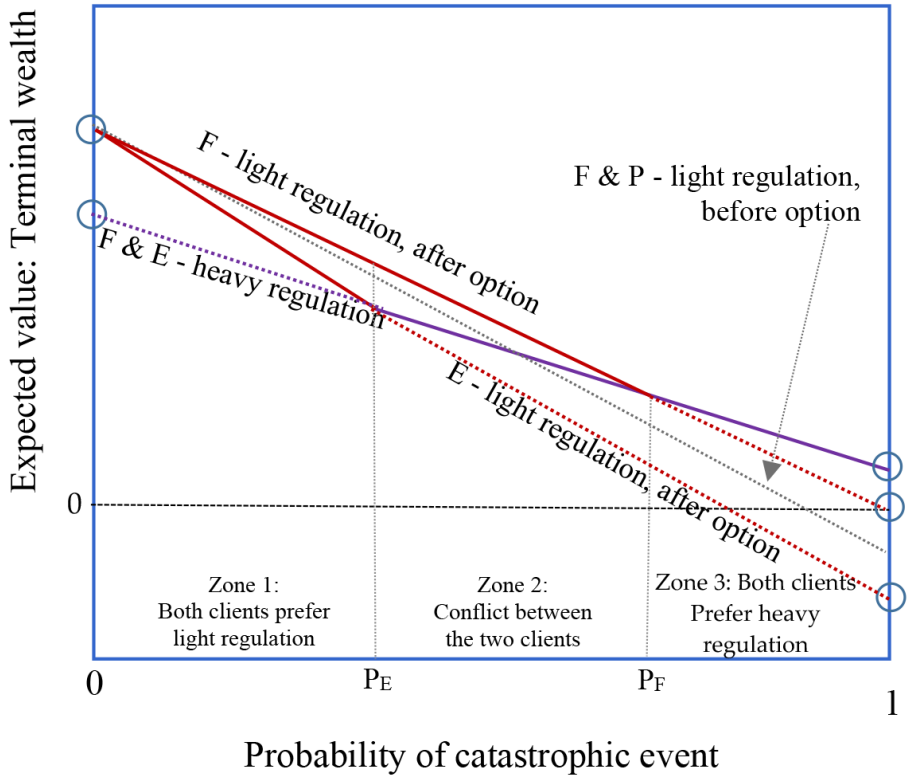

The option creates three zones in which the regulator must decide the level of regulations. These zones are identified in Figure 3. Both clients prefer light regulation in zone 1 when the probability of catastrophe is less than $P_E$. Because of the high cost associated with the option, E prefers heavy regulation for all probabilities of catastrophe higher than $P_E$. Even F prefers heavy regulation in zone 3 when the probability of catastrophe exceeds $P_F$. The two clients have different preferences between $P_E$ and $P_F$,: F prefers light regulation whereas E prefers heavy regulation. The regulators' choices are quite clear in Zones 1 and 3; the difficulty arises in zone 2.

Zone 2 (Figure 3) is perhaps where the economy was prior to the global financial crisis. About a decade prior to the financial crisis, the economy was in Zone 1. Financial regulators were satisfied with a light regulatory regime that had resulted from the relaxation of regulations over the previous quarter century.[18] In that environment, avaricious bankers (Schenk 2021) took excessive risks (Crotty 2009) by easing the conditions and criteria for mortgages while attracting funds from investors who may not have fully accounted for the risks associated with these mortgages. The bundling of existing mortgages into collateralized debt obligations (CDO) and the sale of tranches of such CDO to investors allowed lenders to expand their mortgage offerings by relaxing requirements for

[18] Sherman (2009) provides details of these changes.

creditworthiness and down payments.[19] The long-term secular upward trend in house prices for approximately two decades prior to the crisis had helped lenders recover their investments from defaulted mortgages.[20] Mortgages began to be available to borrowers without jobs, income or assets (NINJA loans)[21] resulting in increased household debt levels.[22]

Figure 3 – Preferences of clients with an option




[19] In the past, large down payments and thorough checks of creditworthiness of borrowers minimized risks for mortgage lenders. In 2008, Greenspan had only one suggestion to the US Congress: "… that companies selling mortgage-backed securities be required to hold a significant number themselves." (Andrews 2008).

[20] This house-prices trend created pressures on both the supply and the demand: "… a careful review … supports a view in which financial institutions and households alike bought into increasing house prices because of overly optimistic expectations" (Adelino et al 2018, p. 37). These authors also show that during the period 2000-2005, homeownership increased regardless of the income except the bottom quintile (p. 32).

[21] Adelino et al (2018, p. 27) attribute this lending behavior to short-term managerial incentives. These authors also argue that loans became "less correlated with household personal characteristics" (p. 31).

[22] Mian and Sufi (2014, Chapter 2) describe easing of mortgage lending requirements and the rise of mortgage loans in the United States in the years prior to the financial crisis. Mian and Sufi (2011, p. 2155) "provide evidence of a strong link between asset prices and household borrowing. … the effect … concentrates largely among homeowners with low credit scores…". This house-prices trend created pressures on both the supply and the demand: "… a careful review … supports a view in which financial institutions and households alike bought into increasing house prices because of overly optimistic expectations" (Adelino et al 2018, p. 37). These authors also show that during the period 2000-2005, homeownership increased regardless of the income except the bottom quintile (p. 32).

The CDO issuing institutions, as well as the rating agencies that endorsed the risk-ratings, had to deal with the absence of models to assess the values of CDOs as well as lack of a precedence for such instruments or sufficient historical data to guide them.[23] Financial markets had to deal with riskier mortgages being offered to riskier borrowers. Systemic risk may have been enhanced in August 1996 when the FED allowed banks to "self-regulate" and set their capital/asset ratios[24] if they hedged their default risks associated with issuance of CDOs with credit default swaps.[25] This was true even for institutions that "… suffered from poor risk management…" (World Bank 2012, p. 49). Quite often, these CDSs were offered by institutions that had little prior experience with swaps. Banks could now negotiate how much capital they raised because "[D]etails of how [the asset/equity] ratios are determined are subject to lobbying …" (Admati 2017, p. 298). These relationships can exist because "In banking, the public interest in safety conflicts with the incentives of people within the industry" (ibid, p. 294). Banks often engaged in predatory practices in an environment created by low interest rates to accommodate global imbalances (Obstfeld and Rogoff 2010), over-consumption, and loose monetary policy in the United States (Lin and Treichel 2012).[26] Regulators may have created moral hazard by maintaining a light regulatory regime (Jain 2010) and by providing implicit guarantees of bailouts to government sponsored institutions (Passmore and von Hafften 2018).[27] These guarantees created the option that was introduced in the Figure 2.

Innovations in the mortgage market required a change in the regulations. Without those changes, these developments eventually turned into a crisis when the right triggers, such as excessive leverage and securitization, took hold (Mian and Sufi 2014, Hossain and Kryznowski 2019). A World Bank report observed that "… the international architecture developed to safeguard the stability of the global financial system … failed" (2012, p. 46).

In the years before the crisis, regulators had to choose the level of regulation given the relative importance of their two clients and their assessments of the impact of financial innovations on the stability of the financial system, uncertainties about chances of a catastrophe and the costs for the two clients in the case of a catastrophe.

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[23] A rating agency's compensation by the very institution whose CDO it had to rate created a conflict of interest: "… credit ratings for financial institutions were inaccurate, in part because those institutions paid the issuers for those ratings, which generated a conflict of interest for credit-rating agencies" (World Bank 2019, p. 22).

[24] "Details of how [the asset/equity] ratios are determined are subject to lobbying …" (Admati 2017, p. 298). These relationships can exist because "In banking, the public interest in safety conflicts with the incentives of people within the industry" (ibid, p. 294).

[25] Barth et al (2012, p. 91) provide a brief description of how these swaps worked and identify some difficulties associated with their regulation. With these swaps, "for the first time in history, banks would be able to make loans without carrying all, or perhaps even any, of the risk involved themselves" Tett (2009, pp. 52). Tett details some events leading up to the FED decision (pp 52-57). For the impact of these swaps on bank capital, see Shan et al (2021) and Moody's (2011). The notional volume of CDSs outstanding increased from $133 billion at the end of 2004 to $5.3 trillion at the end of 2008 before declining to its 2004 level by the middle of 2022 (BIS statistics on credit default swaps).

[26] Rajan (2005) among many others, had warned of the unstable situation. Agarwal et al (2013) document predatory lending.

[27] This is the put option that the government provided the financial sector in 2007-2008. Zingales (2015, p. 1349) estimates that this option may have reduced the bank's cost of equity by about $100 billion. Lucas (2109) estimated the actual cost of bailouts to have been about $500 billion.

## 4. Enhanced risks and regulatory responses

In the years prior to the crisis, uncertainty about the pricing of CDOs and the allocation of risk to the tranches of CDOs had increased. A decline in house prices could increase the risks of CDOs. Endorsements of CDOs provided by rating agencies may not have been completely objective. Implicit guarantees previously offered by regulators had contributed to the risk that the financial institutions were undercapitalized to handle shocks. Inexperienced institutions that had offered financial derivatives like credit default swaps may have added to the systemic risks.

Did the Federal Reserve (FED), under the Chairmanship of Alan Greenspan until January 2006 and Ben Bernanke since February 2006, re-examine its regulatory policies in view of these risks? Were the regulators concerned about chances of increased financial instability?

We examine the deliberations and decisions of regulators concerning each of the risks identified above. The actions of the FED reflect their decisions. Golub et al (2015) provide a methodology for analyzing the deliberations. They examined the transcripts of Federal Open Market Committee meetings from 2000 to 2008 as well as other FED documents to examine the "deliberations" and "thinking" of the FED.[28] They measure the extent of deliberation of any topic from the number of times a term is mentioned in a meeting or in a document. Their conclusions are not very complimentary to the FED: "… overall there was very little focus on the risks associated with financial innovations prior to the crisis" (p. 671).

### *4.1 Pricing of CDOs*

The term "CDO" appears only five times during the 24 meetings of the FED between 2004 and 2006 (Golub et al 2015, Fig 8, p. 666).

The creation of CDOs influenced the risks in the mortgage market in two opposite ways. On the one hand, holding a CDO, consisting of a diversified pool of mortgages from around the country, was less risky than holding a single mortgage. On the other hand, the mortgages themselves may have become riskier because lenders had both relaxed their criteria for a borrower's creditworthiness and lowered their requirements for down payments. Secularly rising house prices in the United States contributed to the relaxation of requirements for the sale of CDOs, especially when credit rating agencies endorsed the risk ratings assigned by the issuers.

The process of pricing CDOs was not transparent.[29] The opacity seemed to have blinded market participants to a need for full information, conflict of interest between issuers and rating agencies and the extent to which CDO prices depended upon continuously increasing house prices. Greenspan was aware of the difficulties of pricing CDOs: "Some of the complexities of some of the instruments that were going into CDOs bewilders me. I didn't understand what they were doing or how they actually got the types of returns out of these mezzanines and the various tranches of the CDO that they did. And

[28] The authors provide a description of constituent members and the frequency of these meetings (Golub et al 2015, p. 664).

[29] For a description of how one bank created one such pool and the difficulties it encountered in assessing the risks, see Tett (2009, pp. 77-80).

I figured if I didn't understand it and I had access to a couple hundred PhDs, how the rest of the world is going to understand it sort of bewildered me" (Greenspan quoted in Sorkin 2010, p. 90). Regulators failed to acknowledge the weaknesses in the process used to set CDO prices before the crisis. Greenspan recognized as much in 2008: "It was the failure to properly price such risky assets [mortgage-backed securities and CDOs] that precipitated the crisis…. The whole intellectual edifice, however, collapsed in the summer of last year because the data inputted into the risk management models generally covered only the past two decades…" (Testimony quoted in Desai 2015, pp. 223-224).

Estimation of the default risk of a CDO required data on the past performances of mortgages during several business cycles. Such data just did not exist. Shiller, who earned fame for having created the home-price indices found that "…everyone I asked said that there were no data on the long-term performance of home prices – not for the United States, nor for any country" (Shiller, 2008, p. 31). In the years before the crisis, regulators had discounted the chances of a nation-wide collapse in house prices. Talking to community bankers in the context of household debt in October 2004, Greenspan observed that "Should home prices fall, we would have reason to be concerned about mortgage debt; but measures of household financial stress do not, at least to date, appear overly worrisome" (Greenspan 2004). This disregard for a potential collapse of house prices seems especially surprising since the house price boom appeared to have been speculative; the demand for rentals was not following pace. Between January 2001 and January 2007, the index for house prices went up by 68% compared to 23% for rentals[30] (Fred.stlouisfed.org).

Given the tendency of people to view disasters through a myopic lens, the absence of data led lenders to assign a subjective probability of near zero to a nation-wide collapse of house-prices regardless of its actual (higher) objective probability.[31] Only when it was too late, did regulators recognize the difficulty of the pricing mechanism and understand the inappropriateness of allowing disaster myopia to set the policy. Timothy Geithner, President of Federal Reserve Bank of New York at the time of the crisis,[32] admitted as much after the crisis: "…we didn't foresee how a nationwide decline in home prices could induce panic in the financial system sufficient to drag down the broader economy" (Geithner 2014, p. 514).

Credit rating agencies that rated the tranches of CDOs based their ratings on the information provided by the originating banks. Issuers of CDOs provided them with all the information and had to pay them for the ratings. Investors, as well as regulators, who relied on these ratings seem to have ignored the conflict of interest as well as the absence of the possibility for independent analysis.

### *4.2 Systemic risks*

An examination of between 1200 and 1500 FED documents per year between the early 2000s and 2007 shows that there was very little discussion of "systemic risk" before 2006 or of "too big to fail" before 2008 (Golub et al 2015, Figure 10).

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[30] Series CSUSHPISA and CUSR0000SEHA from Federal Reserve Bank of St. Louis.

[31] The idea of "disaster myopia" was first introduced by Guttentag and Herring (1984) in relation to the international lending practices of commercial banks and elaborated in Jain (2000).

[32] The President of the Federal Reserve Bank of New York is the only permanent voting member of the Federal Open Market Committee – the committee responsible for setting the country's monetary policy (Golub et al 2015, p. 664).

Central bankers were aware that their decisions required a high degree of judgement.[33] They, however, failed to ask questions about systemic risks: "…the precrisis approach to regulation and supervision … focused on risks to individual institutions and did not sufficiently take into account what a confluence of risks implies for the financial system as a whole (systemic risk) ..." (World Bank 2012, p. 49). It did not help that the regulators had a "silo" approach to banking, insurance, and securities activities.[34]

Financial derivatives such as credit default swaps (CDS) had created such a complex web of interconnectedness within financial markets that it would have taken a long time to establish responsibility should one financial institution default. Financial market activities could freeze while the web of obligations was untangled. "Unfortunately, the securities were extremely complex and financial firms' monitoring of their own risks was not sufficiently strong… The problem was that they were distributed throughout different securities and different places, and nobody really knew where they were and who was going to bear the losses" (Bernanke 2013, pp. 71-72). Government-sponsored institutions like Fannie Mae and Freddie Mac had acquired such significant volumes of mortgage-backed securities that, given their lack of enough capital, "…they were a danger to the stability of the financial system" (Bernanke 2013, p. 66).[35] Regulators experienced the damaging consequences of interconnectedness in 1998 when only one institution with about $2 billion in assets faced difficulties.[36] The risks were particularly acute because a large portion of CDSs worth $15.5 trillion in mid-2008 were being issued by financial institutions having little experience with option-like contracts. The most prominent of these institutions was AIG whose rescue in 2008 cost $85 billion.

A related problem existed in the form of "too-big-to-fail" (TBTF) financial institutions. Several banks whose bankruptcy would have had consequences far beyond their own operations had an implicit guarantee of a bailout from monetary authorities. A "light regulation" regime had increased the expected value of the payments that the taxpayers would have had to make to TBTF institutions.[37]

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[33] "The decision-makers then need to reach a judgment about the probabilities, costs, and benefits of various possible outcomes under alternative choices for policy" (Greenspan 2005).

[34] In words of Bernanke et al (2019, p. 3): "These vulnerabilities were allowed to fester by America's balkanized financial regulatory bureaucracy …". Bordo et al (2011) argue that "one overarching regulator" in Canada, in contrast to the multiple competing regulatory authorities in the United States, may have contained the systemic risk in Canada leading to relative stability at the time of global financial crisis.

[35] Others, for example the controller Charles A. Bowsher, had issued similar warnings (quoted in Sorkin 2010, p. 5).

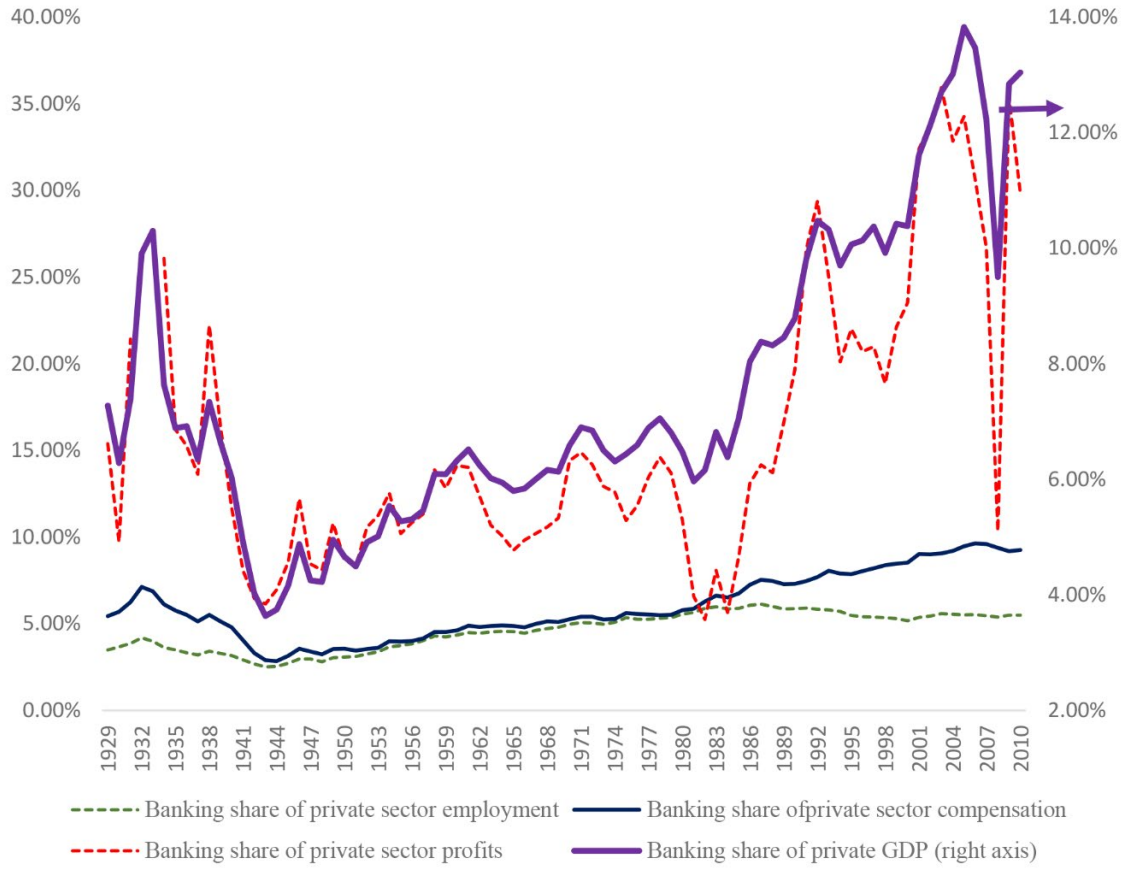
[36] At that time, the prospect that a hedge fund (Long Term Capital Management or LTCM) would fail had caused panic in financial markets (Edwards, 1999). It required the intervention and strong arm of the Federal Reserve Bank of New York to resolve the issue. The situation was much worse prior to the global financial crisis. One FED staff member remarked "The off-balance-sheet leverage was 100 to 1 or 200 to 1 – I don't know how to calculate it" (Quoted in Golub et al 2015, p. 670). Greenspan had suggested that "it is one thing for one bank to have failed to appreciate what was happening to LTCM, but this list of institutions is just mind boggling" (ibid).

[37] Interests of these institutions dominated the post-crisis discussions between the U.S. government and the financial industry (Johnson and Kwak, 2010 and Sorkin, 2010).

### *4.3 Bias towards the needs of the financial services industry*

The importance of the financial services industry within the national economy had increased for about six decades following WWII. As shown in Figure 4, the industry's share of private sector profits and, since 1980s, increases in average compensation/employee had contributed to this growth.[38]

Figure 4 - Importance of FSI in the economy




Source: Data from Philippon and Rashef (2012)

Increase in relative compensation/employee accompanied deregulation as shown in Figure 5 but lags the wave of deregulation of the financial sector by a few years.[39] The deregulation process that had begun during the Reagan years removed some restrictions on the activities of commercial banks and expanded the menu of allowable financial derivatives.[40] Investment banks became free to assess their risks and hence to set their own capital requirements. While increasing skill requirement could have caused this increase, Philippon and Reshef (2012) demonstrate that this compensation included an element of

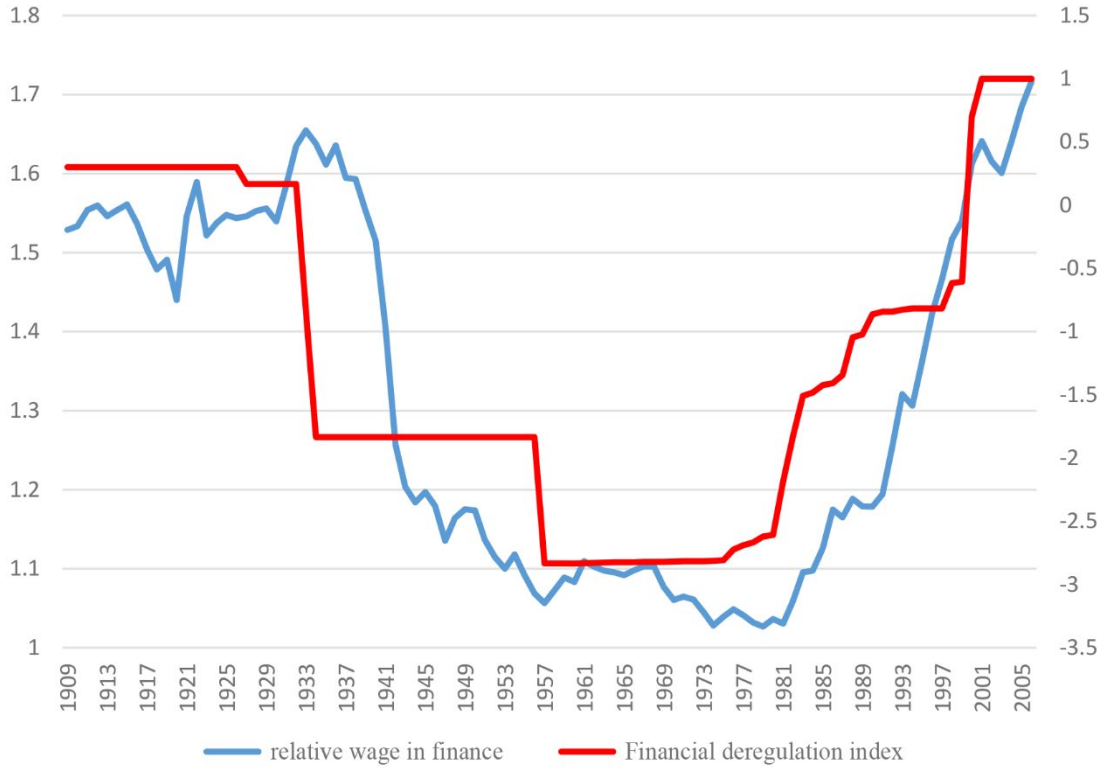
[38] "Between 1950 and 1980, compensation and skill intensity are similar in finance and the rest of the economy" (Philippon and Reshef 2012, p. 1552).

[39] Sissoko (2012) has demonstrated how a bias in the legal environment favours deregulation over regulation.

[40] For a brief description of the environment in which this was happening, see Johnson and Kwak (2010, pp. 7-9).

excess wages: "From 1980 to the mid-1990s financial markets keep on growing, the finance industry hires highly skilled workers, but these workers are paid competitive wages. After 1995 we observe growth, skill bias, and excess wages together" (ibid, p. 1554).[41] Figure 6 shows the link between excess wages and deregulation.

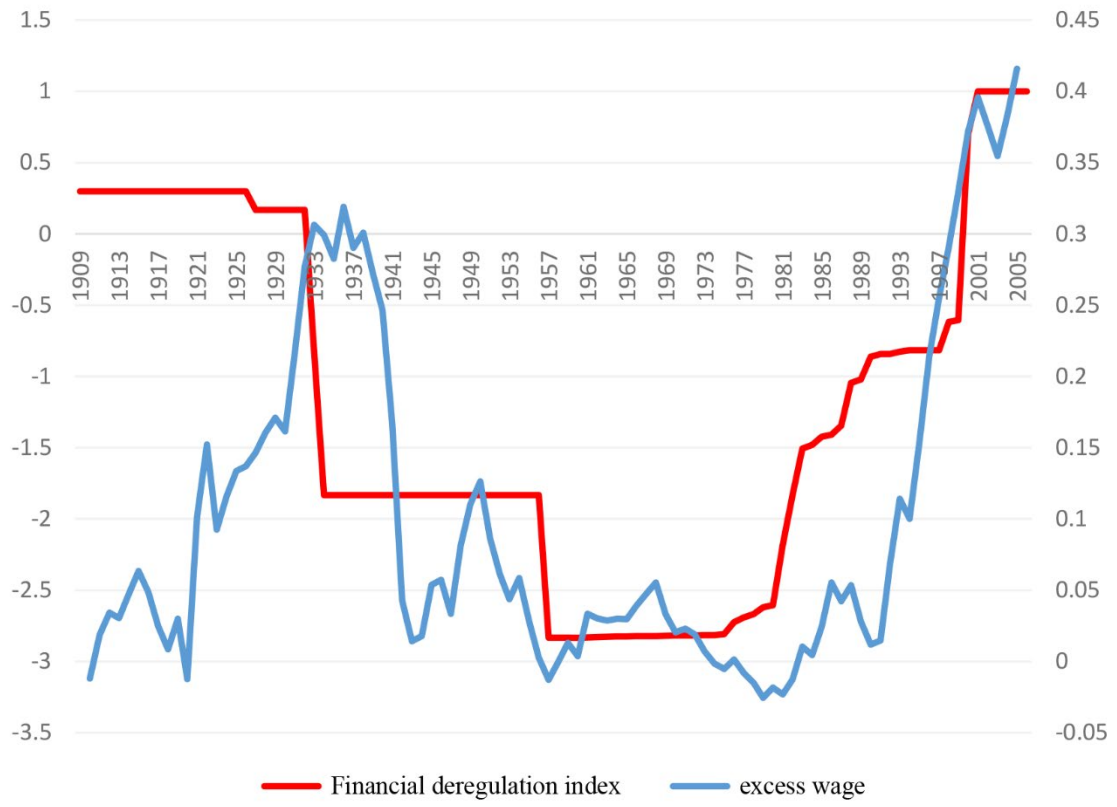
Figure 5 - Deregulation and relative wages in banking




Source: Data from Philippon and Rashef (2012)

[41] Besides providing evidence for the power of the industry, these excess wages are the reason "… finance accounts for 15% to 25% of the overall increase in wage inequality since 1980" (Philippon and Reshef, 2012, p. 1552); the compensation pattern is true for employees as well as the owners of the industry (Figure IV). These compensations have resulted in the representation of finance professionals in the top 1 per cent of income earners to rise from 8 per cent to 14 per cent and, among the top 0.1 per cent, from 11 per cent to 18 per cent (Kay, 2015). This disregard for the welfare of the general public gives credence to the argument that the financial services industry was far more important for the regulators than the general public.

Figure 6 - Deregulation and excess wages




Source: Data from Philippon and Rashef (2012)

Regulation-driven profits became possible because firms in this industry developed close relationships with the regulators through political contributions, a "culture" or a "regulatory" capture and frequent exchange of personnel – often caricatured as a revolving door within the Washington-Wall Street corridor (Johnson 2009). This industry aggressively lobbied politicians. For at least the decade prior to the financial crisis, it spent more on lobbying than its share of the private sector GDP would dictate (Table 1).

"Culture capture" may have further enhanced the power of the financial services industry (Acemoglu et al 2013).[42] Culture capture occurs when policy makers believe in the perspective of firms in that industry and believe that the welfare of those firms is an essential element of the welfare of the general economy. The power of the financial sector may also increase when workers (in the economy) become more invested in financial firms through privatization of pension funds.[43] Culture capture may happen despite the absence of direct links between the financial firms and the policymakers.[44] The well documented movement of individuals between financial firms (Wall Street) and policy-making

[42] Also known as "cultural capital" in the words of Johnson (2009) or "ideological capture" according to Turner (Footnote 7, p. 225 in Desai).

[43] Pagliari et al (2020, p. 655) find that "… financial asset ownership is associated with lower support for more stringent financial regulatory policy, and higher support for financial sector bailouts."

[44] Share prices of the leading banks at the time of the announcement of Timothy Geithner being awarded the position of Treasury Secretary had increased. Acemoglu et al (2013) demonstrate that this increase can be attributed to culture capture, not to any illicit payments or connections between Geithner and the banks or to the possibility that senior executives of these banks would have had easier access to Geithner.

positions in the government (Washington) may be partly responsible for culture capture (Blanes i Vidal et al 2011, Braithwaite et al 2014 and Johnson and Kwak 2010).[45] Three of the most recent US Presidents had Treasury Secretaries who began their careers on Wall Street. Working in either environment, Wall Street or Washington, is considered extremely valuable.

Table 1- Lobbying contributions (billion dollars)

| | Contributions to PACs | | | Finance share of private GDP |
|---|---|---|---|---|
| | All industries | Finance/Insurance/Real estate | Share in total | |
| 1998 | 1.44 | 0.208 | 14.4% | 9.92 |
| 1999 | 1.44 | 0.214 | 14.9% | 10.43 |
| 2000 | 1.56 | 0.231 | 14.8% | 10.38 |
| 2001 | 1.64 | 0.236 | 14.4% | 11.62 |
| 2002 | 1.82 | 0.269 | 14.8% | 12.13 |
| 2003 | 2.04 | 0.323 | 15.8% | 12.71 |
| 2004 | 2.18 | 0.339 | 15.6% | 13.02 |
| 2005 | 2.42 | 0.365 | 15.1% | 13.83 |
| 2006 | 2.62 | 0.378 | 14.4% | 13.47 |
| 2007 | 2.85 | 0.421 | 14.8% | 12.22 |
| 2008 | 3.3 | 0.456 | 13.8% | 9.5 |
| 2009 | 3.5 | 0.45 | 12.9% | 12.84 |
| 2010 | 3.51 | 0.475 | 13.5% | 13.04 |

Source: Centre for Responvive Politics, www.crp.org

Lobbying and cultural capture may have led regulators to prioritize welfare of the industry over that of the public when they had to choose the level of regulation in zone 2 (in Figure 3). They may have come to believe that "what is good for the financial services industry is good for the United States." Were this true, it would have meant that regulators

[45] "Revolving Door" has been described by one organization as follows: "Although the influence powerhouses that line Washington's K Street are just a few miles from the U.S. Capitol building, the most direct path between the two doesn't necessarily involve public transportation. Instead, it's through a door—a revolving door that shuffles former federal employees into jobs as lobbyists, consultants and strategists just as the door pulls former hired guns into government careers." https://www.opensecrets.org/revolving/

ignored the potential consequences of a catastrophe to the public even if they had reason to suspect that the probability of such an event was not trivial.

## 5. Wilfully ignorant regulators

Maintaining the stability of financial markets is one of the most important goals of financial regulators. So, too, is the protection and support of the institutions that constitute the financial services industry. Increased financial stability may require some restrictions on the industry which could lower its profits. Financial regulation must balance the tensions inherent between those two objectives.

To encourage innovation, regulators had imposed light regulations. This was done prior to the financial crisis when the probability of such a crisis may have seemed trivial. As signs of increased financial instability began to appear, they did not re-evaluate their decisions. Regulators underestimated the risks of financial instruments as well as the systemic risks inherent in the financial markets.

They failed to ensure that the prices of assets in the mortgage market reflected those risks as the financial environment began to change. Regulators knew that it was not possible to estimate the prices of innovations like CDOs, given the absence of appropriate financial models as well as the paucity of data. These assets were being priced with a disaster-myopic mind-set and an unsustainable assumption about house prices. Regulators failed to assess both the possibilities and costs of systemic risks created by the financial institutions, despite their awareness of such costs when inexperienced financial institutions enter the derivative markets. They were also aware of the consequences of an incomplete understanding of the precise locations of obligations resulting from the default of complex derivatives contracts.

Regulators failed to question financial institutions about their risk-assessment practices and allowed them to externalize a portion of their costs. Two biases may explain regulators' behaviour. They appeared to have placed greater emphasis on the interests of the financial services industry rather than on those of the public. Political expediency required them to focus on economic growth and increasing the rate of home ownership while ignoring the potential risks associated with promoting those goals.[46] They relied on "great moderation" – a belief that policy makers could manage the consequences of any economic shock. Regulators relied on their belief that managing a crisis is better for the economy than managing the consequences of busting a bubble that would prevent the crisis (Golub et al, p. 659-60).[47]

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[46] National Homeownership Strategy introduced by President Clinton in 1995 aimed to provide affordable homes to everyone. See details in McDonald (2013).

[47] In 2005, Greenspan had remarked that "…The credit crunch of the early 1990s and the bursting of the stock market bubble in 2000 were absorbed with the shallowest recessions in the post-World War II period. And the economic fallout from the tragic events of September 11, 2001, was limited by market forces, with severe economic weakness evident for only a few weeks" (Greenspan 2005). He describes these developments in more details in Greenspan (2008, "Introduction," pp. 1-18). He believed that the US economy could handle any shock: "I was gradually coming to believe that the U.S. economy's greatest strength was its resiliency – its ability to absorb disruptions and recover, often in ways and at a pace you'd never be able to predict, much less dictate" (Greenspan 2008, p. 7). In March 2007, Bernanke, the author of the "great moderation," testified before the Joint Economic Committee: "The impact on the broader

These biases led to the failure of regulators to impose stricter regulations and challenge industry practices regarding the handling of risks associated with financial innovations.[48] Economic rationality required that they question the industry's decisions, which they did not. They would have known that reassessment of various risks would require them to change their past decisions and impose stricter regulations – regulations that would reduce the profitability of the industry. Regulators continued to rely upon conclusions drawn in a light-regulation environment. "The major financial regulatory agencies repeatedly designed, implemented, and maintained policies that increased the fragility of the financial system and the inefficient allocation of capital. The financial policy apparatus maintained these policies even as they learned that their policies were distorting the flow of credit toward questionable ends. They had plenty of time to assess the impact of their policies and adapt, but they frequently failed to change their policies. Thus, the institutions responsible for maintaining the safety and soundness of the global financial system made systematic mistakes" (Levine 2010, p. 11).

Regulators, in fact, did the opposite of what was required – they removed restrictions on banks and derivatives traded over the counter.[49] Their decisions illustrate an over-confidence in their own abilities and an underestimation of the chances of a crisis. Three influential regulators themselves provide some indications of this overconfidence: "A 'quiet period' of relatively low bank losses had extended for nearly 70 years and created a false sense of strength" (Bernanke, Geithner and Paulson, 2019, p, 145); "The 'Great Moderation' – two decades of more stable economic outcomes with shorter, shallower recessions and lower inflation – had added to the complacency" (ibid, p. 146); "Home prices across the country had been rising rapidly for nearly a decade" (ibid, p. 148).

Had regulators both questioned their past decisions and asked questions, they would have recognized the need to make changes. Unfortunately, it appears that such reflection did not occur. This is the textbook description of wilful ignorance. Regulators had, in fact, been "asleep at the wheel" before the financial crisis. The global financial crisis demonstrates that allowing policy makers to be wilfully ignorant can have serious consequences for society as a whole.[50]

## 6. Conclusions

This study points to a need for better cognizance of wilful ignorance as a determinant of economic behavior.[51] The global financial crisis was, and continues to be, costly. Policy

economy and the financial markets of the problems in the subprime market seems likely to be contained." Golub et al (2015) describe this confidence in policymakers as "post hoc interventionism."

[48] Panico et al (2014, p. 12) see this as resulting from the Financial Industry's attempts to increase its turnover regardless of the effects on the risks to the economy.

[49] They formalized the removal of capital restriction in 2004; see appendix for some details. Regulators recognize this after the fact: "Unfortunately, regulators and supervisors did not identify and remedy many of those weaknesses in a timely way" (Bernanke 2009).

[50] Unfortunately, this process seems to be repeating itself in the crypto markets (Kelly 2022). Regulators seem to have been sleepwalking through the crypto world as large firms like FTX declared bankruptcy causing losses for investors.

[51] This concept is accepted in law. In February 2024, A court in Quebec found a hockey player guilty of sexually assaulting a minor, accepting the prosecutor's argument that the player had been "willfully blind."

mistakes, arising from wilful ignorance, caused a deep recession and doubling of the unemployment rate in the United States.[52] It is crucial to understand how many other economic failures have had similar roots. Section 2 of this paper provides a framework for the study of wilful ignorance; additional case studies could demonstrate the importance of this behavioral phenomenon.

Proposing that wilful ignorance may have caused a failure requires us to set aside an important foundation of much of contemporary economic analyses: the idea of economic rationality. For us to consider that regulators of financial markets were rational, we would have to accept the premise that their sole responsibility was to represent the interests of the financial services industry. That not being the case, the public that had put its faith in the regulators consequently bore the cost of its blind faith. How many other consequential economic disasters could have been avoided had the public not displayed the same level of trust in its decision-makers as it had done in financial regulators?

Other situations in which the banking industry or banking regulators failed to ask appropriate questions before lending come to mind. The 1982 third world debt crisis may have been caused because banks failed to ask pertinent questions about the capacity of borrowers and the purpose of the loans. Bank loans to Greece in the years prior to the global financial crisis assumed that the European Central Bank would bail out the country should payment difficulties arise. At one point, these bank loans raised the spectre of "Grexit". Lending banks failed to ask difficult questions when the country was clearly borrowing these funds to support consumption – not investments. It may also be worthwhile to examine one of the most serious economic crises facing the Chinese economy at this time – that of the bankruptcy of Evergrande. Was this the result of policymakers within the Chinese Government, as well as within Evergrande, not having raised pertinent questions about the vacancy rates in existing urban dwellings, perhaps because of their need for continued growth?

It is possible to argue that an unwillingness to ask questions and make difficult decisions could have caused the most serious problem facing mankind, that of climate change. Cognizance of the long-term costs associated with climate change would have required political leaders to take steps that, in themselves, would have resulted in short-term costs, ones that could affect the political leaders themselves. We have known about the consequences of unrelenting expansion of consumption based on the indiscriminate use of natural resources for at least half a century. Only now, however, do we see the emergence of tentative measures that may prevent further deterioration. This inaction reflects a wilful ignorance on the part of the leaders as well as the public.

Economic theory must take into account the hubris of both the public and those leaders chosen by the public and examine the role that wilful ignorance plays in decision-making processes. It is hoped that this study will encourage event studies of economic failures that have resulted from situations in which policies made sense – unless one looked at the policy from an outsider's perspective. The flow of funds into the mortgage market made sense unless one examined the underlying assumptions. Perhaps, we should pay more attention to the cynics (Rajan 2005) who point out the fundamental flaws in the model being used.

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https://ca.news.yahoo.com/former-quebec-junior-hockey-player-193142682.html.

[52] Barnichon et al (2018) estimate that the decline in output "…represents a lifetime present value income loss of about $70,000 for every American."

It may also be important to create mechanisms that prevent policymakers from succumbing to wilful ignorance. One may consider installing an additional layer of governance. In the case of the global financial crisis, financial regulators and those government leaders who appointed them had a bias to support each other. Neither political leaders nor regulators could challenge the other. In our present (democratic) systems, only the media and civil society have the task of questioning policymakers. The media, however, has not always resisted manipulation by policymakers. Would an independent layer of governance – one that was not dependent upon either political leaders or regulators – have been more willing to question the developments in the financial markets, many of which seemed absurd to a casual observer? How could someone without a job, income or assets receive a multi-million-dollar mortgage? There is a critical need to have a layer of governance that can both ask questions and have authority to raise the alarm, particularly in the case of simple, common-sense situations that do not make sense.

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