Collateralised Debt Obligations (CDOs): An Update

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Abstract: Collateralised Debt Obligations (‘CDOs’) are credited for the credit market’s demise in 2007. It is much too simple, and tempting, to scapegoat the vast use of CDOs during this time. A more complete explanation of the Global Financial Crisis (GFC) considers the stakeholders who created and bolstered the CDO. Ultimately, the CDO is a vehicle for cognitive and moral shortcomings.¹ This paper gives a detailed description of a CDO and chronicles its role in the 2007 Global Financial Crisis (‘GFC’). Legislative responses following the adoption of the Dodd-Frank Wall Street Reform and Consumer Protection Act 2010 (‘Dodd-Frank Act’) are described. Finally, the current status of the CDO in the United States economy is explored. While some human motives and indeed approaches to CDOs have been effectively hampered through regulation, there still exists a clear potential to create CDOs in the current economic climate. More efficient regulation is required to curb the making of CDOs, which provide a potential for ‘rent seeking’ practices amongst investors, while posing social costs for the economy as a whole. Thanks to cognitive shortcomings, the current rebirth of CDOs in the US ought to be managed through greater regulatory oversight to avoid another crisis.

I. WHAT IS A CDO AND WHAT IS ITS USE?

A. Keeping Up With the Demand for CDOs

The Collateralised Debt Obligation or CDO is a special purpose vehicle aimed at diversifying financial risk or spreading risk to multiple stakeholders or investors. It essentially is a specie of structured ‘asset-backed securities.’² This means it provides security to a financial transaction, supported by a pool of

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assets. In the present context, the relevant pool of assets is consumer mortgage loans.\textsuperscript{3} CDOs encompass diverse financial instruments, including collateralised bond obligations, collateralised loan obligations, collateralised mortgage obligations and so forth.\textsuperscript{4} They can be created by banks, non-banks and asset management companies.\textsuperscript{5} CDOs are created via a ‘special purpose vehicle,’ a company, which administers the loan obligations and risks, but otherwise has no claim to the cash flow generated by the underlying assets.\textsuperscript{6} In order for CDOs to work, they require subprime loans to fulfill the role of providing capital assets. In essence, subprime mortgage became the ‘raw material’ for the creation of a CDO.\textsuperscript{7} At a broader level, Nayak connects the growth in demand for subprime mortgages, with two interrelated factors. Firstly, the slump in dot.com investments which marked the end of ‘large investments from the stream of technical innovations that had galvanized the investment climate during 1990s.’\textsuperscript{8} In this regard, ‘[t]he GDP growth rate slumped from the peak of 4.8% in 1999 and 4.1% in 2000 to 1.1% in 2001 and 1.8% in 2002.’ Secondly, ‘the housing and real estate market could kick-start the growth of the US economy again if finance was made available to the millions of prospective home owners at reasonable rates.’\textsuperscript{9} Unfortunately, the ‘reasonable rates’ for a majority of consumers was only possible through subprime mortgages and CDO mechanisms. England notes that,

\begin{quote}
\textquote{In 2002, CDOs [took up] 20 percent of all new private subprime mortgage-backed securities issued. In 2003, CDOs were securitizing slices of 60 percent of subprime bonds. By 2004, it was 80 percent. And then afterward, until it all collapsed, there were not enough subprime securities to meet the demand of CDO arrangers and investors.}\textsuperscript{10}
\end{quote}

This had the perverse effect of driving up demand for subprime mortgage loans. Studies show that mortgagors that otherwise qualified for prime loans, were given costly subprime mortgages by brokers, seeking to make a quick profit in an industry where subprime was in high demand.\textsuperscript{11} Specifically, the

\begin{itemize}
\item[\textsuperscript{3}] Lemke, Lins and Picard, \textit{Mortgage-Backed Securities} (Thomson West, 2013) [5.15].
\item[\textsuperscript{4}] Hongwen Du et al, ‘On the Mechanism of CDOs behind the Current Financial Crisis and Mathematical Modeling with Levy Distributions’ 2 (2010) \textit{Intelligent Information Management} 149, 149.
\item[\textsuperscript{5}] Ibid.
\item[\textsuperscript{6}] Ibid.
\item[\textsuperscript{7}] England above n 1, 103.
\item[\textsuperscript{8}] Satyendra Nayak, \textit{The global Financial Crisis: Genesis, Policy Response and Road Ahead} (Springer, 2013) 12.
\item[\textsuperscript{9}] Ibid 12.
\item[\textsuperscript{10}] England above n 1, 103.
\item[\textsuperscript{11}] Charles W Murdock, ‘The Dodd-Frank Street Reform and Consumer Protection Act: What Caused the Financial Crisis and Will Dodd-Frank Prevent Future Crises?’ 64 (2011)
\end{itemize}
types of loans that rose in prominence in this climate were ‘Alt-A loans,’ which were low documentation loans typically offered to sophisticated borrowers, who understood that a creditor was ‘no Santa Claus.’ However in the pre-crisis climate, the highly risky loans were offered to consumers who typically had a poor understanding of their obligations under the loan agreement. Notwithstanding the exceptional ‘opportunistic borrower,’ the majority of loan transactions were completed on the basis of a ‘wide gap in sophistication between the borrower and the providers of these loans,’ whereby the complexity associated with ‘teaser rates’ and other behavioral shortcomings worked to deceive the borrower. As a result, subprime lenders had very little equity in the homes they purchased with the loans. To make matters worse, the capital requirements regulation at the time had the effect of creating ‘distorted incentives’ for hiding low equity loans. Under the Basel Accord II, higher risk loans require a higher percentage of capital, at 8%. While less risker loans require capital of only 1.6%. In turn, credit rating agencies were incentivised to rate risk low, in order to grant their clients the benefit of a smaller capital requirement. The credit ratings’ incentive stemmed from a ‘conflict of interest’ or moral hazard, because the company seeking to have their risks rated pays the fee for a risk assessment. In order to retain customers, it is in the agencies’ best interest to issue favorable, however flawed, ratings. In fact, credit rating agencies are commonly disparaged for playing a key role in the crisis for these reasons.

B. What is Inside a CDO?

Delving deeper in to the CDO mechanism, the SPV has the risk from preexisting loan transactions, it organises these risks in ‘tranches’ [See Figure 1]. The tranches are organised according to ‘credit ratings.’ For example, a top tranche with the most favorable credit rating is given to a tranche that bears little risk and is exemplified by ‘AAA.’ The tranches range from the most favorable, AAA, through to AA, BBB, BB and so forth. The most favorable low risk tranche is known as the ‘senior tranche’ while the lowest
ranking highest risk tranche is the ‘equity tranche.’ A senior tranche is the first to be paid from underlying loans’ interest repayments. It is also the tranche that is the last to bear a loss from any defaults. This is why the process is often likened to a waterfall or cascade. It is the senior equity tranche that gets filled up with interest first, then the other tranches, according to seniority. Therefore, where there are insufficient funds, because of mortgage defaults, for example, the senior tranche still receives payments made, with the lower tranches suffering the loss first [See Figure 2]. However, because the senior tranche bears very little risk the senior tranche investor is paid less in interest repayments, in comparison to his or her ‘equity tranche’ counterpart.

C. CDOs and Protection Through Covered CDS

The CDO analysis is not complete, nor would it be sustainable in a risk averse climate, without its logical offshoots: the CDS and naked CDOs. The CDO system closely depended upon ‘Credit Default Swaps’ (‘CDS’). CDSs are bilateral swap agreements between two investing parties, which insure against default or losses flowing from the CDO. Thus, in a typical CDS arrangement the insurer provides the insured with the promise that it would cover the costs against loss (occasioned by, for example, default, bankruptcy, credit rating downgrade of a borrower), while the CDO investor would provide the insurer with regular payments. The hedging practices were ultimately unstable because the providers of protection were not adequately capitalised. The mechanism gave rise to a demand for ‘naked’ or ‘uncovered’ CDOs.

Unlike the typical hedging CDO described directly above, the uncovered CDO took on a different form. The uncovered CDOs were cheaper to create, they ‘referenced’ covered CDOs to the effect that uncovered CDO investors would receive premium payments from the CDS, in the event of a default or other loss causing occasion. Therefore, an uncovered CDO did not finance mortgage loans but instead allowed investors to speculate on the likelihood of loss causing occasions, such as default. For instance, where an uncovered CDO investor speculated that a particular covered CDO would result in major losses from defaults, the uncovered CDO investor would invest in that CDO to reap the benefits of a CDS repayment. The latter approach has been described as

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18 Du above n 7, 151.
19 Ibid 151
‘speculative trading’ by providing speculators with compensating returns.\textsuperscript{22} It is abhorrent to many because it bears a strong resemblance to gambling.

\textbf{D. The Rise of Uncovered CDO and CDSs Transactions}

These derivative contracts essentially promise that one party will pay another party a sum, where a mutually agreed financial phenomenon occurs. Stout explains that ‘[t]he value of [the] derivative agreement is derived from the performance of the underlying financial phenomenon, just as the value of a betting ticket at the racetrack is derived from the performance of a horse.’\textsuperscript{23} Hence, ‘paying $2,000 for a CDS contract whose value depends on the performance of a $100,000 bond is equivalent to paying $2 to buy a betting ticket whose value depends on the performance of a horse in a race.’\textsuperscript{24} Covered CDOs and CDS transactions are no different. However, because the investor in a covered CDO owns the underlying bonds, when the loans do not perform, they lose on their investment income but win the protection through their CDS insurance-like contract. This is the same as when a homeowner buys insurance for protection in the event that their house burns down. When the house burns down (loans suffer from defaults), the insured will gain benefit from the protection. However, in both cases, the parties have an interest against house burning down, or the loans going into default. In the uncovered scenario, because the protection buyer has no underlying interest in the loans, it is in their interest for the loans to default, in order to gain benefits from the protection pay out.\textsuperscript{25} In an uncovered market, the questionable practice takes place as follows:

- Betty and Bob are both risk averse
- Neither party owns corporate bonds of Bank A, therefore neither is exposed to risks that arise from Bank A’s creditworthiness
- However, Betty predicts Bank A’s credit rating will remain stable or rise, through loan repayments, while Bob predicts there will be many defaults to adversely affect Bank A’s credit rating
- As a result Bob buys CDS protection (anticipating returns from losses), while Betty sells.\textsuperscript{26}

Both parties are essentially speculating and ‘rent-seeking.’ Both have exposed themselves to risk, while contributing nothing to the economy as a whole. Instead of investing money in new building projects and expansion, both Betty

\textsuperscript{22} Stout above n 3, 4.
\textsuperscript{23} Ibid 6.
\textsuperscript{24} Ibid.
\textsuperscript{26} Stout above n 3, 8.
and Bob risked vast sums of money on the speculative guesses of certain events unfolding. 27 This practice was banned by most common law jurisdictions, through the legal rule against ‘difference contracts.’ 28 The rationales were clear, the practice encourages wasteful use of human capital while ‘promot[ing] no legitimate trade.’ 29 Nevertheless, the practice became legal under the Commodities Futures Modernization Act 2000, which allowed speculative trades in the name of ‘legal certainty’ 30 and previous statutes that strictly regulated the practice 31 were outdated. The Act raises questions about ‘enforceability of contracts with banks’ and hinders improvements in the way banks reduce their risks. 32 On the contrary, the deregulation in this area, lead to heightened exposure to risk. Even following minor liberalisation in 1992, under the previous regime, immediate losses were evidenced by industry. For example, Proctor and Gamble Co announced a $157 million loss in speculative trading on interest rates. 33 Of course, the losses evidenced in the current context are incomparably immense. In fact, to use the above example, consider if Betty, along with another four people, decides to sell CDS protection on speculative grounds, on a $100,000 loan. The purchaser of the protection is Bob. If the loan fails, the loss is $100,000. However, Bob is entitled to receive $500,000 on the basis that he has purchased multiple protection. The effect is perverse. As Stout comments, ‘derivatives trading can amplify risks in the underlying economy […] by turning a problem in the $1.3 trillion subprime mortgage market into a multi-trillion dollar speculative crisis.’ 34

Despite the prevailing criticisms, supporters of the practice argue even in the case of ‘uncovered CDOs’ the market benefits from price discovery and increased liquidity. 35 As a consequence, the CDOs were extremely popular up to 2007, due to their ability to provide high returns and their structure, which allowed them to withstand unfavorable events such as defaults. 36 As Kling comments, both regulators and bankers labored under the assumption that CDPs made the intermediation of riskier loans safer and more efficient. 37

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27 Ibid 9.
28 For the US position, see: Irwin v Willar 110 US 499, 508-09 (1884).
29 Melchert v Am Union Tel Co 11 F 193, 195 (CCDA Iowa 1882).
30 Stout above n 3, 21.
31 Commodity Exchange Act 1936.
33 Frank Partnoy and David A Skeel, ‘The Promise and Perils of Credit Derivatives’ 75 (2007) University of Cincinnati Law Review 1019, 1021 (‘a credit default swap is a private contract in which private parties bet on a debt issuer’s bankruptcy’).
34 Stout above n 3, 23.
36 Sharma above n 23, 290.
37 Kling above n 4, 515.
However, the commonly cited defences of the uncovered mechanisms, fail on closer scrutiny.

Firstly, it is doubtful the uncovered transactions lead to greater ‘price discovery,’ given that most of these CDOs had been sold ‘Over the Counter’ (‘OTC’) which involve private, bilateral trades between parties, with no requirement of disclosure.\(^{38}\) Secondly, turning to the ‘liquidity’ defense, it is clear most uncovered CDO-related transactions are separate to the underlying loans, therefore they do not provide liquidity for the trade in the underlying asset (in this context, the houses purchased). Although, it can be said liquidity is provided for those who seek ‘insurance,’ in the event of a particular financial phenomenon.\(^{39}\) Indeed, the GFC is also commonly referred to as the ‘liquidity crisis’. The illiquidity that occurred was staggering, and is explained directly below.

### E. The Financial Crisis

Regulators and other financial stakeholders were forced to rethink their approaches to the CDO during the GFC of 2007.\(^{40}\) As long as the housing market was appreciating, the demand for CDOs, CDO protection through CDS, and uncovered CDOs, thrived.\(^{41}\) Once the demand and market for mortgages slowed down, defaults increased, investors lost their investments,\(^{42}\) and the insurance from CDS and uncovered CDO schemes, came under tremendous pressure to provide protection for the risks insured.\(^{43}\) However, the protection providers were not adequately capitalised to make good their promises. This caused a liquidity crisis in the market whereby the demand for CDOs dropped sharply, as investors commenced a game of ‘hot potato’ by seeking to sell their respective investments.\(^{44}\) In other words, under the previous scheme,

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39 Stout above n 3, 30-31.
sellers and buyers of CDS and uncovered CDOs failed to consider the underlying risk of their investments because of the seemingly infallible protection available at the time. This relaxed approach allowed buyers and sellers of both protection and investment to comprise of the same party. However, once the underlying risk materialised, due to mortgage defaults, the demand for the mechanism fell steeply. Nayak helpfully refers to this occurrence as the ‘Niagara Falls Effect’ [See Figure 3]. Nayak elaborates that the sudden decrease in demand had the effect of rendering irrelevant the underlying capital of the mortgage loans of houses or assets. Interestingly, he hypothesizes,

‘[s]ince the securities were backed by tangible housing mortgages, the write-offs should have been limited at the most to the decline in the fair value of the houses. The crisis was, therefore, triggered by the accounting fallacy. If the market fails to give value due to liquidity collapse, the tangible assets cannot be written down to zero. The homeowners may have defaulted, but their mortgages were intact. This experience is a lesson to the accounting bodies to develop fair valuation methods in the case of a market collapse.’

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The losses suffered by prominent Wall Street firms, had a ripple effect on the economy. To provide an example, Bear Stearns, the nation’s fifth largest investment banking firm was heavily hit due to its participation in the packaging, underwriting, investing and trading in the securities. Lehman Brother, among other firms, suffered a similar fate. The losses to the economy were astounding. It has been noted, the crisis gave rise to job losses of 4.5 million, beginning in 2007 through to 2009. The government was required to infuse capital into the banks by repurchasing troubled assets, with the passage of the Emergency Stabilization Act 2008 (Troubled Assets Repurchase Act or ‘TARP’). The fiscal years of 2008 to 2010 saw the annual deficits soar to $455 billion, $1.4 trillion, and $1.35 trillion, respectively.

45 Nayak above n 11, 40.
46 Sharma above n 23, 291.
48 See for example: Stout above n 3, 26.
In summary, this section has considered the origins of the increased demand in the CDO mechanism, the technical aspects of a CDO, and how the CDO mechanism gave rise to more questionable practices thanks to increased deregulation. Importantly, it is useful to remember the crisis was caused by a multiplicity of factors. For instance, while lack of adequate capitalisation in the subprime mortgage market made a crisis spurred by loan defaults inevitable, the institution of the uncovered CDO and CDS protection worked to amplify the losses.

III. MORAL AND COGNITIVE SHORTCOMINGS

Of course, the mere advent of the CDO as a financial mechanism is not solely to blame. For all purposes, the CDO is no more than the ‘vehicle’ it purports to be at first glance. However, at the roots of its failure lies human motivations driven by morally questionable rationales as well as cognitive shortcomings. The number of stakeholders involved with the advent and use of the CDO is broad. The Financial Crisis Inquiry Commission paraphrased Shakespeare claiming that ‘the fault lies not in our stars, but in us.’ \(^{52}\) The human flaws in the current crisis are multiple, while some are more culpable than others. Starting with the more obvious and therefore culpable human oversight: ‘moral failure.’ Moral failure, Kling explains, is a narrative or concept that shifts blame onto the short-term incentives of key investor stakeholders, such as corporate executives, credit rating agencies and brokers. Moral failure provides a persuasive pretext for stringent regulatory policies painting the financial crisis as a ‘fire started by delinquent teenagers, with the adults in charge not sufficiently inclined or positioned to exercise adequate supervision.’ It follows that ‘[t]he solution is thus to reorganize and re-energize the regulatory apparatus.’ \(^{53}\) On the other hand, if one perceives the crisis and the use of CDOs as a product of less culpable failure, that is cognitive failure, the regulatory bodies are justified in taking a less stringent stance to subsequent intervention. This is because cognitive failure paints the picture of benign stakeholders who overlooked the inherent flaws in financial engineering. Their flaws are only discoverable in hindsight. This rationalisation is used to explain commonly held beliefs at the time, such as: a sudden decline in housing prices was impossible, increased homeownership was intrinsically beneficial to society and the products of financial engineering helped to effectively reduce risk in transactions. \(^{54}\) In this view, future regulation should be viewed


\(^{53}\) Kling above n 4, 507-8.

\(^{54}\) Kling above n 4, 508.
narrowly, because industry experts and regulators alike suffer from the same illusions when faced with innovative financial products.55

The following sections apply Kling’s categorisations to evaluate the efficiency of the regulatory responses to the crisis. ‘Responses to stakeholder motives to create a CDO’ considers legislative reforms aimed at curbing some of the more obvious moral failures, stemming from stakeholder incentives to uphold the CDO financial vehicle. On the whole, the section concludes that obviously flawed motives harbored by most stakeholders in the economy have been largely abated through increased regulation and oversight. However, it also argues that the legislature has refrained from proscriptively denying stakeholder’s the right to create a CDO. This raises the questions, in the event of another financial crisis: will the preservation of questionable financial engineering practices be viewed as another ‘cognitive failure,’ one that should be left to minimal deregulation? Or, does the GFC provide an adequate lesson in ‘innovative products’ and financial engineering, such that the current practices will be viewed as a clear moral failure?

IV. REGULATORY RESPONSES TO THE CDO

In addition to emergency measures legislation, the crisis gave rise to a number of long-term reforms. The Dodd-Frank Act accounts for nearly 1,000 pages,56 marking a ‘profound increase in regulation of the financial services industry.’57 The Act is divided in 16 titles and requires regulatory bodies to create an additional 243 rules, conduct 67 case studies and issue 22 periodic reports.58 Despite its length, the Act anticipates more specific rules will be made, by granting regulatory power to specific government bodies.59

The chief bodies responsible for further implementing the Act include the Federal Reserve, US Department of Treasury, the Federal Deposit Insurance Corporation, the Securities and Exchange Commission and the Commodities

55 Ibid 508.
58 Davis Polk & Wardwell LLP, Summary of the Dodd-Frank Wall Street Reform and Consumer Protection Act, Enacted into Law on July 21, 2010 (July 21, 2010) <http://www.davispolk.com/files/Publication/7084f9fe-6580-413b-b870-b7c025ed2ecf/Presentation/PublicationAttachment/ 1d4495c7-0be0-4e9a-ba77-f786fb9046a/070910_Financial_Reform_Summary.pdf>.
59 North and Buckley above n 59, 481.
Futures Trading Commission. Importantly, the Act establishes a new actor, the Bureau of Consumer Financial Protection (‘CFPB’), which is granted with investigative powers in connection with consumer abuses.

A. Responses to Stakeholder Motives to Create a CDO

Because the CDO is a mere means to an end, this section considers the legislature’s response to some of the different stakeholder motives that helped power the CDO production chain. The laws are analysed according to the relevance and proportionality of their response, to the identified motive and whether the response, while sufficiently proportionate, has the potential to fail due to enforcement costs.

1. The Borrower and Consumer of the Subprime Mortgage

Perhaps at the very foundation of the financial hierarchy, lies the borrower of the subprime loan. As identified above, the borrower played an essential role in powering the CDO production chain, by supplying other stakeholders with the essential, ‘raw material,’ the subprime loan obligation. It has to be noted the borrowers’ motives can be classed within a spectrum of pure ‘opportunism’ or market ‘vulnerability.’ Indeed, while some consumers were content to obtain loans they could not otherwise afford, others were vulnerable to market actors who misrepresented the nature of the loan obligations. Bar-Gill and Warren observed that, ‘[e]vidence abounds that consumers were sold credit products that were designed to obscure their risks and to exploit consumer misunderstanding.’ The specific targeting of low socio-economic neighborhoods by loan originators, and a lenient approach to regulation, further exacerbated the matter. Another contributing factor was the government’s instrumental role in promoting the, ‘American Dream’ through increased home ownership. In fact, the spread of home ownership was a government policy since the New Deal of 1933, and finds resonance in the ‘Fannie Mae’ (Federal National Mortgage Association, 1938) policy of

61 Murdock above n 14, 1255.
63 North and Buckley above n 59, 291-2.
64 In particular, despite calls to use its power under the Home Ownership and Equity Protection Act of 1994, the Fed had failed to forcefully respond and stop the proliferation of risky subprime loans: US Department of Treasury and US Department of Housing and Urban Development, Curbing Predatory Home Mortgage Lending: A Joint Report (2000).
providing banks and mortgages with funding, and ‘Freddie Mac’ (Federal Home Loan Mortgage Corporation, 1970) was created to foster liquidity in secondary markets for conventional mortgages. The disjuncture between the American dream of home ownership and the financial reality facing most consumers is another contributing factor, which would have lead consumers to embrace questionable routes towards home ownership and financing.

The Dodd-Frank response to the foregoing incentives and hazards that exist are quite proportional. Murdock praises the reforms by stating that, ‘[t]he new legislation would not only have effectively barred many improvident loans, but also would have restricted some of the incentives that have lead to such loans.’ The regulatory response to this has been to shift the onus on the mortgage provider or broker, in terms of assessing the loan’s suitability to the particular customer. Thus, an originator of a loan, cannot persuade a customer to obtain a loan, which is ‘predatory’ if the customer lacks the ‘ability to repay’ the loan. In addition the originator must not: misrepresent the consumer’s financial history, or misrepresent the value of the property, which securitises the loan transaction. Title 14 of the Dodd Frank Act amend preexisting legislation to prohibit loans unless, ‘reasonable and good faith determination[s]’ ‘based on verified and documented information’ evidencing a consumers ability to repay. The ability to repay determination is to be assessed according to a fully ‘amortizing payment schedule, not on initial ‘teaser’ or ‘honeymoon rates.’ The Act also establishes the CFPB, which regulates consumer abuses through investigations, court actions and provision of protective rules and regulations.

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65 Nayak above n 7, 15-16. An extreme view would argue that this initial ‘socialisation’ by the government in the home loan market was the ultimate cause of the GFC (an argument of ‘regulatory failure’): Daniel J. Popeo, The American Bad Dream (20 October 2008) <http://www.wlf.org/upload/10-20-08baddreammytopedslick.pdf>.


67 Murdock above n 14, 1267.

68 Defined as a party who ‘takes a residential mortgage loan application’ or provides assistance to a ‘customer in obtaining or applying’ for the mortgage loan or ‘offers or negotiates terms’ of the mortgage loan. Thus the term is inclusive of both a lender and broker. Dodd-Frank § 1401.

69 Dodd-Frank § 1402.

70 Dodd Frank § 1402.


72 Dodd-Frank § 129C(a)(6)(A)-(C).

73 Dodd-Frank §§ 1053-1055 and 1031, respectively.
2. The ‘Originator’\textsuperscript{74} of the Subprime Mortgage

The mortgage originator as the financier or broker played an essential role in connecting the consumer (the ‘raw material’) to financial engineers who constructed CDOs. Specifically, mortgage brokers were strongly incentivised to procure subprime loans as the commission was paid ‘upfront’ to them and a subprime loan usually promised higher returns to brokers.\textsuperscript{75} As a result, six figure incomes were typical.\textsuperscript{76} It is estimated that in 2005, 55% of subprime mortgagors actually possessed credit ratings that would have otherwise qualified to less costly, prime loans.\textsuperscript{77} Unfortunately, this number increased as the CDO frenzy and demand for subprime mortgage ‘raw material’ increased. A related party was the mortgage ‘lender.’ As discussed, there was an increased demand for subprime loans, and because the perceived risk was so low (owing to the ability to repackage the loan and on-sell), the lenders cared little for the borrower’s inability to pay.\textsuperscript{78} For lending institutions, ‘[m]ore loans meant more revenue, which translated into greater earnings, higher stock prices’ and greater remuneration for management.\textsuperscript{79} As such, both subprime lenders and brokers, shared the same short term incentive to increase the supply of CDOs and gain instant remuneration at the expense the longevity of the loans and the borrowers creditworthiness.

The legislative provisions considered above, help to abate the mortgage brokers and lenders incentives, by shifting the burden on them to carry out better due diligence inquiries about a potential customer.

3. Credit Rating Agencies

The credit rating agencies provided a solid justification and basis upon which securitizers purchased subprime loans. Unfortunately, the basis was flawed and incorrect. Credit rating agencies provided inaccurate ratings on structured financial products such as the CDO leading up to the crisis.\textsuperscript{80} CDOs are complex financial instruments, which presents some confusion even amongst sophisticated investors.\textsuperscript{81} As such, investors and purchasers of the CDO relied

\textsuperscript{74} As above, this includes both lenders and brokers.

\textsuperscript{75} The higher the interest rate, the higher the commission. Once the honeymoon period or ‘teaser rates’ had expired it was typical of these loans to possess extremely high interest rates: Rick Brooks & Ruth Simon, ‘Subprime Debacle Traps Even Very Credit-Worthy,’ \textit{Wall Street Journal} (3 December 2007).

\textsuperscript{76} Subprime Lending, \textit{The Effect of Subprime Mortgage Lending on Mortgage Brokers, Subprime Lending Crisis}, <http://www.subprimelendingcrisis.com/Effect_of_Subprime_Mortgage_Lending_on_Mortgage_Brokers.php>

\textsuperscript{77} Rick Brooks and Ruth Simon, ‘Subprime Debacle Traps Even Very Credit-Worthy’ Dec 3 2010 \textit{Wall St Journal}.

\textsuperscript{78} Murdock above n 14, 1262.

\textsuperscript{79} Ibid.

\textsuperscript{80} North and Buckley above n 59, 492.

\textsuperscript{81} Murdock above n 14, 1302.
heavily on third party credit rating agencies, basing their decision on whether agencies gave a desirable AAA rating. However, the agencies were hardly impartial. In fact, rating agencies relied heavily on investment banks, which typically engineered the CDO, for business revenue. This provided the agencies with an insatiable incentive to provide favorable ratings despite apparent risks in order to secure further transactions. Again, as with the other stakeholders, the prevailing mindset was ‘let’s hope that we are all happy and retired by the time this house of cards falters.’

The deterioration in rating practices is perhaps best summarised by the results of their work. It is estimated that 70% of AAA ratings issued by the agency Moody’s fell between January 2007 and December 2008.

The desire by the credit rating agencies to retain customers by giving favorable and biased opinions, is a clear and uncomplicated example of conflicting interests. The moral hazard of the credit rating agencies was promptly and efficiently addressed via the Dodd-Frank Reform. Congress has effectively removed the First Amendment protection offered to rating agencies on the basis that ‘the activities of credit rating agencies are fundamentally commercial in character and should be subjected to the same standards of liability and oversight as apply to auditors, securities analysts and investment bankers.’

The Act specifically allows for private investor actions against credit rating agencies, in this respect. In addition to private actions, which may now be pursued, the Act provides for greater transparency. Rating agencies must now disclose essential aspects of their assessments, such as for instance the methodologies used, potential shortcomings of the rating, whether third parties have been consulted to deliver the ratings and any conflicts of interest that arise. The agencies must also disclose the use and extent of use of third party due diligence assessments and the outcomes of such assessments. The SEC is also required to undertake several periodic assessments, of standard terms used by the agencies, the market conditions under which the assessments are determined, the neutrality of the

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84 Dodd–Frank § 931.
86 Dodd frank § 932(a), 124 Stat 1376, 1879-81
87 Dodd–Frank Act, § 404, 124 Stat 1376, 1571-4. Third party must certify the use of their services: § 932(a), 124 Stat 1376, 1880.
88 Dodd–Frank Act, § 939(h), 124 Stat 1376, 1887.
89 Dodd–Frank Act, § 939(h), 124 Stat 1376, 1887.
assessments\textsuperscript{90} and the existence of persisting conflicts of interest.\textsuperscript{91}

While the reforms have been praised,\textsuperscript{92} commentators such as Brown remain skeptical on the basis that the credit agencies are not provided with any incentives to perfect the information.\textsuperscript{93} This means the agencies are not incentivised to proactively seek out impartial information, but may simply rely on the information provided to them by their clients. To this extent, a moral hazard still persists.

4. Purchasers Of Subprime Loans

Subprime loans would not have existed if not for the entities that securitized them. This means that mortgage brokers would not promote risky loans unless and until another entity, usually a government body or investment bank purchases these loans to bundle them off into securitized instruments. The usual purchasers of these loans were Fannie Mae and Freddie Mac.\textsuperscript{94} However, investment banks offered less stringent pre-requisites for securitizing a loan. This meant that it was easier to securitize a risky loan through a private investment bank, rather than through Fannie Mae and Freddie Mac. This reality is reflected in the growth of investment bank participants in the market, leading up to the crisis.\textsuperscript{95}

Similar to brokers and loan originators, large investment banks were driven by the same desire for individual, short-term gain. Investment banks provided their employees with monetary incentives for increasing the short-term economic growth in their companies. The subprime lending market through the CDO mechanism allowed investment banks to inflate the value of their stock and revenue in the short term.\textsuperscript{96} To provide an example, Merrill Lynch experienced significant growth during 2003 to 2007 thanks to such practices [See Figure].\textsuperscript{97} Investment banks not only secured risky loans, they directly financed the original ‘non-bank’ entities, which provided finance to consumers. For instance, Bear Stearns owned EMC Mortgage.\textsuperscript{98}

The practice was rapid and seemingly risk free. As explained above, the creation, securitization and purchase of CDOs were seemingly made safe

\textsuperscript{90} Dodd-Frank Act § 939C, 124 Stat 1376, 1888.
\textsuperscript{91} Dodd-Frank Act § 939F, 124 Stat 1376, 1889.
\textsuperscript{92} Murdock above n 14, 1243.
\textsuperscript{93} Brown above n 42, 54.
\textsuperscript{94} Murdock above n 14, 1271.
\textsuperscript{95} Ibid 1272.
\textsuperscript{96} Guidance on Sound Incentive Compensation Policies, 75 Fed. Reg. 36,395-02, 36,405 (June 25, 2010).
\textsuperscript{97} Murdock above n 14, 1277 (see tabular graph and explain the steep decline).
through the institution of CDS insurance. However, to recap, the CDSs, which provided the insurance were not adequately capitalised. Insurers such as AIG failed to set aside adequate reserves in the event of a default. The practice of naked CDOs and CDS transactions allowed stakeholders to turn the practice into a wagering system, which had the effect of increasing the underlying loan liabilities. Without due care and diligence about the nature of the loans, the practice of lending was transformed into a money making factory, whereby risky loans could be originated, repackaged and secured at a selling rate of $1 billion per day.

The Dodd-Frank Act responds to the foregoing considerations through several different reforms. Starting with the ‘risk retention’ requirements in Title IX (dealing with risk retention in certain transactions) and Title XVI (dealing with risk retention for mortgages). The risk retention provisions are aimed at reducing the bank and investors’ ability to simply rid them of risk by selling their respective engineered financial product on the market. For general transactions, regulators are required to establish a 5% risk retention minimum. The provisions apply in relation to CDO risk retention. In similar vein, the Act requires disclosure of the level of risk retained.

Murdock comments that the 5% minimum is not particularly prohibitive of risky practices, as stakeholder parties typically earn fees in excess of that, for every transaction. While, Brown comments the risk retention provisions completely miss the point. He supports the notion that the crisis was caused by the securitizers inability to effectively pass on risk through complex systems, such as the CDO, as they had intended. Therefore, the risks were, if anything, concentrated in the financial sector rather than being dispersed. Brown argues a more efficient reform would stipulate capital requirements, which would ensure the financing of any underlying risks assumed. The US has implemented the Basel Accord III international capital requirements in 2011, and continues to do so progressively.

99 Murdock above n 14, 1319.
101 Brown above n 47, 35.
102 Dodd-Frank § 941.
103 Dodd-Frank § 941.
105 Murdock above n 14, 1280.
106 Brown above n 47, 35.
107 Ibid.
An adequately capitalised institution is shielded from shocks in the market place pertaining to value of assets held. As discussed earlier, however, the banks circumvented the capitalisation requirements by seeking to bolster the credit weighting of their financial instruments, along with other means. As such, an adequate Dodd-Frank response needs to address such circumvention practices. The response however is unimaginative, being a mere ‘punt to the regulators.’ The provisions simply establish that primary regulators are to discern appropriate requirements.

A discussion of the current reforms is not be complete without analysis of its most controversial addition, dubbed the, ‘Volcker Rule.’ The Volcker Rule, named after Chairman of the Federal Reserve, Paul Volcker, is expressed in §619 of the Dodd Frank Reform. It prohibits a banking institution or a company owning a banking institution from engaging in proprietary trading, not requested by a client. Proprietary trading refers to the practice of an institution purchasing shares on its own account for the purposes of earning a profit. The key objective of the new rule is to prevent banking institutions from participating in speculative trading of securities with their own capital.

The collapse of Lehman Brothers illustrates how trading in speculative structured financial products can expose the economy to an immense amount of risk. Prior to the Dodd-Frank amendments, the practice of proprietary trading was left unbridled thanks to the 1990s repeal of the Glass-Steagall Act. The repeal was championed by ‘pro market fundamentalism,’ perhaps best captured by President Reagan’s statement that, ‘government is not the solution; government is the problem.’ Proponents of greater deregulation often invoked arguments of economic efficiency, greater global integration, global dominance and the ability to innovate, spreading risks of banking. Effectively, the repeal married commercial banking and investment banking. This marriage had the effect of introducing commercial banking practices and financial products such as the ‘collateralised loan...
obligation’ to the sphere of investment banking. However, while the CLO involved commercial actors who undertook relevant due diligence checks and retained interest in the loan, the CDO market was riddled with ‘residential mortgage loans made by non-bank lenders with no relationship to the borrower who cared less about the underlying safety of the loan, and who sold it to get rid of the risk.’\textsuperscript{118} The Volcker Rule represents a ‘partial policy reversion’\textsuperscript{119} to the Glass-Steagall period, in the sense that it seeks to fix the pre-crisis mischief. The effectiveness of the policy reversion will depend upon the implementation and monitoring of the Volcker Rule, in addition to judicial indications of what the contested phrase of ‘proprietary trading’ means.\textsuperscript{120}

For securities traded, ‘over the counter,’ the act imposes special constrains aimed at addressing issues of transparency and excessive market speculation. As discussed above, the practice of OTC derivatives trading proliferated with increased deregulation. The current amendment seeks to add transparency to these practices, without prohibiting these contentious forms of trading. In essence, the reforms include requirements that each swap is ‘centrally cleared,’\textsuperscript{121} swap dealers and participants will be subjected to capital requirements,\textsuperscript{122} and real time public reporting of the swaps.\textsuperscript{123} The Act does not prohibit the CDO from being engineered; rather it empowers government entities, the SEC and CFTC, to report on any instruments they consider being capable of undermining market stability.\textsuperscript{124} This approach acknowledges the innovative nature of financial products, such as the CDO. Therefore, the practice of financial engineering, or even risky financial engineering, is simply overseen, not prohibited. Given the contentious nature of so-called innovative financial products, many commentators see the reforms as toothless. It is argued that naked CDS and CDOs swaps ought to be completely prohibited.\textsuperscript{125} Commentators also warn that the legislation has wide exceptions, such that most trading will remain unhindered.\textsuperscript{126} From a logistical perspective, it is anticipated that regulatory bodies will have difficulty enforcing the reform’s stipulations. The sheer magnitude of OTC transactions presents an overwhelming task, especially within the context of large corporate actors

\textsuperscript{118} Murdock above n 14, 1292.
\textsuperscript{121} \textit{Dodd--Frank Act}, § 723, 124 Stat 1376, 1675-6.
\textsuperscript{122} \textit{Dodd--Frank Act}, § 731(2), 124 Stat 1376, 1705-6.
\textsuperscript{123} \textit{Dodd--Frank Act} §§ 727, 729, 124 Stat 1376, 1696-7, 1701-3.
\textsuperscript{124} \textit{Dodd--Frank Act}, § 714, 124 Stat 1376, 1647.
\textsuperscript{125} \textit{Dodd--Frank Act} §§ 721(a)(19), (21), 124 Stat 1376, 1665-6, 1666-70.
\textsuperscript{126} Stout above n 3.
with the expertise and motive to exploit loopholes.\(^{127}\)

Furthermore, the Act introduces specific rules to curb senior financial executives from implementing risky practices for short-term gain. This is done through the control and oversight of executives’ bonuses and compensation. In this respect, however, the Act is especially tepid. The provisions regurgitate the previous rules whereby executives are required to disclose the amounts earned while the SEC is permitted to oversee compensation practices through a committee and a team of independent legal advisors.\(^{128}\) In addition, and somewhat more proactively, the Act mandates that a company be permitted to recover from former executives any compensation paid, when they do not comply with disclosure requirements.\(^{129}\)

V. OVERALL EFFECTIVENESS OF RESPONSES: IGNORING CLEAR MORAL SHORTCOMING WHILE USING COGNITIVISM AS A PRETEXT?

The above discussion summarised the essential aspects of the Dodd-Frank reform, as they relate to the future viability and potential of another CDO market. It appears that clear human or moral shortcomings of loan originators, opportunist or unsuspecting consumer borrowers and credit rating agencies have been adequately restricted. Indeed, the legislation appears to have addressed these stakeholder parties with particular care. Perhaps this is due to the clearly questionable and clearly human, nature of their shortcomings. An exception to this is the tepid response to executives’ remuneration.

However, when it comes to more technical aspects, the legislation is found wanting. Thus, it is somewhat perplexing for example, why the CDO product is still capable of being manufactured and sold onto the market, subject only to some (yet to be discerned) checks and balances. This point is especially poignant because while the deregulatory approaches and sanguine hopes for the CDO leading up to the 2007 crisis, are brushed off as cognitive shortcomings, this pretext will not prove persuasive the second time around. In sum, the legislation removes apparent human flaws from the CDO chain of production, but the end product, the CDO, is still a possibility. The question remains, how will a new generation of CDOs be repackaged and will their technical nature render them safe the second time around?


\(^{128}\) Dodd-Frank § 952(a) (adding § 10C(d) to the 1934 Securities Exchange Act).

\(^{129}\) Dodd-Frank § 954 (adding § 10D (b) to the 1934 Securities Exchange Act).
A. Post-Dodd Frank: Wall Street vs. Washington

Before considering the current practices pertaining to CDO creation, it is necessary to consider the political battle waged behind the scenes. The colossal nature of the Dodd-Frank reform requires an effective coordination of several government agencies to report, oversee and implement existing measures in the future. Unfortunately, by its mid-2013 anniversary, regulators have missed the deadlines for over 60% of the rules required to be implemented. It seems as though the continued trend, predating the crisis, of increased deregulation, is characteristic of the post-crisis climate. For instance, the Volcker Rule has been criticised for its complexity, leading to the implementation of highly detailed and complex exemptions. Furthermore, the OTC derivatives provisions now define swap dealers as those who conduct trades in excess of $8 billion each year, a stark contrast to the intended $100 million ceiling. The lobbying efforts have been met with an equally aggressive litigation campaign. The Wall Street campaign, said to cost $3.3 billion in political campaigns from 1990 to 2012, and an additional $5.3 billion on lobbying from 1998 to 2012, is fuelled by the age-old rhetoric that when it comes to complex and ‘innovative’ financial products, industry knows best and regulation is likely to do more harm than good. Interestingly, this cost-benefit rhetoric fails to factor in the cost of deregulation, namely, the $3 trillion used in government bail outs to support the financial industry during the crisis and immeasurable damage to the global economy whose effects are yet to be fully felt.


133 Wilmarth above n 134, 1308.


135 Wilmarth above n 134, 1308.

136 Ibid 1363.

137 Ibid.

B. Return of the CDOs: Are We Smarter and Morally Responsible Now?

Since the economic crisis of 2007, CDOs have been virtually eliminated from the financial market. However, current reports are documenting a relatively unthreatening, yet apparent comeback. The comeback is said to have its genesis in low interest rate environments, which have driven demand for higher returns than their government and corporate bond counterparts. But have investors and securitisers learnt from their previous mistakes? Wharton reports the new CDOs are packaged, ‘not necessarily those holding lesser-quality residential mortgages but other types of debt.’ The Wharton news report also argues that, ‘lenders are far more cautious [and] regulators seem to be waking up.’ Commentator, Wachter, is positive about the CDOs return, highlighting the fact that the raw material is now a higher quality corporate debt, rather than mortgage backed securities. CDOs have not reappeared by themselves. In fact, reports suggest that Citigroup sold a total of $3 billion uncovered CDOs, between 2012 and 2013. It is perhaps arguable that CDOs (unlike their naked CDO counterparts) are not inherently flawed, but instead play a significant role in risk diversification, when engineered with assets and loans that pose minimal risks of defaults. Besides, proponents argue we ought to assume investors have learnt their lesson by now, such that they will expect nothing less than a high quality CDO investment.

The foregoing confidence displayed by some proponents of CDOs, begs the question: are investors increasingly willing to ignore bad memories amid high demand for high returns, in a market characterised by ‘rock bottom’ interest rates? This more skeptical approach may suggest history is about to be repeated with these new forms of CDOs. In fact, simply exchanging the ‘raw material’ from mortgage-backed securities to ‘boring’ corporate bonds does not resolve the issue. In fact, early realisations from Proctor and Gamble’s initial entry into the derivatives market (discussed above) illustrate the flawed

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141 Ibid.
142 Ibid.
143 Ibid.
145 Wharton above n 143.
146 Ibid.
nature of a naked CDO product even in a corporate context. Further, the ‘London Whale’ fiasco is a more recent illustration of how corporate debt can prove to be an equally hazardous ‘raw material,’ when used under questionable financial engineering practices.  

148 It is a fallacy to assume that all corporate bonds will always be safe components of a CDO. What happens when corporation begin to default? How is this assumption supposed to protect investors, and indeed, the economy? Rosner, a managing director of Graham and Fisher Co. displays persuasive doubts about the situation. Rosner comments that investors have little information on the kinds of ‘raw material’ used to oil the CDO production chain. In fact, he believes little has changed since the crisis. 149 After all, part of the CDO appeal has always been its illusive allure: the ability to create higher profits from unlikely sources. The state of affairs is even more exacerbated by the financial industry’s aggressive lobbying and the regulators’ willingness to accede to industry demand. At the beginning of January 2014, the Volcker Rule was significantly watered down to allow financial institutions to bet with their own money, in the context of CDOs backed by ‘trust preferred securities.’ 150 Furthermore, and somewhat surprisingly, JP Morgan is reported as starting to sell its mortgage-backed securities with a $616 million deal. However, the circumstances of the transaction are far from ‘plain vanilla.’ Credit rating agency, Moody’s has reported that the deal suffers from some of the symptoms of the pre-crisis market. As a result, the agency was not able to stamp the transaction with its AAA guarantee. 151

In conclusion, the situation concerning CDOs has come a long way from its pre-crisis milieu. However, the vehicle, filled with technicalities and questionable promises of risk diversification, is still a possibility for eager financial engineers. It therefore, becomes apparent that the regulatory response is far from complete. The legislation has effectively addressed more obvious signs of moral decay, by addressing the motives of some stakeholders, such as consumer borrowers, loan originators and securitisers. The more technical aspects of the CDO, including its logical offshoots (the CDS and naked CDOs), have been preserved as instruments of financial innovation. To use

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151 Barr above n 152.
Kling’s categorisation, overestimating the CDO was a cognitive failure—many simply did not understand. However, can we claim this same, convenient pretext, in the future? It appears the GFC is too big a lesson to forget so soon. The next financial crisis spurred by exotic financial engineering will be perceived as a clear moral oversight from every actor in the game.

VI. FIGURES

Figure 1 Collateralised Debt Obligation, extracted from: Hongwen Du et al, ‘On the Mechanism of CDOs behind the Current Financial Crisis and Mathematical Modeling with Levy Distributions’ 2 (2010) Intelligent Information Management 149, 150.
Figure 2 CDO under 50% Defaults and Losses, Extracted from: Hongwen Du et al, ‘On the Mechanism of CDOs behind the Current Financial Crisis and Mathematical Modeling with Levy Distributions’ 2 (2010) Intelligent Information Management 149, 152.

Figure 3 'Niagara Falls Effect' of demand and supply in securities, Extracted from: Satyendra Nayak, The global Financial Crisis: Genesis, Policy Response and Road Ahead (Springer, 2013) 43.