What were the causes of the 2007 financial crisis? Are banks 'too big to fail'? How is it possible to prevent a future crisis?

The global banking and finance sector has experienced exponential growth over past decades; it exerts a great power on what is known as 'Main Street', the real economy, as well as 'Wall Street', the financial markets. The economy has become increasingly interconnected with the financial sector in recent decades, whilst at the same time, the division between those employed in this lucrative sector has widened. This interconnectedness arises as the functions provided by the financial sector, whether that be lending, insurance, wealth management or even pension fund management, influence daily life. If one part of this system fails, the repercussions will reverberate throughout the world, leading to reduced confidence and lending. During 2007, following a decline in the subprime mortgage market in America, many countries experienced recessions leading to mass unemployment and budget deficits as a result of government providing financial assistance to corporations, and undertaking a large fiscal stimulus. Arguably the 2007 subprime crisis led to the worst recession, a period of two consecutive quarters of negative growth[1], since the Great Depression of the 1930s[2]. It is reasonable to question the role that the financial sector played in causing this crisis, whether it has become too interconnected with the economy, and ultimately if the sector 'too big to fail'. This essay shall discuss the factors that lead to the 2007 recession, the roles that banks played in causing this crisis and any ways in which it is possible to avert such a crisis in the future.

As the financial sector grew, it become impossible for one bank to operate should a competitor fail; the loss in confidence and capital of several large failures would potentially lead to a depression. Such a phenomena has been coined 'too big to fail'; this is the "notion that the largest and most interconnected banks, must be saved […] because their failure would present unacceptable systematic risk"[3]. The role of the 'banker' has been categorised as reckless, risk-taking, over-paid individuals that possess economic weapons of mass destruction. Whilst this assumption is extremely palatable, it diverges away from the real truth surrounding the financial crisis, disregarding the roles that other institutions, governments and even general homeowners played.

In America home ownership was actively encouraged by the state, and as such the government sponsored entities Fannie Mae and Freddie Mac guaranteed $6.5 trillion of assets, and a number of tax breaks were introduced. It became increasingly easy for individuals that were subprime, that is, those with poor credit scores and low incomes, to obtain large mortgages on properties with little or no deposit. Numerous introductory offers were offered; however, following the expiration of these 'teaser' interest rates and a rise in American interest rates, many subprime homeowners defaulted. This lead to a large number of repossessions and as such, there was an excess supply of housing leading to a fall in house prices, which in turn lead to negative equity. Frequently mortgages were obtained through fraudulent means. In England, for example, I am personally aware of one mortgage brokerage that was able to obtain falsified income tax statements, issued by HMRC

[1] Bishop,(20009),Economics an A-Z guide.Profile Books-p.267
[2] http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aNivTjr852TI
[3] http://seekingalpha.com/article/127611-a-handy-glossary-for-todays-economic-crisis

employees. It was possible to contact one of many underwriters in well-known high street banks who were able to approve mortgages, in exchange for a fee that was as low as £500.

Despite the fact that these mortgages were of high risk, profits remained high and reckless lending continued. Upon a mortgages being approved, the right to receive interest was sold to banks, pension funds, governments and wealthy individuals. Mortgages were packaged together in a process called securitisation whereby they are effectively turned into bonds; this is a means of attempting to lower the possibility of losses arising from a default as the risk is spread over a large number of investors. Once securitised the mortgages are sold in the form of either Collateralised Debt Obligations (CDOs), or Mortgage Backed Securities (MBSs). These are categorised into several 'tranches' according to their risk rating, each tranche receives the interest payments for a specified period of time. What is known as the senor tranche is considered to be safest as they receive the first interest payments; it is expected that the borrowers are unlikely to default shortly after borrowing. The risk for each successive tranche increases in exchange the owner receives interest payments for a longer period of time. As this area was highly profitable, banks wished to increase their participation, as a result there were a large number of takeovers of subprime lenders.

These securitised assets, in exchange for a fee would be assigned a credit rating by a credit rating agency. A significant proportion of the credit rating agencies' revenues arose from assigning credit ratings on securitised assets. Banks were more likely to deal with an agency that rates its assets highly as the assets could then be sold for a higher value, a conflict of interest arose for the rating agencies; either assign a higher rating and increase profitability, or be truthful and face lower profits. Under regulation implemented across the European Union and America, private individuals are unable to purchase certain assets including CDOs and MBSs if the credit rating is considered to be sub-investment grade, that is, a credit rating below BBB. Due to the high credit ratings received, a large number of individuals who would normally be unable to purchase the assets were able to do so, despite lacking an adequate professional insight.

As the crisis worsened, rating agencies "downgraded more than three-quarters of AAA-rated CDO bonds issued" between the years 2006-2008[4].Therefore, the initial ratings were inaccurate; banks were required to post more capital to meet minimum liquidity ratios, as assets with higher risk ratings require larger reserve capital ratios. As the credit ratings of assets were consistently being downgraded banks were required to post more cash, in order to raise extra money large quantities of assets were sold, resulting in a 'fire-sale', this involves selling assets at an extremely low price. Banks refused to lend to each other due to fears that the other partly will fail, thus accentuating the crisis. During 2007 only five corporation's had a credit rating of AAA, yet in excess of 10,000 CDOs consisting of subprime assets were categorised as AAA[5]. Had the potential levels of risk been correctly accounted for, many individuals and organisations such as pension firms would have been able to make informed investment decisions, and as a result it is likely that the contagion from subprime crisis would have been far less likely to impact significantly on Main Street. Credit rating agencies played arguably an equally catastrophic role in the cause of the credit crunch, the Securities and Exchange Commission concluded that Moody's was an accessory, and failed to correctly manage the conflict of interest that arose. [3]

[4] http://www.bloomberg.com/apps/news?pid=newsarchive&sid=ax3vfya_Vtdo
[5] J.P. Morgan Asset Management,UEA presentation-Was the Crisis a Crisis of Governance?

As stated in the introduction, the financial sector consists of a variety of organisations, each undertaking differing roles. Retail banks, such as Northern Rock and Natwest, deal with consumers rather than large corporations and other banks. Northern Rock operated a highly leveraged business Leverage involves borrowing capital, generally by offering assets as security, then, in the instance of the banking sector, purchasing asset backed securities and profiteering from the difference in the interest paid on the loans and the yield earned from the ABS. However, following a downturn in the housing market, the value of the banks' assets in relation to its debts declined, and it subsequently became unable to repay its debt. Due to the tightening credit supply, the bank requested government support. When this news was made public savers became concerned about the security of their deposits in the bank and as a result large numbers attempted to withdraw money, this is known as a run. Due to the fractional reserve banking system, in which only a small proportion of cash is kept on reserve and the remaining capital is lent, it was impossible to fulfil such withdrawals. In an attempt to prevent runs on other high street banks by maintaining confidence, the then chancellor of the exchequer made the decision to nationalise the bank. Nationalisation was met by criticism by many, arguing that the bank would not run efficiently and that taxpayers' money should not be used to 'bail out' banks that have undertaken reckless activities. Through nationalisation the government effectively subsidised £55 billion worth of loans to other lenders. [6] Despite the large amounts of taxpayers' money at risk, it is possible that the treasury may actually profit when Northern Rock, or as it is now frequently called, 'Northern Crock', is sold to either the public or another corporation. Northern Rock represented just an 8.3% market share in Q4 2007[7], yet the small bank managed to cause reverberations in the stock market on a global scale. This further demonstrates that the banking system is highly interconnected, interdependent and therefore 'too big to fail'.

Wholesale banks or investment banks, in contrast, deal predominately with large companies and other banks. Lehman Brothers, was an example of such a bank, Lehman can be considered to be the first casualty of the financial crisis; after the bank was somewhat unexpectedly refused taxpayers assistance, Lehman filed for chapter 11 bankruptcy, the largest bankruptcy in American history.[8] Lehman, much like Northern Rock, was a highly leveraged organisation; at one point it had an assets to owners' equity ratio of 31:1. A number of measures to prevent bankruptcy were attempted, including attempting to broker a fire sale between either Barclays or Bank of America, and the creation of a 'bad bank' that would own the high-risk assets and would be owned by a variety of large competitors. However, bankers questioned the logic of assisting an competitor "John Mack, chief executive of Morgan Stanley, grumbled that if they bailed out Lehman this weekend, would it be Merrill Lynch next: "If we're going to do this deal, where does it end?"[9].A great deal of moral hazard is said to exist in the banking sector. Moral hazard can be defined as "people or organisations with insurance may take greater risks than they would do without it"[10]. Such insurance in the financial sector relates to that of government assistance, however, upon the decision being made not to assist Lehman's, such moral ceased to exist. Lehman's failure had a significant impact upon the global stock market; the Dow Jones index fell by 500 points. Lehman Brothers demonstrates that

[6] http://news.bbc.co.uk/1/hi/business/7249575.stm
[7] http://companyinfo.northernrock.co.uk/investorrelations/results/stockEx070124.asp
[8] http://www.marketwatch.com/story/lehman-folds-with-record-613-billion-debt?siteid=rss
[9] http://business.timesonline.co.uk/tol/business/industry_sectors/banking_and_finance/article4761884.ece
[10] Bishop,(20009),Economics an A-Z guide.Profile Books.-P.214

despite a bank being considerably large, it is possible for it to fail, however, through its failure; there were a large number of counterparties to many trades placed through Lehman's, and confidence in the banking sector worsened considerably.

The 'too big' aspect relates to the significant market share that a small number of large banks have, this concentration has increased following the takeover of ailing firms during the recession, such as the Lloyds takeover of Halifax and RBS. The only way in which this dominance can be altered is by 'breaking up the banks'. 'Breaking up the banks' involves the sale of certain banking departments, or re-enacting the Glass-Stiegel Act, requiring the separation of retail and wholesale or investment banking arms in universal banks. This policy is aimed at protecting depositors from the high-risk activities undertaken in the investment banking department and making them smaller will pose a lower systematic risk following failure. However, as previously explained, Lehman Brothers was an investment bank and Northern Rock a retail bank; both of which fared worse than their universal counterparts. This policy, despite having a strong backing by Vince Cable, has the potential to accentuate a banking crisis; smaller banks have a smaller capital base, they will not experience significant economies of scale, and innovation may decline, thus hampering the recovery.

During the Wall Street crash of 1929, some estimates state that in excess of 9,000 banks failed[11], many of which were small non-universal banks. This depression was far worse than that of the 2007 credit crunch, despite the widely held belief that the 'too big to fail' system is the bane of the banking system; the banking system came under considerable strain, and without government intervention, many more banks would have failed, however, it would have been near impossible to rescue many individual banks due to the amount of regulatory formalities, or red tape. The current system has assisted in the development of the world today, despite its considerable shortfalls, it leads to considerable advantages, namely the ability to hold a varied portfolio of assets, ranging in their potential risks. Universal banks are efficient through the ability of operating with diverse member of staff, and through the ability to have a larger capital base and thus becoming potentially fiscally sound. It may be true that the credit crunch may not have occurred had the banking sector been smaller, however, the world would have not developed into its current structure without the capital leant by the financial sector.

Much of the debate surrounding 'bankers' relates to the bonus culture in which vast sums of money are given to employees in the form of performance related payments. This raises further criticism when certain banks received taxpayer assistance. While it is true that there are significant wage differentials between bankers and the average wage, those working in this sector are highly educated and there is an extremely heavy workload. In addition to this, the profits that each employee contributes to the banks are extremely high.

According to Barak Obama, "executive compensation; unmoored from long-term performance or even reality rewarded recklessness rather than responsibility"[12]. This is based upon the belief that employees attempt to maximise short-term profits in an attempt to increase their performance related bonuses. This is known as the principle-agent problem, where banks, the principle, hire an agent with conflicting interests. To combat this problem, it is believed that aligning the interests of shareholders and employees can be achieved be paying bonuses in the form of stock options and

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[11] http://bit.ly/2s7a0R
[12] http://www.whitehouse.gov/the_press_office/Remarks-of-the-President-on-Regulatory-Reform/

shares. However, Bear Sterns employees owned one third of the company's shares[13], yet, this did not prevent the bank participating in the subprime market and subsequently going bankrupt. As options only reward rises in share prices this is yet another incentive to partake in high-risk behaviour. However, performance related pay acts as extrinsic motivation and without it, it is likely that banks would be less efficient and profitable. Brunnermeir and Nagel (2004) found that hedge fund managers with poor performance related pay led to heard behaviour, where individuals irrationally copy others decisions as managers have little incentive to place contrarian trades that may be profitable[14]. Individual employees play little role in leading the direction of the bank regardless of their pay structure. Over the years there have been numerous banking crises despite remuneration being lower, therefore, raising the question of whether targeting remuneration is effective.

To avert future liquidity shortages, the G-20 requested that the Basel Banking Committee yet again revise bank capital ratios: the ratio of liquid assets such as cash held in proportion to high-risk assets. The new proposals have been named Basel-3; the previous two have therefore failed. Increasing capital ratios increases the size of the cushion that banks have to fall back on following a loss of liquidity, however, as the previous two attempts have failed, it is unlikely that this one will succeed. There is a trade-off between capital ratios and lending, if the ratios were to rise, less capital would be available for lending; this may leave capital utilised and thus hamper the economic recovery. Over recent decades a large number of ways to mitigate any counterparty risk have been created, thus reducing the need for higher ratios. Credit Default Swaps, for example, help to mitigate risk, by compensating the holder of the swap in the event of default of a specified asset.

Two contrasting ways in which the 'fail' aspect can be improved relates to regulation or deregulation. Deregulation would give a greater degree of freedom for banks, whilst allowing them to fail. The banking system is insured by taxpayers' money, stakeholders of banks are almost always protected, be these savers, through the UKs Financial compensation scheme whereby deposits are guaranteed, or shareholders, through government funded bailouts. Banks are able operate with little equity, as the state acts as a guarantor, thus reassuring creditors. They rely on short-term borrowing from the money markets, as borrowing costs tend to be lower, as the central bank is willing to lend following a lack of liquidity. Clearly this system is unstable, and extremely short sighted, as it operates with a large amount of moral hazard.

If the measures that prevent bank failures were removed, accompanied with regulation that requires increased transparency, the banking system may become self-regulating to a certain extent, thus reducing the potential to fail. If taxpayer assistance were removed, shareholders, in theory, would ensure that banks do not take risks large enough to endanger the whole organisation. However, this alone would not provide a strong enough incentive. Currently, rational individuals deposit savings in a bank that pays the highest rate of interest, and pay not notice to the stability of the bank, as all balances below £85,000[15], are guaranteed. If this were removed, and banks were made to be more transparent, rational savers would consider the stability of the bank along with the rate of interest payable. If a bank undertakes high-risk activities, savers would withdraw their funds and deposit them in a safer bank, to prevent this, banks prohibit dealing in high-risk transactions.

[13] http://www.economist.com/node/11325420?story_id=E1_TTPNVQND
[14] http://www.jstor.org/stable/3694815
[15] http://www.moneysupermarket.com/c/news/who-owns-who/0003118/

Eradicating government assistance would eliminate moral hazard, leaving banks and individuals to make economic decisions based upon, the true state of the banking system. Banks would no longer be 'too big to fail', however, to achieve this individuals could face losing their savings. Regardless of how effective this policy may be, it will certainly never be implemented.

In conclusion, it is unlikely that the existing structure of the financial sector will change drastically in the long-term. The economy of countries is so highly dependent upon the financial sector, draconian regulation, if implemented, are unlikely to be maintained as it is possible for firms to relocate to other countries with more lax regulation. The measures that prevent bank failures are in the public interest; if they were not in place, individuals may lose their savings. Therefore, In reference to the title of this essay, it can be concluded that banks are 'too big to fail', and they will remain to be so as long as the public wishes to protect their savings. This does not need to represent a significant hindrance to the economy, if sufficient regulation and practices are put in place the chance of a similar banking crisis occurring again is reduced. It is possible that the banking sector can be operated in an efficient manor by making the sector more transparent and allowing it to operate with minimum intervention. It is highly likely that the banking sector will once more, through innovation, boost economic growth and provide employment. One certain way to ensure that banks do not fail, is to return to the measures used in 1360s, when a banker in Barcelona was executed in front of his failed firm![16]

[16] http://www.moneymarketing.co.uk/regulation/news/bank-stability-chief-calls-for-bank-leverage-limits/1001780.article