

Regulating the Global Financial System – the challenge of the 21st century

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Abstract

The global financial system provides credit to consumers, corporations and governments. Most economists think of finance as the “heart” of the global system, pumping money around from those who have it to those who need it. In-so-doing financial activity stimulates global spending, overcoming the deadweight of “hoarding” that so retarded medieval economies. However, over the last forty years – riding the wave of free market fundamentalism - newly developed financial activities have been at best dubious, and at worst stupidly short-sighted. In this context this paper focuses on how to create effective global comprehensive macro-prudential regulation in the 21st century. The key challenge for macro-prudential regulators is that governments are national in character, whilst the most powerful financial corporations are transnational in scale.

The paper begins by defining the boundaries of the global financial system. It then outlines a variety of financial innovations developed over the last forty years that are largely outside the purview of regulators. It highlights how massive transnational financial corporations have used the technique of asset “shiftability” to bypass regulation based on the Basel Capital Accords. The paper examines the Stiglitz Report proposals for comprehensive macro-prudential regulation, and identifies a number of important weaknesses. The paper outlines the key conditions needed to make comprehensive regulation effective. This requires the creation of a powerful new super-regulator that can address the key global issues, especially that of asset shiftability.

a) Introduction

The global financial system provides credit to consumers, corporations and governments. Most economists think of finance as the “heart” of the global economy, pumping money around from those who have it to those who need it. In-so-doing financial activity stimulates global spending, overcoming the deadweight of “hoarding” that so retarded medieval economies. However, over the last forty years – riding the wave of free market fundamentalism – the global financial system has significantly evolved; it has created an array of new financial activities, many at best dubious and at worst stupidly short-sighted. The systemic risks created by these new financial activities pose considerable threats to global prosperity in the 21st century. The key policy challenge of the 21st century is how to create a new global system of comprehensive regulation.

Section b provides an overview of the global financial system and its core activities. The role that transnational financial corporations play in the system is highlighted. Section c examines the major financial innovations developed over the last twenty years; these innovations have increased both the risks taken by, and profitability of, financial corporations. Section d considers how profit-seeking corporations use the “shiftability” of assets to avoid the full impact of Basel-style regulatory control. Finally, section e outlines and evaluates the Stiglitz Report proposals for a new system of comprehensive macro-prudential regulation. It examines how the Stiglitz proposals can be strengthened. In particular, it proposes the establishment of a more conducive environment for comprehensive regulation. It highlights the need for comprehensive regulation to address the issue of shiftability.

b) An overview of the global financial system

The operations of the ever-changing global financial system are predominantly concentrated within the system of abundance. It plays a vital part in facilitating the expansion of worldwide effective demand. In addition, the everyday lives and decisions of the people of plenty are increasingly influenced by the activities of the financial system. By contrast, the overwhelming majority of the global population, the peoples of poverty and adequacy, have little direct experience of the system – although their lives are influenced indirectly by it (Sheehan, 2010).

But what constitutes the global financial system? This question can be addressed by considering the range of activities in which the global financial system engages. Not surprisingly, given the crucial importance of finance in the system of abundance, governments have regulated financial activities. Consequently, the global financial system encompasses a variety of distinctive, but inter-related spheres of more regulated and less regulated (and sometimes unregulated) activity.

Traditional and “Near” Insurance

Traditional insurance allow personal and corporate clients located in the system of abundance to insure against risky events. Traditional insurance is big business; the premiums revenues paid to corporations providing traditional insurance cover might be as high as \$4 trillion per annum. Given the massive resources available, corporations

providing traditional insurance have developed specialised skills in asset management, holding diverse portfolios that produce steady flows of income. Consequently, corporations providing traditional insurance are major players in global stock markets and active traders in a range of financial products. Traditional insurance based activity is one of the most heavily regulated sectors of the global financial system. Corporations providing traditional insurance are heavily regulated with respect to the products they can offer, the marketing strategies they pursue, the assets they can purchase, and, most importantly, must satisfy regulators that they have sufficient capital reserves to meet their many immediate liabilities.

In addition, financial activity over the last thirty years has expanded to include the provisions of “near” insurance products – what are called credit default swaps (CDS). The initial *raison d’être* for CDS contracts was to provide protection for lenders against the risk of default by borrowers. A CDS “near” insurance contract shares certain characteristics of traditional insurance but it opens up huge opportunities for speculative proprietary trading. What is more, CDS contracts are outside regulatory controls; this means a seller of a CDS contract does not have to satisfy a regulator that it has sufficient capital reserves to meet its liabilities. In 2007 the value of CDS contracts stood at \$58 trillion (Bank of International Settlements, 2010).

Wealth Management

For the people of plenty a critical form of financial activity is the long run management of funds of wealth associated with company and private pension schemes. Pension funds collectively manage accumulated financial assets valued at greater than \$20 trillion.¹ Pension funds, along with corporations providing traditional insurance, are the dominant lenders of the global economy. Just as with the providers of traditional insurance, pension funds have developed specialised skills in long run asset management, in order to produce steady flows of income and are a major player in global stock and commodity markets. And, like the providers of traditional insurance, pension providers are heavily regulated with respect to the risk factors associated with the assets purchased and the need to maintain sufficient capital reserves to meet immediate liabilities.

Wealth management however extends well beyond the provision of pensions. The highest profits are made by providing asset management services to the wealthiest members of the people of plenty – say those having assets in excess of \$15 million. Transnational financial corporations have dedicated divisions – in Barclays plc it is called Barclays Wealth - to provide specialised wealth management services to very wealthy clients. Every effort is made to maximise returns for clients, often through using tax avoidance vehicles (e.g. investment trusts) located in tax havens such as Jersey and the Cayman Islands. One consequence of wealth management activity is that it provides a significant source of finance for hedge funds that engage in proprietary trading.

Traditional Banking

The major providers of traditional “retail” banking services around the globe are vast transnational financial corporations. But traditional banking can also be done by much smaller localised banks and credit unions. No matter what their size, traditional banking always involves accepting deposits from the general public on the high street and granting loans. In accounting terms, traditional banking involves borrowing

depositors' money, including the promise to repay the deposit on demand, in return for a low interest rate. This means that traditional banking relies heavily on *short term* borrowing. To make profits traditional banking requires that corporations lend out the money deposited to other clients who wish to borrow; the borrowers repay the money over the term of the loan (i.e. anything up to twenty five years on a property mortgage); crucially, the interest rate paid to depositors is *less* than the rate charged to borrowers. Traditional banking releases the wealth of those who *do* have money but *do not* want to spend, to finance the plans of those who *do not* have money but who *do* want to spend. This 'financial alchemy' permits the global level of spending to increase more rapidly, and to far higher levels, than is otherwise be possible (Keynes, 1980c).²

The problem with this model of banking is obvious – borrowing short and lending long is fraught with dangers. If depositors, for any reason, doubt the solvency of a financial corporation – say due to high default rates – there is the possibility of a 'run on the bank'. In these circumstances many depositors simultaneously seek to withdraw all of their funds. In addition, once the viability of one financial corporation is questioned, the frenzy generated can quickly threaten the viability of all corporations involved in traditional banking. Consequently, across the globe, traditional banking has been the subject of regulatory control aimed at minimising the risk of bank runs.

Money market funds are a specialised form of traditional banking attractive to wealthy clients and corporate customers. Money market funds, first created in the 1970s, operate in similar ways to traditional banking; in legal terms, they are mutual organisations run in the interests of their depositors. They accept deposits from large-scale corporations and wealthy families who have significant volumes of cash that needs to be 'parked' for short periods of time. The deposits count as equity in the fund (i.e. as shares in the business) and generate dividends paid out on a monthly basis. The returns exceed those available on traditional bank deposits. The whole pool of money within each fund is managed by a professional team of experts who earn a management fee for their activities. The lending policies of the fund are heavily regulated by legislation. Each fund must have a diversified portfolio – it can lend no more than 10% of its money to one customer. It is required to lend to any customer for no longer than 13 months, with the average duration of a loan around 90 days (three months).

Money market funds are lent out on what is called the wholesale money market. This market can be thought of as a cash lubricant for the activities of transnational corporations. For example, a large car manufacturer with a short term cash flow problem may access funds through the wholesale money market to meet its monthly payroll. Financial corporations may also access funding on wholesale markets to overcome a temporary lack of cash to meet depositors' requirements. More controversially Northern Rock, the UK based financial corporation, made heavy use of wholesale money market funds, continually rolling over short term financing deals to fund an ambitious growth strategy in the mortgage market – the ultimate in borrowing short and lending long (Smith, 2010).

Investment banking

Investment bankers provide specialised market-making services to corporate borrowers wishing to raise finance on stock markets. When a corporation "issues" shares or bonds onto a stock market it engages – for a hefty fee - an investment bank

to act as its marketer, pitching the issue to major lenders.³ In addition, the investment bank can underwrite the issue – for another hefty fee. Underwriting is a promise made by the investment bank to the corporation that if any of the issue remains unsold, the investment bank will purchase the remainder; of course, if all of the issue is sold to third parties the investment bank still pockets the fee. Investment bankers also offer market-making services to major lenders. Investment banks employ specialised ‘analysts’ who offer advice about what assets to trade to pension funds, money market funds, hedge funds and sovereign wealth funds – for a hefty fee.

Finally, there have been two important developments in investment banking over the last thirty years worthy of comment. First, investment bankers increasingly lend money direct to hedge funds engaged in proprietary trading. In general this specialised lending has generated spectacular profits for investment bankers, and on occasion massive losses. Second, investment bankers provide specialised ‘global transaction’ services to those engaged in high volume proprietary trading e.g. money market funds, hedge funds, sovereign wealth funds. These lenders have unique requirements; they conduct tens of millions of transactions each year. Investment bankers provide these lenders with access to sophisticated electronic trading systems that allow a high volume of transactions to be completely speedily. Each time an electronic transaction is conducted the investment bank earns a fee.

Investment banking is lightly regulated because it does *not* involve a corporation accepting deposits on the high street from the general public. Rather investment banking is predicated on borrowing money from traditional banking sources and offering specialised, high value financial services to corporate borrowers and powerful lenders. However, due to merger activity, many investment banks are now part of larger and more complex financial “holding companies”. In these circumstances lending – by the traditional banking division – and borrowing – by the investment bank division - are internalised within the same financial conglomerate. For example, Barclays Capital – the investment bank division of Barclays plc – borrows money from the traditional banking division of Barclays plc. The transaction is wholly internalised within Barclays itself.

Proprietary Trading

Proprietary trading has been the largest growth area of financial activity over the last forty years (Lancaster, 2009; Smith, 2010; Stiglitz, 2010). In essence, proprietary trading is a technical term for gambling; it involves making huge speculative bets on price movements for specific products. Proprietary trading expanded rapidly with the creation in the 1970s of worldwide markets for derivative products. New financial entities – known as *hedge funds* - emerged to make money from large scale speculative betting on derivative contracts. A hedge fund is essentially a large pool of rentier capital made available to a professional fund management team.⁴ The fund managers are charged with making high profits, whilst avoiding any governmental controls.⁵ Fund managers “hedge” the risks they take by making large numbers of educated trading gambles. Although some trades make losses, in theory this is more than compensated for by successful betting elsewhere.⁶

Hedge funds borrow money from two sources. First, money is borrowed from investment trusts established by extremely wealthy families to generate investment income, whilst minimising tax liability. A second source of finance for hedge funds is

borrowing from investment banks. Indeed, Ferguson notes that it is common for a hedge fund engaged in large-scale proprietary trading positions to borrow from investment banks “far in excess of the fund’s own capital” (Ferguson, 2008, p. 319). Successful proprietary trading generates very high rates of profit. This quickly attracted the interest of major transnational financial corporations. The latter have now established various categories of *in-house* hedge funds (Mallaby, 2010).⁷ This means that the in-house hedge fund division of a transnational holding company borrows its pool of capital from the investment bank division of the same corporation. These developments have massively increased the pools of capital available for proprietary trading worldwide.⁸

This lending and borrowing between investment professionals is largely outside the purview of regulators. Regulators have no power to require hedge funds keep sufficient capital to fund the bets they make. What is more, the trading is often on a global scale and no single government can control such worldwide activity. As long as the bets are correct no one is harmed. The original lenders to the hedge fund earned massive profits and the fund managers are very amply rewarded.⁹ But things go disastrously wrong when most of the bets by hedge funds go bad simultaneously.

Special Investment Vehicles

Special investment vehicles (SIVs) are “shell” companies created for a specific purpose. They are established – or “sponsored” - by high-prestige transnational financial corporations wishing to expand lending activities, whilst formally “complying” with macro-prudential rules to restrict lending. SIVs allow financial corporations to “hide” assets – off-balance sheet - using the same legal and accounting principles that permitted Enron to hide its’ escalating debts just before it declared bankruptcy. SIVs are usually established in tax-havens, like Jersey or the Cayman Islands, which do not recognise global regulatory controls and do not tax profits or capital gains (Frawley, 2003; Smith, 2010; Stiglitz, 2010; U.S. State Department, 2010).

SIVs were first invented by Citigroup in 1988, but other key transnational financial corporations quickly followed suit. SIVs were at the heart of the most dubious financial practices prior to the global crisis of 2007. In 2004 there were around 20 SIVs “sponsored” by major financial corporations. In 2008, at the height of the financial crisis, all of them were wound up. Nevertheless there are no regulatory proposals to outlaw the future creation of new SIVs. In the right circumstances, there is no reason to suppose that such entities will not be re-established, if transnational financial corporations judge the regulatory environment to be too stringent.

The big corporate players in the global financial system are vast transnational financial corporations. They include globally-known premier financial brands – such as Bank of America, Barclays, Goldman Sachs, Citigroup, J.P. Morgan-Chase, BNP Paribas, Deutsche Bank, American International Insurance Group (AIG), Prudential Financial, Banco Santander, the ING Group and Daewoo Securities. These prestige conglomerates are “holding companies” – in EU-speak “large and complex banking entities”. Under the umbrella of a single holding company there is an array (a family) of other companies broken into various divisions or business units. A single transnational financial holding company might include a traditional insurance division, a wealth

management division, a traditional banking division, an investment bank division and in-house hedge fund division. In addition, the holding corporation is free to sponsor an “independent” SIV, siphoning off assets to avoid regulatory controls. Each of these divisions provides a multiplicity of reputable branded financial products on a vast array of globalised corporate-guided markets.

Barclays plc is an exemplar of a transnational financial “holding company”. Its activities span traditional banking for households and non-financial corporations, investment banking, wealth management advice and proprietary trading. It operates in 50 nations, employing 147,000 people, with 48 million customers (Barclays, 2010). A key characteristic of all large-scale holding companies is that they straddle the divide between regulatory regimes. Within the same corporation some activities are subject to heavy regulatory control – such as traditional banking - whilst other activities are largely unregulated – specifically proprietary trading and SIVs.

Governmental regulatory agencies are an integral part of the global financial system. Each nation has its own sovereign financial regulators, responsible for the conduct of different aspects of financial activity within its territory. In developed nations the regulation of financial corporations is extensive. Regulation has two prudential dimensions. *Micro*-prudential regulation seeks to protect the interests of small scale savers and borrowers from dubious practices by financial corporations. The wide scope of micro-prudential regulation generates a plethora of regulatory agencies. The exemplar is the alphabet soup of regulatory agencies that exist in the USA: it includes the Securities and Exchange Commission (SEC), the Office of the Comptroller of the Currency (OCC), the Office of Thrift Supervision (OTS), the Federal Deposit Insurance Corporation (FDIC), the Commodities Futures Trading Commission (CFTC), the National Credit Union Administration (NCUA) and, the most recent addition, the Bureau of Consumer Financial Protection (BCFP).

Macro-prudential regulation is about creating rules that promote the stability of the global financial system and control systemic risk. Macro-prudential regulators are particularly concerned with the balance sheet performance of large scale transnational corporations which are deemed systemically important. Macro-prudential regulation is undertaken by a supra-national agency with a global writ. At the moment the role is played by the Bank of International Settlements (BIS), located in Basle, Switzerland. More formally the global rules of macro-prudential regulation are agreed by the Basel Committee on Banking Supervision (BCBS) which operates under the auspices of the BIS. On three occasions in the last thirty years the BIS has formulated global agreements on regulating activities of financial corporations – the Basel Capital Accords 1, 2 and 3. The latest Basel 3 Accord was agreed in September 2010; it suggested new, slightly tougher, rules for regulating the balance sheets of transnational financial corporations (Indiviglio, 2010). BIS member-state central banks monitor the performance of financial corporations within their jurisdiction to ensure formal compliance with the Basel rules. Finally, note that the recently created Financial Stability Board (FSB), established by the G-20 Forum, also has a role in avoiding systemic risk in the global financial system. It is too soon to say how the FSB will develop.

The surveillance of financial activities is not solely a government preserve. Profit-seeking *credit rating agencies*, such as Standard and Poor and the Dagong Agency, assess the credit worthiness of securities issued and purchased by corporations. Some regulated financial corporations can only hold securities with the highest credit rating. Essentially, credit rating involves making an informed judgement about the likelihood that the issuer of a security (either a corporation or a government) will default on its obligations. The lower (higher) the risk that the issuer will default, the higher (lower) the credit rating the agency will award to a security. Credit rating agencies play a key role in the global macro-prudential regulation of financial corporations. The BCBS has incorporated the asset ratings of credit rating agencies into the rules for macro-prudential regulation (Stiglitz *et al*, 2010).

Three further points about credit rating agencies are worthy of note. First, profit-seeking corporations that issue securities have a vested interest in achieving the highest credit rating. This can easily lead to a conflict of interest. Powerful corporations – those that pay the heftiest fees - play credit rating agencies off against each other, picking the agency that will give the highest rating. Second, there is no one accepted credit rating system common to all agencies. Each has its own idiosyncratic rating criterion. Third, credit rating agencies are outside regulatory jurisdictions and controls. This means that there is no global regulatory agency that rates the performance of credit rating agencies.

For completeness the global financial system incorporates the International Monetary Fund (IMF), the World Bank and Sovereign Wealth Funds (SWFs). The IMF and World Bank are supra-national agencies that lend money to sovereign governments in specific circumstances. A SWF is a quasi-governmental organisation, whose employees combine the attributes of civil servants and hedge fund managers. SWFs exist because of huge trade imbalances in the global economy. Major SWFs have accumulated major equity holdings in some of the largest transnational corporations, such as Barclays and Citigroup.

c) Financial innovation

In the system of abundance all corporations operate under a perpetual imperative to grow. This requires that corporations, working with and within the institution of marketing, develop new marketable products and the capacity to provide them (Sheehan, 2010). Financial corporations are under never-ending pressure to both expand the capacity to lend and develop new, innovative financial products; to survive they must seek out new customers and report higher profits.

Financial innovation has both positive and negative consequences for the system of abundance. On the positive side, innovative products - that allow more customers to borrow greater amounts - relax the monetary constraint on spending; and new spending, especially consumer spending, is the driver of growth in the system of abundance. The main negative is that, if pushed too far, lending can become over-extended; new customers don't then generate new profitable assets but loan delinquency and bad debts; and unwinding excessive credit conditions can undermine economic growth, even precipitating a global recession. The rest of this section will

examine a number of key financial innovations that demonstrate the dynamism of the global financial system.

Forward and Option Contracts

The most profitable innovation in the global financial system over the last forty years has been the development of *derivative contracts*. They are known as derivatives because the contract is derived from some underlying asset. Derivative contracts originated in the agricultural sector. Consider the case of a farmer producing a crop of wheat whose price might fluctuate between sowing and reaping. A farmer can 'insure' against the risk that future wheat prices might fall by agreeing a *wheat forward contract* with a merchant. The forward contract is a customized agreement between the two parties to fix the future price at which a quantity of wheat is sold. The value of the contract is *derived* from the production of wheat – the underlying asset. In effect, the farmer and the merchant are taking different sides of a bet about wheat prices; farmers bet that prices don't rise; merchants bet prices don't fall.

A variation on a forward contract is a *futures contract*. A futures contract can be traded on a global exchange market. This means that the merchant can sell the contract onto a third party, who is then obliged to purchase the wheat at the agreed price at the expiration date of the contract. Compared to a forward contract, a futures contract has the attribute of liquidity (i.e. it can be sold for money) but the premium is more expensive.

Forward and futures contracts are very popular. In addition to agricultural products (like wheat, pork bellies and dried milk), forward contracts are available for products such as crude oil, silver, zinc, foreign currencies and interest rates. In 2009 the total outstanding notional value of all forward contracts was just under \$80 trillion (Bank of International Settlements, 2010). Contracts involving foreign currencies and interest rates predominate – between them responsible for 90-95 per cent of the value of all forward contracts.¹⁰ Forward and future contracts open up huge opportunities for proprietary trading. Hedge funds – both independent and in-house divisions of transnational corporations – actively engage in trading in these contracts, taking either side of the bets in order to generate profits.

But the really exciting innovation, which has transformed the global financial system, is the development of the *option contract*. An option contract involves the right, *but not the obligation*, to buy or sell a product at a future date. Consider the case of a farmer who offers to sell an option contract that gives the contract holder the right, but not the obligation, to purchase 1000 bushels of wheat in 6 months time for \$10 per bushel (also known as the *strike price*). Suppose the merchant pays the premium – of say \$150 – to buy this option. An option contract that allows the contract-holder to *buy* an underlying product is termed a *call option*. The farmer – the option *writer* – gains the premium paid by the merchant, plus the possibility of selling the wheat at the strike price six months hence. After six months the merchant can either exercise the option and buy the wheat, or walk away. If the merchant does not exercise the option, the farmer retains the \$150 premium plus the bushels of wheat to sell on the open market.

An option contract, however, also allows the merchant to hedge the risk that the market price for wheat might fall below the strike price of \$10 per bushel. He does this through buying a *second* option contract – for another premium of \$150 - from a third

party (a new option writer). The second option contract gives the merchant the right, but not the obligation, to *sell* 1000 bushels of wheat for \$10 per bushel in six months time. An option contract that allows the contract-holder to *sell* an underlying product is called a *put option*.¹¹ The merchant and the option writer are taking either sides of yet another bet on wheat prices; the third party writer of the put option is betting that the market price will not fall below \$10 per bushel. Yet with respect to the original contract with the farmer, the merchant has hedged his bets; for a combined premium price of \$300 the merchant has hedged the risk that wheat prices in six months time will be less than \$10 per bushel, whilst retaining the flexibility not to trade at all.

Option contracts have the additional attraction that they are tradable on globalised exchanges. This means that the same option contract can be sold many times over. The most saleable option contracts are those in *the money*. A call option is in the money when the market price for the underlying product is higher than the strike price. In the example above, suppose the market price for a bushel of wheat is \$15, whilst the strike price is \$10. The call option contract is now worth \$4850 on the open market. Conversely, a put option holder is in the money when the market price of the underlying product is less than the strike price. Suppose that market price for a bushel of wheat is \$6. The holder of a put option to sell wheat at \$10 per bushel is clearly holding a valuable asset.¹²

Through the 1970s and 80s options spread out of the relative backwater of agricultural products into the massive global markets for stocks and shares, currencies, crude oil, gas and electricity and interest rates. Proprietary traders quickly appreciated the profitable opportunities from correctly betting (or gambling or speculating, you pick) on the option contracts that are likely to be in the money. Through the magic of mark to market accounting, proprietary traders can book profits when they hold a call option contract to *buy* an underlying product at a strike price *below* the market price. Profits can also be booked when a put option contract is held to *sell* an underlying product at a strike price *above* the market price. What is more, when a trade in an underlying asset is not executed the writer of the option contract still makes a pure profit on the premium paid. Last, but not least, investment bankers also benefit; they generate fees whenever option contracts are traded using their electronic systems. By 2009 the notional amounts outstanding on option contracts amounted to about \$62 trillion (Bank of International Settlements, 2010).

The analysis of the derivative contracts highlights a profound insight. Profits from proprietary trading are made when market prices fluctuate – either upwards or downwards. The greater the frequency and scale of price fluctuations the greater the scale of potential profitable opportunities that arise for contract writers and traders. This suggests that proprietary traders in hedge funds have a vested interest in creating unstable market conditions. A stable equilibrium position allows no possibilities of buying cheap and selling dear; price stability is anathema to profitable proprietary trading. And certainly it is true that as new markets have opened up to forward, futures and option contracting these markets are marked by far greater price instability.

Stiglitz (2010) claims that the global financial system is very proud of its innovative creation of a multiplicity of derivative contracts. However the sheer scale and flexibility

of derivative contracts allows risk not only to be hedged but considerably amplified. To demonstrate how this might happen, consider a hedge fund that believes stock markets will increase in value by 50 per cent over the next 12 months. Armed with this insight, a range of proprietary trading strategies opens up. The first is to borrow \$1 million from the investment bank division of a transnational financial corporation to fund the purchase of shares. If the judgement of the hedge fund is right at the end of 12 months the shares are worth \$1.5 million; the deal has generated a pure profit of \$500,000. A riskier strategy is to borrow \$1 million and buy \$1 million worth of call option contracts (at a premium of \$100,000 each) to buy \$10 million worth of shares in 12 months time at today's prices. If the hedge fund is right the shares in 12 months time will be worth \$15 million dollars. The pure profit made is not \$500,000, but \$5 million. But what if the hedge fund is wrong? Say stock markets don't rise, but fall by 25 per cent over the next 12 months. Whoops!!! Put simply, proprietary trading in derivative contracts can magnify risk many times over; they are weapons of financial mass destruction. The global financial crisis of 2007-08, in no small part, was caused by risky proprietary trading in derivative contracts by hedge funds.

Credit Default Swaps

Another variation on a derivative contract is called a *swap contract*, first developed in the early 1980s. Most swap contracts involve two parties swapping the interest revenues from holding different classes of securities. When assets generate returns in different currencies such swap contracts can also act as a hedge against future fluctuations in exchange rates. Interest rate swap contracts are extremely popular. The notional outstanding value of such contracts is vast, valued at just under \$350 trillion in 2009 (Bank of International Settlements, 2010).

A more recent innovation in swap contracts is the credit default swap (CDS). To properly appreciate the character of a CDS contract, some background explanation about corporate finance is required. In the system of abundance corporations and government actively engage in *long term* borrowing – the debt repaid over periods up to twenty years. This form of finance takes place by a corporation or government issuing securities (also known as bonds). Securities are time-limited contracts that allow a corporation to borrow a sum of money for a fixed period of time. The bondholder is contractually guaranteed a predetermined interest payment each year until the bond is redeemed.¹³

The next step of the CDS explanation involves an appreciation of the creditworthiness of the issuers of bonds. Self-evidently, not all entities that issue bonds are equally creditworthy. This is where the private credit-rating agencies play a role, providing surveillance of the risks that issuers of securities will default. Table 5.1 outlines the grading system of one of the ratings agencies – Standard and Poor.

Figure 1 Standard and Poor's Ratings for Securities

AAA	AA	A	BBB	BB	B	CCC	R
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Triple A ratings are reserved for the most secure, least risky, bond issues. Triple A ratings are usually reserved for 'blue chip' corporate debt plus government (or sovereign) debt issued by major developed nations. Ratings between AA and BBB are termed *investment grade*. A rating of BB or below is referred to as *junk*; junk bonds are

issued by corporations or governments of questionable creditworthiness but offer proportionately higher rates of interest.

Prospective bond-holders must assess the risk taken in purchasing any bond: that the bond issuer will default on the debt. But what if the bond-holder could hedge this risk? Suppose the bond-holder could purchase a form of insurance contract from a third party that is willing to bear the risk of a bond default in return for an annual premium. Put another way, the bond-holder swaps the risk of default for a premium payment. This, in essence, is the idea behind a CDS. A CDS is a derivative contract because its value is derived from the risk associated with an underlying asset – the bond issued (and ultimately the bond issuer). Perhaps the best way to think about a CDS contract is that it is a 'near' insurance product. In return for a premium, the contract provides for a payout when an insured event occurs.

There are, however, important differences between traditional insurance and CDS near insurance. To begin with consider three differences on the seller side of the market. First, the seller of CDS contracts can treat them as tradable assets. This opens up huge opportunities for speculative proprietary trading. To explain how this works suppose that there is a hedge fund called Delta Invest. Delta in the recent past sold a large volume of CDS contracts to holders of bonds issued by the investment bank Lehman Brothers to cover the risk that the latter will default. Events change, and Delta thinks that the likelihood of a Lehman default has significantly increased. Delta has an opt-out from its obligation to pay out in the event of a Lehman collapse by selling its portfolio of CDS contracts onto a third party. Suppose the third party is the hedge fund division of a respected insurance company called Insure Anything Company (IAC). The hedge fund managers within IAC think that Lehman Brothers remains a sound business. IAC takes on the risk of Lehman's default but gains the annual premium payments from bond-holders.

Second, the seller of CDS contracts can hedge the risks associated with an insured event. Consider the previous case of IAC that now provides a large number of bond-holders with cover in the event of Lehman Brothers going bankrupt. IAC has a liability to pay out huge amounts if Lehman's goes 'belly-up'. To hedge this risk, IAC can buy its own CDS contract cover from a third party. Suppose that the third party – let's call it Omega Hedge Fund - is willing to cover the liabilities of IAC in return for a premium. In the event of a Lehman Brothers default, IAC pays out to the Lehman bond-holders but receives a pay out from Omega.¹⁴ Of course, it is possible for Omega to buy its own CDS contracts to cover its liabilities to IAC, and so on. The third, and very important, difference is that sellers of CDS contracts are not subject to regulatory control – unlike providers of normal insurance. A corporate entity that sells near insurance CDS contracts has no need to satisfy a government regulatory agency that it has sufficient resources to cover its liabilities. And many of them do not hold sufficient capital reserves, as was ably demonstrated during the global financial crisis of 2007-08.

There is one last difference between a CDS contract and normal insurance, and this relates to the buyer side of the market. With normal insurance it is not permitted for someone to buy life insurance to cover a third party. This is due to moral hazard. The insurance buyer has a vested interest to murder the third party in order to collect the pay-out. This however does not apply to CDS contracts. In order to speculate or hedge a position, any trader can buy CDS near insurance to cover the risk of a bond

default by a specific issuer, even if the trader is not a bond-holder. Clearly this gives the CDS contract holder an incentive to bet against, to undermine, the bond issuer in the hope of instigating a default – and a payout. Moral hazard is rife in these circumstances.

Given the flexibility of CDS contracts, the lack of regulation, and the opportunities for profitable proprietary trading, it is no surprise that the global market for these swap contracts grew rapidly. In 2000 the market for CDS contracts was valued at \$1.5 trillion; for each of the next seven years the market doubled in size; by 2007 CDS contracts were valued at just over \$58 trillion. This was a peak year. After the financial crash this notional value declined to \$32.7 trillion (Bank of International Settlements, 2010).¹⁵

Securitisation

To comprehend the innovation of securitisation the reader must first understand how regulators assess the risks associated with different categories of lending by financial corporations; the lending categories include mortgages, credit card loans, student loans, and an array of ordinary household and business loans. Such lending is the primary preserve of traditional banking divisions of transnational financial corporations. Consider, as an exemplar, the case of mortgage lending. From the perspective of a financial corporation, the advance of a mortgage to a customer counts as an asset on its balance sheet. The mortgage is a steady earner over the mortgage term. The problem for the financial corporation is that it cannot easily liquidate this asset. Given that traditional banking involves borrow short, lending long on mortgages is fraught with risk.¹⁶

Consequently regulators require financial corporations to hold a relatively large capital reserve to cover the default risks associated with lending. Holding capital reserves limits the ability of the financial corporation to grant new loans (i.e. create profitable assets). Regulatory controls are the main reason why traditional banking generates low, but steady, returns. In response corporations have thought up ways to keep lending, whilst formally 'complying' with regulations. The big idea to emerge is that of bundling up huge numbers of mortgages, credit card loans, student loans and business loans, of various risks and returns, and repackaging them as securities that can be traded on the global bond market.¹⁷ With advice from credit rating agencies, financial corporations create securitised assets that are awarded the highest credit rating. The highest credit rating makes the *securitised assets* attractive to potential purchasers - lenders such as pension funds, insurance companies, hedge funds and sovereign wealth funds.¹⁸ This is essentially what securitisation is all about.

Crucially regulators have been placated by securitised assets. In the early 1990s regulators decided that securitisation was legitimate, and because securitised assets were tradable, they were deemed less risky than traditional bank loans – especially with their triple A rating (Bank of International Settlements, 1992). Consequently, regulators permitted financial corporations that had transformed traditional loans into securitised assets to reduce the capital reserves held to cover the risk of default. This, in turn, enhanced the capacity of financial corporations to expand lending further, whilst complying with regulatory rules.¹⁹

From the perspective of a transnational corporation there is still one problem with securitised assets: they are retained on the balance sheet. To really free up the capital reserves such assets must be moved off-balance sheet, beyond the controls of regulators. It did not long for the financial innovators to realise that SIVs were the perfect ruse to move securitised assets off balance sheet. The transnational corporation sells its securitised assets to its own sponsored – though legally independent - SIV. As long as the regulators are happy that a “true” sale has occurred – that the transnational corporation is not responsible for the debts of its sponsored SIV – the assets disappear from the balance sheet of the sponsor corporation.²⁰

This is how it works. Suppose there is an established, prestige transnational corporation called Alpha Financial Group. First, the traditional banking division of Alpha identifies a number of large bundles of ordinary loans provided to a variety of customers. These are transferred to Alpha’s investment bank division that slices and dices the bundles into tradable securitised assets. Second, Alpha establishes – sponsors – an SIV, named Beta Securities, registered in the Cayman Islands. Beta arranges a short term loan with Alpha’s investment bank division, subject to regular renewal. Beta uses the loan to purchase Alpha’s securitised assets. In addition, Beta engages the traditional bank division of Alpha to act as its “servicer” (Bank of International Settlements, 1992); Beta pays the servicer to collect the interest and principal repayments from the ultimate borrowers (i.e. Alpha’s original loan customers) on its behalf.²¹ Next, Beta repackages the securitised assets in order to create a variety of marketable branded financial products. It then aggressively sells these securitised products on to major lenders - pension funds, insurance companies, sovereign wealth funds and hedge funds.

To guide this market, Beta makes full use of the endorser brand of Alpha to gain repute with potential asset purchasers. Knowing that Beta is sponsored by Alpha assuages the concerns potential purchasers may have about the new products. In addition, even when the newly created securitised products are sold on to the major lenders, Alpha acts as Beta’s servicer on the original loans. The repayments are passed on to Beta, which then distributes the money to holders of the securitised products. Even the hedge fund division of Alpha can get in on the act. It does this by selling CDS contracts to the new purchasers of securitised products to cover the risk that Beta may default. Finally, when the repackaged securitised products are sold, Beta uses the revenues to repay its loan to Alpha. Alpha has achieved its special purpose; it has removed assets (and the associated liabilities) from its balance sheet and can start lending again - without contravening regulator capital adequacy requirements. Each time Alpha builds up too many assets to be covered by its capital reserves the process outlined above is repeated.

Just as long as there is no deterioration in the quality of the original loans granted by the traditional banking divisions of the transnational financial corporations (i.e. the risk of default remains low), this innovation makes perfect sense. It diversifies risk out of the balance sheets of transnational corporations, spreading it around the whole global financial system. However, if, in an effort grow the market, traditional banking divisions start easing the usual restrictions on loans, and giving loans to those with a “patchy” (i.e. bad) credit histories, problems start to multiply with securitised assets. And these problems are not restricted to the traditional banking divisions themselves, but spread across the whole global financial system.

New Loan Products

The securitisation of assets opens up profitable opportunities for financial corporations. As assets are made more liquid or removed from balance sheets, financial corporations create new capacity to increase lending. Some of this additional lending is conducted within the financial sector itself; nevertheless the process also facilitates greater lending to affluent consumers, non-financial corporations and governments. In particular, it allows mortgage lending, for the purchase of real estate, to expand very rapidly indeed.

Prior to the 1970s traditional banking had been heavily regulated to ensure that borrowers contributed some capital to the purchase of property; mortgages were restricted to 80 or 90 per cent of the property value, requiring the borrower to share in the risk of the transaction. Furthermore, regulators required that lenders check whether borrowers had sufficient resources to repay the loan; the required loan documentation included things like evidence of income and other outstanding debt. But in the 1990s things changed rapidly under the ideological influence of free market fundamentalism; regulation of traditional fractional bank lending eased considerably.

Stiglitz (2010) outlines some of the innovative branded loan products that were developed in order to attract new customers in this less regulated environment. The first is the *100 per cent mortgage*. The financial corporation takes all the risk and the borrower requires a zero down-payment. This attracts new customers who have no track record of saving. In addition, it changes the way the borrower treats the mortgage contract. The borrower can see the mortgage as an option – with the right, but not the obligation, to repay. A second innovation is that of *mortgages with teaser rates*. The initial interest rate chargeable is very low, rising very rapidly subsequently. This attracts new customers who previously could not afford loans. With easy access to mortgages, new borrowers can convince themselves that the loan can be renegotiated before the higher interest rates kick-in. And every time a mortgage is renegotiated, the traditional banking division of the financial corporation pockets the associated administration fee. The third, and probably the most insidious, innovation is what Stiglitz refers to as *liar loans*. The lender and borrower connive to lie about the income of the house-buyer. The ultimate variation on liar loans is the so-called *NINJA loan* – where the borrower has no income, no job or assets. NINJA loans were prevalent in the infamous “sub-prime” mortgage market.

This, of course, is not the end of the process. For as financial corporations lend more the assets on their balance sheets expand. The next step is for corporations to bundle up various 100 per cent mortgages, teaser loans, liar loans, even NINJA loans, into securitised assets that can be sold onto sponsored SIVs for distribution across the global financial system. And this system generates huge profits for transnational financial corporations assuming one thing keeps happening: that property values keep increasing. As soon as property prices start to fall the whole edifice collapses.

d) Avoiding Basel-style macro-prudential regulation

It is now necessary to get a more complete appreciation of the Basel style macro-prudential regulation of transnational financial corporations. Macro-prudential regulators pay particular attention to the balance sheet of a financial corporation. The

latter is a record of the assets and liabilities of a corporation. It important for the reader to appreciate what is included on the balance sheet of a financial corporation. Once this is achieved, the next step is to comprehend how transnational corporations actively avoid the regulations imposed by the Basel Accords.

Let's consider the published balance sheet of Barclays plc – see Figure 2. The year investigated is 2008, when the balance sheet of Barclays expanded rapidly due to its acquisition of the remnants of Lehman Brothers. On the assets side is cash to meet immediate depositor requirements and cash equivalents, which are government treasury bills that can easily be sold to raise cash. The assets side also includes categories of derivative instruments that can be readily-valued.²² In addition, traditional bank lending, covering various categories of loans and security purchases, count as assets. Finally, there are a range of other assets that include goodwill, intangible assets (e.g. brand reputation) and physical assets. The liabilities side include deposits from customers and other financial corporations; the latter is an increasingly important category given the scale of intra-financial sector lending. Also included on the liabilities side are readily-valued derivative contracts that exert a call on the financial corporation's resources. Like any other business, financial corporations issue securities to raise money to expand activity; these debt securities are a further liability to the corporation.

A financial corporation gets into trouble when large numbers of its borrowers default simultaneously. This means that many of its assets are transformed into bad debts. Bad debts must be deducted from the value of loans and other lending on the balance sheet. If the value of assets fall sufficiently the capital reserve – the safety margin – of the corporation is entirely depleted. If the value of assets falls below the value of liabilities the corporation becomes technically insolvent and must cease trading.

Figure 2 Barclay's Group Balance Sheet - 2008

ASSETS	£ millions
Cash and Cash Equivalents	31,714
Derivative Financial Instruments	984,802
Loans	509,522
Other Lending	316,569
Goodwill and intangible assets	10,402
Property, plant and equipment	4,674
Other assets	195,346
Total Assets	2,053,029
LIABILITIES	
Deposits from customers and financial corporations	452,078
Derivative Financial Instruments	968,072
Debt Securities	153,426
Other Liabilities	435,879
Equity	43,574
Total Liabilities plus Equity	2,053,029

Source: Barclays (2009)

The first thing to note about the balance sheet of Barclays is its sheer size. The total assets are valued at over £2 trillion (or around \$3.6 trillion). This means that Barclays' assets in 2008 were equivalent to roughly *twice* the annual GDP of the UK economy in

the same year. Modern transnational financial corporations are massive animals. The second intriguing fact about Barclays' balance sheet is the size of the equity. With assets of over £2 trillion (\$3.6 trillion) the equity, the safety margin in reserve, is only £43.5 billion (\$70 billion). That is an asset-capital ratio or 2053 to 43.5 or about 47:1. Put another way, the equity, or capital reserve, constitutes only 2.12 per cent of the total assets of the corporation. It only requires 1/47th of the assets of Barclays to become worthless to threaten its solvency. For this to be a sustainable business strategy either Barclays is an extremely safe business, or the risk management skills of Barclays are uncommonly good. If one or both of these conditions does not hold the solvency of Barclays is threatened. What is true for Barclays is equally valid for every other financial corporation.

The main instrument of Basel-style regulation is that of requiring financial corporations to hold a minimum capital reserve as a safety margin against unexpected events. More specifically, BIS member states apply minimum asset-capital ratio requirements on financial corporations. However regulators do not treat all the assets of a financial corporation as equally risky. This means that financial corporations must carry at least a minimum of capital reserves as a proportion of what the BCBS calls *risk-weighted* assets (Basel Committee on Banking Supervision, 2006).

To understand the process of how a financial corporation calculates the minimum capital reserves it must hold, consider the following illustrative example. It relates to the previously mentioned Alpha Financial Group that has total assets valued at \$1 trillion. Alpha then multiply the value of each category of asset held by the BIS announced risk factor to estimate the risk-weighted value of assets – see Figure 3.

Figure 3 Alpha Financial Group – Risk Weighted Assets

Asset category	BIS risk factor	Asset value	Risk-weighted asset value
Cash	0.0	\$40 billion	0
Government bonds	0.0	\$110 billion	0
Inter-bank loans	0.2	\$100 billion	\$20 billion
Securitised assets	0.2	\$100 billion	\$20 billion
Mortgages	0.35	\$500 billion	\$175 billion
Ordinary loans	1.0	\$150 billion	\$150 billion
Total Value		\$1 trillion	\$365 billion

BIS regulations require member-state financial corporations to hold a minimum of capital in reserve as a percentage of the risk-weighted assets. Prior to 2010 the minimum capital requirement was around 4 per cent of the value of risk-weighted assets. In the example above, to comply with the pre-2010 regulations requires that Alpha hold equity of \$14.6 billion (i.e. \$365 billion multiplied by 0.04), or less than 1.5 per cent of the total value of its assets of \$1 trillion. In the light of the global financial crisis there was a move to tighten the regulations and require financial corporations to hold a greater capital safety margin. BIS regulators – in the Basel 3 Capital Accords – have increased the minimum capital reserve to around 8 per cent of risk-weighted

assets – to be phased in over a number of years. To comply with this change, Alpha has to have equity of \$29.2 billion (i.e. \$365 billion multiplied by 0.08) – or just under 3 per cent of the value of total assets.

Yet, when the BIS establish the rules, profit-seeking financial corporations look for ways around them. This is the incentive behind the securitisation of assets. Financial corporations move bundles of mortgage assets and ordinary loans out of higher risk categories (i.e. 0.35 and 1.0 respectively) and repackage them as securitised assets in a lower risk category (i.e. 0.2). The total value of assets held is unchanged whilst the risk-weighted value of the assets is lowered. In the financial sector this is called *shiftability*. To illustrate how it works say that Alpha bundle up \$100 billion worth of mortgages and \$50 billion of ordinary loans and repackage them into \$150 billion of new securitised assets. Figure 4 shows the revised calculation of risk-weighted value assets that Alpha holds; remember the total value of assets held by Alpha is unchanged.

Figure 4 Alpha Financial Group – Shiftability

Asset category	BIS risk factor	Asset value	Risk-weighted asset value
Cash	0.0	\$40 billion	0
Government bonds	0.0	\$110 billion	0
Inter-bank loans	0.2	\$100 billion	\$20 billion
Securitised assets	0.2	\$250 billion	\$50 billion
Mortgages	0.35	\$400 billion	\$140 billion
Ordinary loans	1.0	\$100 billion	\$100 billion
Total Value		\$1 trillion	\$310 billion

The risk-weighted asset value falls from the previous \$365 billion to \$310 billion. Alpha need only keep, even on the Basel 3 rules, \$24.8 billion as equity. The freed equity can be put to work by Alpha through granting new loans.

The ultimate in shiftability is for Alpha to move assets completely off its balance sheet by creating its own SIV - Beta Securities – in an offshore tax haven that is not subject to regulatory controls. Suppose that Alpha engages in such a policy of regulatory arbitrage. Alpha creates Beta and loans the latter \$150 billion; Alpha “sells” Beta \$150 billion of its securitised assets; Beta repackages the securities into branded financial products and sells them to lenders across the globe; Beta then repays the loan to Alpha. Through this process Alpha removes assets from its own balance sheet. Figure 5 shows the revised calculation of the risk-weighted assets held by Alpha. The shiftability permitted by Beta significantly reduces Alpha’s asset values on its balance sheet. The alleged total value of assets is down to \$850 billion and the risk-weighted value falls to just \$280 billion. On the new Basel 3 rules Alpha need only keep \$22.4 billion as equity (i.e. \$280 billion multiplied by 0.08). This frees up even more capital for Alpha to be put to work granting new loans.

Figure 5 Alpha and Beta: the ultimate in shiftability

Asset category	BIS risk factor	Asset value	Risk-weighted asset value
Cash	0.0	\$40 billion	0
Government bonds	0.0	\$110 billion	0
Inter-bank loans	0.2	\$100 billion	\$20 billion
Securitised assets	0.2	\$100 billion	\$20 billion
Mortgages	0.35	\$400 billion	\$140 billion
Ordinary loans	1.0	\$100 billion	\$100 billion
Total Value		\$850 billion	\$280 billion

The conclusion that logically follows from the preceding analysis is that the Basel-style regulations designed to avoid systemic risk are ineffective. The financial crisis of 2007 proved this beyond doubt. The opportunities to avoid regulation are too appetising for a profit seeking corporation to miss. The latest Basel Capital Accords do nothing to close the enormous loop-holes. If anything Basel 3 simply increases the incentives for transnational financial corporations to engage in regulatory arbitrage.

e) Comprehensive financial regulation – the Stiglitz Report proposals

The Stiglitz Report, issued under the auspices of the United Nations, provides detailed proposals for the reform of the macro-prudential regulation of the global financial system. These reform proposals seek to address the problems thrown up by the global financial crisis. They are the only serious proposals to date that address the challenges posed by regulating the whole of the global financial system, and deserve serious consideration.

The proposals begin by calling for what it terms as *comprehensive* global regulation. This means regulation that is seamlessly coordinated across the globe, and which focuses on “systemically important activities, institutions and instruments” (Stiglitz *et al*, 2010, p. 79). The regulators responsible for such regulation also require *comprehensive* authority to act globally. That is the writ of regulators must not be undermined by tax havens that stand outside regulatory control. In these circumstances the threat of *regulatory arbitrage* – where corporations re-locate in tax havens with lax regulatory controls - is minimised. The Report specifically calls for comprehensive regulations to prevent the shiftability of assets to SIVs located in tax havens.

Assuming a comprehensive regulatory regime, the Report goes on to consider the regulation of systemically significant transnational financial corporations. It calls for the revision of the Basel Capital Accords and the implementation of what it terms *time-varying* capital requirements. In essence, this involving a global regulator deciding to increase capital adequacy requirements of each significant transnational financial corporation during a credit boom and lowering the requirements when these corporations are less willing to lend. The Report claims that this provides a more flexible capital requirement rule that is *counter-cyclical* in character: that is slowing down activity during a boom and stimulating it during a downturn.

With respect to those systemically important transnational corporations that are deemed too big to fail (TBTF), the Report recognises that in times of crisis taxpayers are held to ransom. In these circumstances, the unpalatable choice facing governments is either to bail out the corporations or face massive economic disruption. The Report therefore calls for much more stringent capital adequacy requirements for massive TBTF corporations. It also proposes a *global* bank deposit insurance scheme which is funded by a tax on massive financial corporations or their cross border activities. In other words, in good times TBTF corporations pay into a fund that would bail them out in bad times.

In addition, the Report addresses the problems with two important financial innovations of the last twenty years – securitisation and credit default swaps. The Report proposes that all corporate issuers of securitised assets be required to hold at least 10 per cent of the assets they issue. Presumably the idea is that a financial corporation won't issue dubious securitised assets if it has to hold a proportion of them. On CDS near insurance products the Report proposes that they be regulated in the same way as normal insurance products. Beyond this the Report is not specific. But, on the seller side of the market this, presumably, means that CDS contracts will not be tradable, and that the risks associated with the insured event cannot be hedged. In addition, it implies that contract sellers must satisfy regulators that they have sufficient capital resources to meet all their liabilities. On the buyer side of the market this must mean that the opportunities for moral hazard are eliminated.

The final component of comprehensive regulation proposed by the Report relates to credit rating agencies. As noted earlier credit rating agencies play a critical part in the global financial system and its regulation, but are themselves not subject to any form of regulatory control. What is more, credit rating agencies apply a range of idiosyncratic ratings systems that are not standardised. The Report therefore calls for a globally agreed standardised system of ratings for securities to which all agencies are subject. What is more, the Report calls for the regular independent assessment of credit rating agencies based on their past performance – that is the rating of credit rating agencies. Beyond that, the Report is quite vague about the practical implementation of this rating of credit rating agencies.

There is considerable merit in the Stiglitz report proposals. However, in a world of free capital movements, extensive currency convertibility, shiftability and tax havens operating outside the ambit of regulatory control, calling for seamless regulation, time-varying capital adequacy requirements, the consolidation of SIV assets on sponsor balance sheets and the end of tax havens, is wishful thinking. In addition, the report makes a compelling case, *sotto voce*, for the creation of a new global central bank, to replace the BIS, to act as the comprehensive regulator. This new super-regulator could then implement the more stringent control of TBTF corporations, a world-wide bank deposit insurance scheme, and the effective regulation for both credit rating agencies and CDS near insurance. But the case remains implicit. The report is deficient in not explicitly calling for a new global comprehensive regulator. The report therefore falls between stools: it trying to formulate proposals that might be acceptable to transnational corporate interests it avoids controversial topics. Put succinctly, the proposals will the end of comprehensive regulation but not the means.

Meaningful comprehensive regulation requires an appropriate and conducive environment. This is one in which the global regulators have appropriate powers to ensure the compliance of transnational financial corporations. Keynes outlines an appropriate policy domain whilst addressing the issue of trade imbalances (Keynes, 1980a; 1980b; 1980c; and 1980d; Sheehan, 2009). He proposes a new commercial system with a new global currency – *Bancor* – to act as the worldwide reserve currency. Keynes also proposes that the *Bancor* currency is managed by a new supranational central bank – the International Clearing Union (ICU) – with a membership made up of all member-state central banks. *Bancor* should be an elastic currency that expands and contracts with the scale of economic activity. In addition, Keynes argues for the establishment of a global fixed exchange rate regime, in which Bancor (not the USD) is the anchor. The regime should be symmetric, requiring both debtor and creditor nations to respond to trade imbalances. Finally, Keynes calls for the establishment of capital controls to ensure that all Bancor currency transactions are monopolised through member state central banks. Member-state central banks can then prioritise currency requests from those engaged in international trade or foreign direct investment – much like the Chinese government does today.

In this new commercial system comprehensive regulation would find its most conducive environment. The ICU would be the new worldwide super-regulator, imposing rules on all transnational corporations that require Bancor to conduct international transactions. The ICU would have the muscle to impose effective capital adequacy requirements on TBTF corporations, and the power to impose severe penalties on those that attempt to engage in regulatory arbitrage. The ICU must establish capital adequacy levels at much higher levels than those proposed by Basel 3. Rather than TBTF corporations being required to hold capital reserves of 8 per cent of assets, a more prudential figure might be 30 per cent. However such capital requirements are illusory if the ICU does not address the issue of asset shiftability. Two changes are needed. First, the ICU capital adequacy requirements must be based on the total value of balance sheet assets – not the risk weighted value. Second, the sponsoring of SIVs by TBTF corporations must be outlawed.

The ICU acting as a global super-regulator would be able to implement an effective global bank insurance scheme. The scheme might be financed by insurance premiums paid by financial corporations to the ICU. Those corporations engaged in securitisation, CDS contracts, large-scale proprietary trading and the formation of SIVs – all very risky activities – would pay the highest premiums. The ICU could even use the premiums as a systemic policy tool; premium rates across the board could be increased when lending levels became unsustainable. What is more, the ICU could appoint a panel of experts to monitor the performance of credit rating agencies, withdrawing accreditation from those with a poor record. Furthermore, the ICU should have the power to impose a worldwide regulatory regime for CDS near insurance contracts, and ban the practice of securitisation. Lastly, note that a beneficial by-product of the new commercial system would be the reduced scope for speculative trading across the different jurisdictions of central banks. The usual habitat of speculative traders would be undermined.

The benefits of the ICU could be neutralised if it is “captured” by the powerful transnational corporate lobby. Consequently, the ICU must be established under the auspices of the United Nations Organisation - the G-192. The ICU should be required

to present annual reports to the Economic and Social Council of the UN; moreover its Director-General should be required to regularly provide oral evidence to the Committee in open hearings.²³ Finally, the Management Council of the ICU should have a wide membership including representatives from the International Labour Organisation, UNESCO, small and medium size business organisations, and consumer and farming interests. This will give voice to important stakeholders who are frozen out of central bank deliberations.

f) Conclusion

This paper has provided an overview of the global financial system and its key activities. It has highlighted the critical role played by transnational financial corporations in the system. The paper explains the key financial innovations of the last twenty years involving the creation of a variety of derivative contracts and new forms of loans. These innovations have increased both the profitability of financial corporations and the systemic risks of the financial system. The paper then explores the variety of ways in which transnational financial corporations use the shiftability of assets to bypass Basel-style macro-prudential regulation. Finally, the paper considers the Stiglitz Report proposals for creating comprehensive macro-prudential regulation in the 21st century, and how they might be improved upon. The paper argues that it is critical that the most conducive environment is established in order to make comprehensive regulation effective. This includes the creation of a new supra-national central bank which can act as the macro-prudential regulator of the global financial system. This new super regulator must address a number of key issues, which includes the shiftability of assets.

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ENDNOTES

¹ An exemplar of a large pension fund is the California Public Employees' Retirement Scheme (CalPERS), the largest public sector pension fund in the USA. CalPERS provides benefits to 1.6 million employees and 3000 employers; it manages assets valued at roughly \$205 billion.

² Keynes (1980c) describes traditional banking as an activity which transforms stone into bread. This is a biblical allusion. When Jesus was in the desert for 40 days and nights it is claimed that the Devil tempted him by asking him to turn a stone into a loaf of bread. Hence Keynes suggests that traditional banking has almost miraculous powers.

³ A more proactive selling technique involves the investment bank purchasing a small proportion of the stocks or bonds issued. The fact that the investment bank is prepared to put "its money where its' mouth is" demonstrates its confidence in the corporation making the issue, encouraging other lenders to buy.

⁴ A hedge fund can be constituted either as a partnership or incorporated with the protection of limited liability.

⁵ Another related financial entity to develop is hedge fund that lends money to other hedge funds – a so-called fund of funds (Arvedlund, 2009).

⁶ This may involve, in a specific product class (say equities or currencies,) the fund manager buying and selling at the same time. In covering different possibilities – for both a bull and bear market – the fund hedges its bets.

⁷ It should be noted that in-house hedge fund entities are not restricted to financial corporations. Many transnational oil corporations have very profitable hedge fund subsidiaries that actively trade energy products (Bower, 2009). In addition, Enron, just before its demise, had become a massive energy based speculative hedge fund (McLean and Elkind, 2004).

⁸ Mallaby (2010) does not share this definition of a hedge fund. He claims entities that engage in speculative trading which are subsidiaries of larger transnational corporations do not have the necessary financial independence to constitute a hedge fund. Financial independence is, however, a rather arbitrary method by which to define a hedge fund. In this paper a hedge fund is defined by its activities – that is making speculative gambles to buy and sell products in different markets and over different time frames. Any financial entity – whether independent or in-house – which engages in speculative activity is a hedge fund.

⁹ A hedge fund management team normally charges a 2 per cent management fee plus 20 per cent of the profits. Suppose a fund has a start-up capital of \$3 billion and makes a 15 per cent return in its first trading year – that is \$450 million. The management team is paid 2 per cent of the \$3 billion (\$60 million) plus 20 per cent of the annual profit (\$90 million).

¹⁰ Foreign currency derivative contracts are restricted to the major currencies – such as the US dollar, Sterling, and the Yen. Contracts for currencies issued by developing nations – such as the Indian Rupee and the Malaysian Rupiah – do not exist.

¹¹ With a put option the option writer agrees to buy the underlying product for the strike price at the expiration date.

¹² Financial innovators quickly realised that it is possible to write options on options. That is the option of buying a call or put option contract that is in the money. Indeed it is possible to conceive of trades in option contracts written for options in options. And these options in options (and options in options in options) could themselves be traded on globalised exchanges. The possibilities are almost endless.

¹³ Perhaps the simplest way to think of a security is that it is a formalised IOU, agreed between a borrower and the lender, secured against future corporate revenues. Of course, it is not just corporations that can access finance by issuing bonds. Governments also issue securities to raise long term finance. This borrowing is secured against the future tax revenues.

¹⁴ As long as the premium IAC receives to provide cover is higher than the premium it pays to Omega to gain cover, this makes perfect sense.

¹⁵ The dominant player in the global CDS market is J.P. Morgan-Chase. Its investment bank division essentially runs the global market for CDS contracts as an in-house operation. It issues the prices at which CDS contracts can be traded, and brings buyers and sellers together. Its in-house hedge fund division is the major trader in CDS contracts. In 2008 it is estimated that J.P. Morgan had swap agreements covering \$7.9 trillion of securities. The other major transnational corporations with a significant presence are the hedge fund divisions of Citigroup, Goldman Sachs and Morgan Stanley. The other key players are independent hedge funds pension funds and insurance companies. The hedge fund division of AIG was a massive seller of CDS contracts prior to its demise in 2008. The two things are not unrelated (Evans, 2008; Naked Capitalism, 2008; Lancaster, 2009).

¹⁶ One saving grace with mortgages is that if the borrower defaults the financial corporation takes over the house. When house prices are rising the financial corporation can quickly sell the house on; but when house prices are falling and houses aren't selling, the house is an illiquid asset (i.e. not easily turned into cash).

¹⁷ A securitised asset is a derivative, because its value is derived from the underlying bank loans of which it is made up.

¹⁸ It is easy to see why securitised assets are attractive to potential purchasers. Due to the law of large numbers, the risk associated with a huge number of mortgages bundled together is quantifiable. Put simply, when lending money there is safety in numbers. The purchaser of a securitised asset accepts that a small proportion of mortgages may go bad, but believes this will be more than compensated by the vast majority of well-performing mortgages. What is true for mortgages also holds for other categories of loans.

¹⁹ The BIS were aware of the dangers of "enabling lending to take place beyond the constraints of the capital base of the banking system...[potentially] increasing the fragility of the financial system as a whole" (Bank of International Settlements, 1992, p. 8). Nevertheless, many financial corporations were engaging in securitisation so the BIS looked the other way.

²⁰ An SIV is treated as a separate, independent legal entity as long as a third party owns just 3 per cent of its debt or equity. The sponsor corporation can own the other 97 per cent. The "third party" can be a "trust company" registered say in an offshore tax haven such as the Cayman Islands (in the Caribbean). Under the terms of the trust the trust company directors do not interfere in the management of the SIV. The trust company can even borrow the money to purchase its 3 per cent stake from the sponsor financial corporation. Finally, because an offshore tax haven has no corporation tax or capital gains tax, nor any controls on foreign currency, the profits made by the SIV are maximised and easily repatriated to the sponsor financial corporation (Frawley, 2003).

²¹ The servicer plays the same role that in the Mafia is called the "juice man" – the collector of debts.

²² Some derivative contracts – such as options - are omitted from the balance sheet because of the insuperable problems of valuation. Consider, for example, an in-house hedge fund that purchases a call option contract to buy 100 shares in one month's time for a strike price of \$50 per share. If over the next two weeks the share price increases to \$75 the option contract is 'in the money'. It is an asset that can be sold for a profit. But, if over the next two weeks share price falls to \$25 the option contract is 'out of the money'. How should such an option contract be valued in the balance sheet – at \$50 or \$75 or \$25 per share?

²³ It is also important that the Director General of the ICU is appointed by an open and transparent process based on merit. This contrasts with how the top position at the IMF and World Bank is at present decided.