**Leir Center For Financial Bubble Research**

**Working Paper #14**

**RISK MANAGEMENT AND CONTRACTUAL OBLIGATIONS**

**William V Rapp**

**Henry J. Leir Professor International Business**

**New Jersey Institute Of Technology**

**School Of Management**

**Newark, NJ 07102**

**914-945-0630; 923-1416 (fax)**

**rappw@njit.edu**

Keywords:

Financial Contracts

Economics Crises

Banking

Financial Regulations

Bubbles

©William V Rapp 2013**RISK MANAGEMENT AND CONTRACTUAL OBLIGATIONS**

*Abstract*

*Many financial analysts, policymakers and regulators have forcefully argued that over $700 trillion in derivatives and other contractual risk management tools are a clear and unambiguous good for financial markets and economic growth because they transfer risk from organizations and individuals wanting stability and less volatility managing principal and cash flows.* *This wisdom argues risk is shifted to those better able to handle these effects while also dispersing it across a wide range of participants. The recent global financial crisis brings these claims and assumptions into doubt. Indeed these financial instruments may add to the amount risk that must be managed and regulated rather than just transferring it to stronger hands. This paper explains how this occurs and why laws and regulations requiring more capital and the use of exchanges may not be enough to limit contractual exposures and related systemic risk.*

**Introduction: Managing Risk**

Historically individuals and organizations have always faced risk and have developed ways to manage it. Life insurance has helped families deal with the risk of an untimely death on family finances while companies have used key employee insurance to similar effect. Casualty insurance has been developed to insure individuals and organizations against the effects of accidents and natural disasters [Bernstein 1998].

Commodity futures and options have been used in many countries and situations to protect farmers and merchants from price fluctuations that can impact what they get or pay for commodities. Indeed Osaka Japan had a rice futures markets as early as the 17th Century. Today there are robust options and futures markets for oil, gas, gold, corn, pork bellies, coffee, cocoa, wheat, orange juice and many more commodities. These concepts have been extended to financial markets to cover risks related to fluctuations in interest rates, foreign exchange rates, and stock prices. In turn swaps have been developed to convert fixed rates to floating and to cover possible changes in credit worthiness.

The common feature of all these risk management tools is that they are contracts between parties with each side accepting an obligation to perform under certain conditions. A future for example is a contract traded on an exchange where one party agrees to deliver a certain commodity at a certain price on a certain date or to cover a certain risk over a predetermined time period. Options in the form of calls and puts obligate the writer of the contract to sell or buy a commodity, currency, or stock at a certain price during a specified period or date certain in return for a premium. However the party purchasing the option has no obligation to buy or sell. Other derivative related contracts include currency forwards, interest rate swaps, swaptions, credit default swaps, and index options. Indeed financial contracts related to managing risk seem only limited by the imagination of those willing to develop and enter such contracts [Shiller 2012].

Under any contract each party is relying on the other party to perform. In order to insure performance especially when large sums are involved various arrangements have been developed both privately and by regulation. These include depositing collateral with counterparties, requiring margin, regulatory capital allocations against extensions of credit, and using exchanges that have margin calls to underwrite performance by participants.

Risk managing institutions that have become part of our daily lives include Life and Casualty insurance companies with whom we enter contracts to cover our lives, homes and cars. These companies in turn enter into reinsurance contracts with other companies such as General Re or Swiss Re. In fact virtually all risk management tools are contracts involving one or more parties with each party accepting reciprocal obligations to perform under certain specified conditions or situations. These contracts usually involve the payment of money, a premium paid by the insured and a payment by the insurer in the case the event insured actually occurs.

However, this fact introduces two new large risks: counterparty risk or the credit risk involving ability to pay and performance risk involving actual payment. If the counter party can pay but does not this becomes a legal issue settled through arbitration or through the courts where one might win or lose. Yet the “Accepted Wisdom” by policymakers such as Alan Greenspan and other commentators such as Shiller [2012] is that the over $500 trillion[[1]](#footnote-1) in derivatives and other contractual risk management tools are a clear good for financial markets and economic growth because they transfer risk from the organizations and individuals wanting more stability and less volatility managing their principal and cash flows to those sophisticated enough to manage it. Further these individuals argue that this risk is spread over a larger pool of assets and organizations that can better absorb an adverse event. The result they state is that overall there is no increase in risk for the system as a whole and the risk ends up being placed in the best hands to manage it. Thus everyone benefits and the overall financial system is stronger and more stable.

Warren Buffet, though, offers a contrary view. In his 2002 Berkshire Hathaway Annual Report he stated that “derivatives are financial weapons of mass destruction that, while now latent, are potentially lethal.” While he saw this development being signaled in the collapse of LTCM [Long Term Capital Management] and its rescue, his prescience was clearly demonstrated in the recent financial crisis.

Importantly he clearly saw “derivatives as time bombs, both for the parties that deal in them and the economic system.” This is because “[b]asically these instruments call for money to change hands at some future date, with the amount to be determined by one or more reference items, such as interest rates, stock prices, or currency value” and “[u]nless derivatives contracts are collateralized or guaranteed, their ultimate value also depends on the creditworthiness of the counter-parties to them.”

**Transfer Or Addition**

As just noted Traditional Wisdom argues derivative and similar financial contracts shift risk to those better able to handle these events while also dispersing these risks across a wider range of participants. The recent global financial crisis, though, as Buffet predicted in 2002 has brought these claims and assumptions into doubt. Indeed, it seems under many circumstances these contracts have added to rather than just transferred the risk whether the contract involves hedging such as covering a change in the price of an existing asset or betting on a change in value where no asset is being covered.

This paper argues such contracts add risk to the total financial risk outstanding both individual and systemic. Indeed based on recent experience with firms such as AIG or Countrywide contractual obligations related to risk management whether Credit Default Swaps or pools of mortgage backed securities have actually both increased and concentrated risk resulting in a less stable global financial system with more periodic financial crises. That is these contracts increase global systemic risk and have created the need for more specific and focused regulation. Indeed recent regulations and laws in the US [Dodd-Frank], UK and Continental Europe implicitly recognize this fact. They are requiring more capital from financial market participants especially when they are betting rather than truly hedging. They are also demanding the use of exchanges and making “too-big-to-fail” institutions pay for their greater government support. Governments have also increased regulatory monitoring of such institutions and their accumulated contract risk.

Given recent experience this only makes sense.[[2]](#footnote-2) AIG clearly underpriced credit default swaps by assuming a very low or non-existent probability that a major firm such as GM could go bankrupt in a classic example of overly optimistic contracting [Bar-Gill 2009]. This resulted in a concentration of credit default exposure in AIG as other market participants exploited this risk versus price mismatch.

However, those participants were also overly optimistic because the excessive exploitation of AIG’s mispricing created very large systemic and concentrated counterparty risks. This is why when the US government rescued AIG it felt obliged to pay its major counterparties such as Goldman Sachs or J.P. Morgan Chase since otherwise those firms would have taken large losses on what were now uncovered assets or financial obligations. This could have destabilized the entire financial system even more. In effect the increase in defaults led to a “run” or “daisy-chain” of collateral requests forcing the US government to honor the contracts. Indeed Treasury Secretary Geithner when criticized about the payments used AIG’s “contractual obligations” as an excuse even though they were not the government’s contractual obligations. Something similar occurred during the rescue of LTCM [Long- Term Credit Management – Kindleberger & Aliber 2011]. Further Lehman’s collapse illustrated how these intertwined contractual obligations could impact the global financial system when a major financial institution failed.[[3]](#footnote-3)

**Regulatory Issues**

Developing the appropriate regulatory policies to manage contractual risk especially when it explodes due to excessive optimism [Bar-Gill 2009] requires both a direct analysis over the business cycle of the contractual asymmetry between the customer, the contracting financial institutions and the government and the overly optimistic assumptions of each of these parties. Thus in the recent housing crisis the individual borrowers were overly optimistic that housing prices would rise and they could then refinance. Aliber [2011] calls this Ponzi finance.

However the lenders were also overly optimistic thinking that housing prices would continue rising and so even if a subprime borrower defaulted they could foreclose and get their money back. They also persuaded optimistic investors these assumptions were valid. Regulators in turn went along. Yet if the policy goal is to avoid a financial crisis government regulations should initiate, manage and avoid some crises by countering optimism through the regulation of contractual obligations. Something along these lines has already been begun through the new Consumer Financial Protection Agency but earlier examples include the creation of the SEC and the regulation of how firms issue securities.

**Policy Issues**

Panics and crashes are usually caused when people have borrowed money to buy inflated assets due to over optimism that the assets’ prices will continue rising. Borrowing is a contract where the lender assumes the risk of non-payment or default. It can transfer that risk via a credit default swap to another institution but now it has two risks, the original default risk plus that the swap party may not pay. Thus the policy debate should center around when contracts pose risks to the financial system due this extra exposure combined with the explicit and implicit leverage involved. From this perspective it may be that strict laws on margin or exposure may work better than regulators who also can become overly optimistic or co-opted.

Any such policy will require analyzing contractual risk explicitly and in more detail. This is because what makes sense on a micro basis may not make sense when done in volume [herding] as such aggregation can change the underlying assumptions as in AIG’s case. For example, combining growth stocks and risk free assets in a portfolio in the late 1960s was sound based history but it led to the “nifty fifty” boom & bust. Making subprime mortgages may have made sense given rising home prices but in volume they led to the housing boom and bust with the assumed foreclosure exit strategy actually foreclosed to lenders and in turn the investors that purchased the securities they supported.

For this reason regulators generally should have a “green eyeshade” objective reality mentality and should lean against prevailing winds of excessive optimism and avoid pro-cyclical regulation when anti-cyclical is required. From such a skeptical perspective the following should be suspect: Financial Innovations, Increased Leverage; Contractual Complexity; Contract Optimism; Concentration of Underpriced Financial and Contractual Risk; and Attempts to Co-opt Regulators.

**Systemic Risks**

These are important Policy Issues because as we have just witnessed globally large potential banking losses that have had large adverse impacts on the real economy and have shown that the potential for de facto “Bank Runs” on large but highly leveraged institutions are not a thing of the past.[[4]](#footnote-4) Low investor capital was a major factor in the recent financial meltdown. Homebuyers in some cases put no money down [ninja loans]. For institutions derivatives involved little or no margin so that collateral calls could be disastrous [AIG]. In turn these contractual situations in various forms were a Global Phenomena impacting not only economies such as the US, Spain and Ireland but had foreign exchange effects too that roiled markets worldwide [Kindleberger & Aliber 2011].

At the same time the object is not to eliminate all contracting risk but to eliminate excessive risk that could affect the financial system as a result of over-optimism by a large group of obligors and their counterparties [Rapp 2012]. Ways to prevent Risky Contracting include forcing the use of exchanges, government monitoring of contractual exposures, effective contract enforcement, using significant capital and margin requirements, adopting stronger and more effective anti-cooption policies, and pushing a real transaction or insurable risk rule that would reduce naked betting on defaults. Many of these ideas with the exception of the last are incorporated in the Dodd-Frank legislation but banks and other financial institutions are working hard to dilute related regulations through a co-option of the rule making process.

It is clear from this analysis that Legal Regimes play an important role in controlling the 3-sided Optimism and Asymmetric Incentives in Contracting. Indeed having a law such as Glass-Steagall did for many years is one way to keep a Long-term Interactive Perspective and avoid having regulators or policymakers get caught up in the excess optimism of the moment and believe or concur “this time is different”. This is how one can maintain sensible Central Bank and Federal Government policies, hopefully skirting the scourge of Regulatory Arbitrage and Co-option. If such efforts avoid or moderate a few future financial crises then Central Banks or taxpayers will have fewer calls to become Lenders of Last Resort and rescue the financial system so as to stabilize the real economy.

**Research**

One way to counter Co-Option or getting seduced by the excess optimism of the moment is more detailed current and historical research related to Contract Risk and its Regulation. This research should focus on:

* Use of strict rules or minimums instead of discretionary regulation;
* How best to counter Excessive Optimism by leveraged lenders;
* How to control Optimistic Contracting via simplicity and transparency;
* Identifying what are the Herding and Aggregation Effects of Multiple Contracts on the Underlying Assumptions of Entering those Contracts;
* Limiting the Concentration of Credit and Contract Risk in Counterparties;
* Assessing how Various Financial Contracting Assumptions Interact with and Impact Foreign Exchange and Ponzi Finance?

*Strict Rules or Minimums*

There ha s been a general assumption that financial and economic situations are complex and it is difficult to have controls in the form of rules and regulations that can appropriately apply to all situations. Thus it is better to put these controls in the hands of regulators giving them the power to make rules and enforce them. Yet recent experience shows that regulators can be coopted or at least subject to the same excessive optimism as those they are supposed to regulate. There is also concern about the revolving door from regulator to representing the private sector and back. The SEC’s easing of investment bank capital requirements in 2004 is a prime example that helped bring about Lehman and Bear Stearns’ demise.

On the other hand margin requirements appear to have worked well in moderating the dot.com boom and bust. If a black line rule exists the market will adjust to it. There is also a possible middle ground where legislation sets a minimum rule but regulators have the power to make it more stringent but not weaker. This has been the situation with the Basel Agreements on Bank Capitalization relative to risk-adjusted assets.

*Countering Leveraged Lenders’ Excessive Optimism*

Historically and in the recent crisis the threat to the financial system comes when a large number of banks or shadow banks that are highly leverage suffer large deteriorations regarding the value of their assets so their capital is wiped out or significantly impaired as illustrated by Lehman and Bear Stearns. This occurs when several lenders become overly optimistic about the profitability of a particular lending opportunity such as lending to US Stock Trusts in the 1920s [Galbraith 2009], South American Countries in the 1970s and 1980s [Kindleberger & Aliber 2011], the value of Japanese Property in the 1980s [Rapp 1999], Emerging Markets in the 1990s [Kindleberger & Aliber 2011], and most recently US housing via subprime mortgages between 2002 and 2008 [Gramlich 2007, Soros 2009].

Countering this through regulation that can be co-opted as noted above can be a problem. Further the use of appraisals as under FIRREA [The Financial Institutions Reform, Recovery, and Enforcement Act of 1989] can be self-fulfilling since these are generally based on the last sale. Rather there should be firm black line regulations limiting lending against asset values that assume a market value if a default occurs since as noted below when several similar assets are available for through foreclosure or short sales prices fall. Rather there should be firm lending criteria based on borrowers’ cash flow.[[5]](#footnote-5)

Con*trolling Optimistic Contracting*

As explained abovethree-party overly optimistic contracting by borrowers, lenders and policymakers has been at the center of most bubbles and related financial crises. Because this is very difficult to control when it occurs, limiting regulators’ discretion to “go along” seems appropriate. There should also be limits on lenders’ ability to disguise the true costs or risks of a transaction or to lend to people that can clearly not repay no matter how optimistic the borrower might be. Thus new rules on rate transparency, income verification, and loan to value under Dodd-Frank all seem appropriate though they may only moderate the next boom and bust whenever that happens.

*Herding and Aggregation Effects of Multiple Contracts*

The reason optimistic contracting needs to be moderated is because it affects not only borrowers but lenders and regulators too. In the Great South Sea Bubble investors entered subscription agreements where they put down 10% to purchase shares hoping the price would rise before the next installment was due. As the price rose they sold their prior contractual agreement [installment sale contract] for a profit and bought a new one for more shares using their profits from the prior sale for the additional subscription down payment. However, when the share price stopped rising they could not come up with the next installment and defaulted on their agreements. This then led to further price drops and more defaults until the whole bubble collapsed along with the South Sea Company.

In this way herding and an aggregation effects were responsible for both the bubble’s creation and its ultimate collapse. Something similar happened in the case of defaults by subprime mortgage borrowers, the subsequent fall in housing prices, the resulting failure of some subprime lenders, the rising losses to investors in those mortgage-backed securities, the foreclosure escalation and a further drop in home prices (Rapp 2010). Speculators that had placed down payments on condos in hot pre-2008 real estate markets such as Las Vegas hoping for appreciation and an exit before a closing experienced similar results to those who speculated in South Sea Company shares.

*Credit and Contract Risk Concentration*

Major participants in the financial markets will quickly exploit the mispricing of risk as in the case of AIG and credit default swaps. At the same time AIG was able to assume large contractual risks without being required to put up any capital or margin. Thus the new rules under Dodd-Frank and their equivalent in other countries that require large derivative transactions to go through exchanges are appropriate black line requirements that can limit overly optimistic contracting through capital constraints. Similarly banking rules that require banks to keep these activities in separate subsidies also seem correct as does requiring banks to allocate some capital against foreign exchange lines.

However is this sufficient given that the Treasury Department has requested that the Department of Justice not pursue certain criminal actions against some major banks guilty of intentional money laundering such as HSBC due to their importance in supporting the worldwide web of contractual financial relationships [McCoy 2012]. Under these circumstances it would seem too-big-to-prosecute has expanded the concept of too-big-to-fail and is subverting important social and political goals related to controlling the global drug trade or economic sanctions against countries such as Iran and North Korea. Thus more research on the consequences of sanctions that in addition to fines would involve required divestitures and the unwinding and limiting of contracts would seem appropriate.

*Ponzi Finance*

Contractual lending or refinancing procedures that effectively provide borrowers with the funds needed to cover interest that lenders then book as earnings is an unstable banking practice and inherently contains the seeds of defaults and a potential banking and financial crisis [Kindleberger & Aliber 2011]. Therefore the regulation of banks should flag and classify such arrangements or require higher capital requirements in terms of value-at-risk calculations under the Basle Accords and related legislation or regulations. This would include mandated stress tests where interest could not be lent. Therefore recent lending rules requiring banks to evaluate borrowers on their ability to repay at the highest rate on a mortgage loan over 5 years with no refinancing option is a move in the right direction.

However, this prudential regulation should really be extended to all loans where interest is contractually converted to principal or payment in kind requiring that cash flow cover the interest owed and is actually paid in cash and not re-borrowed. Emphasizing cash flow lending is important since current mark-to-market rules are too pro-cyclical when prices are rising and provide no capital cushion when prices start to peak or fall. Indeed it is at these times that the previously booked earnings and capital increases turn out to have been a fiction and have made crises worse by removing a major financial and regulatory constraint on overly optimistic lending by inflating capital to value-at-risk ratios.[[6]](#footnote-6)

A simple arithmetic example illustrates the problem especially when zeros are added that define the problem in the hundreds of billions of dollars or even trillions. If a large bank lends a million dollars at 5% interest under the Basle Agreements it must allocate at least 8% capital against the loan. However if rather than collecting cash it rolls the required annual interest into principal it books $50,000 in increased earnings and capital as well as a new loan or increase in assets of $50,000. But under Basel it only is required to allocate capital of $4,000 to the new loan, leaving $46,000 in increased capital that can be used to make more loans. Yet if the borrower could not pay the interest much less repay principal the whole contractual arrangement is a financial sham that when aggregated across thousand or even millions of transactions can put the global financial system at risk since if the borrower defaults the increased capital meant to cushion such risks evaporates too. This is why Ponzi finance is so dangerous.

During the Japanese real estate and stock market boom of the 1980s banks increased lending based on rising real estate prices while counting part of their stock holdings as capital. Thus when stock and real estate values started to fall, capital and lending capacity evaporated along with the banks’ ability to lend more to support the inflated real estate and stock prices. Further the prudential capital levels that were supposed to cushion such losses were shown to have been a fiction and many banks failed or were merged [Rapp 1999]. Something similar with respect to bank reported earnings and capital occurred during the recent US housing boom and bust. Thus it is very important from a prudential regulatory standpoint to strictly regulate and control such optimistic contractual lending arrangements that automatically or easily convert interest to principal.

**Conclusion**

Clearly “Contractual Risk” adds to policy concerns regarding the risks to the global financial system that must be managed. While policymakers have assessed the recent financial crisis and have recognized these risks by requiring more capital and the use of exchanges, more remains to be done. This is illustrated by the too-big-to-prosecute situations reported in the press. In addition research on the adequacy of recent regulatory and legislative initiatives remains an important regulatory and policy tool in many areas.

**References**

Bar-Gill, O. 2009. “Subprime Mortgage Contracts,” *Cornell Law Review*, Vo. 94.

Berkshire Hathaway, *2002 Annual Report*, Omaha, NE. Available at http://www.berkshirehathaway.com/reports.html

Bernstein, P. 1998. *Against the Gods*, John Wiley & Sons, New York.

Galbraith, J.  *The Great Crash 1929*, Houghton Mifflin Harcourt Publishing Company, NY.

### Gramlich, E. 2007. [*Subprime Mortgages: America's Latest Boom and Bust*](http://www.amazon.com/Subprime-Mortgages-Americas-Latest-Boom/dp/087766739X/ref=sr_1_1?ie=UTF8&qid=1361803577&sr=8-1&keywords=Ned+Gramlich), The Urban Institute Press, Washington, DC

Kindleberger, C. & Aliber, R. 2011. *Manias, Panics, and Crashes*, Palgrave Macmillan, NY.

Lipton, E. 2013. “Banks Resist Strict Controls Of Foreign Bets,” *NY Times*, NY. Available at

http://www.nytimes.com/2013/05/01/business/banks-criticize-strict-controls-for-foreign-bets.html?nl=todaysheadlines&emc=edit\_th\_ 20130501&\_r=0

McCoy, K. 2012. “HSBC will pay $1.9 billion for money laundering.” *USA Today*. Available at usa.com.

Morgenson, G. 2013. “If a Fund Turns on a Dime, Watch Your Dollars,” *NY Times*, NY. Available athttp://www.nytimes.com/2013/03/31/business/willow-fund-as-a-cautionary-tale-for-investors.html?ref=business&\_r=0&pagewanted=print

Rapp, W. 2012. “Everything Is Not A Bubble,” *Proceedings Of IABPAD Conference*, LA.

Rapp, W. 2010.“The Global Mortgage Crisis Litigation Fallout”. *After the Crisis: Rethinking Finance*, Lagoarde-Segot, T., ed., Nova Science Publishers, Inc., Hauppauge NY pp. 47-80.

Rapp, W. 2009. **“**Clash Of Titans - The Barclays v Bear Stearns Case and the Current Financial Crisis,” Proceedings Association For Global Business, VA.

Rapp, W. 1999. “Foreign Firms in Japan’s Securities Industry in the 1980s and Post Bubble Economy,” *Post Bubble Japanese Business*, Raj Aggarwal, ed., Kluwer Academic Publishers.

### Soros, G. 2009. *The Crash of 2008 and What it Means: The New Paradigm for Financial Markets*, Public Affairs, NY.

Shiller, R. 2012. *Finance And The Good Society*, Princeton University Press, Princeton, NJ.

1. A May 1, 2013 NY Times article states market has grown to $700 trillion [Lipton 2013]. [↑](#footnote-ref-1)
2. Buffet notes “Many people argue that derivatives reduce systemic problems, in that participants who can’t bear certain risks are able to transfer them to stronger hands. These people believe that derivatives act to stabilize the economy, facilitate trade, and eliminate bumps for individual participants. On a micro level, what they say is often true. I believe, however, that the macro picture is dangerous and getting more so. Large amounts of risk, particularly credit risk, have become concentrated in the hands of relatively few derivatives dealers, who in addition trade extensively with one other. The troubles of one could quickly infect the others. On top of that, these dealers are owed huge amounts by non-dealer counter-parties. Some of these counter-parties, are linked in ways that could cause them to run into a problem because of a single event, such as the implosion of the telecom industry. Linkage, when it suddenly surfaces, can trigger serious systemic problems.” [↑](#footnote-ref-2)
3. Buffet foresaw this effect too. “Another problem about derivatives is that they can exacerbate trouble that a corporation has run into for completely unrelated reasons. This pile-on effect occurs because many derivatives contracts require that a company suffering a credit downgrade immediately supply collateral to counter-parties. Imagine then that a company is downgraded because of general adversity and that its derivatives instantly kick in with their requirement, imposing an unexpected and enormous demand for cash collateral on the company. The need to meet this demand can then throw the company into a liquidity crisis that may, in some cases, trigger still more downgrades. It all becomes a spiral that can lead to a corporate meltdown. Derivatives also create a daisy-chain risk that is akin to the risk run by insurers or reinsurers that lay off much of their business with others. In both cases, huge receivables from many counter-parties tend to build up over time. A participant may see himself as prudent, believing his large credit exposures to be diversified and therefore not dangerous. However under certain circumstances, an exogenous event that causes the receivable from Company A to go bad will also affect those from Companies B through Z.” [↑](#footnote-ref-3)
4. Interestingly Buffet in his 2002 Annual Report Statement referred to the Crisis of 1907 where there was such a series of bank runs and in dealing with the aftermath the US finally established a central bank in the form of the Federal Reserve. [↑](#footnote-ref-4)
5. While borrowing and lending raise the largest systemic issues investors can be exposed to such contracting without their knowledge. A recent NY Times article reported how the manager of a UBS mutual fund specializing in distressed debt switched from directly investing in such assets to entering related credit default swaps. As the high yield market improved with lower interest rates and the economic recovery the investors lost, 80% of value, rather than made money as the fund had to put up more and more collateral. Morgenson, G. 2013. “If a Fund Turns on a Dime, Watch Your Dollars,” *NY Times*, NY. “Last October, shareholders in the Willow Fund, a closed-end investment fund sponsored and sold by UBS, received some disturbing news: the fund, which had assets of almost $500 million in 2006, was being liquidated. With a portfolio that specialized in distressed debt instruments, the Willow Fund had suffered losses of almost 80 percent in the first three quarters of 2012 after its longtime manager switched gears: he had abandoned the corporate debt markets he was familiar with and piled into some colossally bad derivatives trades. The investors, some of whom hadn’t realized they were holding a portfolio filled with risky bets against the debt of European nations, were stunned.” [↑](#footnote-ref-5)
6. Asset Managers can be involved in a similar type of Ponzi finance that can feed a bubble and increase contractual risk. Most investors enter a contract with their broker, mutual fund manager, and/or financial advisor that delegates them a certain amount of independence and authority in managing the investor’s

   assets. History indicates in contracts incentives matter and a contract risk related to asset managers is making sure the investor’s asset management goals and those of the asset manager are aligned even though the manager has a legal fiduciary duty in this regard. In reality some asset managers like the banks have been involved in Ponzi finance creating fictional earnings through taking unwarranted short-term risks to boost current earnings by optimistically acquiring bubble related assets. Much litigation has involved determining whether such investments were authorized or appropriate [Rapp 2010]. Still it is clear the collapse of the Bear Stearns hedge funds in June 2007 were due to such actions by the asset managers [Rapp 2009]. [↑](#footnote-ref-6)