**History Matters**. November 2014—Matthew Piepenburg

It is often warned that those who do not learn history are doomed to repeat it. Looking back upon the patterns of public and private market dislocations since the crash of 29 and our current *Titanic*-like path toward grossly inflated equity, bond, and currency markets, this warning acquires a particular relevance. Present circumstances and past lessons suggest history is more pertinent today than the math of algorithm writers or the theater of sell-side market spinners to make sense of where we are now and what lies ahead for tomorrow. Despite ongoing and eerily bullish numbers this week (10/31/14), I see an inflated market steaming toward a severe correction.

This unpopular truth is more straightforward than the cheerleading which predominates in the street, CNBC or the brochures of banks X,Y or Z. Indeed, the numbers and events of yesterday reveal a pattern of precarious cause and effect; the only change through time has been the size of the effect as measured in real and nominal dollars: millions in the 1930's, billions in the 1980's, and now trillions in the 2000 era. The past is in many ways prologue and the lessons from yesterday and themes for tomorrow are as plain as they are unpleasant: when easy money fuels unchecked speculation, markets inflate, create a false euphoria, and then-- pop. The history of the US markets since the 1920's is one of increasingly ineffective policies designed to manage free markets. These polices are premised upon a well-intended yet misguided belief that the Fed can improve GDP and perpetually sustain frothy markets by adjusting the dial of interest rates and money supply. The current and historical evidence shows, however, that this is not only untrue, but also dangerous. The now well-worn pattern of replacing past bubbles with new bubbles confirms a definition of madness, i.e. the notion that one can repeat the same behavior yet expect a different result. The Federal Reserve's growing status as Wall Street's mistress has tempted the Central Bank into increasingly promiscuous lending and rate setting policies which, like all such seductions, leads repeatedly to bad behavior and unhappy endings.

Such bad behavior has taken many forms and offered numerous symptoms (*infra*), but all stem from the same virus of easy money/credit in the backdrop of a currency that has no backing or standard other than faith in its reputation. This history of liberal monetary policies explains:

i) **volatile market rides** (the roaring 20's, the junk bond 80's, the tech-boom 90's, the sub-prime 2000's);
ii) **staggering leverage use** (from 1927 "hot money" to the embedded toxins of the current derivatives trade);
iii) **mispriced assets** (from the dotcoms and LBO's, M&A's and stock buy-backs of the 90's to the real estate valuations of 06 or the sub-prime storm of 08); and
iv) **a growing menu of risky investment vehicles** (CDO's, CLO's, levered currency exchanges, counter-party-booby-trapped derivatives and churn and burn hedge funds.)

The following paragraphs examine the history of this easy money virus and its market symptoms without recourse to hyperbole but with a sober view of cycles, balance sheets, GDP truth-telling and, alas, a blunt prognosis of what lies ahead. (A good doctor doesn't mince words just because the diagnosis is unsettling.) Much of this data and vernacular is too heavy, voluminous, boring or even disturbing for easy synthesis and lucid conclusions. Many of us simply do not have the time or resources to objectively understand how to make sense of the admittedly messy moving parts of our markets and their history. Sound bites or sector reports spun out of any semblance of context are all that most of us receive on a daily basis. It is therefore my hope to condense decades (even centuries) of time and tomes of figures and market data into a single white paper that, if read carefully, can provide a more user-friendly and easily understood backdrop to consider the markets we come from and the ones we are stumbling toward. The ultimate aim here is to prepare investors for severe shifts in the status quo. This is not a recommendation for buying rice, guns, and water in the face of looming catastrophe, but serves rather as an acknowledgement of what most market professionals already feel: the current environment is unsustainable and heading toward a storm.

**Turing Points—Taking Away the Dollar's Standard**.

In understanding how central bankers lost their way and brought our current economy within eyesight of the next (and biggest iceberg), a review of two broad turning points in the history of the American markets is helpful. The crash of 29 is an appropriate starting point.

George Washington famously observed that a nation has neither permanent friends nor enemies, merely permanent interests. This homage to *Realpolitik* took its early economic form in the American approach to the crash of 1929 and the dollar-debasing policies unleashed in its wake. Contrary to Bernanke's Princeton thesis that the Great Depression was caused by a failure to bail out US banks in the post-crash environment, the evidence confirms that commercial banking outside of Wall Street (then as in 08) was in fact intact. Instead, the actual severity of the Great

Depression was attributable to: i) massive amounts of pre-crash, "hot/easy money" speculation begun in 1927, and ii) a collapsed export market (post WWI Europe was smoldering and in no condition to absorb US productivity). Rather than assist Europe to become stronger buyers and seek trade cooperation, the US under Hoover took the "me-first/me-only" (i.e. *Realpolitik*) approach and choked rather than supported an already tired continent in the form of a tariff wall—aka the Smoot Hawley Bill. Result: countries declared economic war, more trade barriers were raised and more economic decline ensued for one and all. By the time FDR took office, he was faced with the problem of how to create enough demand to re-ignite our broken economy and manage the outstanding debt incurred during the roaring, pre-crash spending spree.

*FDR's Mistake.*

Economic historians agree that FDR was not up to the task. In fact, like many elected officials, he was largely inexperienced in free markets, free trade and currency matters. As a result, a series of poor and trend-setting decisions followed, *most notably in the form of devaluing the dollar*. As in any ponzi scheme that runs out of money, the immediate aim is to find more. When you run a country or central bank rather than a fraud-shop, this is legally achieved by: a) taking your currency off any collateralized controls (i.e. a gold standard) and b) printing more of it (if Madeoff had a printer, he certainly would have used it). In 1933, Roosevelt did precisely that. First, he confiscated gold in the US and then embraced the Thomas Amendment, which in the stroke of a pen devalued the gold content of the dollar and betrayed global market participants who relied on a currency standard. This lead to exchange rate instability among an already unstable universe of ailing nations who needed open rather than nationalistic trade. By removing the dollar from the gold exchange, FDR, like other unwise actors to come, focused on manipulating the US currency rather than addressing productivity—the veritable "P" in GDP. His was a shortsighted decision with long-term consequences. FDR's knee-jerk macro policies interfered with the hard but informative lesson of free markets, namely: deep recession always follows deep debt. Policy makers should have therefore acted with accountability and led the nation through restraint, short-term discomfort and a long-term rebuilding of a dollar standard, national balance sheet, open trade, and industrial productivity.

Instead, FDR spent a lot of money, debased the dollar, and thwarted free trade. He goes down in history for his "New Deal" salvation policies, "bank holidays," and dollar-debasing/money-printing reflation that in fact did nothing to bring the US out of the Depression. Much like China's 2004-2012 investment cycles of empty cities and bridges to nowhere (or even Stalin's top-down "five year plans"), the New Deal programs, laudable in their intent but mathematically ineffective in stimulating consumer demand (which only works from the bottom-up), simply created unsustainable levels of outputs. What actually pulled the US out of the Depression were not FDR's inflationary policies, but the winds of a brewing world war and the slow emergence of the US (and its Treasury bonds) as a perceived safe-haven for investment and gold—whose reserves doubled from overseas before the first bomb hit Pearl Harbor.

*Lesson/Pattern from Great Depression-to FDR*.

The broad themes and lessons of this seminal market crash deserve foundational attention because they reveal the first patterns seen many times over in the subsequent market cycles. In particular, **a pattern where policy makers consistently made the fatal error of: i) devaluing the dollar, 2) providing easy credit/money as the perceived solution to economic growth, and 3) confusing stock market prosperity with national prosperity.** As we see over and over, booming (inflated) stock markets do not translate into booming economies. In fact, **with each cycle of easy money bubbles and the recessionary pops that followed (from 1929 to 2008), the spread between Wall Street euphoria and Main Street malaise only increases**.

**Another common thread woven throughout US market history is the misguided faith placed on elites who simply got it wrong** without accepting the same and thus changing course. A well-known example of the FDR period was Professor Irving Fisher, the Yale economics professor who just 10 days prior to the crash of 29, declared that efficiencies had made the stock market bullet proof. Years later, it was this same scholar who gave FDR the equally inaccurate notion that the best way to beat deflation (here wrongly defined as low prices) was to print money. Today, a similarly misguided professor, Princeton's Ben Bernanke, has assumed this easy-money baton of trying to solve deflated economies via inflationary policies. Such thinking misunderstands cause and effect. In fact, history tells a different tale, namely: The price and money supply declines which follow market crashes are not the *cause* of market deformations but the *result* of earlier easy money policies and the subsequent liquidations of bad debt, which ***takes time, not new money, to cure***. In 1927, the NY Fed opened its easy money spigots (ostensibly to help the UK adhere to their gold standard obligations on which the US later welched), but the net result was speculators taking the easy and short-term "hot money" and inflating market bubbles and margin debt levels which popped in 29 (just as they popped in 1987, 2000 and 2008 after similar and yet much wider money supply spigots opened). Taking a quick and historical peek overseas, we saw an identical pattern when the Nikkei crashed in 89, namely easy money (cheap credit) booms followed inevitably by a mega busts (and then lots of money printing). The bust which hit Japan has not been healed. The country remains an economic zombie. Yet despite such examples, investors ignore at their peril the history of spigots, easy money bubbles and subsequent collapses.

Such cycles are the laws of free markets, who have repeatedly tried to teach lenders and borrowers these basic lessons: **1) too much easy money/credit leads to too much debt; 2) too much debt leads to inflated asset bubbles; 3) all asset bubbles pop; and 4) when a bubble bursts, policy makers should put a reign on providing easy money stimuli rather than create new bubbles.**

Unfortunately, history and current events indicate that no one wants to apply these unpopular reigns. Instead, the majority want the bubble party (served by a punch bowl of easy FED-made dollars and low rates) to go on forever. As any party-animal/college graduate knows, however, a never-ending binge is neither realistic nor healthy. To believe otherwise is a kind of delusion. Free markets demand periods of restraint and humility so that lessons can be learned from the hangovers of too much credit. Yet somehow in the drunken course of events since the days of Adam Smith, policy makers, hedge fund managers, Fed chairs, Wall Street elites, and Main Street dreamers seem unwilling to exercise **two key components of market wisdom: restraint and humility**. Eventually, however, market events force heavy doses of both.

*Nixon's Mistake*.

When it comes to lacking restraint and humility, Richard Nixon serves as the second logical turning point in the history of long-term market distortions. In 1971, he was staring down the barrel of an economy on the brink of bad news. The gold standard, revived by the restraint and humility of the Post World War II Bretton Woods Accord, meant the dollar was once again tied to a restraining asset upon which global markets and trade partners relied. Other nations were thus buying lots of gold-exchangeable dollars. Unfortunately, the US gold reserves were woefully low compared to the number of dollars in circulation. To honestly and correctly rectify this imbalance would have required a painful yet necessary recalibration of gold to the dollar, which would have meant short-term pain at home, and hence election-time risk for Nixon. Given the choice between doing the right or wrong thing, Nixon, alas, did the wrong thing. In a move similar to FDR in the 30's, he jettisoned the Bretton Woods gold exchange standard and thus once again welched on US dollar holders and currency-honest trade partners overseas. With the currency untied to any "standards," reigns or restraints, Nixon was thus free to once again devalue the dollar and lower rates to encourage short-term economic activity to boost his pre-Watergate election chances.

This "stimulus" mentality (repeated to this day by current policy makers) was tantamount to doping the economy for a quick fix at the expense of inevitable inflation (remember the late 70's?). Nixon's policies once again set the stage for a now trend-setting perversion of the role of central banking via a familiar pattern of: 1) removing the dollar from a gold standard, 2) lowering rates to encourage short-term speculation which 3) ends in unnaturally large corrections. This pattern of myopia also perverted the normal stick and carrot needed to keep free markets free. Instead, and from 1971 forward, markets were to be manipulated by visible policy as opposed to the invisible hands of supply and demand.

Nixon's 1971 decisions also set the stage for a global perversion of currency exchanges, which haunt markets to this day. By removing gold from the global currency models, we now face the problem attendant to all floating currencies, namely the fact that free markets no longer set exchange rates, national policy makers do, and they do so selfishly—again: *Realpolitik*. The US is a poster-child of such economic *Realpolitik*, meaning it is able to export and monetize its deficits (i.e. other nations are forced to import its inflated/devalued dollars) and thus spread and encourage reactive inflationary policies overseas. US bubble policies have therefore spawned *global* bubble policies. Today, international "my-nation-first" currency markets are the consequent scene of state sponsored manipulations where central banks (from the ECB, to the Bank of Japan and the Chinese star chamber) can buy their own sovereign debt pegged to thin air rather than an actual asset as part of ongoing trade battles to beggar-thy-neighbor via currency wars. Without this gold backing, currency has no discipline.

**Profiles in Courage**.

Despite the examples of Nixon, FDR and a handful Fed Chairmen to be named below, there have been moments where economic policy makers put national interests ahead of self-interest, and showed restraint where others sought politically beneficial quick fixes. JFK's famous work, *Profiles in Courage*, celebrated statesman who personified such courage. The policies of Presidents Eisenhower and Truman as well as Fed Chairmen William Martin and Paul Volker are worth highlighting in this context. Truman, for example, fought the Korean War the old fashioned and honest way, that is, by raising taxes rather than debt levels. His successor, Dwight Eisenhower, was a warrior who bravely fought to balance the US budget by addressing excess military costs. Despite two unpopular recessions under his watch, Ike refused to cut taxes until the US budget was balanced, thus risking popularity and votes for the sake of the larger good. Ike wanted small government, and understood that tax cuts can only be earned through spending control. Federal spending under his administration was an exemplar study of humility and restraint, the likes of which we have not seen since. In fact, Eisenhower was the *last* president to see inflation-adjusted spending *shrink* rather than grow while in office. (The Kennedy-Johnson period, for example, saw a budget increase of 50%, the Reagan era a 22% increase, and the G.W. Bush White House lead a 53% increase in spending while in office. The current regime is no better…)

Federal Reserve Chairmen William Martin and Paul Volker deserve equal note for exercising unpopular courage by standing up to bull-market temptations. In 1958, for example, Martin took away Wall Street's "easy money" punchbowl as soon as he saw that the economic recovery had morphed into greedy speculation. Paul Volker, faced with rising inflation (nod to Nixon's legacy) in the late 70's, showed similar courage when sternly and swiftly raising interest rates and putting tight reigns on an economy "gone rodeo" from too many years of Nixon's easy money. Comparing Fed Chairmen like Volker and Martin to the contrasting policies of low-rate setting Bernanke and Greenspan, is indeed a comparison of black to white, apples to oranges. The latter, who share an unusual subservience to Wall Street needs rather than national productivity, have not shown profiles of courage in the midst of bull runs or bear corrections to pursue unpopular and difficult monetary policies.

Instead, rather than take away the "punch bowel," the contemporary crop of Central Bank leadership has only added more moonshine each time Wall Street has so much as a toothache. The result has been the creation not only of an ethical moral hazard in the towers of Wall Street, but the perpetuation of ever-increasing asset bubbles with ever-increasing degrees of pain when they implode.

As we look next at a series of market cycles/bubbles lead by less-than-courageous monetary policies, this theme acquires greater clarity.

**A Series of Bubbles: The More Things Change, the More they Stay the Same**.

*Black Monday*.

Black Monday, October 19, 1987. In even that pre-CDS and CDO uber-leverage world, markets in the late 80's once again reminded us that any significant degree of easy credit and leverage (by then computerized) leads to equal amounts of pain, which can come, seemingly, out of nowhere. The spark which set off the crash of 87 was the fear/rumor that the new Fed Sheriff in town (Alan Greenspan) might put an end to the Wall Street party by raising rates in a "Volker 2" scenario. And so in a single day, the stock index dropped 23%--double the 13% declines on the worst day of the 29 Crash. This accounted for $500B in paper losses (a lot of money then) based on banks using more and more leverage to assume counter-party risk on increasingly inflated assets. But even more astounding than this Black Monday was the Lazarus-like resurrection of the market buy orders on the Tuesday to follow. By 12:30 PM the next day, the market saw massive buy orders that in a miraculous swoop stopped the panic. The Greenspan Fed was clearly no "Volker 2" and came to the rescue of wayward markets. In doing so, policy makers once again distorted the invisible (and often painful) hands of the free market. Rather than allow painful corrections to teach investors a lesson about derivatives, leverage and other mines dotting the S&P futures pits (which dropped by 29% in a single day) and larger markets, the Fed once again came in with buckets of money and thus destroyed any chance for the cleansing tough love of natural markets. This, once again, created the moral hazard of letting investors behave like the spoiled nephews of a rich uncle: spending with impunity until the next crisis, as there's always Uncle Fed to bail you out—at least until that uncle is himself insolvent (which, ironically, and unknown to most, is where we are heading today).

*The Exchange Pits and the Birth of Derivatives*.

Policy makers who create environments where the dollar is unrestrained, credit is easy and regulation is lax (or favors "creativity") set a stage where clever market players are free to scheme their ways into ever-increasing bubbles. This is true in every asset class, including within the once humble mercantile exchange. It was in this former cob-web-modest Chicago-based exchange where Leo Melamed applied the notion of using futures contracts (originally created to help farmers and suppliers adjust for price volatility) to global currencies, an idea which could only have been spawned in the unfettered currency environment created by Nixon's folly in 71. Shortly thereafter, Melamed, having conferred with Greenspan and other easy-money minds (including Milton Friedman) got the green light to open currencies to an entirely new level of speculative alchemy. Four decades later, the volume of currency traded in 1 hour on the exchange exceeds the *annual* volume of funds traded on the original MERC. Now, like all post-71 markets, the exchange pits have morphed into a casino with an astonishing 50,000X growth based on derivatives, leverage and hi tech software trades that set up *100:1 ratios of hedging volume to the underlying activity rate*. These levered hot potatoes whose degree of risk and *tranched*-sliced-diced confusion are so far from the plow of any actual value that when a liquidity crisis comes again, this very tall house of cards will fall like the others.

By introducing derivatives, the exchanges were no longer trading cash bonds at thin spreads. Instead, they learned to use 20:1 leverage on T-Bill Futures, which soon went to wheat futures. This was not your ordinary "spread trade" of simultaneous longs in month A and shorts in month B or the "basis arbitrage" which trades spreads on the futures price at the exchange and the current cash market price. It metastasized by the late 80's into a game of simple, same-duration T-Bill shorts in cash markets paired with long T-Bill futures on the exchange (with margin requirements of only 5%). As time passed, the "casino" invented other clever new slot machines/trading vehicles, like the Merc's launch (with CFTC complicity) of the cash-settled S&P futures contract (a tool for shorting long positions in the cash market). Because the Fed's open market desk was transparently taking the volatility out of the Treasury trade, this was easy money at easy leverage for exchange traders. Yet like all easy money schemes, the party stops at some point, as it did in 87. In a single move, free market forces stepped in and reminded speculators/gamblers that pair trades don't always act as planned, and levered longs can tank in massive, unexpected sell-offs at the very same time the equally levered (and "protective") shorts are unexpectedly squeezed, a rare but not impossible occurrence in frothy, margin-addicted markets moving on momentum rather than fundamentals.

As for the Fed reaction to 87, rather than assume responsibility or learn lessons from the speculation and leverage it unleashed upon the Chicago Merc and the S&P futures between 71 and 87, they simply blamed "animal spirits." In doing so, the central bank conveniently overlooked the fact that "animal spirits" are not a *cause* of market DUI's, but a *result* of the FED moonshine supplied by deliberate and transparent policies of easy money.

*1998: LTCM*.

Yet another symptom of easy money leverage leading to bad behavior and even worse Fed policy was the 1998 collapse of LTCM. This Greenwich, CT-based child of

Merriwether with a staff of the best and brightest Wall Street algorithm writers and Nobel Laureate advisors stands out as telling reminder of three additional observations regarding Wall Street: **1) the smart guys really aren't that smart, 2) wherever there is exaggerated leverage, a day of reckoning awaits, and 3) the Fed once again comes to the aid of Wall Street when its misbehavior leads to yet another DUI—that is trading under the influence of easy credit and hence easy leverage.** In 1998, when the Russian default sent the S&P down 12%, this was a pullback rather than grounds for a Fed-to-the-rescue-panic. LTCM, whose risk models had no formula for the complexity of black-swans, got caught with its hands in the leverage cookie jar and deservedly lost all its fingers. Nevertheless, the FOMC, fearing that the loss of one bad mega-hedge fund was too much for the markets to handle, intervened and did what its spoiled nephews on Wall Street had grown to expect: they cut the Fed Funds rate three times in fifty days to re-ignite lending and restore the muscle power to an over-levered bull market rather than allow the free market (and its bull and bear struggle) do its own thing.

*Dot.com Mania.*

Just as the smoke was rising from the rubble of LTCM, another classic asset bubble misconstrued as free-market prosperity was playing itself out in the form of a dot.com hysteria. The Fed, however, saw these rising tech prices as proof of a rising economy, when in fact, dot.com mania was just a protracted spring break of traders gone wild that ended with a memorable hangover and market nosedive. The easy money had begun in 71, continued past 87 and rolled deep into the 1990's; by 1999, this credit tailwind had inflated the balloon of the S&P to over 4 times its decade-earlier size while trading at an unprecedented (and unbelievable) 28.5X earnings. In that same year, actual earnings growth clocked in at only 8%; this meant 1999-2000 saw a S&P valued at 4 times its *earnings growth rate*. The Index itself climbed from 110 in 1982 to 1485 by August 2000, a 13.5X gain, the likes of which had never been seen in modern finance. Now that's a bubble, and anyone who believed such climbs and PEG rates (Price to Earnings Growth) were sustainable knew little about facing uncomfortable facts. But if the S&P figures weren't enough to sober up a market on a binge, a NASDAQ trading at 100X earnings at its March, 2000 peak was warning enough that the party was nearing an end. And it was. By April of 2000, a tech bubble inflated by the easy money which flows from public policies to private credit expansion did what bubbles do best: it popped.

In retrospect, the dot.com implosion seems obvious. But even at the time it was happening, that market (much like today's) felt, well: unreal. Consider Dell Inc. It started at $0.05 per share and grew to $54.00/share (a 1,100X multiple) only to slide back to 10.00/share. Does that smack of efficient market pricing? (There are numerous examples of other roller-coaster mis-pricings of that era, from Cisco, Juniper, Nortel, Yahoo and Lucent to Global Crossing and Commerce One.) Even "blue chip" names like AIG (trading at 40X multiples), GE (at 30X), and of course Microsoft, (trading at 64X net income), were collective evidence of the private-credit intoxication that flows in the wake of easy-money public policy and the illusion of economic progress. And the result is always the same. Easy leverage (credit) and peak valuations are harbingers of bubble creation and bubble implosion. Dell and others in the late 90's were like RCA in the pre-Depression era 1920's, which went from $5.00/share to $400.00, trading at 200X earnings before sliding back to $10.00/share after the 29 crash. The modern champagne party of the 1990's, like its predecessor in the dapper 1920's, ended in ruins, with the S&P down 45% and the wild-child NASDAQ off 80% by 2003.

As for the FED, did it learn any lessons in the wake of yet another massive implosion, such as the possibility that perhaps it might be time to finally rethink the theory of easy money/low-rate spigots? No. Instead, the market-enamored policy makers at the Eccles building began an even more aggressive rate-reduction and bubble creation campaign. In an act of almost unthinkable hubris (and with the wreckage of the NASDAQ still smoldering in its rear-view mirror), the Greenspan Fed instigated a 75% reduction in policy rates to less than 1% by 2003, the greatest reduction in such a brief time ever seen, resulting in a wide open spigot for more easy credit, leverage and hence debt-induced market deformations.

Why the emergency measures? Was America's Main Street in danger? The straight answer is no. As in 1987, 1998, and 2000, Main Street was not in "crisis." In fact, by Q4 2001, personal consumption expenditures were actually up by 2.8%. The sadder truth is the Fed's furious rate cuts just after the 2000 bubble-burst were aimed at boosting Wall Street stock averages, not the national productivity levels. Thus, the Fed's take-away from the dot.com bubble was a policy to create another one. As a result, Greenspan merely set the Drumroll for the next easy-credit-then-bust sequence, namely the real estate and sub-prime bubbles of 2008.

*Irrational M&A, Stock and LBO Deals.*

But the coming sub-prime storm of 08 was not the only consequence of the Greenspan rate reduction. A wide and embarrassing swath of wasteful M&A, stock-by-backs and LBO deals (just like we are seeing today at Verizon, Apple, Medtronics etc.) that occurred under his watch supply further evidence that low rate/easy credit stimulus policies lead to bad behavior. Post- 2000 markets were quickly deformed by more easy credit, which led to a wave of secondary market speculation in which stock prices were raised not by the honest demand of free markets or product/service ingenuity, but as a result of the liquidation of shares purchased through massive turns of easily supplied leverage, expressed in: 1) stock buy-backs (i.e. Cisco, Exxon, Microsoft, Hewlett Packard), 2) M&A mania (Time/Aol, JDS Uniphase/SDL, or the numerous companies WorldCom devoured), and 3) grossly mispriced LBO's (Clear Channel, Alltel, Hilton Hotels). Highlights of this low point in "American deal making" include GE's dive from 50 to $10 share prices based on the fact that its finance company's earnings reports were essentially $600B of risky, illiquid assets heavily propped by mountains of debt (800B) and hot money leverage. Net result? Did GE's Mr. Immelt take his lumps courageously? Did the company learn the necessary lessons of reckless speculation in the fall from its 40X valuation peaks? No. Instead, GE's CEO took a bailout…Additional examples of executive profiles without courage were plentiful in that era of reckless spending. The boards and CEO's of countless unprofitable LBO's shared over $300B in a carried interest jackpot while their publically traded balance sheets stayed permanently red. To twist the words of Winston Churchill, "Never before has so much been given to so few for so little."

This was an intoxicated and unproductive era that ended (2008) in staggering write-downs on massively overvalued operations that were not close to profitable (but for their executive salaries). Meanwhile, and in the backdrop to a wave of peak leverage and peak multiple PE deals (pricing at 11X EBITDA), the nation's real and ignored economy dwindled as stock prices skyrocketed, **demonstrating that stock market pumping does not trickle down/translate to national prosperity at the farm or commuter train level**. Between 2000 and 2007, when MBA's were inventing derivatives and minting fortunes, nominal GDP grew by only 4T while total debt surged by 27T, meaning that for every six dollars of Fed-created leverage, only 1 dollar of national income was gained.

*Hedge Funds*.

Excess in the corporate balance sheets (driven by excess at the Fed) was matched by excess leverage in the rapidly growing hedge fund industry. Lurking behind the scenes of this pre-08 private and public equity bacchanalia were the hedge funds, whose growth story tells an equally disturbing tale of industry irrationality fueled by easy money speculation. In 1990, the hedge fund market hovered at a modest $150B, yet after only two decades of the Greenspan/Bernanke money spigot, the same industry had grown to $3T, more than half of which was levered. The majority of these vehicles did little for either the real economy or the many accredited investors who lost money in strategies that rarely hedged. Instead, most alternative investment vehicles (or "ALTs") levered, churned and dumped. Indeed, honest industry professionals know that long-short funds are often (though not always) just levered equity funds, or "Lever Funds." In the well-used domino-chain of easy credit trickling from the Fed to the wirehouse prime brokerage desks to the portfolio managers' trade accounts, these entities fell (and continue to fall) in love with exotic strategies, viz: OTC trades, derivative embedded leverage cocktails and the perpetual flirt with margin calls stemming from short term borrowing and long-term betting—a Pavlovian pattern that inevitably fails when easy money bubbles pop and there's no one to roll over the short term debt. But prior to the 08 crash, hedge funds were like marauding U-boats conducting hit and run speculation investments in the takeovers, buy-backs and momentum/pump-em/dump-em LBO's, including the roster of toxic deals string-cited above.

*Real Estate Bubble.*

No history of irrational bubbles would be complete without a salute to the equally irrational real estate markets. And the first name that comes to most minds is Fannie Mae, a GSE  ("Government Sponsored Entity") who, along with its cousins Freddie and Ginnie, grew astronomically in the 40 years following their accidental births in the New Deal era. Indeed, the notorious exuberance and balance sheet ballooning of these operations is now the stuff of legend as a towering example of easy money prompting bad, very bad behavior—*and this time with national consequences.* In less than a decade, these mortgage lenders grew their balance sheets from $200B in the 80's to $1.5T by 1992. Heading toward the crash in 08, they had completely lost their way and were acting like hedge funds with mortgage pools levered at 200:1.  In an era of egregious underwriting standards and fast money, these alleged real estate caretakers became dispensers of poison, indirectly setting the stage for increasingly bad practices, including the growth of predatory, boiler room mortgage brokers selling non–recourse loans to unqualified buyers whose paper was then consolidated, packaged, *tranched* and syndicated to the world as AAA securities.

Of course these packaged assets were just "pigs in lipstick" (Paulson) whose facade of value pushed the Case-Shiller Index up 60% by 2001, and then to a staggering 195% by the housing markets' 2006 peak. Such unprecedented "growth" should have been an obvious sign of trouble, as it had nothing to do with intrinsic value but everything to do with easy credit. Unfortunately, the markets then, like today, were too shortsighted to take their eyes off the immediate prize/profits and consider the longer-term risks ahead. In this bonfire of intentional blindness, the stock and option values of Freddie and Fannie skyrocketed. Like dot.com executives, GSE managers focused less on national interests and more on the need to keep earnings growing to justify market prices and annual bonuses. This meant they had to continually dig deeper into the pigpen of poor credit borrowers to churn and generate more toxic yet tradable loans, 80% of which were to be re-syndicated into the growing real estate and sub-prime Wall Street bubble. (The Chinese, by the way, bought over $1T of this GSE toilet paper).

Needless to say, the GSE's, like most of the LBO, PE and M&A deals of the same era (*supra*), were not real businesses contributing any actual value to the US economy. (As their stock prices roared, US GDP by 2006 was at its worst since the 1930's). The seduction and temptation of easy credit had spread from the Eccles building, to the trading floor, the exchange pits, the hedge fund offices and banking towers all the way to Washington DC's GSE sector, which was originally designed to carry out modest policies for national interest, not stock pumping and chest puffing on the Georgetown party circuit. Sadly, Fannie and Freddie had thus morphed into yet another tool to inflate stock prices and chase short-term profits on a market gambling floor backed/bankrolled by Fed policies. What is more, these GSE's  took a percentage of their profits to fund K Street lobbyists paid to convince the policy makers that more poor people needed to be shoved into unscrupulous loans they could never actually afford. The net result of this Fed-created, low-rate, easy-money, rogue financing (from bank "warehouse lines") was, alas, a *massive* housing bubble, followed by an equally massive pop. This "pop," moreover, did not result from a supply/demand failure of free markets, which hadn't been free for a long time, but rather from an explosion of unprecedented credit expansion leading to the production of inflated stock prices. In short, a continuation of a patterns seen over and over again...

*2008*.

As for 2008, all of us remember it well. By the year's close, $5 trillion of stock value had disappeared…But this latest catastrophe was built upon an even shakier foundation (2003-08) than prior bubbles, including the dot.com meltdown of 2000. That is, by 2008, the Fed supported markets had invented even more complex and pernicious tools of leverage and speculation –namely an unregulated derivatives market, which gives entirely new meaning to the expression "form over substance" as veritable leverage monsters which Warren Buffet aptly described as "weapons of mass destruction." Today, the notional value of these derivative instruments exceeds 9 X global GDP. That number alone is simply astounding. Staggering. It is the off-balance-sheet ebola market virus no one wishes to discuss or consider. The implications of such leverage cannot be stressed enough, and yet 9 out of 10 market professionals aren't even aware of the statistic or able to explain what it means.

The pre-08 crash was also characterized by such "cutting edge" Wall Street strategies as "flow trading"—a fancy term for aggressively accumulating (i.e. levering) assets by borrowing against them in the form of short term repo loans and then re-investing the borrowed money in long term speculation. Key to this model, of course, is being able to constantly roll over and satisfy the short-term debt that feeds the speculation/leverage machine which in turn fuels the majority of hedge fund and investment banking trades, from Salomon Brothers to Citigroup. Of course, once the portfolio managers could not make these short-term loan payments, the house of cards fell on the so-called "market masters" (little more than over-levered/paid gamblers) from Goldman to Morgan Stanley, who since the 2000 repeal of Glass Steagall, were no longer white shoe advisory and retail brokerage firms, but lever-happy prop desks/black boxes retaining reward while allocating all the risk to the shareholders.

When the sub-prime contaminated balance sheets left these banks too insolvent to pay their leverage commitments, a true free market would have carried them out of Wall Street in coffins for a well-deserved death. Instead, the Bernanke Fed (taking its cue from a Treasury Secretary who once led Goldman Sachs) chose the less free-marketed and hence less natural approach (his back was admittedly against the wall). Rather than throw a rose on the graves of busted banks, Bernanke opted to bail them out, thus giving new life to the very foxes who just raided the Wall Street henhouse. In many ways, Bernanke's reaction to the latest US bubble was the darkest period of American free markets, which were –and remain to this day-- un-free and mismanaged by a central bank that consistently fails to accept the pattern of its mistakes, i.e.: **1) creating market bubbles doesn't create GDP growth, and 2) preventing free markets from punishing levered speculators merely encourages more speculation, more dangerous schemes and thus more disastrous consequences.**

And what was the net result of our most recent bubble? By now, there's neither suspense nor surprise. Once again, standing in the wreckage of the popped bubble of 08, Uncle Fed responded once again to his spoiled nephews on Wall Street with more money, this time much, much, much more money. Bernanke began by immediately expanding the Fed's balance sheet by 900B in seven weeks. He also shut down the money markets to prevent free markets from raising rates to cleanse/rinse the markets of over-levered players—including Goldman Sachs, Morgan Stanley, Merrill Lynch, AIG, Bear Stearns, Lehman etc.—none of whom were in fact "too big to fail," a term used to cover one of the biggest myths of American market history.

And then the real spending kicked in…

**Today—the Buck Stops Here.**

We stand today at the edge of a market cliff built upon unprecedented levels of post-08 debt and money supply expansion. The current deficit stands at $18 Trillion (nearly doubling its 2008 levels); money supply is up 400% (representing more money creation in the last six years than in the previous century combined). Such data demonstrates that nothing has changed (or was learned from) in nearly a century of market manipulations save for the scope and type of the bubbles created, and hence the scope and type of corrections to follow. Because today's bubbles are *currency* and *debt* bubbles, the cycle will end here, as there is nowhere left to extract rescue capital (more below). In sum, the coming storm will exceed prior crashes in size and degree. This is not a theory, but a mathematical inevitability. In prior corrections (1987, 1998, 2000 and even 2008) the "bubbles" were specific to particular and over-inflated asset classes or sectors (i.e. dotcoms in 2000, housing prices in 06, or sub-prime instruments in 2008). Despite their magnitude and excess, these popped bubbles were, at least… affordable. That is, when they inevitably imploded and sent markets and confidence levels downward, the Fed had the means and credibility to re-inflate the markets via low rate policies (post 2000) and staggering money creation (post 2008). Given the historically unprecedented cost of the current false recovery (stimulated entirely by post 08 ZIRP and QE policies—i.e. "printing"), the US balance sheet is now tapped out. Policy makers have no more means to "bail out" its own bailout policies.

In other words, the rich uncle is broke.

Economists and policy makers have been unwilling to see or admit that such stimulus policies (low rates, money creation, or both) do not cure economic pain, but merely delay, and then *exacerbate* it. _Human immune systems gain strength from exposure to illnesses just as free markets gain efficiencies from pullbacks. In the same way children need an occasional infection, markets demand corrections to reset and discover fair pricing. Unfortunately, a post-29 mentality (from the White house to the Eccles building, from Wall Street to Main Street) of seeking a monetary flu shot for every market sniffle and cough is not only unnatural and ineffective, but ultimately fatal.

But how could a nation of brilliant "market doctors" be so collectively wrong in their economic diagnosis and remedies? How did we get to this "deficits without tears" (Stockman) mentality of believing debt remedies had no long-term side effects? The answer, I feel, lies principally in decades of pursuing an economic wealth-effect model that creates a powerful *illusion* of prosperity at the expense of postponed pain. Our policies operate in much the same way over-used credit card purchases create short term illusions of wealth--right until the bills (and reckoning) arrives and there's no money to pay for that new designer wardrobe. As crazy as this may sound, our economy is driven by an economic model not too dissimilar than a spoiled teenager on a spending spree. Short-term policies (from FDR to Nixon, Reagan to Obama, Fed Chairman Greenspan to Chairwoman Yellen) which provide immediate stimulus at the expense of long-term economic stability are nothing more than facades of prosperity—i.e. credit card binges at the mall. Unfortunately, this façade has slowly morphed into a misplaced faith that the credit card has no limit. Today's investors/ speculators are all too addicted to the visible support of the Fed, a comfort that enables front running and carry trades by a market that no longer expects many surprises from its rich uncle.

The problem, however, is that too much faith in that rich uncle creates not only a spoiled class of nephews (architects of the type of inflated LBO's, levered hedge funds, mortgage boiler rooms, busted M&A's and grossly over-levered/priced PE deals discussed above), but also an equally false confidence in both the wisdom and solvency of the uncle. Slowly, however, more of us are coming to realize that the "rich uncle" is in fact heavily in debt ($17T and growing), and like most Americans, from Wall St to Main Street—living beyond his means. In addition to being broke, that same uncle is also a bit, well, *senile*... His thinking has been clouded by habit and groupthink. Repeated cycles of manipulating the interest rate mechanism has led to years of transparent policies which have distorted (if not ruined) the most honest price signal in capital markets, namely the cost of money. With short term rates set months—if not years--in advance, markets have deformed into perpetual carry trades whose levered speculations deliver a soothing, yet false illusion of market (rather than economic) prosperity. Woefully absent from such illusory habits, however, are wise, traditional notions that employment levels, GDP, and production prices are in fact bottoms-up *consequences* of *free* markets rather than the consequences of state and central interest rate policies.

Despite the foregoing evidence, many skeptics (and I fully empathize with them) stubbornly maintain that the world's great economists and bankers, from Yale's Irving Fisher, NYU's Alan Greenspan (and please don't forget Harvard's Larry Summers) or Princeton's Ben Bernanke could not have gotten this wrong. My own answer is quite simple: they have. This assessment is partly based upon the observations of both recent authors (such as Christopher Hayes), as well as classical moralists (such as Larouchefoucauld), who have consistently shown that the **highest offices are by no means always filled with the highest minds.** A great mind, for example, recognizes humility in him/herself—and as such accepts the postulate that they could be wrong. Thereafter, wise corrections are made. Our current era of policy makers (driven by vanity, re-election, pride, or, in all fairness to Bernanke: desperation) lacks such humility and courage, which explains the sad pattern of short-term benefits/illusions consistently trumping long-term consequences.

With regard to the leading economists, for example, a well-intended experiment has failed, yet no one (at least not Greenspan, Bernanke or Yellen) wants to admit it. Milton Friedman sincerely believed the economic ills regarding GDP could be cured by targeting and controlling money supply growth rates.[*] If Friedman's well-intended theory that money creation (i.e. providing credit cards to shop-aholics) can solve problems ever needed a real-time test-run, then his equally well-intended and intelligent devotee, Ben Bernanke and the 2008 market crisis provided an ideal backdrop/case-study. Unfortunately, and six years later, the evidence suggests Friedman and the central banks were wrong. Despite historically unmatched levels of money supply growth (and deficit levels), US GDP languishes and U6 unemployment figures are at Depression era levels. The entire money-printing "remedy" bluntly resembles little more than running up hill with roller skates: spinning wheels, going nowhere, yet leading eventually to fatigue, exhaustion and then collapse…

Collapse? It's a polarizing and dramatic thought, and thus easily ignored or subject to scoffing. After all, if a collapse were truly imminent, wouldn't the majority of experts know better? Wouldn't there be fair warning, a chance to change course? Certainly, the majority of those bullish cheerleaders couldn't be wrong? But theuy are. Hugely wrong. In fact, the history of human nature, and hence the markets it trades in, is a history of safety—as well as ignorance—in numbers. Prior to the Nikkei's 1989 collapse, the Japanese often repeated the same quote: ""If we all cross the street together when the light is red, how can we meet any harm?" Over and

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[*] The problem is that money supply (M1) is the sum of currency *and* deposits, which the Fed can't measure or control (M2, incidentally, which is M1 + saving deposits, is also beyond Fed control). The movement of M1 or M2 is thus dependent upon the *behavior* of depositors and savers, not just the policies of a central bank. Instead, the Fed can only measure *reserves* in the system (which is *potential* money). The bank (and savings) deposits, which are *actual* money, fluctuate as commercial bank loans increase or decrease, which, again, the Fed can't control.

over, circumstances prove the folly of such groupthink, even the groupthink of the so-called "best minds."

But ask yourselves this: how many of those "best minds" (Greenspan, Summers, Bernanke et al) saw 1987 coming? 1998? 2000? 2008? Even 1929? Why would today's policy makers be any more prescient regarding the even greater avalanche ahead, particularly when they have been responsible for most of the snow? Critics may still see me as merely an opinionated finger-pointer. But I am pointing towards facts not opinions, and those facts (and numbers) speak for themselves. Now, as then, few are willing to hear bad news. Think again of the dot.com bust, a mere pullback compared to the correction toward which current bubbles/markets are heading. Within less than a year of that brutal crash, the Fed responded with a fury of new printing—repeating rather than ending the cycles which have consistently brought us into the gun sites of bubbles and busts. In the wake of the 2000 crash, for example, public and private debt grew by 18T—which was 5X greater than the 3.5T GDP gain of the same period (2002-07). Is this worrisome? In the wake of the 2008 crash, an even greater debt to GDP ratio was born. Worrisome? If your kids borrowed 50 dollars for a lemonade stand that only grossed 1.00 dollar, you'd call that a mistake. At the Trillion-dollar level, however you'd call that something else. In other words, **we should be worried**.

As I've detailed in other white papers, the culmination of the foregoing history of postponing and exacerbating pain via panacea policies which inflate asset classes rather than permit free market corrections is a failed experiment, the full extent of which will be revealed in the collapse ahead. Doubling debt levels and quadrupling deficits without posting GDP or employment gains makes this painfully clear. As bond, credit and IPO pricing reach new highs in this backdrop of failed indicators, we have to take words like "collapse" more seriously and replace the glossy brochures and market cheerleading with somber courage.

This is not panic. It's intelligence. It's fairly simple. It's also unpleasant. But more importantly: it's true.

This week (10/31) ended with markets closing at record highs, and yet most of us are catching on. It doesn't feel…"right," and this is because it's not. In the coming years, months or seconds (I can't time it), history is about to repeat itself, because history has been forgotten.