

# HindeSight

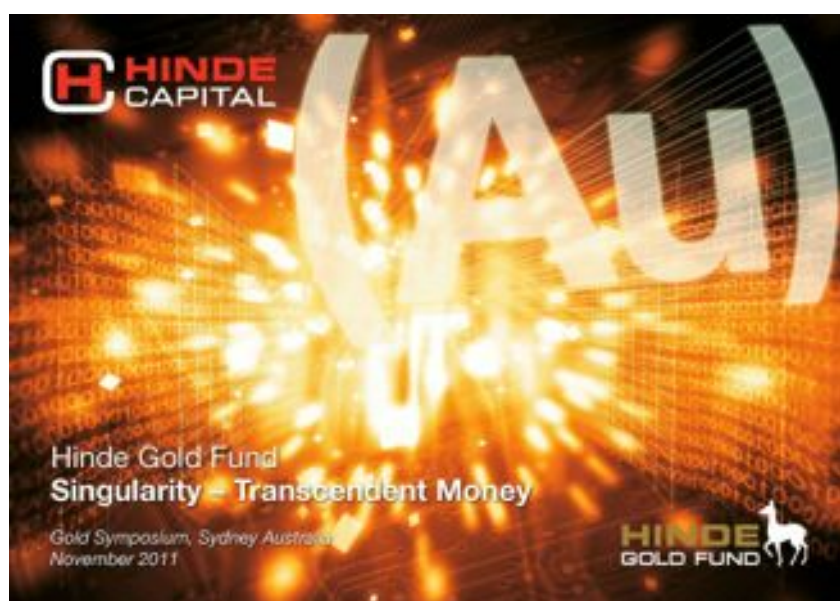


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November 11

## Singularity - Transcendent Money

Gold Symposium, Sydney Australia, November 2011 – Keynote Speaker

This HindeSight letter develops in full some of the ideas raised in this address.



### SINGULARITY – TRANSCENDENT MONEY

#### KEY CONCEPTS

- Singularity
- Exponential vs Linear Growth Trends
- Law of Accelerating Returns vs Law of Diminishing Returns
- Financial Oppression
- Internet Reformation
- Transcendent Money
- Monetary Singularity



What is a singularity? And what does a singularity have to do with gold?

Well, there are several common types, mathematical singularities and those associated with physics and technology. All singularities hold true to one concept - the exponential trend. I want to introduce this concept in relation to the law of accelerating returns and that of the law of diminishing returns.

Both exhibit exponential progression, all be it with equal and opposite trajectories, their outcome will be the same for the monetary system.

I want to tell a narrative of how technological evolution is embarking on a journey toward singularity and how this technological singularity is facilitating an acceleration in the inevitable diminishing returns of a debt laden fiat currency system via a new technological paradigm - the World Wide Web.

I want to tell a narrative of how gold will rise as the inverse function of the diminishing returns of a failed fiat paper currency system, but could by free market forces become the stabiliser to the global economy through a merger of technology and gold in payment systems. A 'Transcendent Money'.

Transcendent because it is a money system beyond our level of current belief and a money that transcends the corruptible money of a fiat currency system. A system by decree of the state.

Your very own Australian scholar Damien Broderick explored the future of technology and singularity in his book *The Spike*, which he in 1997 anticipated would have an exponential impact within two decades.

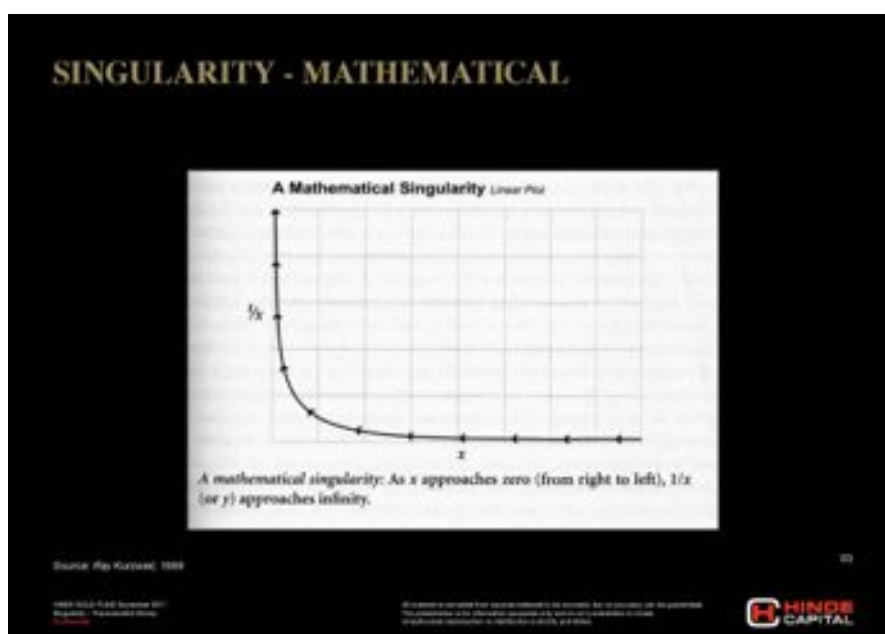
I want to elaborate, throughout this talk, on this exponential and how it is an antidote to escalating financial oppression. I will describe how gold itself started life as a function of the 'mother of all singularities', and how I believe it will come full circle in the culmination of a new singularity - a Monetary Singularity.

I am always prescient of what I find fascinating may be of little interest to others - as Lyndon Johnson once famously said to the acclaimed depression economist J K Galbraith - "Did you ever think, Ken, that talking about economics is like pissing down your leg? It seems hot to you, but it never does to anyone else."

## Singularity

Singularity is an English word meaning a unique event with, well, singular expectations. Like most English words it's derived from Latin. In this case the word singularis - referring to only one.

The word "money" itself has singular meaning. It is believed to originate from the temple of Hera, located on Capitoline, one of Rome's seven hills. In the ancient world Hera was often associated with money. The temple of Juno Moneta at Rome was the place where the mint of Ancient Rome was located. The name Juno may derive from the Etruscan goddess Uni (which means "the one", or "unique") and Moneta either from the Latin word "monere" (remind, warn, or instruct) or the Greek word "moneres" (alone or unique). It seems only fitting then that we observe money as a singularity.



The word singularity was arguably first adopted by mathematicians to denote a value that transcends any finite limitation. If we consider the function  $y = 1 / x$ , as the value of  $x$  approaches zero, the value of the function ( $y$ ) explodes to larger values. If we observe the graph here - moving from right to left, as ( $x$ ) approaches zero,  $1/x$  or ( $y$ ) approaches infinity. Such a mathematical function never actually achieves infinity, since dividing by zero is mathematically impossible to calculate (its "undefined").

One other discipline that you may associate with singularity is physics or more specifically astrophysics. Certainly, I first heard the term in conjunction with Black holes, when Stephen Hawking, the brilliant, physicist and cosmologist spoke at my school in Cambridge.



If a massive star undergoes a supernova, ie a stellar nuclear explosion, its remnant collapses to the point of seemingly zero volume and infinite density. Because light was thought to be unable to escape the star once it reached this infinite density, it was called a black hole.



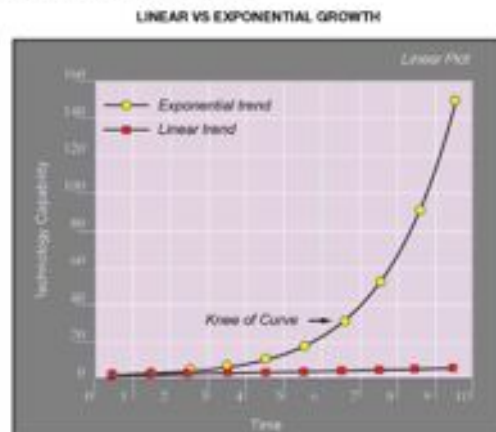


The leading advocate and major contributor to this line of thought is the futurist and scientist Ray Kurzweil. In one of his book's 'Singularity is Near', Kurzweil quotes the legendary information theorist, John von Neumann as saying that "the ever-accelerating progress of technology gives the appearance of approaching some essential singularity in the history of the race beyond which human affairs, as we know them, could not continue."

Von Neumann makes two critical observations here: that of acceleration and singularity. By doing so, firstly, he introduces the notion that human progress is exponential - it expands by repeatedly multiplying by a constant rather than the linear - which is expanding by repeatedly adding a constant.

## SINGULARITY – EXPONENTIAL TREND

Linear vs Exponential trend growth. Note the initial imperceptible growth which accelerates at a point in time called the "Knee of the curve".



Source: Ray Kurzweil, 2009

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Secondly that exponential growth is seductive, starting out slowly and virtually unnoticeably, but beyond the 'knee of the curve' it turns explosive and profoundly transformative. This is why the future is widely misunderstood. We always underestimate the power of future developments because we base them on our linear view of history rather than an exponential view. We all too often look at too short a data series which shows only the linear and masks the exponential trend.

### Law of Accelerating Returns

Kurzweil first publicly introduced these observations in his law of accelerating returns which states that the speed of technological change increases exponentially with the advent of each new technological paradigm. He predicts that:

"The singularity will allow us to transcend the limitations of our biological bodies and brains. There will be no distinction, post singularity, between human and machine."

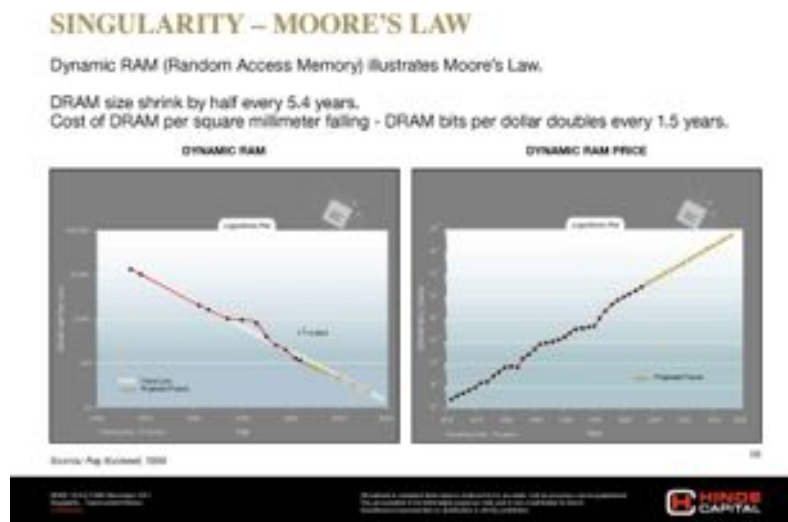
Notice this graph on the growth of computing. It is on a logarithmic scale and exhibits a potentially exponential growth curve. This indicates two levels of exponential growth. In other words, there is a gentle but unmistakable exponential growth in the rate of exponential growth itself.



It took ninety years to achieve the first million instructions per second (MIPS) per thousand dollars; now we add one MIPS per thousand every five hours. Based on these growth rates Kurzweil has been uncannily accurate in predicting technological development. He suggests that by around 2020 personal computing will match human brain capability. Now that is exponential.

## Moore's Law

Kurzweil's thesis was one based on Moore's Law. The law is named after the Intel co-founder Gordon Moore.



It states that the number of transistors in a given area of silicon ie on an integrated circuit board doubles approximately every two years. Today there is Moore's Law for chip speeds, for computer memory, for disk storage per dollar, even a Moore's Law for Internet connectivity, and a dozen other variants.

No one can deny that technological progress is very real. It is concrete. It is also concomitant with healthy pricing power. Technological advancement has rapidly boosted productivity as not only cost per unit, but cost per unit size have fallen in an exponential way. A classic example of positive 'price deflation'.

Dynamic Random Access Memory (DRAM) prices is a perfect illustration of this exponential law. The reduction of semiconductor feature sizes, which shrink by half every 5.4 years in every dimension, whilst the doubling time for bits of DRAM has been every 1.5 years.

Other doubling (or halving) times for transistor, microprocessors and their features are highlighted in this next slide.

**SINGULARITY - PRODUCTIVITY**  
Half-lives or Doubling times.

Doubling (or Halving) Times**	
Dynamic RAM "Half Pitch" Feature Size (smallest chip feature)	3.4 years
Dynamic RAM (bits per dollar)	1.5 years
Average Transistor Price	1.6 years
Microprocessor Cost-per-Transistor Cycle	1.1 years
Total Bits Shipped	1.1 years
Processor Performance in MIPS	1.8 years
Transistors in Intel Microprocessors	2.0 years
Microprocessor Clock Speed	3.0 years

Source: The Futurist, 1999

\*\*Based on projections based on historical data. Projections are not guaranteed and are subject to change. The information is for informational purposes only and does not constitute an offer. HINDE CAPITAL

For example total bits (short for **binary digit** - the smallest unit of information) shipped doubles every 1.1 years, which also shows demand has more than kept up as this is faster than the halving time in cost per bit.

## SINGULARITY – PROGRESSIVE PURCHASING POWER

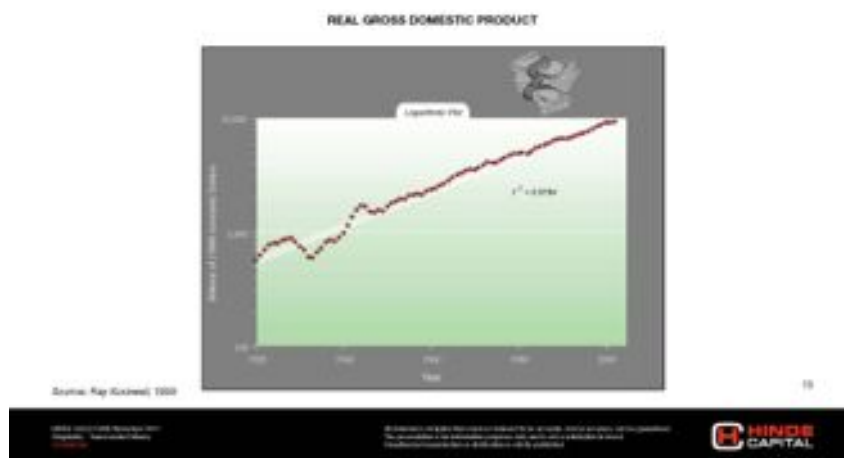


IT has become indispensable to all areas of our economy. I reiterate. An analysis of the history of technology shows that technological change is exponential, contrary to the common-sense 'intuitive linear' view. We won't experience 100 years of progress in the 21st century—it will be more like 20,000 years of progress (at today's rate).

Kurzweil credits Real GDP growth with the technology productivity boon, but I believe excessive credit expansion has facilitated this growth as well; creating an illusion of growth. Furthermore I believe we are at the saturation point of debt in our financial system, whereby we are witnessing a negative feedback loop and not the positive one of the law of accelerating returns. We have a name for this. The law of diminishing returns.

## SINGULARITY – PRODUCTIVITY MIRACLE?

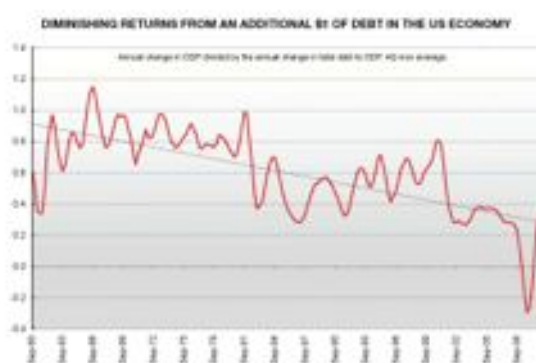
Real GDP growth. A productivity miracle or a function of credit expansion?



## Law of Diminishing Returns

Ask most individuals their greatest fear about growing old and chances are most won't speak of wrinkles, or grey and thinning hair. I suspect most worry about the loss of their mental faculties. One's own diminishing returns. Alzheimer's is an aging disease that promotes the loss of such cognitive ability. A form of dementia - it is an incurable, degenerative and terminal disease.

### SINGULARITY – LAW OF DIMINISHING RETURNS



Source: Marc Faber - Global Credit Report

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By 2050, researchers suggest 1 in 85 of the world population will suffer from this cruel affliction. Sadly these past few decades the world populace has been suffering from another form of mental incapacity – 'economic amnesia'. Individuals have forgotten the rudiments of monetary supply and demand. Too much money creates a rise in the price of a stable supply of goods and services. They forget this is also concomitant with a loss in the value of their day's earnings.

This past 40 years since we have been on a global paper money system we have witnessed the diminishing productivity of debt. For every given amount of debt creation the output or GDP of an economy rises at a proportionally slower rate. We have to issue more and more debt to maintain the status quo.

The law of diminishing returns is emblematic of the flaw in our credit based system where capital is initially created out of electronic printing presses. I call this pseudo-capital. Pseudo, because it's not made by productive means.

'Capital' is a word that is often banded around indiscriminately. I catch myself using it inappropriately, as if it is some homogeneous thing, but in fact it is simply an idea. Like 'size' or 'weight', it does not exist on its own. It exists only in capital goods, that is to say, producer goods. And the exact mix of those producer goods that is employed in an economy – what Austrian economists call the capital structure – is crucial.

A country can have large capital expenditures, but if they go into building the wrong producer goods that do not in fact create value for consumers, then all that spending has been wasted. This is particularly important in explaining a persistent feature of capitalist economies, the repeated booms and busts that occur in them. The phenomenon known as the business cycle, and the unemployment and financial losses that go with it.

Since 1971 when we moved to a paper based currency system it is no coincidence that we began to see serial boom busts in business cycles many with systemic consequences. We have been wasting capital. The Anchovy, Tequila, Tiger, a litany of colourfully named crises lie testimony to this flawed cycle.

These crises occur because the business cycle is a credit cycle. A state manufactured cycle. It often starts with an excess of credit created by the central bank, which is invariably encouraged by government. I call this casino credit.

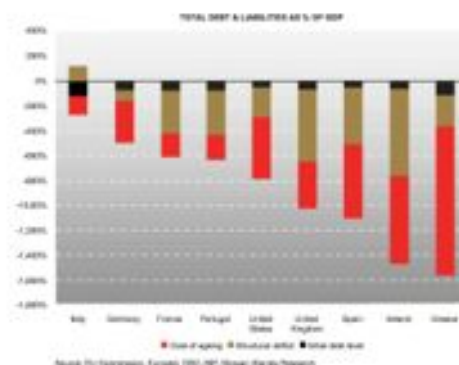
## Casino Credit

### Casino credit or excessive credit leads to dislocation of production & misallocation of capital.

Money and credit is no more than a convenient means to facilitate and register the productive effort of an exchange of goods and services required between entities.

Unfortunately modern day banking (both the central & shadow banking system) has facilitated too much 'easy' credit for products entities ultimately don't need. This unproductive vendor finance was most notably exemplified at the macro level by the China-US relationship and at the micro level by the subprime borrower and the mortgage provider.

### SINGULARITY – LINEAR DEBT TRENDS



Easier credit availability sourced by new sources of collateral (think 'securitisation proliferation') and lengthened repayment schedules has led to the production of goods underpinned by effectively less cash, and higher debt backed by spurious collateral.

Hyman Minsky (despite his Keynesian leanings on capital formation) articulated the credit cycle best as a 'self-reinforcing dynamic of speculative finance'. He described how the bullish rise in employment, investment and profits brought about by this credit tends to confirm in the minds of business leaders and the bankers the soundness of an approach that ultimately fosters volatility and unacceptable risk. 'Stability breeds Instability.'

We have created an illusion of wealth; goods and asset prices that have so been so distorted by a misallocation of capital that 'price discovery' is nigh on impossible. But as Ludwig Von Mises put it:

"What is needed for a sound expansion of production is additional capital goods, not money or fiduciary media. The credit boom is built on the sands of banknotes and deposits. It must collapse."

## **Known Knowns**

What we do know today is that every crisis these past forty years has been counterbalanced by active fiscal and monetary policy. This is done to avoid a collapse of aggregate demand brought about by recessionary or deflationary forces unleashed by a crisis.

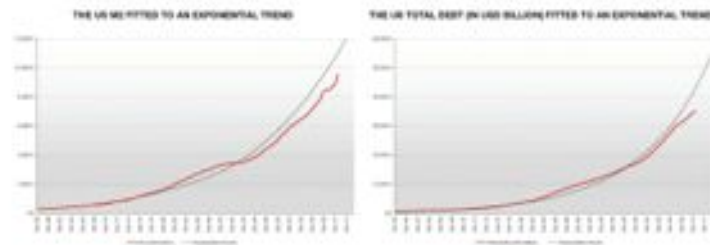
It is part of the inherent logic of the present financial system that policy makers must do everything to avoid a rise in interest rates, as such a rise would reveal the true availability of savings. Clearly there is not enough. This savings or by product of capital is much more limited than the artificially lowered interest rates provide.

Global society has hit a debt saturation point, whereby our collective income can no longer service either principal or interest payments. So to conceal this reality policymakers must prevent a rise in market interest rates. This next slide illustrates the extent of the global debt problem.

The state has chosen to fight the collapse in credit by underwriting private balance sheets, namely the banks, pension and insurance companies by issuing more debt, injecting money and making purchases of both private and public debt to keep yields low.

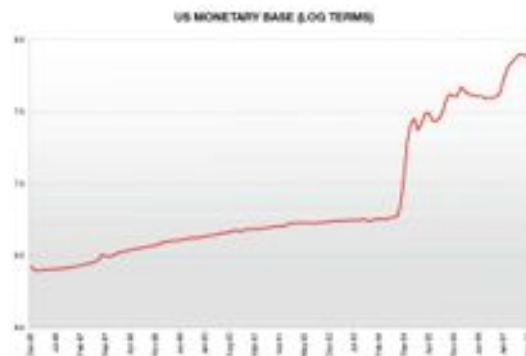
This next slide shows one the extent of the state's response - a clear exponential growth in linear terms of the US monetary system since the 1960s.

## SINGULARITY – EXPONENTIAL DEBT TRENDS



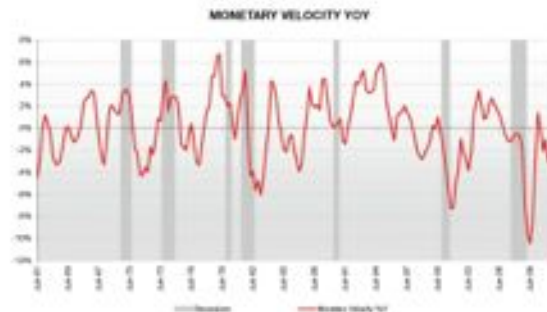
The central bank balance sheets have expanded exponentially on a linear scale. But when observed on a log scale they have risen even more significantly as exhibits an exponential curve. An exponential on a log scale is the exponential of the rate of the exponential. A phenomena we have experienced in technology too.

## SINGULARITY – LOG MONETARY TREND



Unfortunately this money and casino credit doesn't enter into the system in a uniform manner. It will enter into the system at a growing exponential rate. It is this exponential of the rate of exponential that threatens to disrupt the fabric of space and time of our economy and society.

## SINGULARITY – MONEY VELOCITY



### Ball and the Cantillon Effect

Policymakers are trying to reflate the global financial system, but the global ball of debt has been punctured. The reflation efforts succeed only in partially pumping air into the ball, whilst the rest escapes as hot air. This hot air merely succeeds in inflating new asset classes, not previously encumbered. Such classes have been real assets, corporate debt and some stock markets - and particular countries with a small float of stock available eg. Taiwanese stock market.

'Pumpty Pumpty Pump....Woosh...'

## SINGULARITY – “PUMPTY PUMPTY PUMP...”



In arguably the first ever general treatise on economics, one prior even to Smith's *Wealth of Nations* (1776), Richard Cantillon remarked in his works *an Essay on the Nature of Commerce* (1734):

"The entrepreneur realized well that the abundance of money makes everything dear, but he did not analyse how that takes place. The great difficulty of this analysis consists in discovering by what path and in what proportion the increase of money raises the price of things."

Cantillon understood the market as an entrepreneurial process, and held to the Austrian theory of money creation: that it enters the economy in a step-by-step fashion disrupting prices along the way. That monetary influences play a dominant role in determining both the volume and direction of production is a truth which is probably as pertinent now as any time in the last century.

Cantillon had argued that the result of an increase in the stock of money will not be uniform across the economy, but rather will cause prices to rise at uneven rates in different sectors, thereby changing relative prices in the process. He understood the mercantilist ambitions of merchants and bankers and how they created excessive credit to purloin cheap goods at the expense of the masses.

In modern societies, when governments or central banks increase the supply of money, they do not do so in a way that affects everyone equally. Instead, new money is created by the government or by banks to be spent on specific goods and services. The demand for these specific goods rises, thereby raising their prices first. In a Misesian economy as money holdings increase, the marginal utility of money declines so that certain goods are revalued ahead of money on subjective preference scales, pushing the prices of these goods upward.

Gradually the new money ripples through the economy, raising demand and prices as it goes. Income and wealth are thereby redistributed to those who receive the new money early in the process, at the expense of those who receive the new money later, or those who live on fixed incomes and receive none of the new money.

Milton Friedman said it best - 'Monetary theory is like a Japanese garden...an apparent simplicity conceals a sophisticated reality.'

## SINGULARITY – E.F.S.F.

European Financial Stability Facility or European FUBAR Slush Fund?



"It is tied to higher risks of losses and to increased sharing of risks. The way they are constructed, the leveraging instruments are not too different from those which are responsible for creating the crisis, because they are concealed risks."

Jens Weidmann, President of the German Bundesbank

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## SINGULARITY – MONOLINE

AMBAC: the muni and sub-prime monoline insurer.  
A taste of things to come for the EFSF monoline insurer?

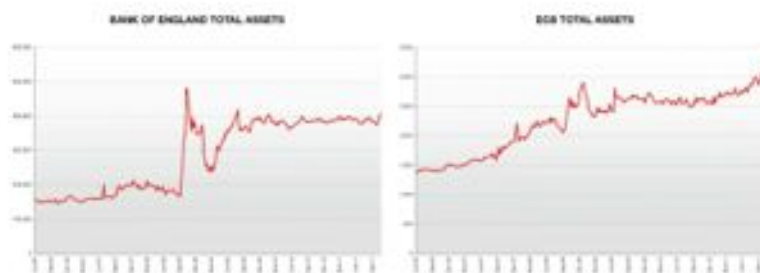


As far as the impact on prices goes today, the rise in the monetary base sponsored by the global central banks - and particularly the Fed as ‘defender’ of the reserve currency - has so far been largely restricted to the invisible effects. First and foremost, the base money increase prevents banks' troubled asset prices from adjusting to lower levels. For example, mortgage-backed securities worth billions have still not been placed at market-clearing levels with private investors artificially supported either directly by the Fed or indirectly by the financial sector.

I just want to highlight how much the central banks have had to expand their monetary bases (ie their balance sheets) to offset falling asset prices.

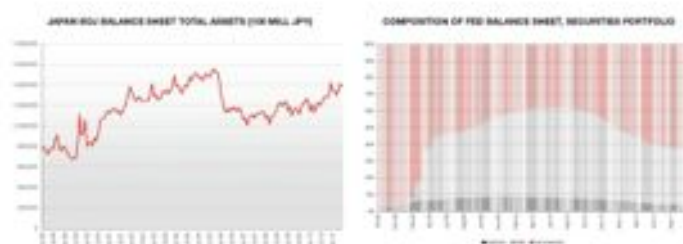
## SINGULARITY – GLOBAL MONETARY TRENDS

UK QE has been 45% bigger than the Fed's QE.



## SINGULARITY – GLOBAL MONETARY TRENDS

The illusion of sobriety.



The Bank of England has expanded its balance sheet 45% as much as the Fed balance sheet, whilst the ECB is continually reluctant to engage in full out quantitative easing. Recent moves to expand the covered bond purchasing program as well as the re-introduction of 12 month liquidity provisions hint at a return to QE by stealth at the ECB.

To illustrate the concept of illusionary stability let's observe the Federal housing agencies. The US has put Fannie Mae and Freddie Mac into government conservatorship, so effectively they have been nationalised. The state controls 90% of house loans in the USA. Buyers of these assets have to pay a higher price when compared to the scenario in which the Fed hadn't increased the money supply. Perhaps they should be more aptly named 'Phony Mae' and 'Fraudy Mac'.

## SINGULARITY – PRICE TRENDS

QE impact on corporate bond spreads, S&P500, Commodities and Dollar.



Furthermore, as prices of banks' troubled assets are kept from declining, the need for revaluing other assets (such as book loans extended to firms, house builders, bonds, and stocks.) tends to decline or is prevented altogether.

When asset prices are kept from falling by monetary policy, the mechanism of relative prices cannot do its job properly. It actually paves the way for making other prices, such as wages, and producer and consumer prices to go up.

There is no way out of the crisis, except to go through the dismal downswing of falling prices and wages, and of foreclosures and business bankruptcies. Attempts to delay the adjustment – trade unions resisting layoffs, or governments trying to stimulate the economy further by pushing interest rates even lower – simply prolong this history of malinvestment and makes the eventual reckoning even worse.

The policy prescription of more of the same - layering debt on debt, leverage on leverage has progressively sowed the seeds for an exponential demise of the fiat currency system. I believe we are witnessing a final transition phase of the global financial system. There is only one outcome and of that I am certain. As Ludwig von Mises so eloquently stated:

"There is no means of avoiding the final collapse of a boom brought about by credit expansion. The alternative is only whether the crisis should come sooner as the result of a voluntary abandonment of further credit expansion, or later as a final and total catastrophe of the currency system involved."

I consider that the actions of states will lead to high inflation even hyperinflation. Mises would consider this the crack up boom as the final and total catastrophe of the currency system. Such a singularity would lead to exponentially higher gold prices - as one can see from this graph gold is an inverse function of paper money. You print unlimited amounts

against a fixed unit of gold (supply expands at rate of population growth) then it will rise to a singular infinity - well almost.

## SINGULARITY – COMMODITY VS FIAT PAPER MONEY

Gold price (y) or (1/x) is an inverse function of paper money (x).



Authorities understand this, which is why the state will become more devious in its search for capital. They will not allow gold to re-collateralise the fiat currency system, until they have taken all efforts to maintain the current monetary system.

## Financial Oppression

### SINGULARITY – FINANCIAL OPPRESSION

Monetary and Fiscal Policy at a 'practical limit'

Financial Legislation, regulation and taxation enables 'Capital Constriction'

Conscripted Capital ie 'grab' capital mandatorily

- Quantitative and Qualitative Easing (financial repression)
- 'Dodd-Frank -esque' Global Financial Regulation Acts
- Nationalisation of Money Centres and Pension companies
- FATCA, FTT or Tobin Tax, Double Tax Treaties (US, UK and Switzerland)
- Mining Taxes, Windfall Taxes, Nationalisation of Mines



In 2008 the financial sector losses were socialised by government and taxpayers. Balance sheets of both government and banks are synonymous. This raises the moral hazard 'exponentially' - I haven't said that word for a while. It means banks cannot fail because it will be obvious to the global populace that the system (banks and government) are truly insolvent and paper money will be invalidated instantly.

Monetary and fiscal policy 'politically' speaking is at its limits, although theoretically there is no limit; recall Bernanke's by now infamous 'helicopter speech' of November 2002, almost a decade on to the day.

But monetary intervention does have its practical limitations. Central banks are becoming highly geared and with less credit worthy assets. For instance the Fed's assets are over 50x larger than its capital compared with 25x in 2007. Russell Napier of CLSA stipulates that a mere 1.8% decline in the value of these assets would eradicate its capital. I guess mark to market accounting will be disappearing as a state initiative, and a progressive mortgage relief program to refinance the poor 'ol Fed - excuse me poor citizens of the US of A will swiftly ensue.

Sovereign nations are crowding each other out as they compete to fund their ensuing debt growth. In extremis this could lead to capital controls to keep capital domestically captive. Creditors, particularly those of the US are wary of ensuing currency debasement and with dollar pegs strengthening the subsequent narrowing in structural imbalances have reduced the need to reinvest dollars to maintain the pegs at artificially low levels.

The law of diminishing returns presents a singularly malevolent proposition. The state, in order to maintain the creation of pseudo capital to keep the system from disintegrating will take more and more direct control of the entire money creation process. An implicit nationalisation of money and credit, vis-a-vis financial oppression.

This financial oppression is about preventing market forces providing a cleansing correction. This is the battle. We will witness the escalation of new socialist policies - interventionist measures in legislation, regulation and taxation.

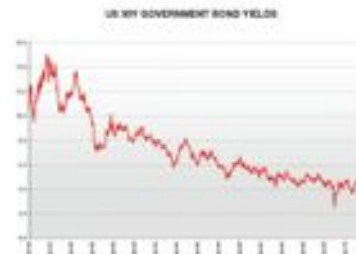
I almost guarantee there will be state directives aimed at pension funds and maintenance of higher fixed income holdings, which will guarantee defined pension schemes having larger liability mismatches than already exist. I suspect growing losses will be the trigger for government bailouts and a return to state run pension schemes.

The Federal Open Market Committee August 2011 statement set the process in motion with a gentle persuasion to the financial sector that rates would be on hold for a considerable period of time. I quote:

"The Committee currently anticipates that economic conditions--including low rates of resource utilization and a subdued outlook for inflation over the medium run--are likely to warrant exceptionally low levels for the federal funds rate at least through mid-2013."

## SINGULARITY – FINANCIAL OPPRESSION

Game of Twist(er) anyone?

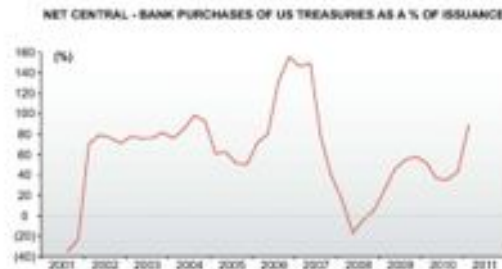


Financial centres profit by borrowing short and lending long. They play the yield curve. Borrow at zero rates in the front end and lend in the long end. The maxim for a prolonged period of low rates and 'Operation Twist' has all but forced financial institutions to buy up long end rates. Sell 2yrs and buy 30 yr bonds, which has seen bullish curve flattening in the US bond market. US 30yr bonds one of the last vestige of liquid triple AAA (ish) rated bonds left in the world. What a proposition - locking in negative inflation 'busting' real rates. Government would be better off shooting all the pensioners now and sending them to an early grave. They are going to starve soon enough anyway.

The next few slides show how large the burden that could fall on the private sector if we witness a structural change in central bank purchases going forward. I have always maintained the central banks have been the US government's lender of first resort, which is why I term gold as - the currency of first resort. Central banks will ultimately have to look to gold more and more to capitalise themselves - an event that has been in subtle process these last few years.

## SINGULARITY – FINANCIAL OPPRESSION

Net central bank purchases of US Treasuries as a % of total issuance.  
Central Bank printers financing US government.



Source: Russell Hines, CLSA

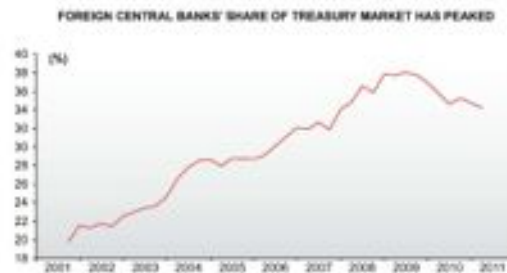
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The US new debt issuance is funded entirely by central banks (the 'money printers') around the globe.

## SINGULARITY – FINANCIAL OPPRESSION

Foreign central banks' Treasury market share peaked at close to 40%.



Source: Russell Hines, CLSA

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At one time almost 40% was funded by foreign central banks. The Fed has since taken up this short fall.

## SINGULARITY – FINANCIAL OPPRESSION

Treasury Market share not owned by central banks.



Source: Federal Reserve, CLSA

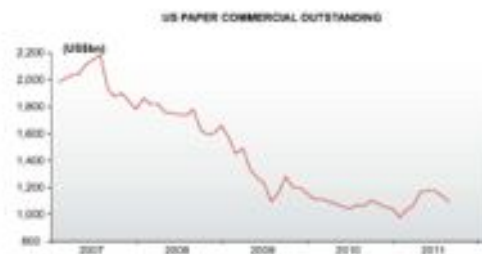
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The private sector owns only 50% of the existing US Treasury market, the rest is owned by central banks.

## SINGULARITY – FINANCIAL OPPRESSION

US commercial paper outstanding is falling as government issuance crowds out private sector.



Source: Federal Reserve, CLSA

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Since QE2 ended commercial paper issuance has fallen US\$75 billion along with a 40 to 50 per cent drop in corporate issuance, the latter a \$12.5 trillion market place. The private sector is clearly already experiencing the burden of government crowding out private sector issuance.

## SINGULARITY – FINANCIAL OPPRESSION

Corporate profits too high in US.



Source: PricewaterhouseCoopers (PwC)

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If we couple this with very high corporate profits, the government will feel emboldened in recouping some lost capital as their finances are in desperate need of it.

## SINGULARITY – FINANCIAL OPPRESSION

Corporate tax rate only going to rise.



Source: PricewaterhouseCoopers (PwC)

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Corporate tax hikes are a logical step, especially with after tax profits so high. The 'corporate take' may look in line with recent cycles, but if we understand that US debt burdens will soon resemble the World War II era then that is our true point of reference for taxation.

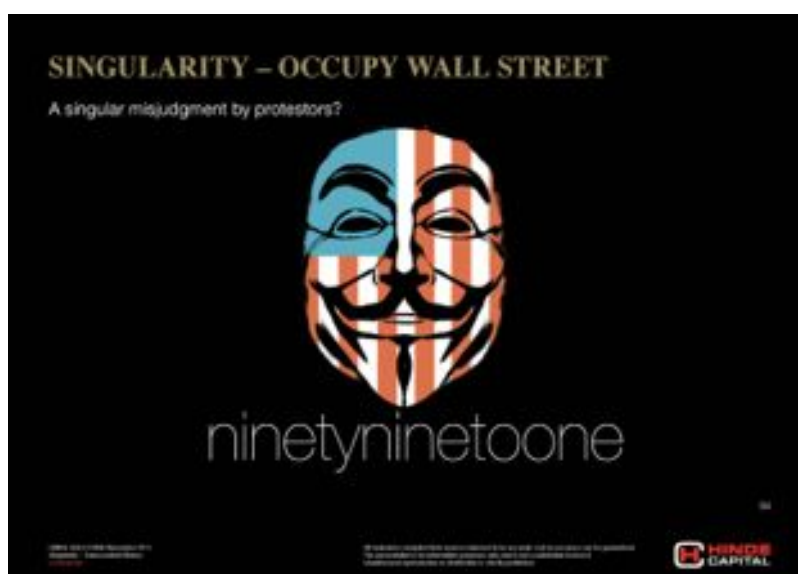
A great phrase to describe the procurement of this private capital is 'conscripted capital.'

Tax regimes are changing and many I am afraid are the precursors to capital controls and other such draconian protectionist measures. We have the Financial Transaction or Tobin Tax, which in my opinion will only add to volatility. Markets in Financial Instruments

Directive - Mifid - best execution dealing for bond markets, and central clearing will all lead to the state control of money centres in the developed world.

The Dodd-Franks -Wall Street Reform and Consumer Protection Act or document 120 times the size of the US constitution. Clean, simple and no bureaucratic tape to cut there. It spells the beginning of the end of the US banking hegemony. An implicit nationalisation.

By controlling money centres and by procuring capital from the private sector they can also dictate terms on lending. The fractional reserve system is the source of casino credit. Money velocity has remained subdued as banks have chosen largely to hold excess reserves with central banks. These state interventions I mention will unlock this capital.



Such malevolent forces will add to the heavy cocktail of social disquiet with the banks as 'Occupy Wall Street' protestors begin to realise that their ire should have been directed at the corruption of the omnipotent state. It is the state that has systematically enabled and encouraged the diminishing return of the worth of a day's labour because it has been political expedient. By offering an over inclusive welfare state bought and paid for by ever growing amounts of debased pseudo capital, political parties and individuals have gained re-election.

At Hinde Capital we have feared the rise of financial and personal oppression these past 5 years, but today I have hope for a better solution; a free market solution, and mercifully one that has begun already - the World Wide Web.

## SINGULARITY – INTERNET REFORMATION

An exponential social paradigm – the World Wide Web.



Source: Pop Network, 2000



### Internet Reformation

This technological paradigm is a product of the exponential trend in technology which is creating its very own exponential social paradigm - the 'Internet Reformation'.

Not since the arrival of the Gutenberg printing press has humanity been so challenged by the printing of monetary notes. Oh what irony -- Gutenberg was himself a goldsmith by training. I am sure that he could never have envisaged the abuse the financial printing presses would have on mankind's development.

Interestingly his invention was a powerful positive for the Protestant Reformation, as equally positive I believe as the Internet Reformation will be in assisting movement away from this printed currency to gold and a potentially sound monetary system. The start of a monetary schism.

The introduction of an overbearing welfare system in most developed countries has robbed the masses of independent thought. Government has induced a powerful amnesia in us.

## SINGULARITY – GOVT INDUCED MONEY AMNESIA



Dali's Disintegration of Memory  
A metaphor for government induced 'Money Amnesia'?



## SINGULARITY – EVOLUTION OF FACEBOOK

### Facts & figures: Since 2004

#### People on Facebook

More than 800 million active users  
More than 50% of our active users log on to Facebook in any given day



#### Activity on Facebook

More than 900 million objects that people interact with (pages, groups, events and community pages)  
On average, more than 250 million photos are uploaded per day

#### Global Reach

More than 70 languages available on the site

#### Platform

On average, people on Facebook install apps more than 20 million times every day

#### Mobile

More than 350 million active users currently access Facebook through their mobile devices  
More than 475 mobile operators globally work to deploy and promote Facebook mobile products

Source: www.webtrends-monitoring.com

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Until now that is. There is good news: fish oils may ameliorate the decline of impaired thought, but the internet will likely prevent it entirely. The internet never sleeps, but more importantly it will never allow us to forget. Never before has so much information been so readily accessible, and to so many - information that extols the truth, free of government propaganda. The seminal events in the Maghreb are a testimony to the power of the internet.

## SINGULARITY – facebook

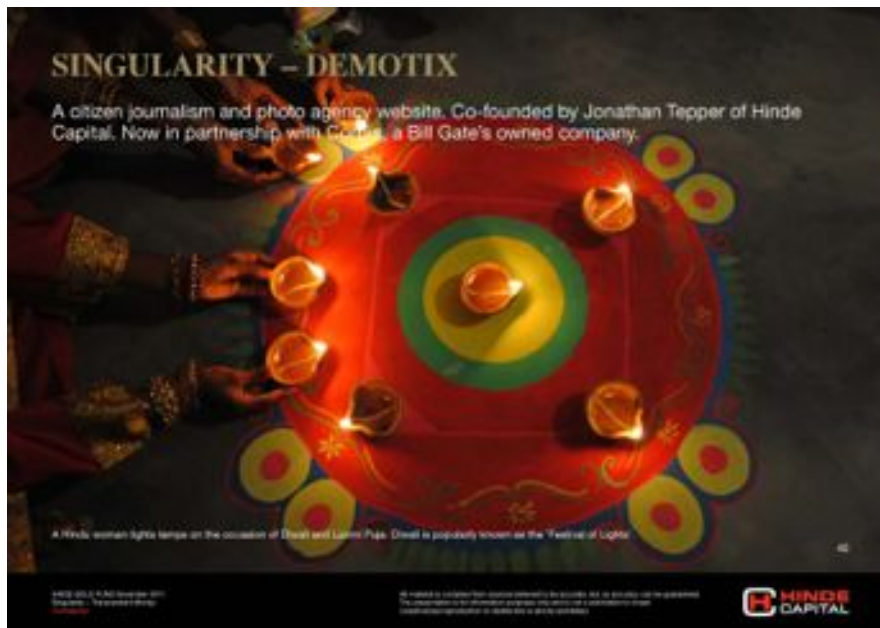
Twitter, and Facebook more widely used in India, Indonesia vs any other countries.



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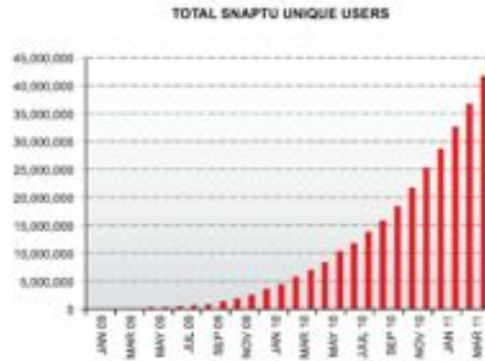




There are other such 'user generated news' sites like Demotix, from the Greek meaning 'Voice of the People'. This was co-founded by Hinde's very own Jonathan Tepper. This and companies like this next company Snaptu are a significant part of this chain of democratisation.



## SINGULARITY – EXPONENTIAL ADOPTION RATES



Source: Snaptu marketing presentation 2011

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Snaptu is a portal via mobile phones to access such social media sites. It was co-founded by my brother Simon Davies. It has seen a staggering growth trend in adoption rates, which led to its acquisition by Facebook itself. And one can see why with its technology and participation rates.

Social Media sites are the exponential trend of the exponential growth of mass interventions which originally enabled the world wide web.

## SINGULARITY – POWER LAW OF PARTICIPATION

Power Law of Participation, Content created by the few taken up by the many.



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The Internet and technology has for the first time provided the opportunity for individuals not government to create a truly global impact. We are witnessing everyday collaborative experiences on the net, a global consciousness if you will.

The net is helping us create positively disruptive products because of its reach. Changes occur in seconds not years. This speeds up the wealth creation process, by providing better productivity and good price deflation, whilst also enabling entrepreneurial opportunity on a scale that ordinarily would be too capital intensive.

The internet suffers from its own exponential tendencies. It exhibits a power law - participation in communities on the internet plots along an exponential growth concept, whereby 20% create information and 80% imitate it and or propagate it. The 80:20 rule of Pareto's principle. For Wikipedia this power law is even more marked. Did you know that 0.5% of the users, account for 50% of the edits?

As the Facebook Revolution has enabled the developing world to shift radically towards a desire for freedom and democracy, the developed world is sadly experiencing a further tightening of the socialist grip. But again hope is at hand.

## **Liberal Economics**

The developed world should count itself fortunate for their very own breed of freedom fighters: liberal economists. I consider myself a follower. Our philosophy encompasses laissez-faire - a society in which private transactions are free from state intervention, including restrictive regulations, tariffs, state monopolies and taxes. The pursuit of democracy, political and social freedom are inseparable with economic freedom in the eyes

of such economists. This is why they salute democracy and its pursuit, as a state devoid of constant intervention can pursue free markets, where market transactions are facilitated by the unadulterated price signals of supply and demand.

Liberal economists unsurprisingly believe in gold as a currency unit.

Individuals (savers) are beginning to question their faith in our current monetary system. The unquestionable belief in fiat paper money is wavering as it looks less like a store of value. The synchronicity of problems across the world, however, mean that most currencies are being printed at an accelerating rate, whether it be yen, yuan, euros, sterling or the reserve currency dollars. So in such circumstances what currency does one turn to? The universal currency - gold.

What we are witnessing today is the incremental reversion of gold to monetary status, as dictated by the people, ie what is coined the 'free market'.

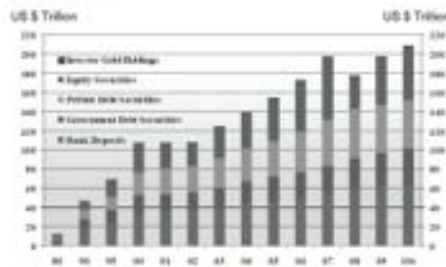
The internet is facilitating this incremental reversion to gold by educating the global masses through its growing consciousness. It is spreading the concept of a better monetary system based on an asset that is incorruptible and bears no liability.

**The trend of reversion will become exponential. A function of the exit from fiat paper money to gold as propagated by the power of law of participation dynamic of the internet.**

## SINGULARITY – EXPONENTIAL ASSET GROWTH

Global financial assets have risen 17-fold over the last 3 decades from \$12.3 trillion to nearly \$210 trillion.

Gold has not kept up with this rate of growth, and this doesn't account for the quadrillion dollars in worldwide derivatives.



Source: World Federation of Exchanges, The Economist, M&G, JF and CFI Group

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www.hindecapital.com  
November 11, 2011

Worldwide derivatives are not included in the assets and liabilities shown in this chart. The chart shows only assets and liabilities and does not include derivatives. The chart is not intended to be used for investment purposes.



## SINGULARITY – GOLD ADOPTION RATES LOW

Gold investor holdings stands at \$2.0 trillion (Nov 2011), 0.96% of Global Financial Assets (GFA). In 2000 gold holdings were worth \$227 billion, or 0.2% of GFA, but this isn't the whole story...

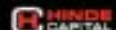


Source: World Federation of Exchanges, The Economist, M&G, JF and CFI Group, as of end of Dec, 2011

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www.hindecapital.com  
November 11, 2011

Worldwide derivatives are not included in the assets and liabilities shown in this chart. The chart shows only assets and liabilities and does not include derivatives. The chart is not intended to be used for investment purposes.



## SINGULARITY – GOLD ADOPTION RATES LOW

- Today 0.2% would be worth \$1.45 trillion (\$1800 troy oz. Au) or 0.7% of Global Financial Assets (GFA).
- Therefore new investment gold only provided 0.26% increase in % gold holdings.
- In 1968 to 1970 % gold holdings of GFA = 5%, to attain this % at current values of gold (\$1,800), \$10.4 trillion dollars need to be invested.
- \$10.4 trillion is equivalent to 5.8 billion troy oz at \$1,800 or 1.2 x gold ever produced.
- 5.8 billion troy oz. is 3.6 x known gold reserves (based on US Geological Survey).
- Clearly not only is public ownership miniscule, but to return to the 70s % holdings requires too much gold than these prices can handle.
- This transfer of gold will take place at much higher prices.



In these next series of charts you will observe already the exponential growth we have witnessed in global assets these past 30 years. Primarily a function of casino credit. They illustrate how undervalued gold is.

Notwithstanding gold as money, it is in my opinion the best asset to own, that will belatedly benefit from the previous growth in assets. A non-levered play which will exhibit the same and then faster exponential growth of the leveraged global asset boom. But why has gold not kept pace with this other asset growth?

### Gold Masking

Earlier this year in a speech about 'Monetary Illusions' I likened saccadic suppression to gold suppression. Saccades are fast eye movements. In our vision we suffer from saccadic masking or suppression. This is the phenomenon in visual perception where the mind selectively blocks visual processing during eye movements in such a way that neither the motion of the eye (and subsequent motion blur of the image) nor the blind gap in visual perception is noticeable to the viewer.

The phenomenon was first described by Erdmann and Dodge in 1898, when it was noticed that an observer could never see the motion of their own eyes. This can easily be duplicated

by looking into a mirror, and looking from one eye to another. The eyes can never be observed in motion, yet an external observer clearly sees the motion of the eyes.

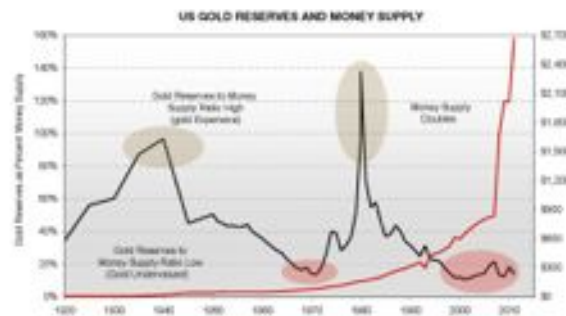
Governments have induced their own version of saccadic masking - a gold masking. The necessity for gold as sound money has been suppressed in the mindset of individuals, despite centuries of evidence suggesting otherwise. To witness a rising gold price is to undermine the value of the paper currency which in turn would threaten to undermine low

bond yields. Higher bond yields are the statist's nightmare, as higher financing rates would threaten to pull the whole financial edifice down on itself.

The Gold Anti Trust Action Committee (GATA) talks are as much about the subliminal effects of propaganda as they are used to deflect our attention away from the reality that gold is money, as they do about the actual physical suppression to keep gold prices low. I consider the former perhaps even more insidious than the latter.

## SINGULARITY – GOLD NOT EXPONENTIAL YET

The US monetary base is backed 15% by gold.

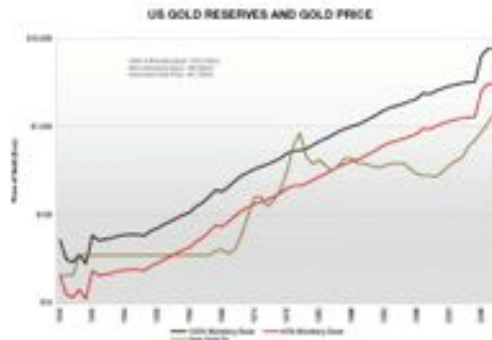


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## SINGULARITY – GOLD LINEAR PRICE TARGETS

Gold is re-setting. The minimum target is US\$4,000 formulated on 40% base money, which is the non-levered component ie exclusive of credit. This is the linear price target.



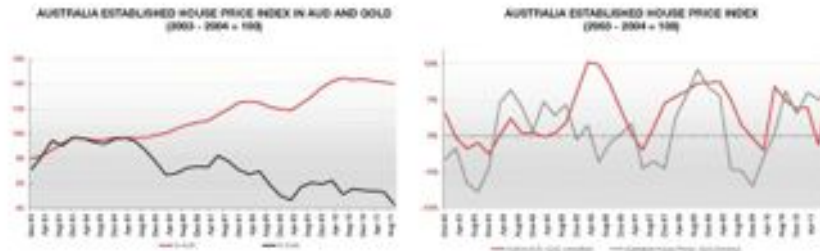
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## SINGULARITY – AUSSIE GOLD PROTECTION

Aussie house prices have increased strongly in AUD terms, but they have fallen in gold terms. In addition, there seems to be a good correlation between declines in house prices (in AUD terms) and the price of gold (in AUD terms).



An investment in gold for an AUD dominated investor with a high exposure to the real estate market is a good hedge.



Intervention in or suppression of markets by the state in an attempt to postpone the day of reckoning for years or even decades creates a false sense of equilibrium. Such equilibrium ultimately gives way to disequilibrium and heightened instability. The greater the suppression the greater the reaction when that suppression is overwhelmed.

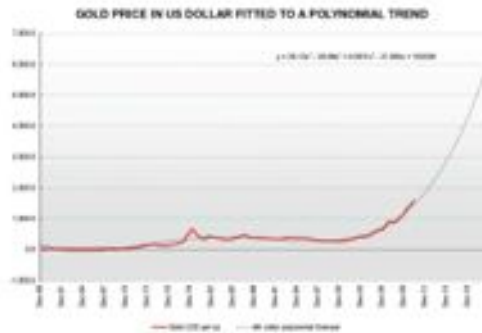
### Hyperinflation

When individuals obsess about the validity of money, they lose faith in government. Their discarding of money in such a situation is akin to an increase in the money supply, which is an inflationary event. Hyperinflations such as these are thus a political event, not only as government will be deficit-financing but because people have made a statement about government. After all, fiat money is by decree of government, not free markets.

If gold is an inverse function of fiat money, so with hyperinflation comes an exponential surge in the price of gold - 'hypermetal criticality'.

## SINGULARITY – HYPER(BOLE)METAL CRITICALITY?

European Financial Stability Facility or European FUBAR Skush Fund?



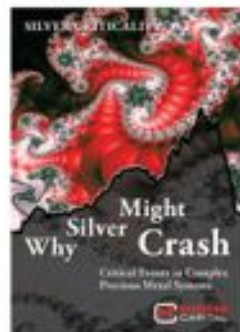
In April of this year in our HindeSight Investor Letter we wrote a piece about Silver criticality and how within seemingly chaotic and complex systems we could predict outcomes. We predicted a silver crash. Not only a crash but the magnitude and duration of it thanks to the work of the physicist Didier Sornette. But it was the 'noise' of internet chatter that alerted us to the growing trend.

The mini-parabola we witnessed in silver was a direct manifestation of 'Internet Chatter' spreading information concerning silver shortages. This information had built up over many years but with no perceptible adoption until the final stages where upon us. By observing social media trends one could see the adoption rates explode exponentially.

## SINGULARITY – CRITICAL EVENTS

Silver Criticality – a taste of what is to come?

A mini-parabola in Silver manifested by Internet Chatter about Silver shortages. Originated by a few spread by a many.



Graph: To date the gold trend is holding to the exponential growth of the rate of exponential growth trajectory. Criticality - refers to the 'knee of the curve' in this scenario. The point of criticality, where money begins to be discarded and its value falls.

Peter Bernholz wrote the bible on inflation and hyperinflation, called Monetary Regimes and Inflation: History, Economic and Political Relationships. Bernholz examined in detail twelve specific hyperinflationary episodes where significant data existed. Every hyperinflation looked the same. "Hyperinflations are always caused by public budget deficits which are largely financed by money creation."

## SINGULARITY – HYPER(BOLE)INFLATION?

**High (Hyper) Inflation is a political occurrence.**

"The figures demonstrate clearly that deficits amounting to 40 per cent or more expenditures cannot be maintained. They lead to high inflation and hyperinflations..."

Peter Bernholz "Monetary Regimes & Inflation pp. 17"

High (hyper) inflation is caused by financing huge public deficits through money creation.

Even 20% deficits were behind but four cases of hyperinflation.

The US government deficit is 10% of GDP, but currently the US deficit is over 30% of all government spending. The world reserve currency is in the red.

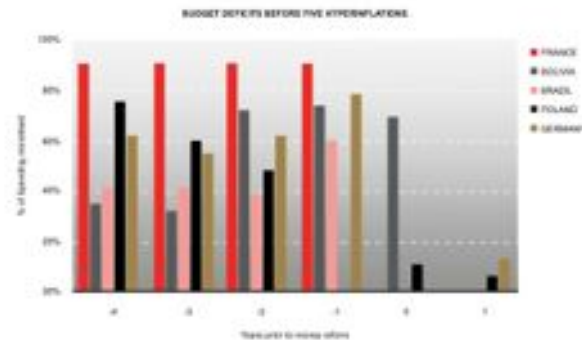
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But even more interestingly, Bernholz identified the level at which hyperinflations can start. He concluded that "the figures demonstrate clearly that deficits amounting to 40 percent or more of expenditures cannot be maintained. They lead to high inflation and hyperinflations...." Interestingly, even lower levels of government deficits can cause inflation. For example, 20% deficits were behind all but four cases of hyperinflation. The US has a government deficit of 10% of GDP, but currently the US deficit is over 30% of all government spending. So is it hyperbole to assert that hyperinflation is an eventuality?

## SINGULARITY – HYPERINFLATION

Deficit levels relative to expenditures before hyperinflation.

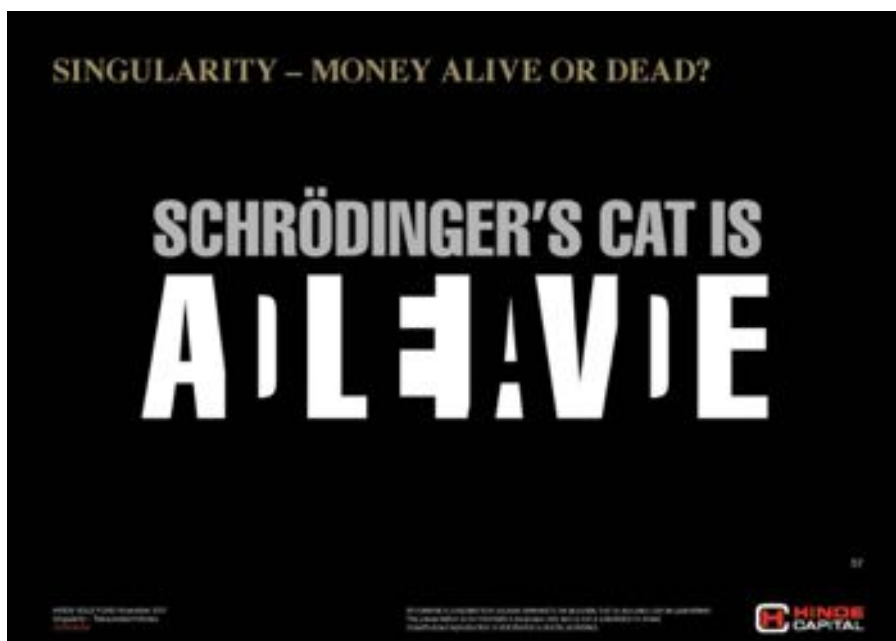


Source: Monetary Progress and Inflation, Peter Bernholz

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I am often asked how high I think gold will go. My prediction is: How low can money go? How many zeros can you put on a piece of paper -- that is how high gold can go. In Hungary the pengo was denominated in 100 quintillion. That's a lot of noughts per ounce of gold. Like our mathematical singularity and inverse function gold graphs illustrate, reaching infinity is a mathematical impossibility. Somehow I think it will give it a damn good go.



One will recall I stated earlier that the exponential growth rate of the technological singularity is deceptive. What starts out as an almost imperceptible development, then explodes with unexpected fury. Well this is what I envisage for the simultaneous discarding of paper money and the adoption of gold.

This is the first step towards Monetary Singularity. Like the Technological Singularity both have unexpected exponentials - so far as one does not take care to observe its potential trajectory.

## Monetary Singularity

The collapse of an old monetary system and its social order will momentarily give way to anarchic and chaotic behaviour. But I believe there are two sides of a coin that make it a unit. A singular event such as anarchy will be mirrored by order. One money will be dead the other alive. These are but flip sides of the same coin.

We will witness what I term a Monetary Singularity - a unique event. This the point where technology and gold merge. Technology will enable the transactional use of gold as money in the world.

To date technological evolution by the paradigm known as the world wide web has begun to help create awareness of the diminishing value of paper money.

The growth rate of this awareness will become exponential and equal and opposite to the exponential demise of the fiat currency system. The more awareness grows the faster the discarding of paper money occurs. I consider this a positive feedback loop because this takes us nearer to the day we can begin a sound monetary system dictated by the free market fundamentals of supply and demand of money. And not those of the artificial supply set by government, which destabilises the 'slope' of value of money.

The inverse function of this paper demise is the commensurate rise in the gold price, as we have depicted. This process of destruction will seem almost imperceptible, but when we hit the "knee of the curve" in monetary failure and gold succession, the perception will seem immediate.

## SINGULARITY – MONETARY SINGULARITY



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Like all complex systems the monetary system is no different. In nature the drop of one grain of sand may cause a slope to collapse with devastating effects, where thousands before it didn't. But each drop of sand before it had taken the slope nearer to its critical point of failure. It's critical threshold. So it is the same in a monetary system. Each individual who exits paper money for gold, sets the monetary system to an inevitable failure. It only takes perhaps one more vocal entity to declare their exit from paper to gold and the paper money system will collapse.

Hyperinflation, the equal and opposite reaction of this we have termed hypermetalcriticality is the hyperbolic rise in gold. But out of this immediate chaos will come order as the introduction of technological payment systems backed by gold will support the use of gold as money, ie a media of exchange. One will be able to transact in gold. A money that transcends the previous corruptible nature of fiat paper money - corruptible because one can create unlimited amounts - well in theory. A transcendent money because today this perception of gold used in technological advanced payment systems seems beyond our experience.

After all most of us have only known one currency system.

"The future can't be predicted,' is a common refrain...But...when (this) perspective is wrong, it is profoundly wrong." A profound comment made by the suitably named J Smart.

Government will not want to lose access to the unfettered monopoly of money. If we the free market can encourage the use of gold as a medium of exchange ie we spend our gold, government will move quickly to control the supply of this new money by a number of means. It may nationalise the gold miners, or at a minimum countries will ban exports of gold, or introduce resource or windfall taxes. But in essence they will want to wrest control of the new money centres from the free market.

I believe the development of Singularity in technological terms is far more fascinating and mindboggling than my perhaps early narrative for a monetary singularity. But even the technological singularity will remain hampered whilst the value by which it is measured is in an amorphous and corruptible state. What is the true value of a piece of nanotechnology or IT software? How can we value it and plan production safely when we do not know the true worth of the unit of account that measures it – ie the worth of the numeraire.

Although until such time as we can use matter in the universe for energy, I know of no other matter other than gold which fits the prism for facilitating an exchange of goods and eradicating the age old problem of a barter system that suffers from a coincidence of wants, and from a system that cannot corrupt the value of this fiduciary media by continuous and exponential supply.

Have I created just a good narrative or am I predicting an outcome which if you observe carefully is likely. Hyperinflation is a process, but it will appear seemingly overnight.

In a decaying fiat paper money system such as ours, whilst the state continues to utilise the provision of casino credit to avoid a deflationary correction at all costs, it will continue to

subvert free markets and with it our liberty. Free markets are a misnomer for our current term - financial markets, because they are incompatible with fiat paper money.

It is my intention to continue to pursue the free market availability of gold as money, as distinct from gold defined by a government standard, that is no different in decree to that of fiat paper money. I am of course humbled by those men before me who have tried and in vain. The list is great, including many here today. But I am sufficiently delusional to pursue an eventuality that I assign a greater probability if we harness one tool that was not available to them before. That tool is the internet.

The internet provides the means by which a humble few can change the course of events and history demonstratively for the better of mankind. We collectively have a tool that if we collaborate can wrest the cynicism from the world and put us on a path of financial fortitude.

Ex scientia pecuniae libertas. "Out of knowledge of money comes freedom." I echo the sentiments of the Committee of Monetary Research and Reform. The World Wide Web is the ultimate global forum for truth and action by which each and every one of us should pursue individual rights, open markets, free trade, freedom of movement and gold as hard money owned by the people.

Thank you for taking the time to listen



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