ERSTE BANK

Gold Report 2012 – In GOLD we TRUST

The foundation for new all-time-highs is in place. As far as sentiment is concerned, we definitely see no euphoria with respect to gold. Skepticism, fear, and panic are never the final stop of a bull market. In the short run, seasonality seems to argue in favor of a continued sideways movement, but from August onwards gold should enter its seasonally best phase. **USD 2,000 is our next 12M price target. We believe that the parabolic trend phase is still ahead of us, and that our long-term price target of USD 2,300/ounce could be on the conservative side.**

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All closing prices as of 09 July 2012

Since our first Gold Report we have discussed the gradual remonetisation of gold. Last year, we saw numerous signals indicating the fact that gold was gradually becoming "*politically correct*" again. **Due to its high liquidity and unique characteristics, gold is becoming ever more prominent as collateral. Therefore, we are currently seeing the renaissance of gold in international finance. The foundation for a return to "sound money" has been laid.**

Negative interest rates constitute a perfect environment for the gold price. During the 20 years of the gold bear market in the 1980s and 1990s, the average real interest rate level was around +4%. Since 2000, real interest rates have been negative for 51% of the time, which constitutes an optimal environment for gold. **The fact that the Federal Reserve will now maintain its zero-interest policy until 2014 should result in prolonged negative real interest rates and thus create a positive foundation for further increases in the gold price.**

We believe that financial repression will continue to crop up in many shapes and sizes and gain in importance over the coming years. Although we are currently faced with the highest level of public debt in time of peace, far-reaching consolidation of public budgets does not seem to be up for discussion. According to Austrian economics, every act of consumption has to be preceded by production. **There seems to be no painless therapy for these problems. We believe that gold is an effective medicine.**

We believe that mining shares currently represent a high-leverage bet on the gold price with an extremely attractive risk/return profile. Strong balance sheets, high free cash flows, a substantial increase in margins, low debt levels, and rising dividends all speak in favor of the sector. There are also only a few sectors that are more underweighted by investors. **We therefore believe that the current, historically low valuations offer a good opportunity to invest. At this point, we wish to point out that we regard gold as a currency and thus as a form of saving, whereas we consider gold shares a form of investment.**

According to Leonard da Vinci, *simplicity is the ultimate sophistication*. **We believe that gold is a simple, affordable, time-tested, and reliable good for protecting oneself against the massive tail risks that we are currently facing.**

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INTRODUCTION

"***If something can't go on forever, it will stop*", Herbert Stein**

Our current global fiat monetary[1] system celebrated its 40th birthday on 15 August 2011[2]. It now seems as though the system is struggling with a severe midlife crisis. Until four decades ago, taking risk meant discarding gold, but now the opposite seems to be the case. We believe that we are seeing a gradual reversal of that former attitude, with gold coming back into fashion, much like flares, shoulder pads, and neon attire[3].

Remonetisation indicates that bull market has entered a new phase

The perception of gold has gradually shifted from that of a commodity to that of money of the highest quality. Gold has the international currency code XAU, is traded by banks mostly at their currency desk (and not the commodity desk), and continues to be held as a reserve by global central banks. This confirms the monetary importance of gold. In a US survey, 44% of US citizens declared themselves in favour of returning to the gold standard, with only 28% being strictly opposed to the idea[4]. Some say that there is not enough existing gold for a gold standard today, but we regard this notion as a distortion of reality. The British Empire flourished under the gold standard, yet operated with only 150-200 tonnes of gold in the safes of the Bank of England. This means that the quantity is not the problem - *quality trumps quantity every time*[5]. **We believe that the current return to a traditionally approved monetary status for Gold indicates that the bull market has entered into new phase.**

Gold is becoming "politically correct" again

Even in our first Gold Report we discussed the gradual remonetisation of gold. While it had formerly been up to a handful of critical minds to question our monetary system, high-profile politicians and central bankers have in the meantime also offered their opinion. Last year, we saw numerous signals that indicated the fact that gold was gradually becoming "*politically correct*". Ron Paul spearheaded a movement of opinion that was also joined by Newt Gingrich, Steve Forbes, and Robert Zoellick, all of whom spoke in favour of an imminent return to the gold standard. In his Nobel Prize acceptance speech, Robert Mundell had this to say:

*"The main thing we miss today is universal money. Gold fulfilled this role from the time of Augustus to 1914. The absence of gold as an intrinsic part of our monetary system makes our century, the one that just passed, unique in several thousand years…**I firmly believe gold will be a part of the international monetary system sometime in the twenty-first century**"*[6]

"***You can avoid reality, but you cannot avoid the consequences of avoiding reality*" Ayn Rand**

It seems that market participants have been conditioned to ever-growing monetary stimulus measures like Pavlovian dogs. In the absence of their "treat", they flee into liquid and seemingly safe US Treasuries or German government bonds, each of which have set new all time highs. This risk on/risk off behaviour reminds us of manic-depressive mood swings.

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[1] *Fiat money is credit money that does not oblige the issuer to convert it into full-bodied coins. The term is derived from the Latin word fiat ("let it be done"). Fiat money becomes money when the legislative bodies of a state declare it so. Nowadays, central bank money such as the euro or the US dollar is fiat money.*
[2] *Closing of the gold window, termination of gold convertibility on 15 August 1971*
[3] ***…a comeback which we are very critical of***
[4] *"Public has mixed views of Return to Gold Standard", Rasmussen Reports*
[5] *Please refer to Rudy Fritsch, Journal of the Gold Standard Institute*
[6] *Robert Mundell, Nobel Prize acceptance speech December 1999, read in "Hard Money", Shayne McGuire*

Negative yields in Germany and Switzerland

Allow us to illustrate this misallocation by means of an example: in December 2011, the Republic of Germany placed 6M Treasury notes at 0.0005% in the market. The interest expense for this note worth EUR 2.675bn thus amounted to EUR 6,687.50[7]. On the secondary market, the yields of short-term German and Swiss bonds have meanwhile turned negative. In the course of this year, the yields of 6M and 2Y Treasury notes have set new lows and have for the first time dipped into negative territory.

Negative real interest rates vs. the illusion of nominal value

In an environment of negative real interest rates, the concept of risk has to be redefined, seeing as nominally "safe" assets still incur losses. This doesn't mean that asset classes with low volatility are free of risk nor relatively safe. The difference between saving and investing is the fact that the saver tries to preserve his purchasing power, while investors try to increase it[8]. In an environment of negative real interest rates, one has to take risk to preserve one's capital.

Causal relationship between risk and consequence is disconnected – this results in misallocations of capital

The term "risk-free" is the mother of all oxymorons[9]. There has never been anything like a risk-free investment, nor will there ever be such a thing. Risk can never be eliminated – it can only be transferred. And when it is transferred or disguised, the strong relationship between risk and consequence is disrupted. As soon as risk and capital are misvalued, misallocations will ensue[10]. This is what is currently happening at a global scale unknown as yet.

"*Simplicity is the ultimate sophistication*", Leonardo da Vinci

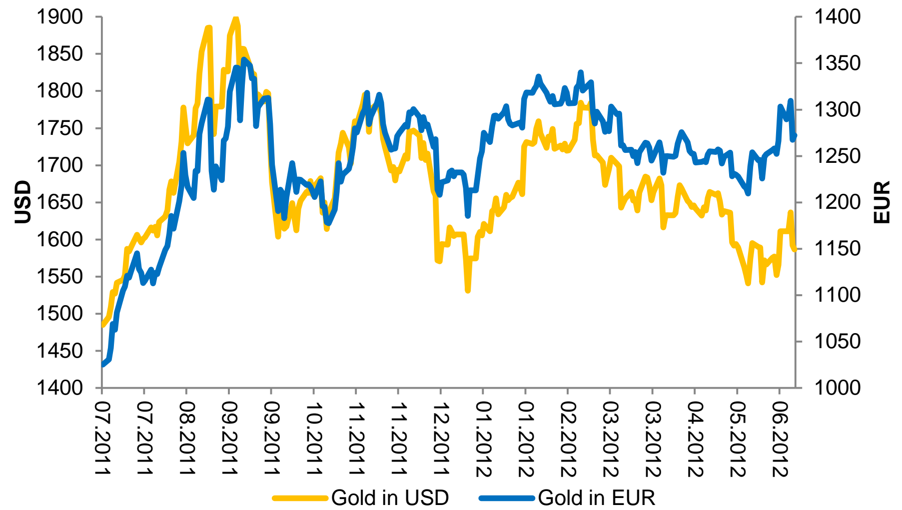
The degree of complexity tends to be greatest at the fringes of the chaos. Societies react to crises by stepping up complexity and thus trying to solve their problems. Every resource investment – be it energy or money – achieves a lower rate of return than the preceding investment, i.e. the marginal utility declines. According to Leonard da Vinci, simplicity is the ultimate sophistication. **We believe that gold is a simple, affordable, time-tested, and reliable good for protecting oneself against tail risks.**

New all time highs in EUR and USD, but our target price of USD 2.000 was clearly missed

What does this environment now mean for the gold price? Since our previous "In Gold We Trust" report of early July 2011, gold has set new all time highs in numerous currencies (among others, USD, GBP and EUR). The following chart illustrates the fact that the last year was merely a consolidation pattern, rather than a top-formation. **That said, we have to be self-critical here, as the price has clearly fallen short of our target of USD 2,000.**

[7] *Vgl. Flossbach & von Storch, Jahresbericht 2011*
[8] *Vgl. "Another Perspective", QB Asset Management, May 2012*
[9] *Vgl. "Regulomics" – Ineichen Research and Management*
[10] *Vgl. "When risk is disconnected from consequence, the system itself is at risk", Charles Hugh Smith*

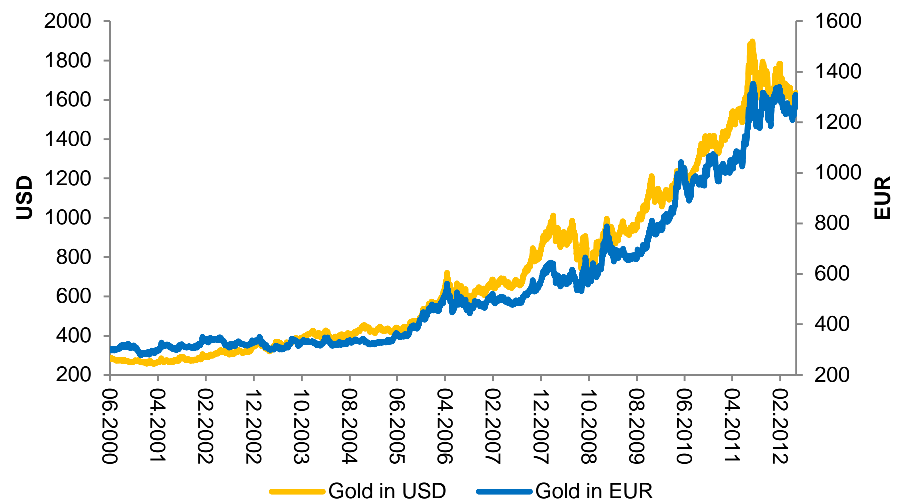
Gold price in EUR and USD since the previous Gold Report



Sources: Datastream, Erste Group Research

The following chart shows that the secular bull trend is intact in both currencies and that at the same time no final trend acceleration has taken place so far. In August 2011 gold soared from USD 1,600 to USD 1,920 within 15 trading days. **This might have been the overture to such a parabolic trend acceleration.**

Gold price in USD and EUR since 2000



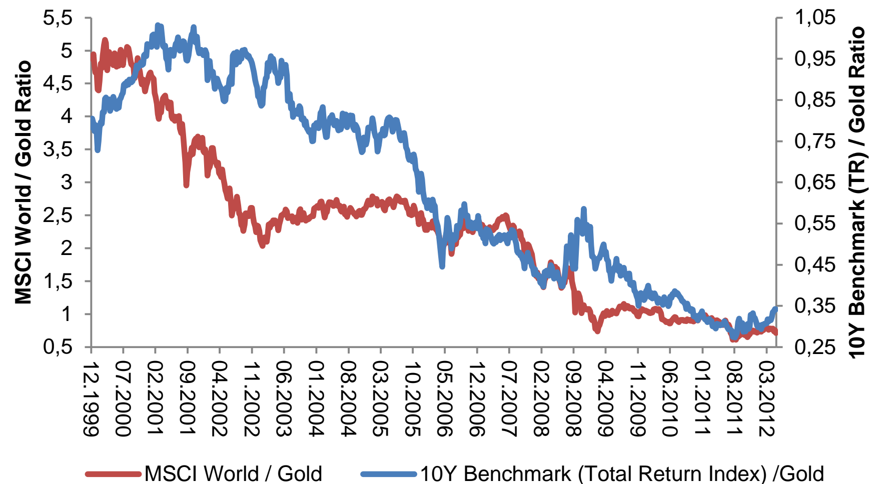
Sources: Datastream, Erste Group Research

In order to analyse the status quo of the gold bull market, we would like to put the development of the gold price in relation to other asset classes on the following pages. The following chart illustrates that chrysophilites[11] still have little to worry about. The left-hand scale shows the ratio of the MSCI World equity index to gold, while the right-hand one depicts the ratio of a total return index of 10Y US Treasuries to gold. **The chart clearly highlights the fact that the relative strength of gold (falling ratio) vis-à-vis both asset classes is still intact.** Both ratios have

[11] *Friends of gold*

been setting lower lows and lower highs and are thus locked in a downward trend. Gold holdings should be reduced only once a significant trend reversal becomes apparent.

Ratios of equities and bonds (total return, i.e. including coupon payments) to gold



Sources: Datastream, Erste Group Research

"***It should come as no surprise that an unprecedented policy should have unprecedented and unexpected results*" Jim Rickards**

We are convinced, that the global monetary expansion should continue to ensure a positive environment for gold investments. The reaction to the current crisis is already feeding into the next crisis. The idea of trying to cure a crisis that was created by an expansive monetary policy and chronically excessive debt with the same poison seems naive. **The driving forces of economic health are savings and investment, not consumption and debt.**

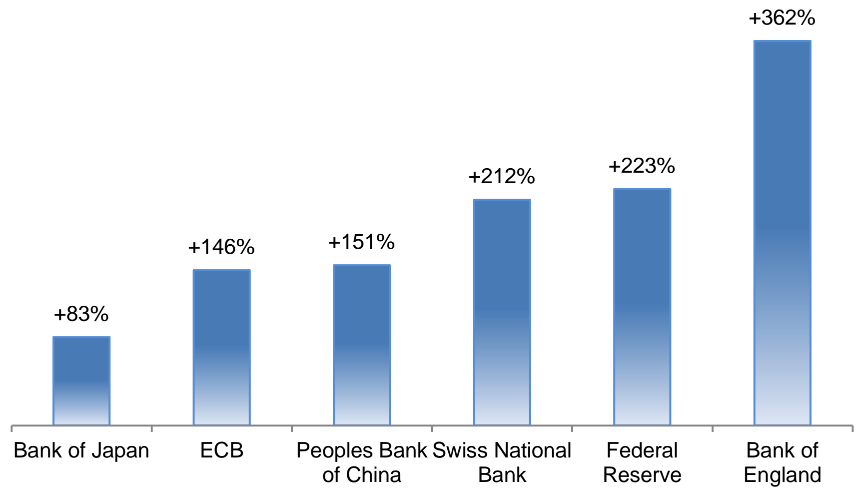
Central bank's monetary inflation supports progressive remonetisation of gold

"***There's no limit to central bank expanding its balance sheet in theory*" Dennis Lockhart, President Federal Reserve Bank of Atlanta**

The combined base money supply of the four most important central banks has been growing by 15.2% per year since 2000. According to the Austrian School of Economics, this means inflation. Rising prices are only a logical consequence. From 2007 to April 2012, the balance sheets of the four most important central banks were growing from USD 3,500bn to almost USD 9,000bn. Last year alone, the increase amounted to USD 1,500bn[12]. The following chart shows the rate of change of central bank balance sheets since the beginning of 2007.

[12] *Please refer to www.acting-man.com, The Trap, Ramsey Su, 27 April 2012*

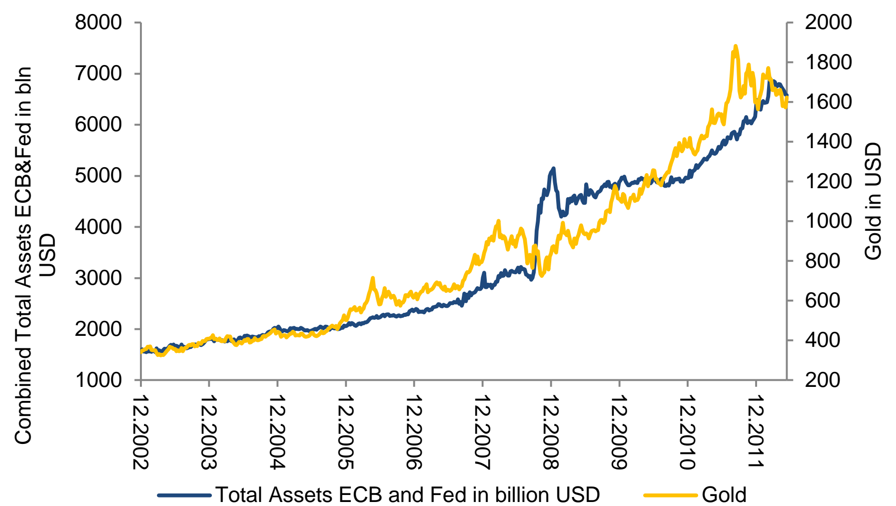
% Change in central bank balance sheets 2007 vs. May 2012



Sources: Datastream, Erste Group Research

The following chart illustrates the combined base money supply of the ECB and the Federal Reserve. It has increased from USD 1,564bn in December 2002 to currently USD 6,578bn. The gold price more than offset the inflated money supply, increasing from USD 340 to USD 1,600 over the same period.

Total assets ECB and Federal Reserve (in USD) vs. gold

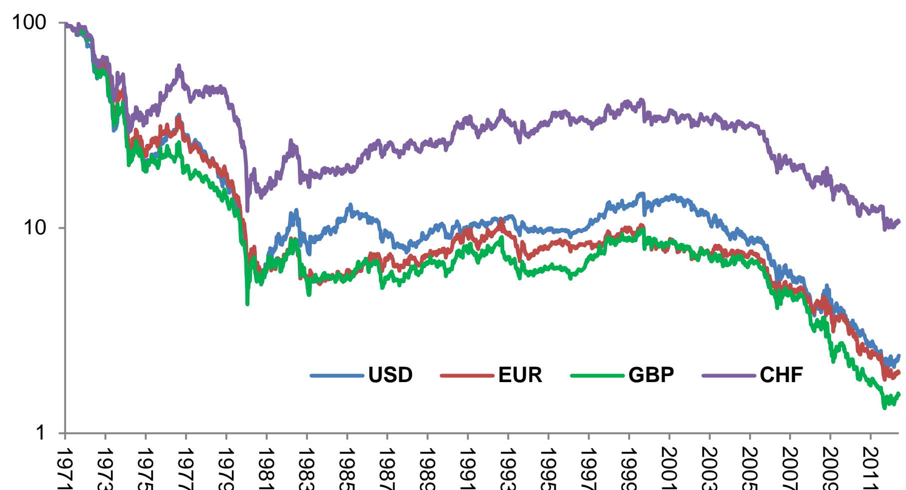


Sources: Datastream, Erste Group Research

***"Gold, unlike all other commodities, is a currency. And the major thrust in the demand for gold is not for jewelry. It's not for anything other than an escape from what is perceived to be a fiat money system, paper money, that seems to be deteriorating"*, Alan Greenspan, March 2011**

The following chart highlights the substantial erosion of purchasing power since 1971. It describes how many units of gold one unit of the respective currency buys. Clearly, purchasing power has been on a gradual slide, i.e. one unit of currency has been worth less and less in terms of gold. The US dollar, the British pound, and the euro[13] have lost almost 98% of their purchasing power since 1971. Interestingly, the Swiss franc, which was the last currency to abandon the gold standard, shows relative strength, losing "only" 90% of its purchasing power since 1971. This further confirms the preservation of purchasing power gold provides. We can also see that the downward trends are clearly intact and there is little reason to expect an imminent bottom in the various fiat currencies in relation to gold.

Purchasing power in various currencies – how much gold does one unit of foreign currency buy? (logarithmic scale and indexed to 100)



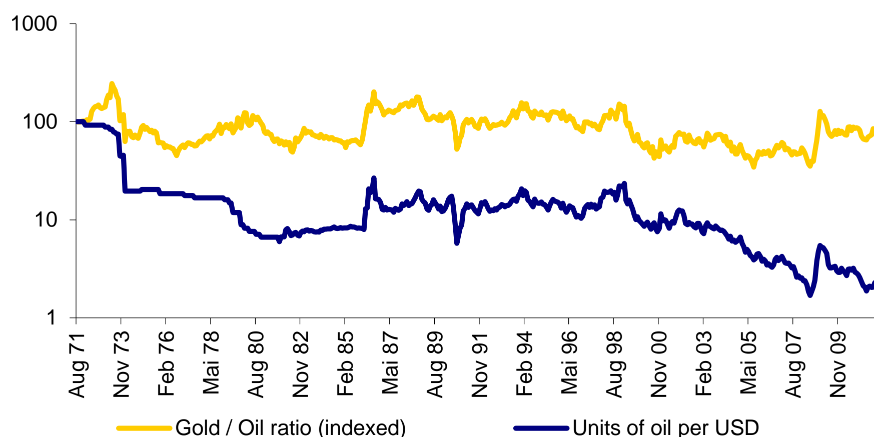
Sources: Erste Group Research, Datastream

Stable purchasing power of gold in terms of oil

The following chart prompts a similar conclusion. It shows on the one hand the gold/oil ratio (i.e. how many barrels of oil does one ounce of gold buy) and on the other hand the inverted oil price (i.e. how many units of oil do I get for USD 1). For reasons of user-friendliness we have standardised both values at 100 on a logarithmic scale. **Whereas the oil price in terms of gold has been stable since 1971, the USD has lost more than 98% of its purchasing power in terms of oil.**

[13] *Euro prior to 1999 calculated on the basis of the weighted average of all member currencies*

Gold/oil ratio and units of oil per USD – (logarithmic scale and indexed to 100)



Sources: Datastream, Erste Group Research

Average performance since beginning of the gold rush: 15% per annum

The performance of gold was clearly positive last year and indeed has been so since the beginning of the previous decade in almost all currencies. The crucial point here is the relative stability in comparison with the fiat currencies, which can be expanded at will. Gold reserves grow at about 1.5% per year, whereas the money supply aggregates grow at a substantially faster rate. This fact should be a cornerstone of any analysis of the natural dilution of a currency. **We therefore expect the *exchange rate* of gold and paper to continue increasing.**

The following table shows the annual performance of gold in nine different currencies since the beginning of the current gold rush. The largely green figures mean that the bull market has been intact in almost all currencies since 2001. The gold price closed down on the year only in 11 out of 99 cases**. The mean of the average annual price increases is 14% and therefore, fascinatingly, within the annual central bank inflation of the money supply.**

Annual gold performance since 2001 in various currencies (%)

	EUR	USD	GBP	AUD	CAD	Yuan	JPY	CHF	INR	MEAN
2001	8.10%	2.50%	5.40%	11.30%	8.80%	2.50%	17.40%	5.00%	5.80%	**7.42%**
2002	5.90%	24.70%	12.70%	13.50%	23.70%	24.80%	13.00%	3.90%	24.00%	**16.24%**
2003	-0.50%	19.60%	7.90%	-10.50%	-2.20%	19.50%	7.90%	7.00%	13.50%	**6.91%**
2004	-2.10%	5.20%	-2.00%	1.40%	-2.00%	5.20%	0.90%	-3.00%	0.90%	**0.50%**
2005	35.10%	18.20%	31.80%	25.60%	14.50%	15.20%	35.70%	36.20%	22.80%	**26.12%**
2006	10.20%	22.80%	7.80%	14.40%	22.80%	18.80%	24.00%	13.90%	20.50%	**17.24%**
2007	18.80%	31.40%	29.70%	18.10%	11.50%	22.90%	23.40%	22.10%	17.40%	**21.70%**
2008	11.00%	5.80%	43.70%	33.00%	31.10%	-1.00%	-14.00%	-0.30%	30.50%	**15.53%**
2009	20.50%	23.90%	12.10%	-3.60%	5.90%	24.00%	27.10%	20.30%	18.40%	**16.51%**
2010	39.20%	29.80%	36.30%	15.10%	24.30%	25.30%	13.90%	17.40%	25.30%	**25.18%**
2011	12.70%	10.20%	9.20%	8.80%	11.90%	3.30%	3.90%	10.20%	30.40%	**11.18%**
2012ytd	8.24%	3.15%	2.49%	1.89%	1.70%	3.53%	6.47%	5.93%	6.95%	**4.48%**
Mean	**13.93%**	**16.44%**	**16.42%**	**10.75%**	**12.67%**	**13.67%**	**13.31%**	**11.55%**	**18.04%**	**14.09%**
Median	**10.60%**	**18.90%**	**10.65%**	**12.40%**	**11.70%**	**17.00%**	**13.45%**	**8.60%**	**19.45%**	**13.64%**

Sources: James Turk, Goldmoney.com, Datastream, Erste Group Research

Peter Millar's cycle model signals remonetisation of gold

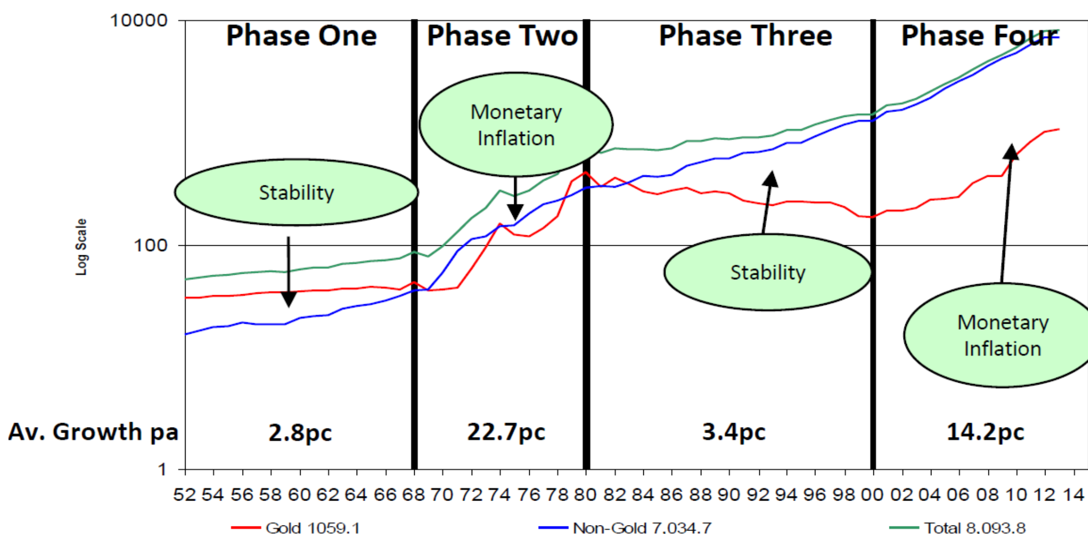
The following chart illustrates the development of the consolidated global money supply since 1953, expressed in SDRs (i.e. the unit of account of the IMF) and the gold price (red line). According to Peter Millar, a cycle consists of a total of five phases. In phase 1 (1952 to 1968) the money supply was growing at a stable rate of 2.8% p.a. Phase 2 (1968 to 1980) was dominated by monetary inflation and the increase in money supply of 22.7% per year. Phase 3 (1980 to 2000) was again characterised by the fight against inflation and the resulting decrease in monetary expansion (+3.4% p.a.).

We have been in phase 4 since 2001. This phase has been dominated by inflationary instability. In phase 1 and 2, the money supply expanded along economic growth rates. These were phases that provided an unfavourable environment for the gold price, making other asset classes more attractive. Phase 2 and the current phase (due to negative real interest rates, among other things), on the other hand, have created a clearly positive environment for the gold price.

***"Panics do not destroy capital; they merely reveal the extent to which it has been previously destroyed by its betrayal into hopelessly unproductive works",* John Stuart Mill**

Phase 5 is largely characterised by common Keynesian policies aimed at reducing debt by creating new debt. The Austrian School suggests that the recession will relentlessly uncover flawed investments and misallocations. Even more aggressive monetary expansion is launched against said process. **According to Millar in this phase the return to a quantitatively lower monetary inflation is initiated via a monetary reform, the return to a gold standard, or the re-valuation of gold reserves, before a new cycle begins.**

Global development of the monetary base (logarithmic scale)



Sources: Valu-trac, World Monetary Review, Peter Millar

Inflation ≠ rising prices: confusing terminology with grave consequences[14]

Money matters, but credit counts

The Austrian School of Economics has provided investors with a new angle for analysing asset and commodity prices. In contrast to other economists, "Austrians" do not regard the rising demand for gold, oil, and other assets as the decisive factor behind rising prices. Rather, they consider the ongoing expansion of the money supply, which in our fractionally reserved banking system triggers an expansion of credit, the main factor of the price increase.

The development of asset prices can be compared to the skin of a balloon. The balloon is filled with air (credit), and as soon as one stops blowing it up further, it shrinks and wrinkles, and the air escapes with a hissing sound. If one continues to blow it up, there is the risk that it will burst[15].

Inflation ≠ rising prices

From a semantic point of view, it is very important to distinguish between inflation and rising prices[16]. Inflation describes the expansion of the uncovered money supply, whereas rising prices denote the increase in the general price level. In general linguistic usage the latter tends to get reduced to the segment of consumer prices. **Inflation is the root cause of the devaluation of money, whereas price increases are just the result of inflation.** Nowadays these two terms are used interchangeably, and Gregor Hochreiter claims that this blurred terminology comes with grave consequences. The linguistic desensitisation thus prevents us from recognising the cause-effect relationship and as a result keeps us from solving the problem. **Instead, unsuitable measures such as price regulations and nationalisations have been demanded in order to fight the wave of rising prices, while in the background inflation continues to be fuelled.**

Adding up disparate goods makes little sense

Also, the definition of inflation as rising price levels is problematic merely from a measuring point of view, given that baskets of goods cannot depict all the price movements in an economy[17]. And lastly, the most disparate goods and services are aggregated under this concept. 1 haircut, ½ cinema ticket, one 40,000th of a car, 3 bags of potatoes etc. Adding up this very mixed collection of goods makes little sense. Besides, quality parameters (1 bag of potatoes does not come with *one* single price, but with numerous ones, depending on location, quality, kind etc) are not taken into account. This is why Ludwig von Mises once said that any housewife knew substantially more about purchasing power of money than official statistics could ever convey[18].

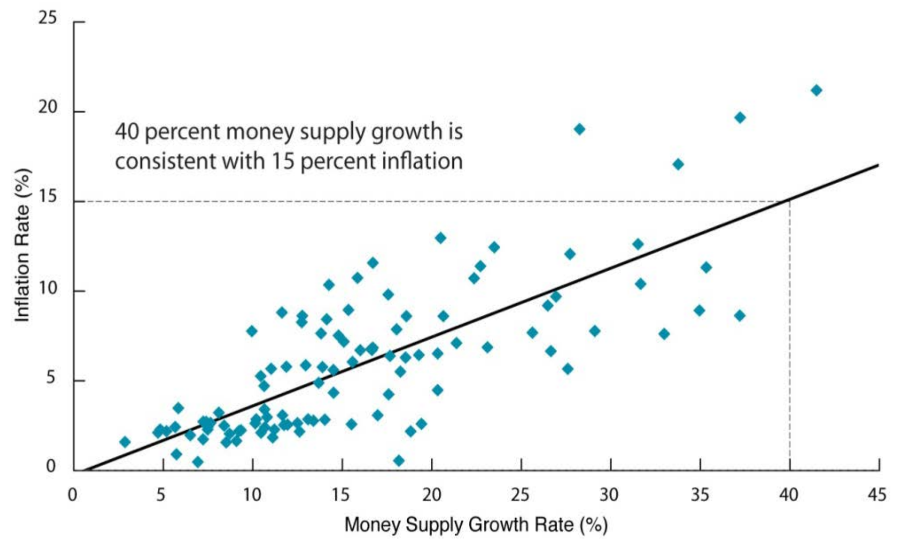
Increase in money supply leads to lower purchasing power – studies confirm correlation between monetary growth and rise in prices

Why should money not follow the laws of supply and demand? Rising supply at stable or falling demand has to lead to falling purchasing power by default. One thing is clear to "Austrians": the more monetary units are in circulation, the lower the perception of their quality. Numerous studies

[14] *Please refer also to our Special Report Gold 2011, page 39*
[15] *Please refer to "Golden ratio", Commodities & Mining Q/A, UBS Investment Research, January 2012*
[16] *Please refer to "Geld und Inflation aus der Sicht der Wiener Schule" (Money and Inflation – The Perspective of the Vienna School), a study by Institut für Wertewirtschaft (Institute for Value-Based Economics), Gregor Hochreiter, July 2008*
[17] *Wolf von Laer, "Probleme des etablierten Notenbankensystems – Free Banking als Alternative?" (Problems of the established central bank system – free banking as alternative?)*
[18] *Please refer to Ludwig von Mises, Human Action, XII, chapter 4*

support the notion that there is often[19] a clearly positive correlation between growth in money supply (i.e. inflation as defined by the Austrians) and the subsequent rise in prices[20]. The following chart shows the relationship between the growth of the M2 money supply (horizontal scale) and rising prices in % (vertical scale) in 103 different countries over a period of ten years. Clearly, the correlation is high and positive**. According to the graph, an increase in M2 of 40% causes the rate of inflation to rise by 15%.**

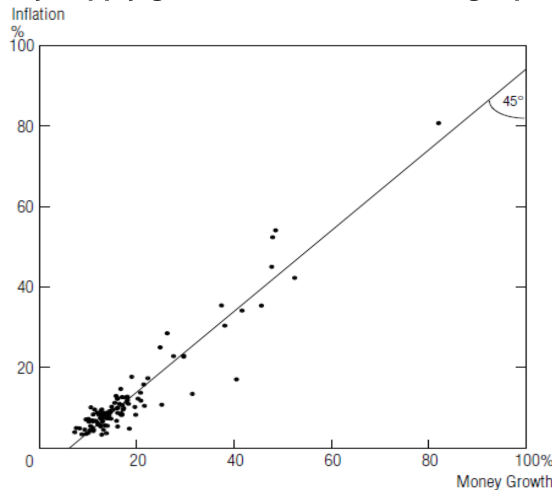
Money supply growth rate vs. inflation rate in 103 different countries– 10Y average 2001-2010



Source: World Bank

The following chart from the IMF paints a similar picture. It is based on a time series spanning from 1960 to 1990 in 110 different countries, and it, too, shows a strongly positive correlation between money supply growth and rising prices.

Money supply growth and Inflation: a high, positive correlation



Source: IMF

[19] *Of course there are also a few examples to the contrary such as Japan*
[20] *Please refer to "Some Monetary Facts", Federal Reserve Bank Minneapolis*

The following table of the Federal Reserve Minneapolis also highlights this extremely strong relationship. It shows the correlation coefficient of money supply growth (M0, M1, and M2) and inflation in various regions.

Correlation coefficient money supply growth and inflation

Sample	M0	M1	M2
All 110 Countries	0.925	0.958	0.95
21 OECD Countries	0.894	0.94	0.958
14 Latin American Countries	0.973	0.992	0.993

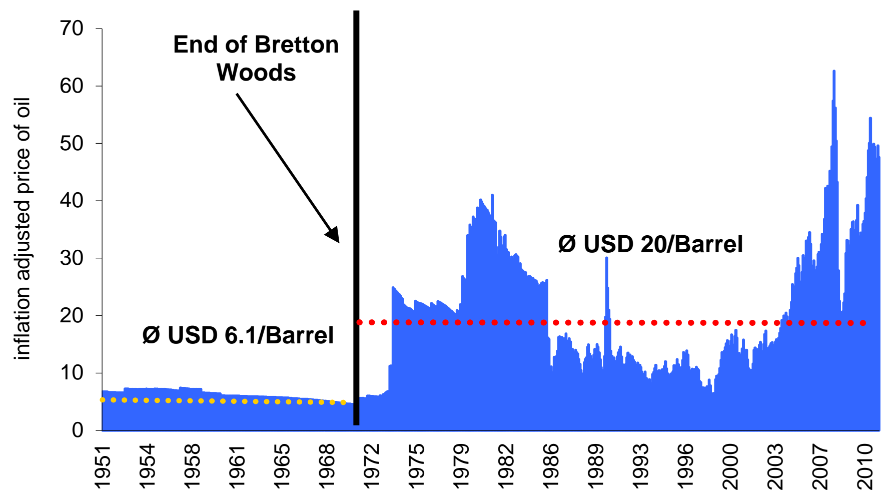
Sources: Federal Reserve Minneapolis, IMF

1% money supply growth = 0.9% increase in the price of gold

A study by the World Gold Council[21] reveals that a 1% expansion in money supply results in an average increase in the price of gold of 0.9% six months down the line. In addition, gold is an excellent indicator of the velocity of money, especially in the USA. **The gold price anticipates an increase in the velocity of money, i.e., a falling demand for money, in the market and interprets this as future inflation.**

This is why the drastic rise in gold and oil prices in the past several years have not really come as a surprise either, given that for Austrians it is not so much the increase in demand for these specific goods that has driven up their prices, but the simple fact that more and more paper and digital money has been circulating globally since 1971. This is also the clear message of the following chart. **While the average inflation-adjusted oil price was hovering around USD 6.1/barrel when the Bretton Woods agreement was in place, it soared dramatically after the abandonment of the gold standard. Since the end of the most recent pegging of the US dollar to gold, the average price of oil has been USD 20.6/barrel[22]. The chart also highlights the fact that volatility has increased dramatically since the end of Bretton Woods.**

Inflation-adjusted oil price since 1950



Sources: Bloomberg, Erste Group Research

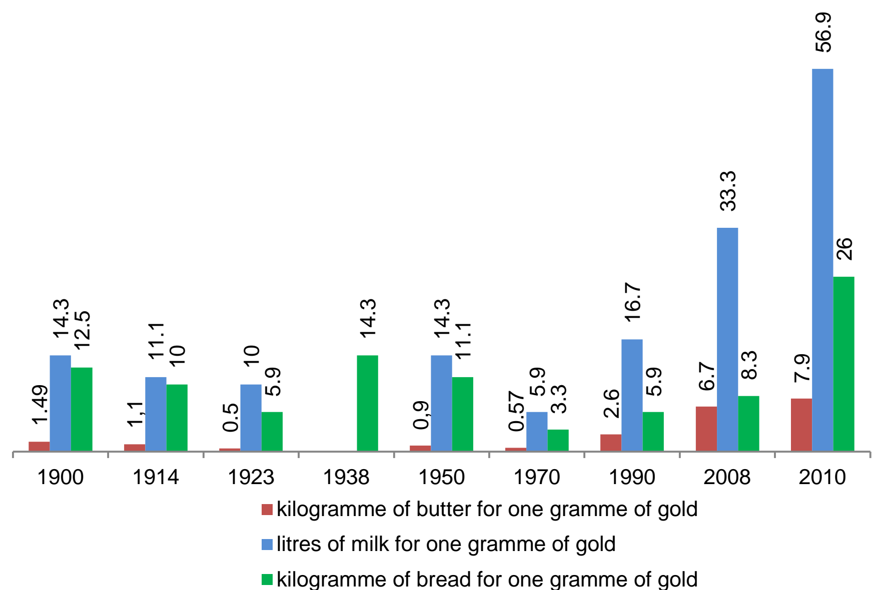
[21] *Please refer to "Linking Global Money Supply to Gold and Gold to Future Inflation", World Gold Council, February 2010*
[22] *Please refer also to Special Report Oil "Nothing to Spare", Erste Group Research, March 2012*

Stable purchasing power since King Nebuchadnezzar II

But it seems that gold does not only preserve its purchasing power in the US dollar. Apparently during the reign of King Nebuchadnezzar II around 600 B.C. the nominal value of gold was such that one ounce of gold would buy 350 loaves of bread. In June 2012 the price of bread in Austria was EUR 3.20[23], while an ounce of gold was EUR 1,300. This means that, much like 2600 years ago, one ounce of gold would buy you slightly less than 400 loaves of bread.

The following graphs depict how much bread, butter, and milk one gramme of gold would have bought you over the past century[24]. It is obvious that the purchasing power of gold remained stable throughout the chaos of the 20th century and has indeed been rising since the 1990s.

Purchasing power of 1 gramme of gold measured in kilogramme of butter and bread and litres of milk from 1900 to 2010



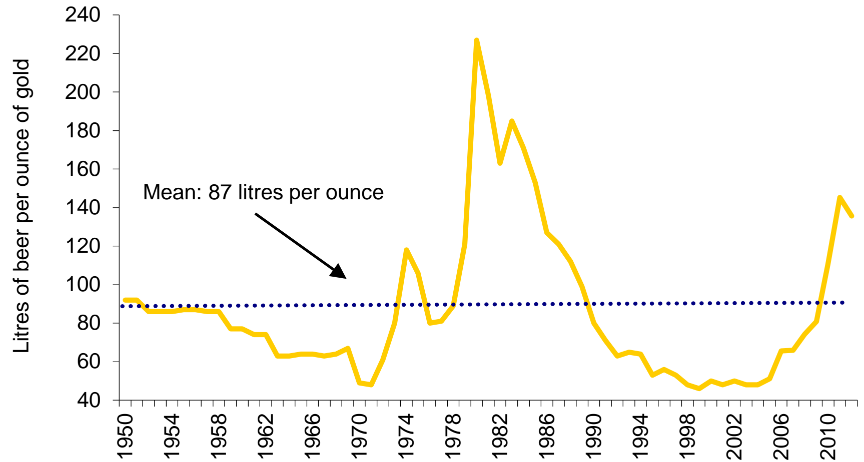
Sources: Wirtschaftswoche, Wikipedia

Good outlook for beer-drinking gold bugs

The purchasing power of gold should be especially appreciated in Bavaria. While one litre of beer at the Munich Oktoberfest cost an equivalent of EUR 0.82 in 1950, it will probably be EUR 9.50 in 2012. The annual increase in the price of beer since 1950 has been an average 4.1%. Relating the beer price to the price of gold, we find that one ounce of gold buys 136 litres of beer at the 2012 Oktoberfest in Munich[25]. The historical median is 87 litres, this means that the “beer purchasing power” of gold is relatively high. The all time high was 227 litres per ounce of gold in 1980. We think it is indeed possible that we will see these values again. **Beer drinkers with gold in their portfolio should therefore look out for sparkling times.**

[23] *1 loaf of standard farmhouse bread*
[24] *http://de.wikipedia.org/wiki/Goldpreis#cite_note-107*
[25] *Expected price per litre for 2012: EUR 9.50, gold price as of June 2012*

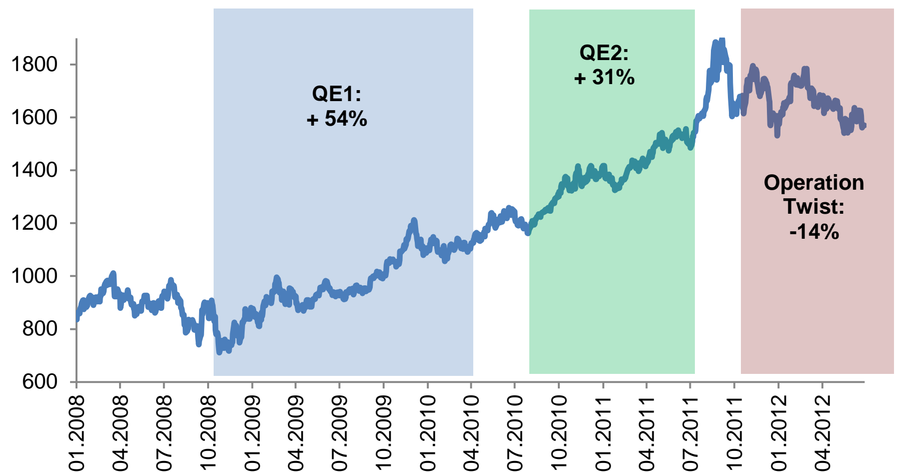
Gold/Oktoberfest beer ratio



Sources: www.HaaseEwert.de, historical archive Spaten-Löwenbräu, London BMA, Erste Group

The fact that the gold price has also reacted to previous QE rounds, as the following chart suggests, prompts the question of whether and to what extent central bank measures (especially by the Fed) should be expected for 2012?

Gold price and QE phases (from the announcement of the new purchase program in each case)



Sources Datastream, Erste Group

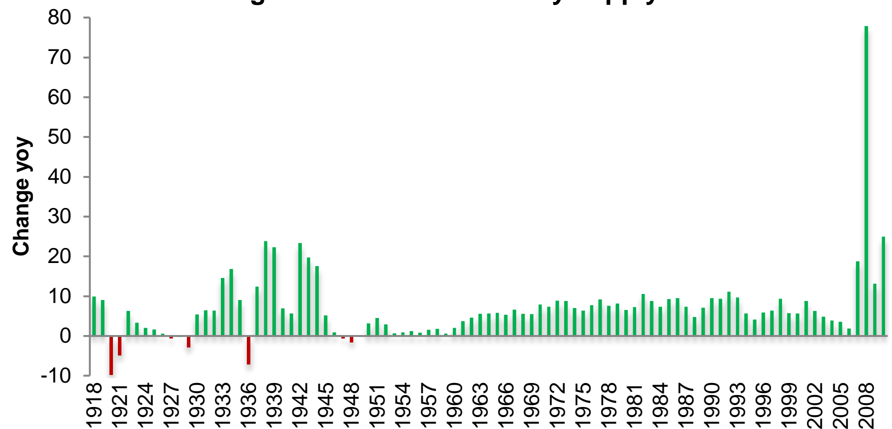
The Fed has revised the assessment of the economy downward, both verbally and in terms of the committee member's forecasts. **"Growth in employment has slowed in recent months", "household spending appears to be rising at a slower pace" and inflation has "declined"**

The Fed has also decided to prolong "Operation Twist". The central bank intends to purchase USD 267bn of longer-term Treasuries (maturities more than 6Y) and sell the same amount in short-term paper (less than 3Y) until the end of the year. This compares to an expiring "Operation Twist" of USD 400bn that is estimated to have lowered interest rates by 15bp to 20bp.

Finally, the Committee "is prepared to take further action as appropriate to promote a […] sustained improvement in labor market conditions." This is a stronger formulation than previously and leaves the door open for further measures if necessary. In our view, possible further action could be taken in September, depending on the extent of the slowdown in the labor market visible until then[26].

The following chart reveals the highly expansive basic attitude of the Fed. It shows the annual rate of change of the American base money supply. The money supply declined in only 7 out of 94 years on an annual basis.

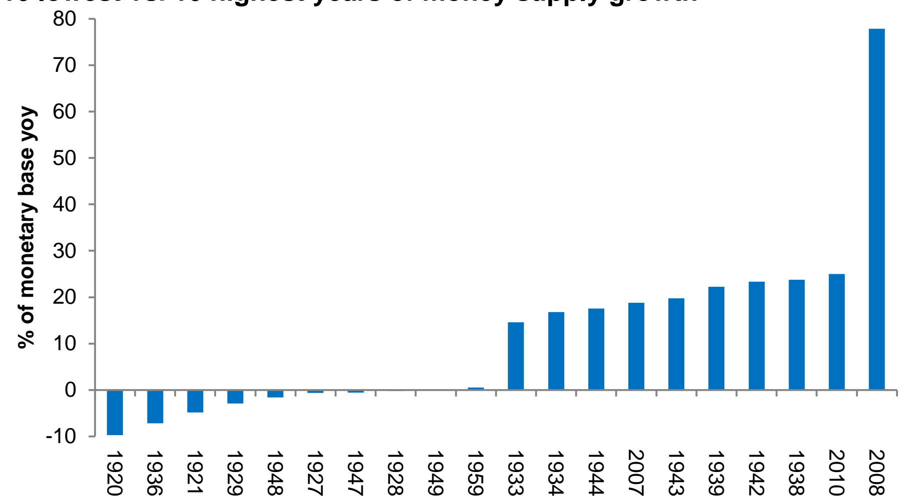
Annual rate of change of the US base money supply in %



Sources: Federal Reserve St. Louis, Erste Group Research

In addition, it seems the time series is positively skewed. The following graph compares the ten years that experienced the biggest declines in money supply to the ten years with the biggest increases.

10 lowest vs. 10 highest years of money supply growth



Sources: Federal Reserve St. Louis, Erste Group Research

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[26] *"Fed marks down assessment, continues Twist", Erste Group Research, Mildred Hager, June 2012*

The chronology of a hyperinflation – Explanation based on Peter Bernholz' "Monetary Regimes and Inflation"

Hyperinflation was always caused by money printing due to exorbitant budget deficits

The Swiss economist Peter Bernholz is probably the most renowned inflation scientist. His book "Monetary Regimes and Inflation" is a definitive work in the area of historical (hyper) inflation analysis. According to Bernholz, every hyperinflation, ever, has happened under a discretionary paper currency standard, and there have only been few instances where the expansion of the central bank money supply did not cause a price rise. Gold or bimetal standards show no or substantially less tendency towards inflation than paper currency standards. Inflation is always a monetary problem. In fact there is no example in history where hyperinflation was not caused by money creation due to exorbitant budget deficits. Budget deficits of 40% in terms of 40% of public spending will eventually result in hyperinflation. In eight out of twelve cases examined by Bernholz even a deficit of 20% caused hyperinflation.

Central bankers underestimate psychological pressure that they are exposed to as they want to stop the stimulus

Bernholz recognises an *inflationary bias* in the political system. This means that stimulus measures and campaign pledges, given out by means of all-round distribution, constitute the basic requirements for the expansion of the money supply. According to Bernholz, many central bankers underestimate the psychological pressure that they are exposed to as soon as they want to stop the stimulus and reduce the money supply. Technically speaking, the reduction of the money supply is no problem, but politically it is very hard to go through with it. **As soon as the stimulus is reduced, the risk of recession increases, which in turn causes political pressure[27].**

In the event, new money is used in an effort to finance budget deficits. But this only works if prices increase more significantly than the money supply. However, according to Tanzi's Law, real budget deficits increase at a faster rate. This law postulates that, in an environment of rising inflation rates budget deficits are additionally burdened by the fact that tax revenues and other public revenues do not increase in line with the inflation rate. Since a substantial period of time may have elapsed between the taxable transaction and the definitive payment of the tax, the real value of this tax declines substantially in cases of high inflation. This explains the decline in the share of tax revenues in terms of GNP[28].

"*Inflation can only be prolonged as long as the opinion prevails that it will come to an end in the foreseeable future. If at some point the conviction has taken over that inflation will never abate again, panic breaks out.*" Ludwig von Mises

As soon as a "tipping point" has been reached, inflation tends to accelerate[29]. It is in this phase that currency substitution begins. Gresham's Law only works in the early stages of inflation, for example, if in case of a bimetal standard the central bank tries to defend a fixed parity. At that stage people usually flee into tangible goods such as property (aka "concrete gold") or gold. Due to Thier's Law the velocity of money increases, some market participants subsequently return to barter trading, and the real supply of inflated money declines rapidly. According to Thier's Law – also referred to as "Gresham's Law in Reverse" – the acceptance of the currency falls abruptly due to the sped-up depreciation. The lack of a stable means of

[27] Please refer to "Expansive Geldpolitik ist wie Fremdgehen" (Expansive monetary policy is like cheating on your wife), Dylan Grice and Albert Edwards, Finanz und Wirtschaft 14 April 2012
[28] Please refer to "Die Umwandlung von sozialistischen zu kapitalistischen Gesellschaften in den postkommunistischen Ländern und die koreanische Einheit" (The transformation of socialist to capitalist societies in post-communist countries, and the Korean unity), dissertation Freie Universtität Berlin, Lee, Duck Ho
[29] Please refer to Paldam 1994, page 139

payment causes increasing chaos in trade and production and leads foreign currencies to be resorted to as alternative means of payment. People will therefore select the currency that they believe to be the most stable in the long run. **The dollarisation, i.e. the popular use of the US dollar, or of the D-Mark after the collapse of the Eastern bloc is a good example of this phenomenon[30].**

[30] *Please refer to Guidotti, P./Rodríguez, C. (1992), "Dollarization in Latin America: Gresham's Law in Reverse", IMF Staff Papers 39, 518-544.*

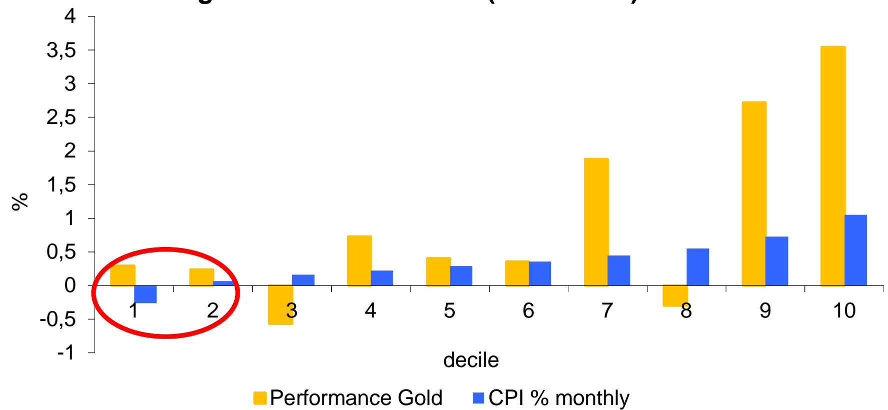
Gold in an environment of a deflationary loss of confidence

Disinflation means the worst environment for gold, deflation and rising inflation are supportive

Gold is mainly regarded as protection against inflation. The disinflation in the 1980s and 1990s and the weak performance of gold during that period seem to be the reason for this point of view. An "*a minore ad maius*"[31] inference seems to lead people to assume that if gold is weak in a phase of disinflation, it would have to do even worse amid deflation. **We consider this a fallacy.**

In our opinion, deflation is characterized by a gradual loss of confidence in the financial system, which in turn means a supportive environment for gold. This view is confirmed by the subsequent chart. In the first (deflationary) decile, gold records a positive performance, while it incurs the weakest performance during low inflation rates. In the seventh, ninth, and tenth decile gold also "outperforms" the CPI.

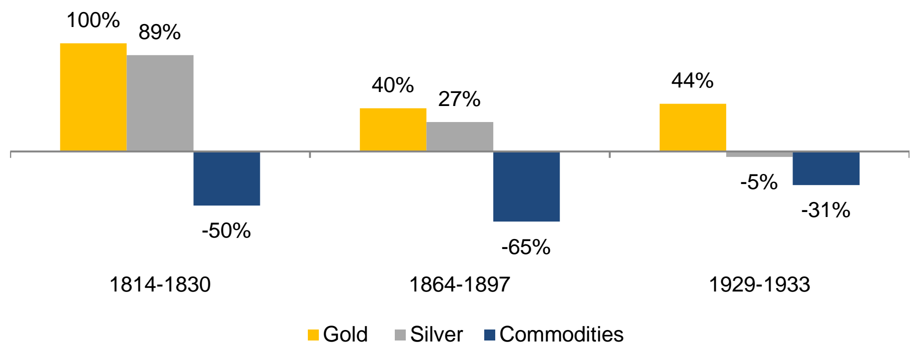
Performance of gold vs. CPI in deciles (since 1970)



Sources: Datastream, Erste Group Research

The positive trend of gold during deflation is also confirmed over a longer time horizon. The following graph highlights the fact that gold (and to a lesser extent also silver) would record a clear increase in purchasing power during deflationary phases.

Gold, silver, and commodities in historical phases of deflation

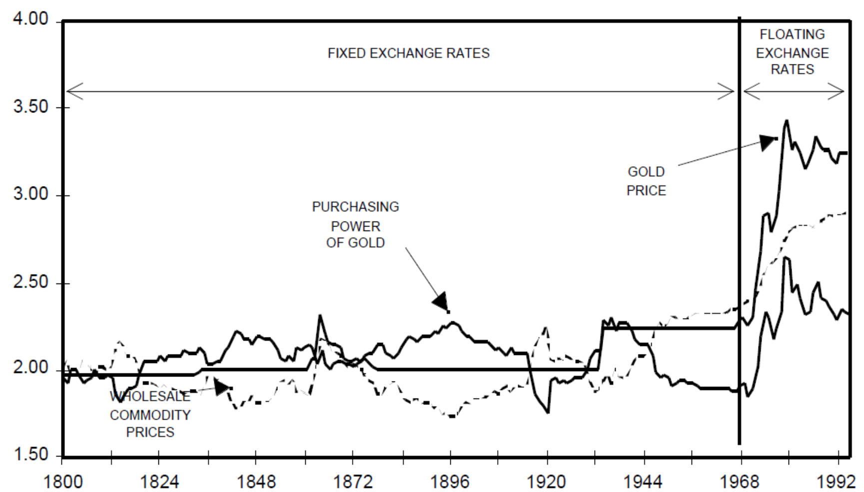


Sources: Roy Jastram," The Golden Constant" and "Silver, the Restless Metal", Erste Group Research

[31] *The a minore ad maius argument denotes an inference from smaller to bigger*

Until 1968, falling commodity prices were tantamount to rising purchasing power of gold, given that gold was at a fixed parity to the US dollar, which the following long-term chart illustrates. During such periods gold would tend to be traded on the black market at a substantial premium to the official conversion rate. It is also interesting to see by what degree volatility has increased since the end of Bretton Woods in 1971.

Development of purchasing power of gold in the USA:



Sources: Sun Valley Gold Company, "The Behavior of Gold under Deflation"

What happens usually during a period of profound deflation? Public budgets are over-strained, the financial sector is faced with systemic problems, and currencies are depreciated in order to reflate the system. The credit quality deteriorates gradually, and the creditworthiness of companies and government is questioned. **The investment focus shifts from capital growth to capital preservation.** The confidence in the financial system and paper currencies declines, while the importance of gold increases and a **remonetisation** takes place[32].

Deflation thus always comes with falling confidence in the (perceived) root cause of the crisis (governments, banks, "speculators" etc) and their rating. At first, lending volume falls, lending terms become more stringent, and debtors try to maintain their credit rating. This is achieved by selling assets in order to be able to service their debt, which only accelerates the downward spiral. A number of credit defaults finally accelerate the deflationary spiral further and reduce the liquidity in the system. **Gold is hoarded in such periods as a manifestation of a stronger desire for safety[33].**

[32] *Please refer to "The Behaviour of Gold under Deflation", Sun Valley Gold Company*

Exeter's Pyramid

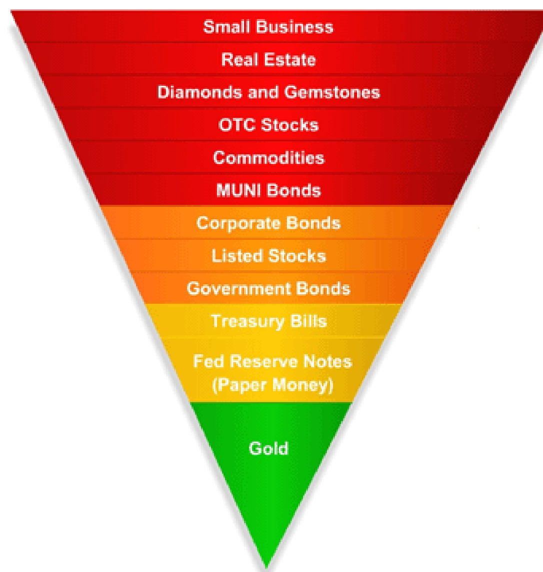
The graph illustrating this process was developed by John Exeter[34]. The pyramid named after him shows the liquidity flows between the various asset classes. **In an often-quoted interview[35], Exeter expected a deflationary collapse, in the course of which gold would significantly gain in importance.**

"The significance of gold lies mainly in the possession thereof and to a lesser extent in its value relative to any currency." **Frank Doll**

In a deflationary depression, as in an hourglass, liquidity flows from the higher part of the pyramid downwards, amid falling willingness to assume risk. At the upper end, liquidity would dry up due to the lack of buyers and revert from a sellers' to a buyers' market. Since credit is "slumbering mistrust" [36], creditors try to sell the continuously falling number of liquid assets and head for the lower asset classes as a result of their rising risk aversion. At the bottom end is gold. Due to the general scepticism the circulation of gold declines, as it is increasingly being hoarded. The degree of hoarding always depends proportionately on the confidence in the government and the currency. Gold is never scarce unless it is hoarded – for good reasons – and deliberately hidden[37]. **Since gold does not hinge on any form of IOU, it is the only alternative to paper money and is thus at the bottom of the upside-down pyramid.**

"***Fiat money has no place to go but gold***", **Alan Greenspan to the Council on Foreign Relations, 2010**

Exeter's Pyramid



Source: "Dollar Backwardation", Keith Weiner, New Austrian School of Economics

An increase in prosperity and growing confidence would then boost willingness to assume risk again, causing a gradual inflow of liquidity from the gold sector into the higher segments of the pyramid, and a new cycle starts. **Deflation therefore means an improvement in monetary quality, whereas inflation means an increase in monetary quantity.**

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[34] *John Exeter was a US economist, vice president of the Federal Reserve New York, member of the Mont Pelerin Society, of the Council on Foreign Relations, and of the Committee for Monetary Research & Education.*
[35] *http://www.istockanalyst.com/article/viewarticle/articleid/2599701*
[36] *Thomas Paine*
[37] *"Safe haven – A History of Gold", Philip Barton*

Gold is backed by nothing… but everything else is backed by gold

Hayek has made the difference between the effects of deflation and inflation crystal-clear: *"… but it is not that certain that in the long run deflation is more harmful than inflation. [...] Because moderate inflation is always pleasant as and when it is happening, whereas deflation is direct and painful. There is no need to take precaution against a situation whose unpleasant effects can be felt immediately and sharply; however, precaution is necessary for a measure that is immediately pleasant or helps alleviate problems but that entails a much more substantial damage which can only be felt later. The difference is that in case of inflation, the pleasant surprise comes first and is followed by the reaction later, whereas in case of deflation the first effect on business activity is depressive."*[38]

Conclusion

The crucial question of whether inflation or deflation will be the determining environment in the coming years remains unanswered. In times of inflation tangible goods are the preferred asset class, whereas in deflation it is cash. Gold is liquid, divisible, indestructible, and easily transportable. It also has a worldwide market and there is no default risk. **It is thus cash of the highest quality.**

The fear of deflation as manifested, for example, in numerous essays and speeches by Ben Bernanke (e.g. "Deflation: Making Sure "It" Doesn't Happen Here") seems to argue very much in favour of further interventions in increasing magnitude. **The natural shakeout during a deflationary recession will probably be avoided at all costs. This should continue to create a positive environment for gold.**

[38] Hayek, "Verfassung der Freiheit" (The Constitution of Liberty), seen in "Probleme des etablierten Notenbanksystems – Free Banking als Alternative?"(Problems of the established central bank system – free banking as alternative?), Wolf von Laer

The biggest misconception with regard to gold

"The comparison to gold mined, scrap, central bank sales, etc., is particularly irrelevant. Mine supply adds a small increment each year to the total supply, but most of the gold (or any other asset) traded in the world is not the incremental new supply; it is shifting among the holders of the existing base of supply." Robert Blumen

From our point of view, the gold sector is riddled with an elementary misunderstanding. Many gold investors and analysts operate on an erroneous assumption: they attach too much importance to annual production and annual demand. We often read that *the gold price cannot drop below production costs*. We would like to discuss this misconception in the following and would also like to highly recommend the articles by Robert Blumen on this subject [39].

Every gramme of gold that is held for a variety of reasons is for sale at a certain price. Many owners would sell at a price slightly above spot, others would only sell at a substantially higher price. If, due to favourable prices, a private individual wants to sell his gold holdings that he acquired decades ago, it will not reduce the overall supply of gold. All that happens is the transfer from one private portfolio to another private portfolio. To the buyer, it makes no difference whether the gold was produced three weeks or three millennia ago.

Annual production is of relatively little significance to the pricing of gold

This means the annual gold production of close to 2,600 tonnes is of relatively little significance to the pricing process. Rather, the supply side consists of all the gold that has ever been produced. The recycling of existing gold accounts for a much larger share of supply than is the case for other commodities. Paradoxically, gold is not in short supply– the opposite is the case: it is one of the most widely dispersed goods in the world. Given that its industrial use is limited, the majority of all gold ever produced is still available.

„*..neither is recent central bank buying a major factor in determining the gold price, nor are big investors like Soros or Paulson. The amounts involved are **nothing but drops in the daily ocean of gold trading**. Gold is not a normal commodity, it is the money commodity. It must be analyzed like a currency. With the total available supply at roughly 170,000 tonnes, how can buying and selling of a few hundred tons make any difference? More than those few hundred tons trade on the LBMA alone every single trading day… The decisive factor in determining the gold price is the **reservation demand** of the current owners of the extant gold supply."*
www.acting-man.com

Much like an increase in the money supply dilutes the purchasing power of existing money, and the issue of new stock dilutes the existing share holders' equity per share, an increase in the supply of gold should be understood as a dilution of the existing supply. **A one-percent increase in supply can be absorbed by the market via a 1% price drop, with total demand remaining the same in nominal terms.**

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[39] *For further reading we recommend the highly interesting articles by Robert Blumen, especially "Does Gold Mining Matter?", "The Myth of the Gold Supply Deficit" and "If gold supplies are rising, why aren't prices falling", all available at mises.org*

High stock-to-flow ratio is the most important characteristic of gold

In contrast to other commodities, the discrepancy between annual production and total available supply (i.e. the stock) for gold and silver is enormous. This is called a high stock-to-flow ratio. As already discussed last year[40], we believe that this is the single most important distinctive feature of gold (and silver). The aggregate volume of all the gold ever produced comes to about 170,000 tonnes. This is the stock. Annual production was close to 2,600 tonnes in 2011. That is the flow. Dividing the former by the latter, we receive the stock-to-flow ratio of 65 years.

	Total reserves (stock) in tonnes	% share of total reserves (stock)
Jewellery	84,100	50%
Private holdings	31,400	19%
Central bank reserve	20,200	12%
Others	32,600	19%
Total	**168,300**	**100%**
Estimated mining production (flow)	2,600	**1.5% of total stock**

Sources: CLSA Asia-Pacific Markets, World Gold Council

Gold reserves grow by about 1.5% every year, and thus at a much slower rate than any of the money supply aggregates around the world. The growth rate is vaguely in line with population growth. **Trust in the current and future purchasing power of money or any means of payment not only depends on how much is available now, but also on how the quantity is expected to change over time**

Short-term fluctuations in gold production are irrelevant for gold prices

What does that mean in numbers? If annual mine production were to double (which is highly unlikely), this would translate into an annual increase of only 3% in the supply of gold. **This is still a very minor inflation of total gold reserves, especially compared to current rates of dilution of paper currencies**. This fact creates a sense of security as far as availability is concerned and prevents natural inflation. If production were down for a year, this would also have little effect on the total stock and on pricing. On the other hand, if a significant part of oil production were to be disrupted for an extended period of time, stocks would be exhausted after only a few weeks. This means it is much easier for gold to absorb any form of significant production expansions or shortages.

Many gold market analysts attach great importance to the rate of change of mine production (increasing mine production being bearish; decreasing: bullish). The change in production from one year to the next is an increment on top of an increment and is really of miniscule importance to the supply situation.

High stock-to-flow ratio differentiates gold and silver from commodities

We therefore believe that gold is not precious because it is scarce, but because the opposite is true: **gold is precious because the <u>annual production is so low relative to the stock</u>. Gold has acquired this feature over centuries, and cannot lose it anymore.** This stability and

[40] *Please refer to Special Report Gold 2011 "In Gold we Trust"*

safety is a crucial prerequisite for the creation of trust. And it is what clearly differentiates gold and silver as monetary metals from commodities and the other precious metals. Commodities are consumed, whereas gold is hoarded. **This also explains why traditional supply/demand models are only of limited use for the gold market.**

"Contrary to the consumption model, the price of gold does clear the supply of recently mined gold against coin buyers; it clears all buyers against all sellers and holders. The amount of gold available at any price depends largely on the preferences of existing gold owners, because they own most of the gold." Robert Blumen

In the case of a good that is consumed, a rising supply/demand deficit would of course trigger higher prices until a new equilibrium price has been restored. This is not so for goods that are hoarded. Therefore a simple consumption model only works for goods that are actually consumed and whose annual production in relation to the existing stock is relatively high (i.e. low stock-to-flow ratio).

Production costs do not have any significance for gold prices

This means that the production costs are also of limited significance when it comes to the pricing. They are mainly relevant for the performance of gold shares. **From our point of view, analyses claiming that the gold price cannot drop below production costs are therefore based on a fundamental misunderstanding.** While from a certain price onwards the production would turn unprofitable for mining companies, the trade of already produced gold would not suffer. The mining sector therefore has little influence on the gold price. However, the opposite is not true: the gold price has a substantial impact on mining and its profitability[41].

There is no single cost of mining gold - the cost depends on the characteristics of the deposit and the mine. The cost of extracting each ounce within the same mine will vary. The price of gold, relative to mine labor and mining capital goods prices, determines which mines are profitable and which are not, and which ounces within a given mine can be profitably extracted. **As the gold price rises relative to mining costs, formerly uneconomic deposits become profitable to mine.**

The demand side is made up of investors, the jewellery industry, central banks, and the industrial sector. But this is still only a fraction of total demand. Reservation demand accounts for the largest part of demand. This term describes gold owners who do not want to sell gold at the current price level. By refusing to sell, they are responsible for the price remaining at the same level[42].

"*Gold is the inverse of paper, unlimited to the upside, limited to the downside. It's not the total stock of gold that matters, but the flow from those that already hold it*" FOFOA

This means that the decision *not* to sell at current prices is as important as the decision to buy gold. In net terms, the effect on the price is the same. The gold supply is therefore always high. At a price of USD 5,000, the supply of recycled gold would exceed annual production several times. This also explains why the often-quoted gold deficit is a fairy tale.

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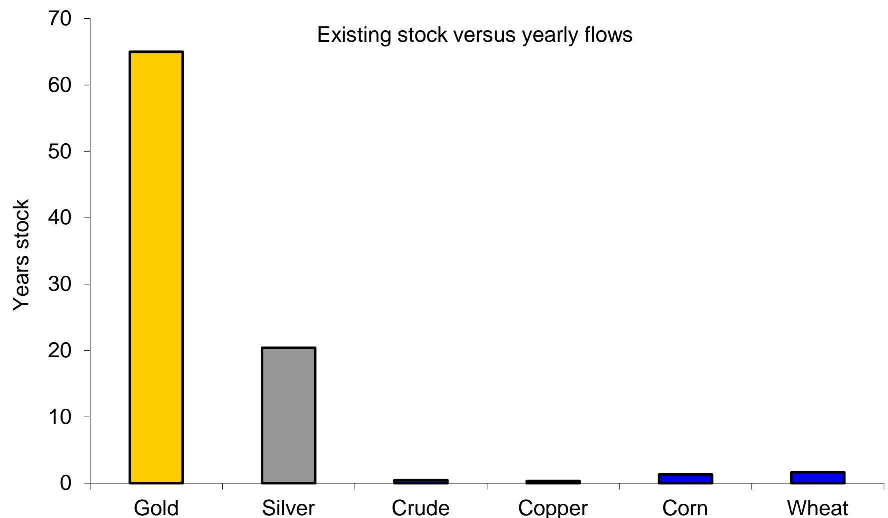
[41] *Please refer to "Does Gold Mining Matter?", Robert Blumen*
[42] *Please refer to "WSJ does not understand how the gold price is formed", Mises Economics Blog, Robert Blumen*

"Gold is an asset. Supply and demand should be understood in the same way that we understand the shares of a company. Every time shares change hands, the shares are demanded by a buyer and supplied by a seller. For each and every transaction, supply equals demand. Adding up all of the transactions that occur on a particular exchange, over the course of a month or a year, tells you absolutely nothing…If you said that buyers in China had bought 100 million shares of Microsoft but 'no supplier could supply that many shares,' nor was the company issuing enough new shares to meet the demand, you would readily see the error in that statement…Everyone understands that new shares only dilute the value of the existing shareholders, that it is not required for a company to issue new shares for the price to go up or down and that most trading of shares consists of existing shareholders selling to people who have dollars" Robert Blumen

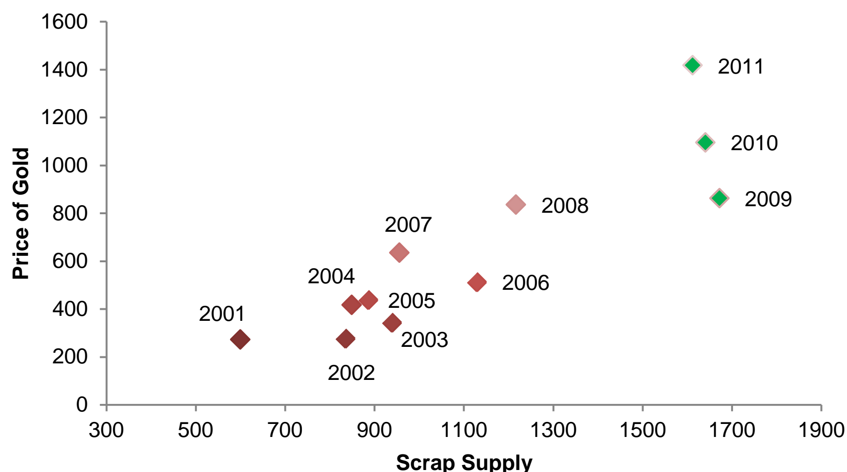
Stock-to-flow ratio as most important reason for monetary relevance of gold and silver



Sources: The Gold Standard Institute, Sharelynx.com, Erste Group Research

Of course the supply of recycled gold has increased significantly throughout the bull market. But it strikes us as interesting that the supply has only increased marginally since 2009, in spite of a drastic increase in the price. This could mean that the market has gotten used to a higher price, to the extent that new sellers will only come forward at substantially higher prices. **This distribution indicates that gold holdings are gradually moving from weak to strong hands.**

Recycled (scrap) gold supply vs. gold price since 2001



Sources: World Gold Council, Bloomberg

But what is the implication of that? Whenever a seller sells, that means that gold has hit their reservation price, so they sell to a buyer - who inherently has a higher reservation price demonstrated by his willingness to buy at that price. **This means that large sales improve the market structure.**

Conclusion

The gold market should therefore be seen as an integrated market. We believe that the segregation into annual production and total reserves is incorrect and leads many analysts to the wrong conclusion. All sources of supply are equivalent, given that every available ounce of gold is in direct competition with other ounces, regardless of whether this specific ounce was produced 3,000 years ago or three months ago or consists of recycled dental gold. **The annual gold production of close to 2,600 tonnes is therefore of no significant relevance to the pricing.**

Gold is money, nothing else

Aristotle – the first "gold bug"?

Many a (more or less) big philosopher has racked his brain as to why money has value. Aristotle was of the opinion that good money should come with very high production costs so as to induce people to attach value to it. He claimed that everybody would have to accept it as means of payment, value store, and value benchmark. Along those lines presented by Aristotle, basically an ancient gold bug, the only materials that would fit this description were gold and silver[43]. Marxists would hail the reference to production costs, but Plato found a better explanation: from his point of view, money had no intrinsic value except the one that it was given by people. This reminds us of the marginal theory of value proposed by the Austrian School of Economics.

"People value units of money because of their expected purchasing power; money will allow people to receive real goods and services in the future, and hence people are willing to give up real goods and services now in order to attain cash balances. Thus the expected future purchasing power of money explains its current purchasing power."[44]

Carl Menger explained the emergence of money as result of a historical-evolutionary process derived from barter trade. In his Principles of Economics (1871) he writes: "*Money is not the product of agreement of economic individuals, or even the product of a legislative act. It is no invention made by the people. Gaining an ever greater insight into their economic interests, the economic individuals in countries everywhere at the same time also realised that by relinquishing goods of lower marketable value for those of higher marketable value they would further their own economic end significantly. This is how money was created at many independent cultural centres along the ongoing development of the economy.*" [45]

According to Mises today's purchasing power can be explained by yesterday's purchasing power – in the end we have to find a good that is generally accepted

In his habilitation treatise "The Theory of Money and Credit", Ludwig von Mises managed to resolve a persistent circular argument of economics in an a priori, deductive way. The circular argument was: "*The people demand money because it has purchasing power, and it has purchasing power, because the people demand it*" [46]. This statement is of course a tautology. Therefore, Mises introduced the time factor into his concept. According to him, the expectation of future purchasing power of money crucially depends on the knowledge about today's purchasing power. Today's purchasing power in turn can be explained by yesterday's purchasing power. At the end of the regression we therefore have to find a good that was generally needed and came with an industrial use. This means that money has developed from a tangible good. This also includes the demand for jewellery and thus gold. According to Mises only goods with a generally accepted utility value can turn into generally accepted, natural money. Gold and silver were already used as jewellery before they assumed their monetary functions.

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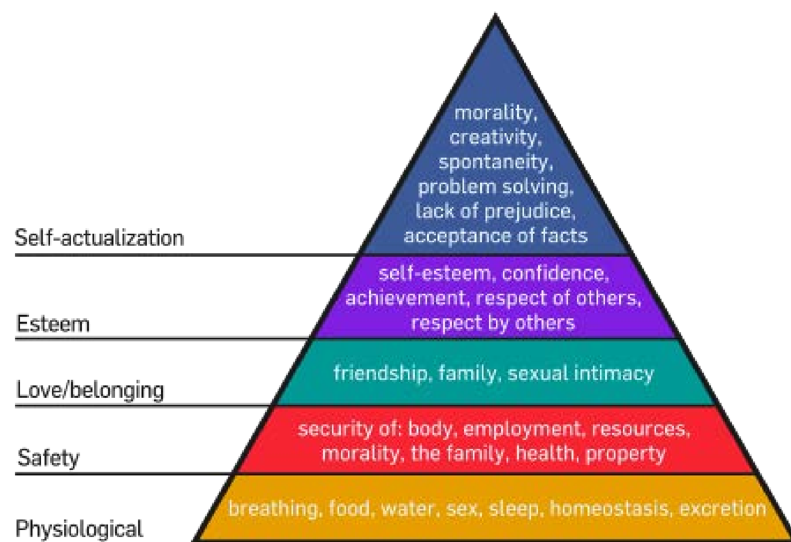
[43] *Please refer to "Blind men looking at money", GK Research, Charles Gave*
[44] *Please refer to "The Origin of Money and Its Value ", Robert Murphy, http://mises.org/daily/1333*
[45] *Please refer also to "Geld und Inflation – Die Sicht der Wiener Schule" (Money and inflation – the point of view of the Vienna School), Gregor Hochreiter, July 2008*
[46] *Please refer to "Feld: Direkter Tausch/Indirekter Tausch (Arbeitsteilung) und das Regressionstheorem" (Field work: direct / indirect barter (division of labour) and the regression theorem), Freemind blog*

According to Mises, past experience is the decisive factor for future trust in monetary stability.

The trust in the stability and future purchasing power is essential for the value measurement of money. According to the regression theorem people only trust in money as long as it offers a certain degree of safety with regard to its future supply and thus to its future purchasing power.

"Gold was not selected arbitrarily by governments to be the monetary standard. Gold had developed for many centuries on the free market as the best money; as the commodity providing the most stable and desirable monetary medium." Murray Rothbard

Why have gold and silver come out on top as money after all those centuries? In his explanation, Roy Jastram refers to two (also anthropologically provable) basic human needs: the appreciation of beauty and the human will to survive. The two metals therefore satisfy two requirements that are situated at the very bottom and at the very top of **Maslow's hierarchy of needs.**



Source: Wikipedia

These two needs are today as strong as they used to be thousands of years ago. Dr. Bernard Pacella, former President of the American Psychoanalytic Society, points out that the will to survive is the most important driver in nature. According to Pacella personal survival (and in turn the survival of the species) dominates everything else. Continuing along this train of thought, the protection of one's savings and the expectation of receiving a reward for this deferral of consumption also constitute elementary motives[47]. **This also explains the need for a stable means of saving.**

".*.the most marketable goods will gradually be selected as the media for exchange. As they are more and more selected as media, the demand for them increases, and so they become even more marketable…eventually one or two commodities are used as general media…and these are called money "* Murray Rothbard

[47] *Please refer to "Eureka! When Gold Struck Me", Andre Sharon", 321gold.com*

What are the central requirements for money?

- it has to be easily divisible into standardised units
- it has to be negotiable
- it has to be easily transportable[48]
- it has to be durable and practically indestructible
- it has to come with a long track record of universal acceptance[49]
- it has to be easily recognisable and fulfill certain criteria that can be easily verified
- it has to have a high value density (i.e. high value / weight and volume)
- the existing holdings have to be large relative to the annual increments (high stock-to-flow ratio)
- it has to come with low storage costs
- it has to come with low transportation costs
- **and last but not least, it must defy random replication**

There are numerous goods that satisfy some of these criteria, but **only gold and silver satisfy all of them.**

"*Money is a medium of exchange. It is the most marketable good which people acquire because they want to offer it in later acts of interpersonal exchange… This is its only function. All other functions which people ascribe to money are merely particular aspects of its primary and sole function, that of a medium of exchange."* Ludwig von Mises[50]

[48] *In the past, cattle used to be a popular means of exchange. pecunia, the Latin word for money, is derived from pecus, which means cattle. The Indian rupee is named after "rupa", the term for drove*
[49] *Which is why bit coins or rhodium bullions will probably never achieve monetary status*
[50] *Ludwig von Mises: Human Action, page 401*

The advantages of a gold standard

"A gold standard means one thing, and only one thing: it means that gold is the measure of value", Philip Barton

***"The inflation of money is followed by the inflation of the perception of value. This means that they tend towards indifference and eventually disintegrate altogether. What the economists call 'time preference', is subject to dramatic changes. The focus shifts to the 'here and now' – to hell with the future."* Roland Baader**

In his book, "Honest Money", John Tomlinson explains descriptively how inflation gradually causes turbulences and eventually chaos. He likens the monetary system to another important system of measurement, i.e. *time*. He asks what would happen if Big Ben in London were to become the accepted standard for measuring time and if due to a fault it would reduce the length of every minute by one second. The consequences would be devastating. More and more activities would have to be finished within an ever shorter period of time, schedules would gradually collapse, and people would reassess and rearrange their priorities. Everything would speed up, and time preferences would increase. **According to Tomlinson, a similar scenario is true for the absence of a gold standard.**

Gold and economic freedom are inseparably linked

Howard Buffett once called the gold standard a silent watchdog, which prevented unlimited public spending[51]. This seems to be one of its central advantages, and it is probably also the reason why it is not exactly a favourite among politicians. A gold standard is also independent of the various differing economic convictions of governments. As Ludwig Mises said, *"The importance of the gold currency for internal traffic is the fact that it liberates the creation of the purchasing power of the monetary unit from the fluctuating economic philosophies held dear by changing political majorities and parties. The pegging of the monetary value to the value of gold sets up a dam against any and all efforts of favouring certain social strata at the expense of other strata via monetary measures."*[52] Gold means freedom – a notion also highlighted by the fact that Lenin, Mussolini, and Hitler banned private gold ownership at the outset of their dictatorships[53].

***"History is a teacher nobody listens to",* Otto von Habsburg**

Gold and peace are inseparably linked. During the 100 years after the Napoleonic wars there were fewer wars than at any other period in history before; the phase was also called "the 100 years of peace". Slavery was abolished, and the working class was given access to school education, homes, and the creation of assets[54]. In 1914 the world abandoned the gold standard, because the European governments could not afford to fight a war given the restrictions of the standard. Without abandoning the gold standard, WWI would have probably lasted only a few weeks, because nobody could have funded the war. The gold standard is therefore an objective measure of discipline for politics and public finances as well as a strait jacket for budget policies. It is completely bare of any party interest or bias.

England prospered because of trust in its gold currency

England had a gold standard in place from 1717 to 1914 (briefly interrupted by the Napoleonic wars). By the end of the 19th century the five most industrialised and wealthiest nations had followed suit. Why? When England had a currency covered by gold, it managed to attract capital, technology, and labour from around the world. It was the unlimited trust in the gold currency that made the Industrial Revolution and England's rise to a world power possible.

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[51] *Please refer to "The gold standard acted as a silent watchdog to prevent unlimited public spending", Howard Buffett*
[52] *Please refer to "Die Goldwährung und ihre Gegner" (The gold currency and its enemies), Neue Freie Presse, December 1931*
[53] *Please refer to "In Gold we Trust 2011", Erste Group Research*
[54] *Please refer to Karl Polanyi "The Great Transformation"*

It is a proven fact that a gold standard offers the best protection against rising prices. The period of the classic gold standard from 1879 to 1914 was probably the most stable era of all monetary regimes. This is also manifest in the following table. Average inflation from 1879 to 1914 was 0.2%, at a volatility of only 2.2%. Since 1971 (i.e. the end of Bretton Woods) average volatility has been 2.8%, and average inflation 4.5%.

US Consumer Price Index: long-term stability and short-term volatility, by period and monetary system 1800-2009

	Long-Run Stability (Average Annual Change)	Short-Run Volatility (St. Deviation Annual Change)	Maximum Price Change (High vs. Low)	Stability Rank
1800-1834 Domestic Silver Standard	-1.5%	5.2%	76%	4
1834 – 1861 Domestic Gold Standard	-0.4%	3.5%	36%	2
1862-1879 Domestic Paper Standard	+0.1%	8.8%	74%	3
1879-1914 International Gold Standard	+0.2%	2.2%	20%	1
1914-1944 Interwar International Gold-Dollar-Sterling Standard	+1.9%	7.2%	99%	5
1944-1971 Bretton Woods International Gold-Dollar Standard	+3.1%	3,.%	130%	4
1971-2009 International Paper Dollar Standard	+4.5%	2.8%	432%	4

Sources: Lewis E. Lehrman, edited and shortened from John D. Muelller, Redeeming Economics (ISI Books, 2010)

"Every country, even the poorest one, is able to hold on to the gold currency, and every country – and especially the poorest one – has to hold on to the gold currency. Because it is the gold currency alone that allows poor countries to create a production base by attracting foreign capital."

According to Roy Jastram[55] the United States and England can look back on a period of joint price stability of 350 years. In England the CPI in 1717, the first year of the gold standard, was 100. This was equal to its level of 1930. Consumer prices at the beginning of WWII were lower than in 1800[56]. From 1820 to 1914, consumer price inflation in the USA was 0%.

The idea of a currency without a fixed gold pegging and cover would probably have been unthinkable 100 years ago. Much as the idea of a gold standard sounds today. Today even the notion that only in 1971 every USD 35 was backed by one ounce of gold sounds absurd. But we believe that the return to a gold standard does not constitute any significant economic or organisational problem. Rather, it is a highly political and philosophical question of principle that has to be answered. **We therefore**

[55] *Please refer to Roy Jastram, "The Golden Constant"*
[56] *Please refer to Roland Baader „Der papierene Selbstmord" (The paper suicide), Eigentümlich frei, March 2008*

believe that the strain has to become much bigger before specific action will be taken[57].

But something is already happening. As a result of the rising popularity of Ron Paul, calls for a return to a gold standard have become more prominent across the United States. Paul demands the "Free Competition in Currency Act", which would grant the various States autonomy over currency and thus allow them to issue their own currency. The German economist Horst Sennholz said "only freedom and a parallel standard guarantee the basis for a fair monetary reform."

Utah defies Washington

A case in point, the federal State of Utah (close to 2.8mn citizens) has recently recognised gold and silver as an official means of payment. Not the embossed nominal value determines the value of the coins, but the material value of the coin. According to Edwin Vieira, President of the National Alliance for Constitutional Money, this could trigger a domino effect. Similar proposals are currently being reviewed in 13 other states. On top of that, senators from South Carolina, Minnesota, Iowa, Georgia, Idaho, and Indiana want to present a draft law that would make the gold and silver coins of other countries legal tender as well, e.g. the South African Krugerrand, the Austrian Philharmonic coin etc.

The symbolic meaning of the Legal Tender Act is enormous

We believe that the decision will not result in any major changes for now, as according to Gresham's Law gold will not be used for payments. **That said, we do regard the initiative as yet another piece of the puzzle on the way to the remonetisation of gold**. In addition it underlines the dwindling confidence in the US dollar and in the policies of the Fed, the smouldering fear of hyperinflation, and the soaring level of dissatisfaction with the governmental work that is done in Washington. **The symbolic meaning of the Legal Tender Act is therefore enormous.**

Initiatives demand transparent inventory and the bringing home of gold reserves

Hugo Chavéz following Charles de Gaulle

Another trend shows the continuously growing relevance of gold: secretive behaviour with regard to central bank gold has led to an increased degree of scepticism in terms of storage abroad and leasing transactions. Calls for a clean inventory or the repatriation of gold reserves stored abroad have becoming louder on a global scale, with the mainstream media starting to chime in. In Germany, Switzerland, the Netherlands, and Austria, initiatives have been launched. Hugo Chávez seems to have followed Charles de Gaulle when he had the Venezuelan gold reserves repatriated from London to Caracas last year.

De Gaulle had the majority of the French dollar reserves exchanged for gold within the framework of the Bretton Wood agreement (upon the suggestion of legendary Jacques Rueff). In summer 1966 gold made up 86% of French central bank reserves. In contrast to other countries such as Germany, which also exchanged dollars for gold, France refused to leave the gold in the vaults of the Federal Reserve. Instead, de Gaulle insisted on the bullions being shipped to France to make sure they were not exposed to a foreign power[58].

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[57] *Please refer to Special Report Gold 2011, Erste Group Research*
[58] *Please refer to Wikipedia ad Charles de Gaulle*

Bundesrechnungshof suggests repatriation of German gold reserves

In a report, the German Bundesrechnungshof pointed out "*insufficient diligence in accounting for the gold reserves, which are partially stored abroad*". In addition, it suggested the repatriation of the gold reserves. Indeed, the German central bank (Bundesbank) at the moment fully relies on the assurance of the various central banks where it stores its gold reserves (i.e. New York, Paris and London), but the bullion is not physically accounted for. The German Bundesrechnungshof has now recommended an annual audit of the gold reserves stored abroad. The German central bank has so far rejected this recommendation, stating that it was in no doubt regarding the integrity of the foreign storage sites.

German initiative calls for full and independently testified audit of German gold reserves

The initiative "Holt unser Gold heim" (Repatriate our Gold) has made more concrete demands. It calls for a full and independently testified physical audit of the German gold reserves at all storage locations. Moreover it demands the repatriation of the gold stored abroad in due course so as to achieve the option of a partial cover of a future currency. The initiative also demands the establishment of a special balance sheet status for the gold reserves, to be laid down by constitutional law, in order to protect the reserves from the risk of write-offs resulting from the dramatically deteriorated quality of the balance sheet of the German central bank since 2008.

Resistance has also emerged in the United Kingdom in the shape of the "Buy Britain's Gold Back" campaign[59], after 395 tonnes of gold were sold under Gordon Brown as Chancellor of the Exchequer. The average sales price was USD 275/ounce. Currently the UK owns more than 310 tonnes of gold, i.e. 17.6% of total central bank reserves. This puts the UK at 34th place in terms of per capita holdings. The island state of Aruba, for example, holds six times as much gold per capita.

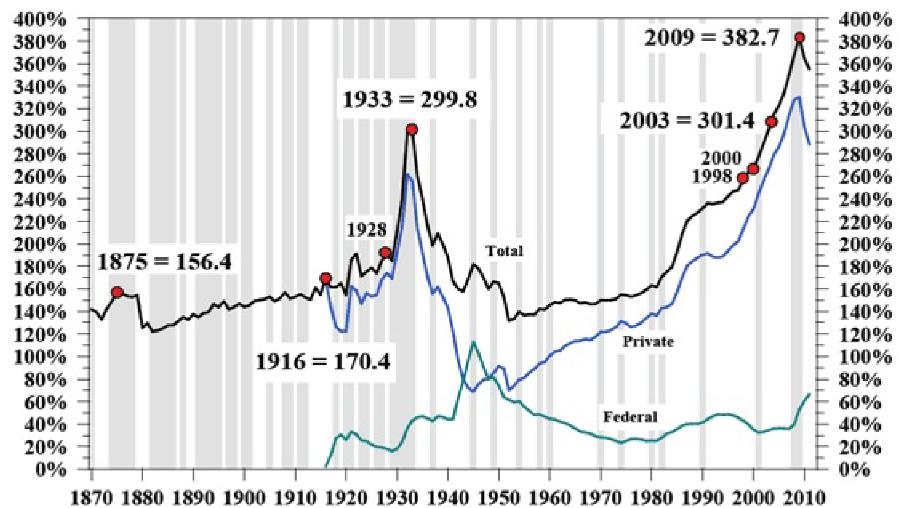
[59] *Please refer to "Buy Britain's Gold Back", Jan Skoyles, The Real Asset Co*

Excessive structural debt suggests further increase of the gold price

Debt problem in Japan and UK just as precarious as in the Eurozone

Even if market participants are currently focused on the debt problem within the Eurozone and its peripheral countries, the situation in the UK and Japan seems to be just as precarious. The Western world and Japan have amassed the highest level of debt ever in times of peace – although the demographic outlook is dire. The following chart shows the aggregate public and private debt in the USA since 1870. It is currently approaching 400% of GDP. The grey bars indicate recessions.

US total debt (private and public) since 1870



Sources: Hoisington, Bureau of Economic Analysis, Federal Reserve, Census Bureau

Many comments by the most important global organisations confirm this development of excessive debt growth. A few examples follow below:

*"The United States is facing an untenable fiscal situation due to the combination of high fiscal deficits, an aging population and rapid growth in government-provided healthcare benefits. IMF and Congressional Budget Office forecasts imply that **U.S. debt will rise rapidly relative to GDP in the medium to long term**".* This is the beginning of a working paper by the IMF called "An Analysis of U.S. Fiscal and Generational Imbalances: Who Will Pay and How?"[60].

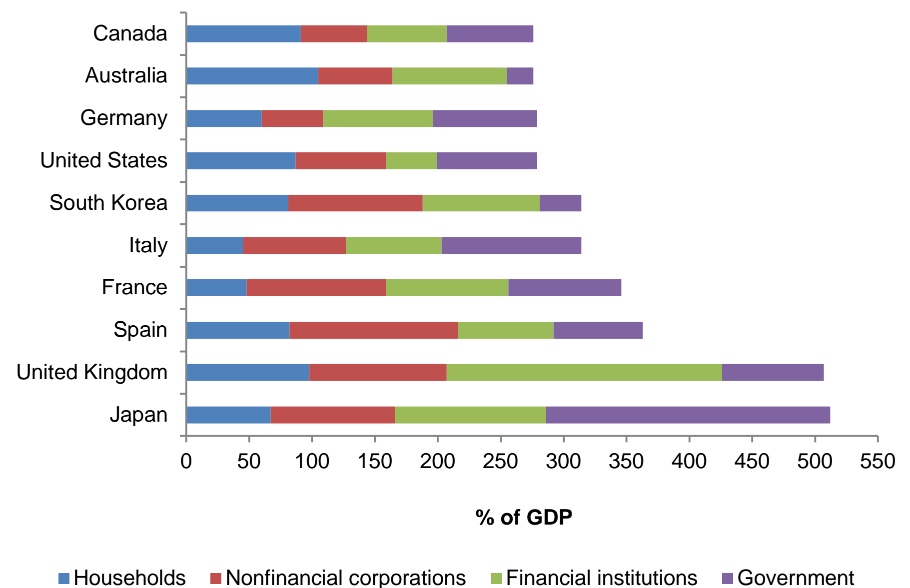
The BIS is equally unenthusiastic: "*The debt problem facing advanced economies is even worse than we thought… Debt is rising to points that are above anything we have seen, except during major wars. Public debt ratios are currently on an explosive path in a number of countries. These countries will need to implement drastic policy changes. Stabilization might not be enough"*[61]

… and the Congressional Budget Office (CBO) warns: *"The explosive path of Federal debt underscores the need for major changes to current policies"*[62]

[60] *http://www.imf.org/external/pubs/ft/wp/2011/wp1172.pdf*
[61] *Please refer to "The real effects of debt", Cecchetti, Mohanty und Zampolli, Bank for International Settlements, August 2011*
[62] *Please refer to CBO 2012 Long-Term Budget Outlook, June 2012*

But the following chart also shows that it is not only governments that have amassed excessive debt.

Debt of private households / financial institutions / companies and governments in % of GDP



Sources: Datastream, Bloomberg, OECD, Erste Group Research

When will the US reach the "bang point"?

According to OECD the USA reached 100% of aggregate public debt in terms of GDP last year. However, in the US itself the debt is broken down into, among others, debt held by the public, which is currently at 70% in terms of GDP. This means it has doubled since 2006. In fiscal 2011 public spending in the US amounted to USD 3,700bn, whereas revenues were falling short, at USD 2,400bn. Tax revenues covered only 65% of expenditure. Reinhart and Rogoff call this the "bang point", at which the confidence of creditors often tends to collapse.

"Facts do not cease to exist because they are ignored"
Aldous Huxley

Current government debt as of June 2012 amount to USD 15,700bn. This is equal to 300,000 tonnes of gold[63]. In fiscal 2011, US government debt had reached USD 14,790bn, with interest paid amounting to USD 454bn[64] at an average rate of interest of 2.9%. Within the past twenty years debt has increased by 350%, while the interest burden has only risen by 60%. If interest rates were on a similar level as in 1991, interest paid would have increased to USD 1,200bn. According to the CBO, government debt will rise to USD 20,000bn by 2015. At an interest rate of 5%, interest payments would then amount to USD 1,000bn, or 45% of current tax revenues.

When including the debt and guarantees given by states, authorities, pension funds, etc., we find that the picture of excessive debt looks even more dramatic. According to Prof. Laurence Kotlikoff the fiscal gap, i.e. the financing gap between the present value of all future expenditure and all future tax revenues, amounts to at least USD 200,000bn. This equals 14

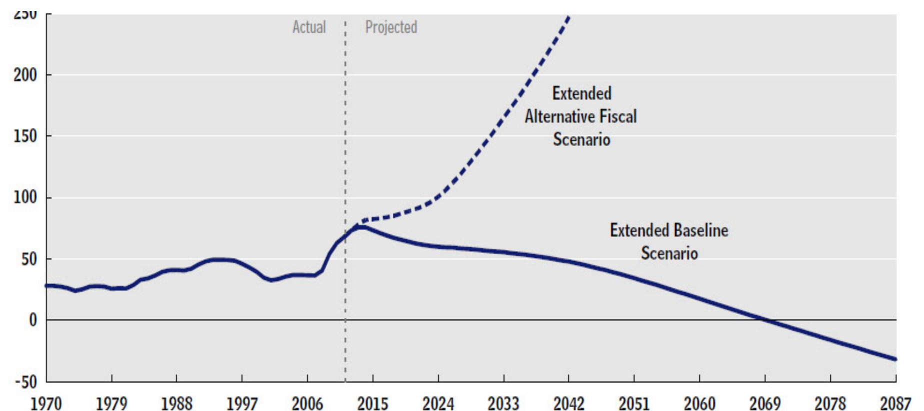
[63] 1 ton of gold currently priced at USD 51mn, US total debt outstanding as of May 2012: USD 15,690bn
[64] Please refer to http://www.treasurydirect.gov/govt/charts/charts_expense.htm

times the current GDP. In order to fill this gap, all taxes would have to be raised to 64% with immediate effect, or public spending would have to be cut by 40%. **According to the IMF[65], GDP would have to be adjusted by 14% every year.**

The Congressional Budget Office (CBO) has drawn up two different scenarios as far as the development of debt is concerned[66]. The "Baseline Scenario" assumes that the tax reliefs of the Bush Administration will not be extended and will thus expire (largely in 2013). This would automatically reduce the deficit and generate additional revenues of about USD 240bn per year. In this case, the federal debt would decrease from currently 73% of GDP to 61% in 2022 and 53% in 2037.

The "**Alternative Scenario**", on the other hand, is based on the assumption that the current regulatory framework and tax reliefs would be extended. In this scenario, federal debt[67] would increase to 90% of GDP by 2022. Only then does the CBO expect the growing imbalance between revenues and expenditure to cause an explosive increase in interest rates with debt skyrocketing to 200% of economic output by 2037.

Federal Debt held by the public: CBO Baseline and Alternative Scenario until 2087



Source: Congressional Budget Office

These figures sound sobering, and even more so if we take into account that the CBO estimates are already based on rather optimistic long-term forecasts. For example, the office expects a decline in unemployment to 5.7% from 2017 onwards. From 2018 to 2087 (!!), the unemployment rate is not supposed to rise above 5.5%. Annual inflation is expected at 2.5% until 2087, and nominal wage growth is estimated at 5.4% in 2014 and is expected to fluctuate within 3.7% and a maximum of 6% thereafter until 2087. **These forecasts somewhat remind us of the cost estimates prior to large construction projects that often come in at twice the budgeted amount.**

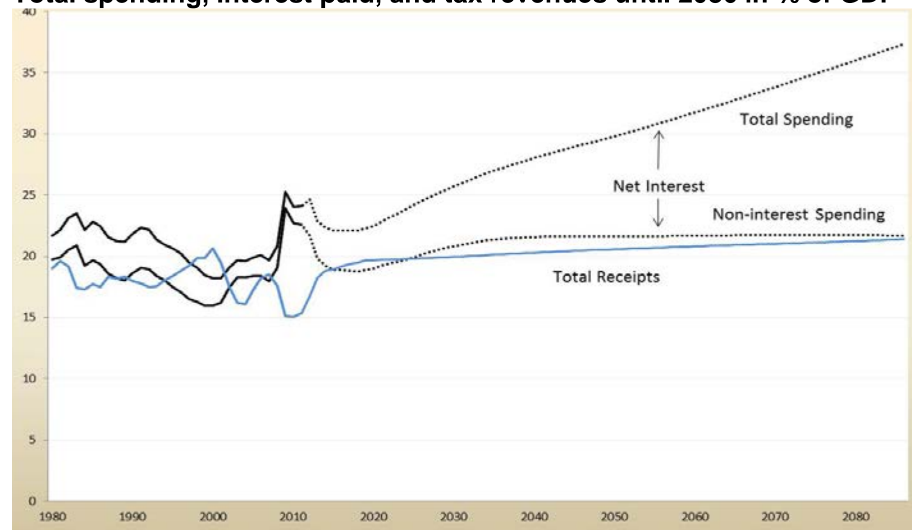
Most of the CBO forecasts are inclined toward the optimistic. For example, in January 2001 expectations were such that budget surpluses should have been achieved every year until 2012. As a result, the CBO

[65] *Please refer to "United States: Selected Issues Paper", IMF, July 2010*
[66] *Please refer to "The Long-term Budget Outlook", Congressional Budget Office, June 2010*
[67] *Debt held by the public*

envisaged US public debt to fall below USD 1,000bn by 2012. **In fact, the aggregate deficit amounted to USD 6,200bn, which means the CBO was out by USD 11,800bn.**

The Financial Report of the US Government for 2011[68] also contains numerous charts that illustrate the gloomy future of US finances. In the meantime, the majority of expenditure has been earmarked and is no longer discretionary. Due to drastically rising healthcare costs, the advancing retirement of the baby boomers, and rising life expectancy, costs for Medicare, Medicaid, etc., have increased rapidly.

Total spending, interest paid, and tax revenues until 2086 in % of GDP

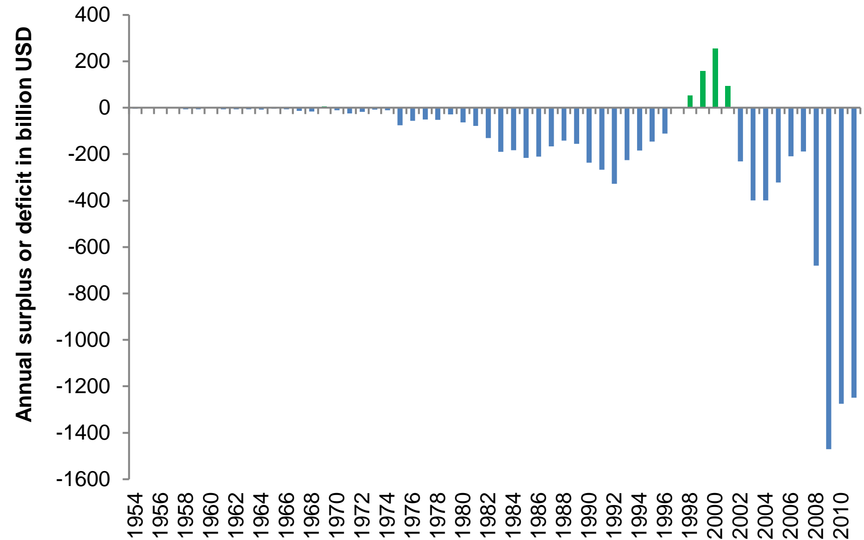


Source: 2011 Financial Report of the U.S. Government

Once it is no longer possible to produce a surplus even in times of economic prosperity, it becomes clear that the problems are of a systemic nature. Due to compound interest, debt can grow exponentially, which in the long run causes enormous problems. As soon as debt and interest rise at faster rates than revenues, a vicious circle of excessive debt is set off. **The sharply rising deficit clearly shows that the current path will have to be left at some point. The following chart shows the US budget surpluses / deficits since 1954. A surplus was only achieved in 8 out of 57 years.**

[68] *Financial Report of the U.S. Government for the Fiscal Year 2011*

Budget surplus / deficit in USD bn



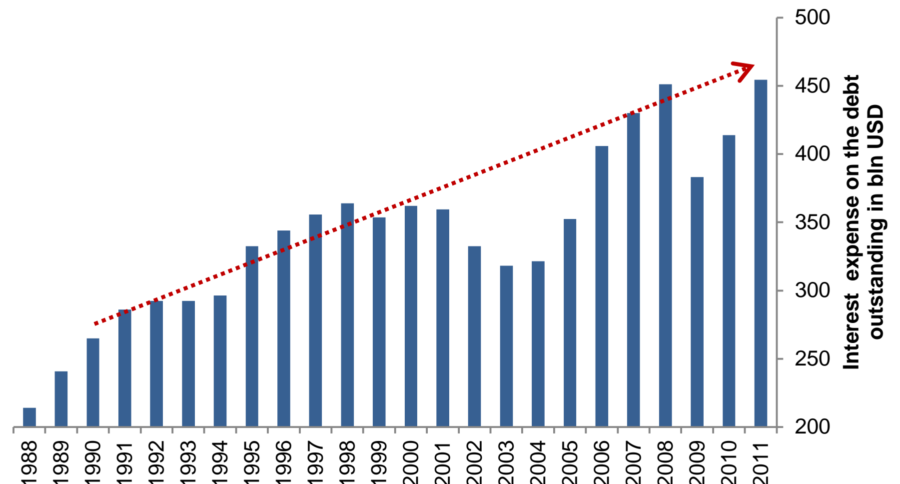
Sources: Datastream, Erste Group Research

Erroneous impression of high demand for US Treasuries

Today, the USA has three times as many Treasury bonds outstanding as ten years ago. In the meantime, the average interest rate has fallen from 6.1% to 2%. Is that a logical development? Hardly, seeing as last year 61% of all bond issues were bought by the Federal Reserve. In 2008, it had been an insignificant percentage. This results, on the one hand, in an erroneous impression of high demand, and on the other hand, it downplays the urgency of slashing debt and getting structural reforms underway.

We believe that interest rates cannot/will not be allowed to rise significantly, due to the dimensions the debt volume has already reached. An increase of 0.5% per year, combined with new debt of USD 1,500bn p.a. as before would double the debt of the US within the next decade to USD 30,000bn. If interest rates were to rise to 7%, the debt service would quintuple over the next decade, to USD 2,000bn. To put this number into context: total tax revenues in 2011 amounted to USD 2,400bn.

US Treasury federal budget yearly interest expense on the debt outstanding (in USD bn)

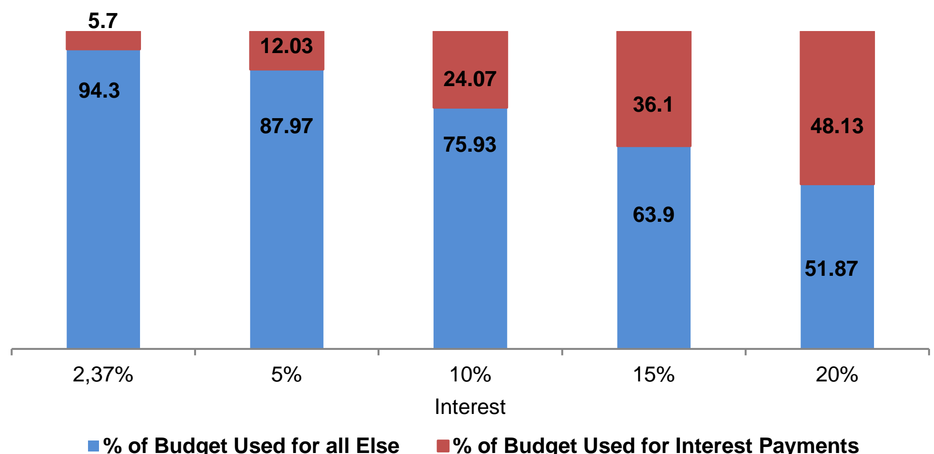


Sources: Bloomberg, Erste Group Research

***"He who goes borrowing, goes sorrowing"*, Benjamin Franklin**

The following chart shows the percentage of interest payments in terms of total budget along with varying interest rate levels. In fiscal 2010 the average interest rate was 2.37%, which translated into total interest payments of 5.7% in terms of the overall budget. The calculations are based on the current level of debt, which means that the expected further trillions of deficits are not included. But the model still shows how dramatic the consequences of even a rise in interest rates to 5% would be for the budget. And if interest rates were to soar to the level of the end of the previous bull market, interest payments would eat up almost half of the budget. **Those are purely hypothetical considerations, but they illustrate how little wiggle room there is for a significant rise in interest rates.**

Share of the budget used for interest payments in %



Sources: Casey Research, Erste Group Research

Economic output can no longer be stimulated by taking out additional debt

Taking out new debt seems to have an increasingly counterproductive effect. It seems as if the marginal return on GDP per additional unit of debt were gradually declining. This means that economic output cannot be stimulated by taking out additional debt any longer. **As soon as the dose of debt cannot be stepped up accordingly anymore or indeed this course of treatment has to be discontinued altogether, the withdrawal effects will be painful. Gold should come out of this situation on the winning side.**

"*The future is purchased by the present*", Samuel Johnson

Excessive debt causes the room available to the government to shrink, because the amount of debt service eats up an ever-growing portion of public spending. David Hume already described this scenario in his essay "Public Credit" (1752): excessive debt leads governments to pawn their future revenues and to lapse into a *state of faintness and incapacitation*[69]. A number of concrete examples substantiate this notion: in Germany, the three cost segments of social benefits, public sector pay, and interest and redemption of debt account for almost 75% of the federal budget. This means that only a quarter of tax revenues provide room to manoeuvre[70].

[69] *Please refer to "Face the music", Interview with Dr. Lacy Hunt, Welling@Weeden*
[70] *Please refer to Erwin Grandinger, "Die Welt", June 2012*

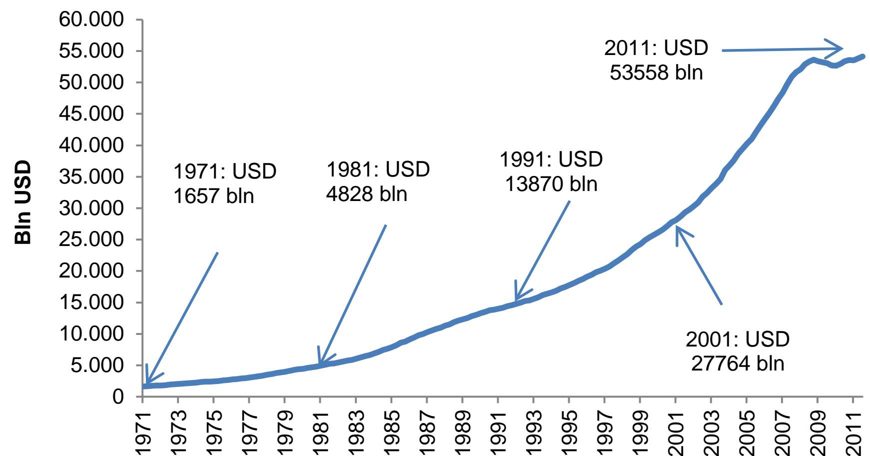
Budget for the current fiscal year will produce a deficit of USD 1,300 bn – an amount that would have exceeded the entire budget in 1990

As is the case for every trend, the dynamics seem to accelerate towards the end. Dimensions change quickly: at the end of the previous large gold bull market in 1980, US government debt exceeded USD 1,000bn for the first time in history. Today public debt amounts to USD 15,000bn – with USD 1,000bn being added in only the past eight months. The budget of the current fiscal year will produce a deficit of USD 1,300bn – an amount that would have exceeded the entire budget in 1990. During Barack Obama's term in office, public debt has increased by more than USD 5,000bn – the same amount of debt that had been amassed over a period of 211 years from George Washington's inauguration in 1789 to Bill Clinton's second term. The average deficit between 2000 and 2007 amounted to USD 174bn, while the annual shortfall has come to an average of USD 1,160bn since 2008.

***"The greatest shortcoming of the human race is our inability to understand the exponential function"* Albert Bartlett**

The following chart shows the increase in dynamics. Public debt today is more than 5,000 times that of 1913, when the Federal Reserve was established. On the following chart we can see that "total credit market debt owed" would double every decade. **We are currently seeing some sideways consolidation, but if this pattern continued, the USA would be faced with a total debt of USD 107,116bn in 2012.**

Total Credit Market Debt Owed since 1971

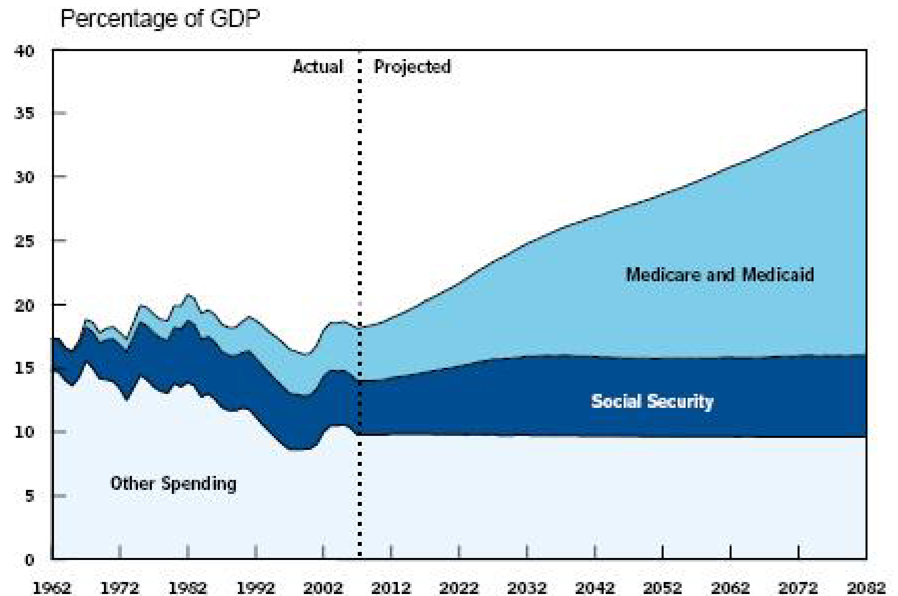


Sources: Federal Reserve St. Louis, Erste Group Resesarch

***"We can guarantee cash benefits as far out and at whatever size you like, but we cannot guarantee their purchasing power"* Alan Greenspan on funding Social Security to Senate Banking committee**

The aging population and the drastic increase in Medicare and Medicaid costs will require a shifting point of view in terms of budget policy. According to the CBO, healthcare expenses have increased from 4.8% in terms of the total budget in 1960 to currently 17%. Medicare and Medicaid expenses have increased from 2.2% in 1985 to currently 5.5%. From 2001 to 2010, Medicaid expenses increased by an average annual 8.6%.

Projected federal spending over the long term (in % of GDP)



Source: Center for Economic and Policy Research

Worrying demographic reality…

Because of medical progress and improved access to medical services, life expectancy has increased dramatically. When the Social Security Act was signed in 1935, average male life expectancy in the USA was 59.4 years. Nowadays it is almost 76 years for men. Female life expectancy has increased from 63.5 to 80 years during the same period. This has of course led to an increase in the duration of retirement. In 1935, a 65-year old woman would live for 13 more years after retiring, today this number has increased to 19 years. According to official forecasts, by 2100 the number of years in retirement will have risen to 24[71]. Retirees and welfare recipients already account for 59% of taxpayers, up from 47% in 2008. Over the coming 19 years, 10,000 baby boomers will turn 65 every day and thus reach retirement age.

…not only in the US

The aging population is gradually turning into a sword of Damocles for the public finances in most industrial nations. According to the study "Global Aging 2010 – An Irreversible Truth" [72] by S&P, which analysed 32 OECD countries and 17 emerging markets, the burden caused by pensions, healthcare, and eldercare will dramatically push up debt in the industrialised nations. For example, net debt in Germany will increase from 75.2% in 2010, to 97.1% in 2020, to 155% in 2030, to 254% in 2040, and to 400% in 2050. **Therefore, for almost all industrial nations a considerable increase in the retirement age would be required. Although this would lead to significant distortions on the labor market.**

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[71] *Please refer to "Commodity Phase Shift", Global commodities Research, JP Morgan, August 2011*

[72] *http://www2.standardandpoors.com/spf/pdf/media/global_aging_100710.pdf*

Proposals for solution– BCG recommends haircut based on "Mesopotamian model"

BCG suggests haircuts on basis of the "Mesopotamian model"

In the study "*Back to Mesopotamia? The Looming Threat of Debt Restructuring*"[73], which we highly recommend, the Boston Consulting Group suggests the cancellation of debt ("a haircut") on the basis of the Mesopotamian model. According to the authors, the current policies are simply geared towards gaining time. They claim that "*kicking the can further down the road",* i.e. continuing to muddle through, is no sustainable strategy. **At some point, politicians have to realise that the restructuring of debt is unavoidable.**

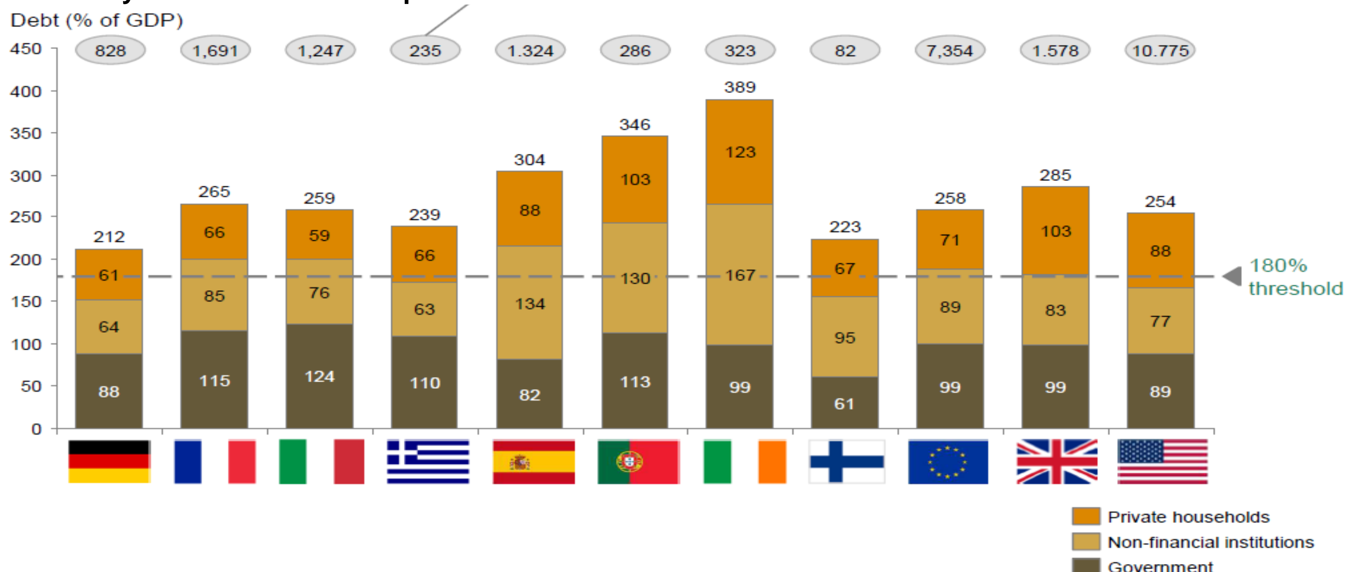
Haircuts were aimed at avoiding an insurrection among the population that was suffering from the load of debt

The authors look at the cancellation of debt in ancient Mesopotamia. At the time, debt was recorded on clay boards. A new emperor would accede to the throne by granting a comprehensive cancellation of debt and amnesty. All debt was declared void and crossed off the clay boards. This was aimed at avoiding an insurrection among the population that was suffering from the load of debt. BCG recommends a similar model to resolve the current debt crisis. **The authors point out that a normal deleveraging process is difficult on account of the excessive amount of debt and the fact that due to the demographic structure and the anaemic growth rates the outstanding debt simply cannot be reduced.**

Almost EUR 20 trillion would have to be written off

BCG recommends a level of debt of 180% in terms of economic output. The public sector, the corporate sector, and private households should account for one third each. At an interest rate of 5% and nominal economic growth this is an acceptable amount. The Eurozone currently exceeds these limits by EUR 7,300bn, the UK by EUR 1,500bn, and the US by EUR 10,700bn.

Necessary haircut to reach 180 percent debt-to-GDP ratio



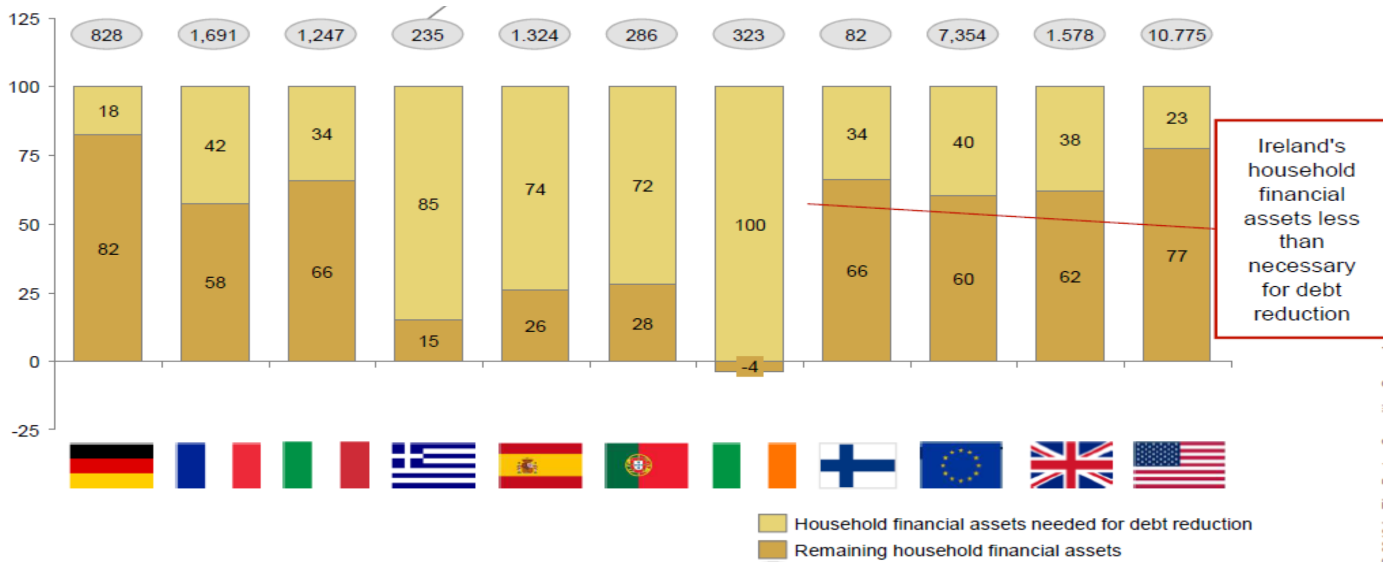
Sources: BCG, Eurostat, Federal Reserve, Thomson Reuters Datastream

In order to finance the reduction of debt, BCG recommends a one-time tax for people with assets in excess of EUR 100,000. For Germany, the consultancy group suggests a tax of 17.8% on all financial investments held by the private sector. In the UK BCG regards 38.2% as doable, and in the US

[73] *http://www.bcg.de/expertise_impact/PublicationDetails.aspx?id=tcm:89-87238*

22.2%. After this seizure of assets, the group recommends a cutback of income tax and the abolition of all current taxes on assets[74].

Necessary debt reduction to reach sustainable debt to GDP ratio (in EUR bn)



Sources: BCG, Eurostat, Federal Reserve, Thomson Reuters Datastream

Conclusion

"***In levying taxes and in shearing sheep it is well to stop when you get down to the skin*", Austin O'Malley**

A wrong diagnosis of causes leads to wrong solutions. The systemic problem is not low tax revenue, but excessive spending. Additional tax hikes will never consolidate the public budgets in the long run. This can only be achieved by structural reforms in the spending department. **According to Schlesinger saving is tantamount to holding back on consumption in the present in order to be able to consume more in the future. The opposite is true for credit, where today's benefit is bought with tomorrow's shortcoming.**

"***To think output and income can be raised by increasing the quantity of money is rather like trying to get fat by buying a larger belt*" John Maynard Kenyes in a letter to Franklin D. Roosevelt**

Although we are currently faced with the highest level of public debt in times of peace, a far-reaching consolidation of public budgets does not seem to be up for discussion. The required grave cutbacks are being postponed, and the policy of "muddling through" is cheerfully continued. The longer structural and far-reaching reforms are postponed, the more substantial will be the need for adjustment and thus greater the burden on future generations. According to the Austrians every act of consumption has to be preceded by production first. *"Debt is nothing but consumption brought forward which will then not take place in the future"*[75]. **There does not seem to be a painless therapy for these problems. We believe that gold is an effective medicine.**

Therefore we expect interest rates to be kept low for an extensive period of time, with the Fed remaining expansive. This is one of the strongest arguments in favour of a continued low or indeed negative level of real interest rates and thus for a rising gold price.

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[74] *Please refer to "Boston Consulting Group erwartet generellen Schuldenerlass" (Boston Consulting Group expects general cancellation of debt), Rainer Sommer*
[75] *Hjalmar Schacht*

Financial repression: the alleged magic formula

"National bankruptcy is a one-off surgical procedure, whereas inflation is an ongoing poisoning of the blood." Felix Somary[76]

The majority of Western nations are faced with the choice of rigid austerity measures, massive tax hikes, national bankruptcy, or extensive financial repression. By the method of exclusion we can quickly find the supposed magic formula, given that the political implications of rigid austerity measures and drastic tax hikes are largely unpopular and squarely at odds with the goal of getting re-elected. On top of that, drastic austerity measures tend to result in social upheaval. According to Bridgewater the frequency of protests, strikes, and social unrest increases sharply as soon as annual public spending is cut by more than 3% of GDP[77].

"*Make no mistake: We have instruments of torture in the cellar, and we're going to show them, if necessary*" Jean Claude Juncker

We already discussed financial repression as a perfidious form of redistribution last year. Given that the signals have become more frequent since then, we will now discuss further aspects of this kind of policy. Financial repression always means a combination of incentives and restrictions for banks and insurance companies, which cause the investment universe to be substantially reduced for investors. This means that capital is channelled away from the asset classes that it would flow into in a more liberal environment. This is also supposed to create a home bias[78]. Financial regulation constitutes an important aspect.

The pillars of financial repression:

- Stringent investment criteria (Solvency II, Basel III); for example, under the pretence of more attractive liquidity ratios, European government bonds do not have to be underlaid with equity
- **Negative real interest rates**
- Interest caps (i.e. randomly imposed, artificial maximum rates), as a result of which long-term interest rates are substantially lower than the fundamental picture would suggest
- Establishment of a more or less direct control of lending policies
- Nationalisations
- Capital transaction controls (e.g. China)
- Ban on unwanted trading practices, e.g. naked short-selling
- Compulsory bonds
- Ban on the possession of certain assets (gold?)
- Special taxes (financial transaction tax, property tax etc)
- Manipulation of the CPI
- Rising discrepancy between financing costs for private households and government

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[76] *Please refer to "Erinnerungen aus meinem Leben", (Memoirs of my life), Felix Somary*
[77] *Please refer to "Presenting Bridgewater's Weimar Hyperinflationary Case Study", Zerohedge.com*
[78] *Please refer to "Financial Repression Redux", Carmen Reinhart, Jacob Kirkegaard, M. Belen Sbrancia, IMF*

***"Zero interest rates are like antibiotics. The effectiveness wears off over time, you need to take more and more to achieve less and less, and eventually they stop working*" **Simon Mikhailovich**

Negative real interest rates of course reduce interest rate expense and existing debt. Unpopular measures such as VAT or income tax hikes or cuts in public spending can thus be avoided or postponed. This means that negative real interest rates are a transfer from savers to debtors[79]. According to a report by the IMF, some countries are in a position to handle inflation rates of up to 6%. The following example illustrates the extent of silent dispossession: at such a rate, assets worth EUR 1,000,000 shrink to EUR 558,000 within ten years.

Regulations create incentives to hold "safe" government bonds

The financial market regulations Basel III and Solvency II also play an important role given that they contain artificial incentives for holding government bonds. The risk weighting of government bonds issued by EU members is zero. Financial institutions such as insurance companies and banks are coerced by the new Capital Requirements Directive into massively stepping up their holdings of (allegedly) safe government bonds, given that this is the only way to meet the risk criteria. "Risky" investments such as stocks or commodities on the other hand have to be underlaid with equity.

"The fact that we now face twin deleveraging makes it much less likely that financial repression will coincide with strong growth and sustainable asset price returns this time." **Hans Lorenzen**

Financial repression was playing an important role as early as after WWII during the phase of debt reduction. The US managed to cut its debt in terms of GDP from 116% to 66% between 1945 and 1955. The average inflation was 4.2%, real interest rates were -0.8%. But one has to bear in mind that the boom that was created by rebuilding after the war was responsible for a large part of the economic upswing. In addition, demographic conditions were much more favourable, and private household debt was comparatively low.

Debt liquidation via financial repression

	Government debt/GDP			Annual average 1946-1955	
	1945	1955	1955 without "savings from repression" (estimate)	"Income from financial repression " / GDP	Inflation
Australia	143.8	66.3	199.8	6.2	3.8
Belgium	112.6	63.3	132.2	4.6	8.7
Italy	66.9	38.1	81.9	3.7	10.8
Sweden	52	29.6	59.1	1.8	5
UK	215.6	138.2	246.9	4.5	5.9
USA	116	66.2	141.4	6,3	4,2

Sources: Carmen Reinhart, Belen Sbrancia, The Liquidation of Government Debt, NBER, 2011

***"Financial repression is a tactic that may help get us through the week or month or year. But it will come at a substantial cost to our long-term prosperity.*" **Kevin Warsh**

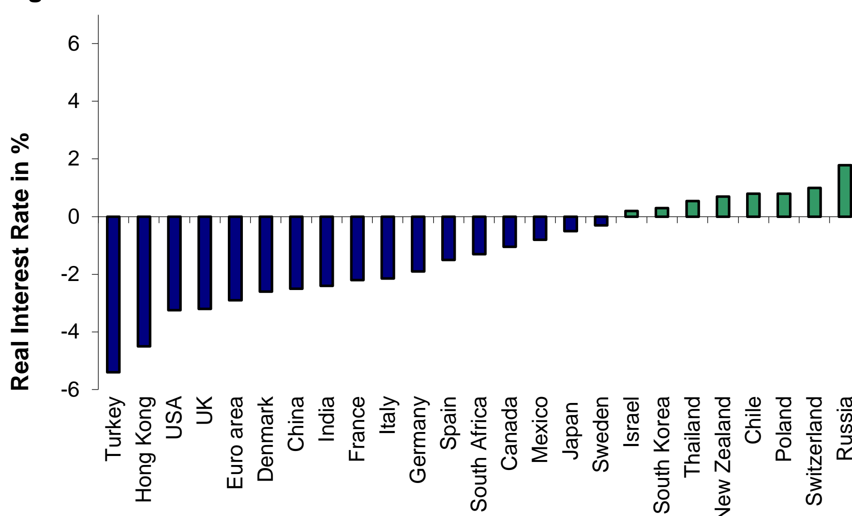
Numerous political protagonists have confirmed the fact that financial repression will represent the strategy of choice in the coming years. Kevin Warsh, former Fed governor, said that the political decision-makers were enticed by the instrument of financial repression. It helped depress the prices of unwanted assets. With the help of various incentives and regulations, investors should be pushed into specific asset classes (government bonds in the first line).

[79] *Please also refer to "The Liquidation of Government debt", Carmen M. Reinhart, M. Belen Sbrancia, April 2011, IMF*

According to Warsh, this was the wrong policy, seeing as prices were sending the wrong signals to market participants. This will speed up the erosion of confidence. From his point of view, the big economies do not have *rating problems*, but *debt problems*. Every percentage point of higher interest rates would translate into an increase of debt service of a total of USD 1,000bn over a 10Y horizon[80].

Warsh pointed out that the efforts made to manage and manipulate asset prices were nothing new. That said, history had shown that that kind of policy was only buying time – at high prices no less. **Windows of opportunity had hardly ever been used to decide on, and implement, structural reforms. Long-term growth should be prioritised over fleeting attempts of stabilisation.**

The following chart illustrates the fact that negative real interest rates are global now

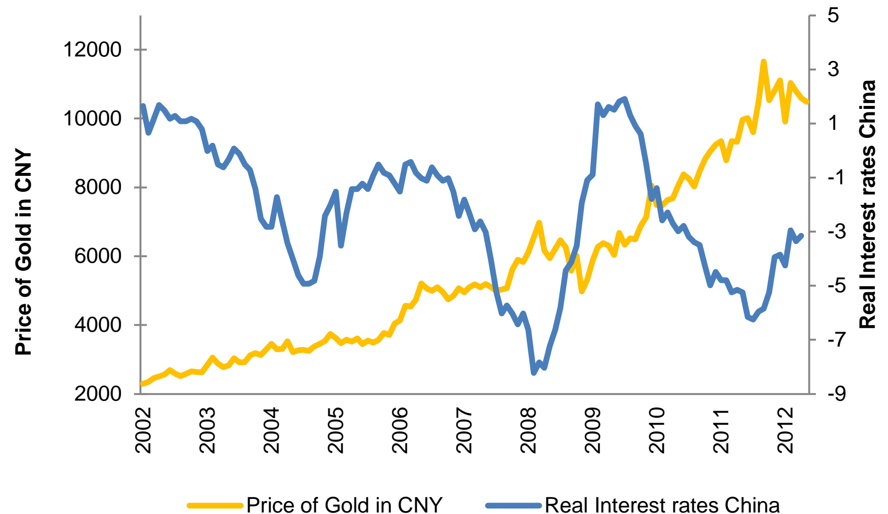


Sources: Erste Group Research, Bloomberg

China, too, has been resorting to financial repression since 2000. Capital controls and negative interest rates play a central role. In February 2002, interest rates were fixed at 0.72%, and were then kept there for almost seven years. At the beginning of 2008 (official) inflation was already 7.9%, which translated into a negative real interest rate of -7.2%. This also explains why consumption collapsed as part of Chinese GDP. Back in the 1980s it had accounted for 50% of GDP, while by 2010 the share had fallen to 34%. The share of the public sector was growing proportionately over the same period of time[81]. It therefore comes as no surprise that China has meanwhile worked its way to the top of the list in terms of gold consumption.

[80] *Please refer to Kevin Warsh, "The "Financial Repression" Trap", Wall Street Journal, December 2011*
[81] *Please refer to Hugh Hendry, Eclectica Fund, April 2012*

Real interest rates vs. gold price in China



Sources: Erste Group Research, Datastream

In Argentina, President Kirchner took unconventional measures. The official rate of inflation was 10%, although realistically it should have been around 25%. But seeing as the Big Mac index, which makes it possible to compare worldwide purchasing power parities, recorded an inflation rate of almost 20% and this was equal to twice the official rate of inflation, McDonald's was simply "persuaded" to lower its prices accordingly. It seems that Argentina is now the only country where the competing Whopper at Burger King costs almost 30% more than the Big Mac. This means of course that, if money is an issue, fast food aficionados may want to opt for the Big Mac in Argentina. **This anecdote shows the degree of inventiveness that goes into concealing the actual rate of price rises [82].**

Further concrete examples of financial repression:

- In Italy, the withholding tax on capital gains was increased, with the exception of gains resulting from investments in government bonds. This means there is a clear incentive to invest in government debt.
- Argentina seized control over private pension funds in 2008.
- In France, it was illegal to buy German government bonds until the 1980s.
- The UK made it compulsory for banks, pension funds, and asset management companies in 2009 to step up their holdings in British government bonds. Therefore the (partially nationalised) British banks, which traditionally did not hold a large amount of British government bonds (gilts), increased the volume of gilts in their portfolios by GBP 100bn. This is equal to more than 15% of the net increase in outstandings in recent years.
- In Japan banks do not have to underlay Japanese government bonds with any equity. At the same time (even currency-hedged) foreign bonds may not be accounted for as liquid funds.

[82] *Please refer to Flossbach & von Storch – Big Mac Repression*

Conclusion

Pan para hoy y hambre para mañana…

We believe that financial repression will continue to crop up in many shapes and sizes over the coming years. However, the long-term costs of the lack in efforts made towards consolidating national finances are substantial. While low bond yields in the short run suggest that the saving measures are on course, one has to bear in mind that this has mainly been achieved by market interventions. Therefore, we regard the gradual transfer of assets – a rather euphemistic term for gradual dispossession – as a disastrous strategy in the long run. What happens is that none of the previous problems of misallocation are resolved, but instead redistribution takes place (at the beginning mostly invisibly) and problems are dragged out, having to be addressed later.

As the dependence on these measures rises, so does the collateral damage to be expected later, and **the seeds for an even bigger crisis have been sown.**

Negative real interest rates mean perfect environment for gold

Cantillon effect describes the fact that newly-created money is distributed neither equally nor simultaneously

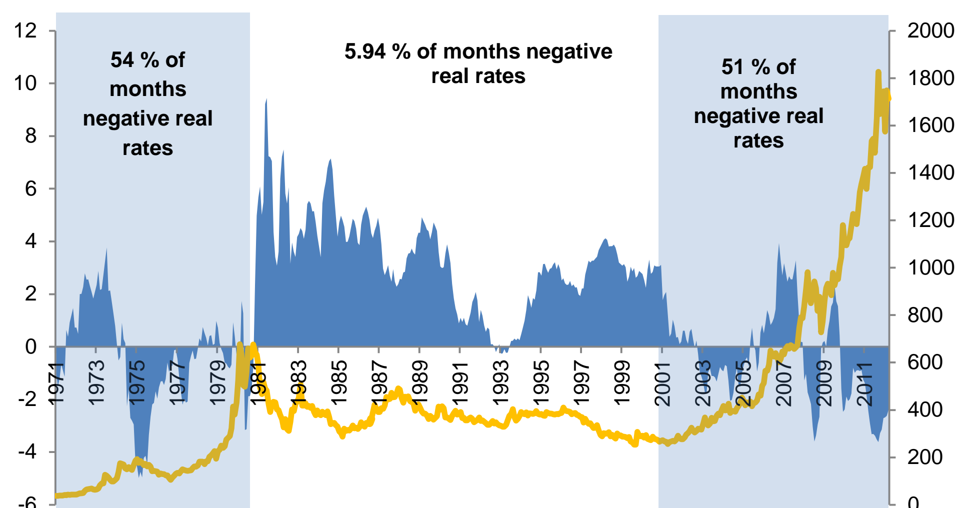
Inflation is a regressive tax, i.e. the opposite of a progressive income tax. The poorer you are, the higher your contribution is. The purchasing power of income decreases, which is why inflation can also be regarded as a redistribution tax. In this context, the so-called Cantillon effect is highly relevant. This effect describes the fact that newly-created money is distributed neither *equally* nor *simultaneously* among the population. This means that people handling money partially benefit from inflation and partially suffer from it. Monetary dispersion is never neutral. Market participants who receive the new money early and exchange it for goods benefit in comparison with those who get the newly-created money later. **We can see a transfer of assets from late money users to early money users.**

The reason for showing lower inflation is elementary. Numerous expenditures hinging on national insurance, government transfers, the salaries of civil servants, food stamps etc. depend on valorisation. In this way, real GDP growth is also manipulated up, since nominal economic growth is divided by the price index. Even if we are generally told that “an inflation rate of 2% is healthy”, this still translates into a loss of purchasing power of 50% within the course of 35 years. An annual inflation rate of 10% causes the monetary value to decrease by 50% every seven years.

Negative real interest rates represent the perfect environment for gold

So what does all that mean for gold? Last year, we described in detail why negative real interest rates represented a perfect environment for the gold price. During the 20 years of the gold bear market in the 1980s and 1990s, the average real interest rate level was around 4%. Real interest rates were negative in only 5.9% of all months. The situation in the 1970s, however, was completely different: real interest rates were negative in 54% of the months. Since 2000 real interest rates have been negative for 51% of the time, which constitutes an optimal environment for gold. **Due to the facts described in the previous chapters we believe that this trend will continue.**

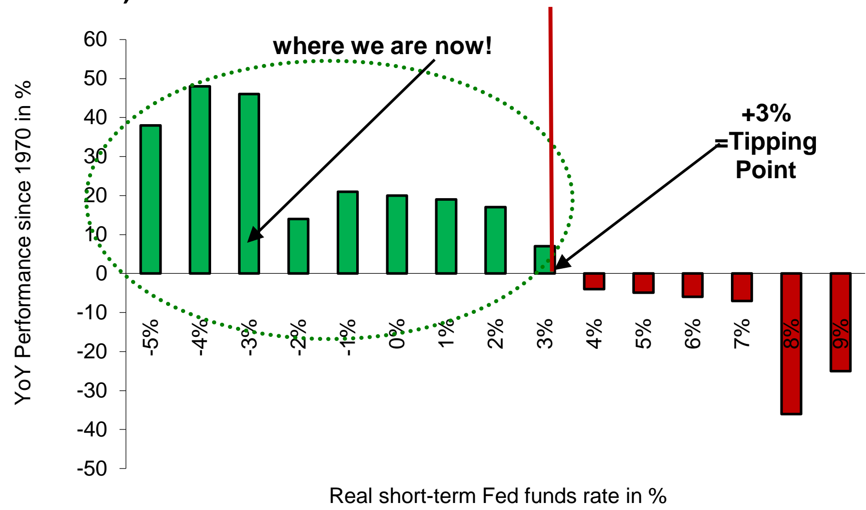
Gold (right scale) vs. real interest rates (lefts scale) since 1971



Sources. Erste Group Research, Datastream

The following chart illustrates the average annual development of gold amid various levels of real interest rates. Clearly, the performance turns negative from a positive real interest rate of 3-4% upwards.

Annual performance of gold amid different levels of real interest rates (from 1970)



Sources: Deutsche Bank, US Global Investors, Erste Group Research

The Asian love affair with gold

"*Gold goes where the money is; it came to the United States between World Wars I and II, and it was transferred to Europe in the post-war period. It then went to Japan and to the Middle East in the 1970s and 1980s and currently it is going to China and also to India*" James Steel

Gold has always abandoned regions of stagnating wealth, heading instead for prospering economies and rising savings volumes. In 1980 Europe and the US accounted for 70% of gold demand, since then this share has plummeted to below 20%.

The following table shows the changes in demand from 2000 to 2011. In absolute terms, i.e. tonnes, China recorded the biggest increase (+518 tonnes), followed by Europe (+232 tonnes) and India (+210 tonnes). In terms of percentage, Germany topped the list at +921%, followed by China (+177%), and Europe ex-CIS (+163%). The figures also highlight the relative insignificance of European and US demand relative to Asia and the Middle East.

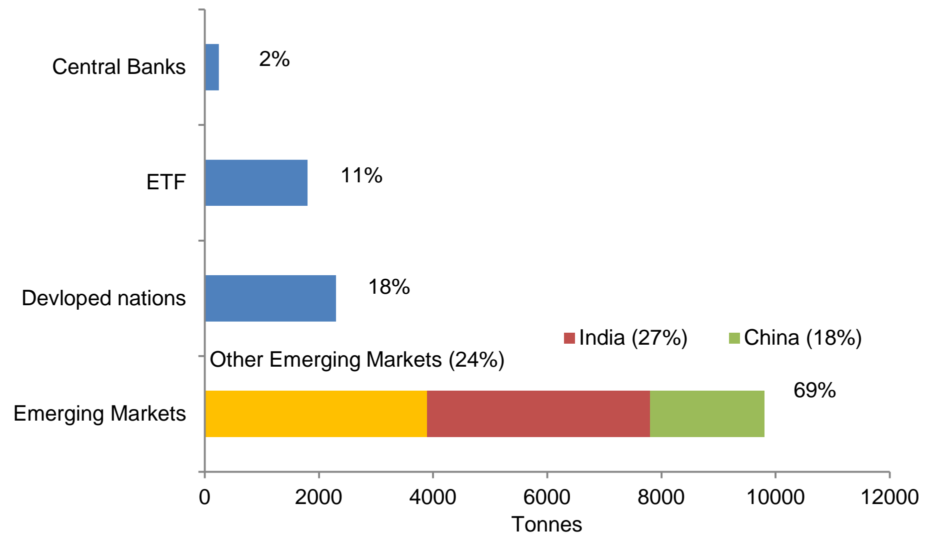
	2011		2000		Change b/w 2000-11	
	Tonnes	%	Tonnes	%	Tonnes	%
India	933.4	27.1%	723	21.6%	210.4	29.1%
Greater China	811.2	23.5%	292,6	8.8%	518.6	177.2%
Japan	-24.4	-0.7%	105.1	3.1%	-129.5	-123.2%
Middle East	199.8	5.8%	457.9	13.7%	-258.1	-56.4%
Turkey	144.2	4.2%	177.4	5.3%	-33.2	-18.7%
USA	194.9	5.6%	368.5	11.0%	-173.6	-47.1%
Europe ex CIS	374.8	10.9%	142.4	4.3%	232.4	163.2%
Germany	159.3	4.6%	15.6	0.5%	143.7	921.2%
UK	22.6	0.7%	75	2.2%	-52.4	-69.9%
Italy	28.8	0.8%	92.1	2.8%	-63.3	-68.7%
France	8.4	0.2%	19	0.6%	-10.6	-55.8%
Others	816.1	23.7%	1076.2	32.2%	-260.1	-24.2%
Total jewellery + investment	3450	100%	3343.1	100%	106.9	3.2%

Sources: Erste Group Research, World Gold Council

Emerging markets account for more than 70% of physical gold demand

Within the past five years the share of the emerging markets in terms of total gold demand increased to 70%, with China and India accounting for more than half of that. Years of financial repression, an unstable monetary system, and the resulting loss in purchasing power, combined with cultural and religious aspects, seem to have been the decisive factors. The following chart clearly shows the dominance of the physical demand coming from the emerging markets over the past four years and how insignificant the demand from the industrialised nations has been in comparison.

Aggregate gold demand 2007 to 2011

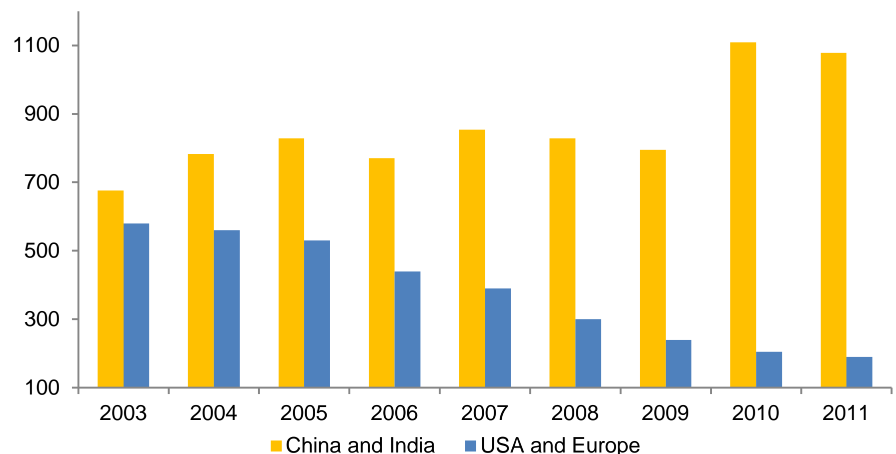


Sources: Bloomberg, Erste Group Research

Increasing welfare and rising savings rate explain rising demand from "Chindia"

The increasing welfare and the gradually rising propensity to save, i.e. the savings ratio, in the emerging countries are the crucial factors for this paradigm shift. In China, said ratio increased from 40% in the 1990s to 49% in 2010. In India, it rose from 22.4% to 30% over the same period of time. According to GMO, total savings increased during that time from USD 557bn to USD 3,400bn in 2010[83]. Therefore, it comes as no surprise that China and India have meanwhile turned into by far the most important gold consumers. The clearly growing gap between demand in "Chindia" and that in the US and Europe is also highlighted by the following chart.

Jewellery demand China and India vs. US and Europe (in tonnes)



Sources: Pierre Lassonde, World Gold Council, Erste Group Research

Number of HNWI's will continue to rise

According to a CLSA study[84], 1.2mn high-net-worth individuals (HNWI) currently live in Asia (ex Japan). These are individuals with investable assets of more than USD 1mn. That share corresponds to 0.06% of the population, and it should increase by a factor of 2.4 in the coming five years.

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[83] *Please refer to "Emerging thoughts. Emerging consumers drive gold prices: who knew?", GMO*
[84] *Please refer to "Wealthy Asia", CLSA*

In India, average net worth has increased over the past decade from USD 2,000 to USD 5,500. Private debt amounts to USD 260 per capita. The number of millionaires rose by 34,000 only in 2011. In China, average net worth increased from USD 6,000 in 2000 to more than USD 21,000 in 2011. Overall, China is now ranked third in terms of private household net worth worldwide, 22% behind Japan, and 44% ahead of France.

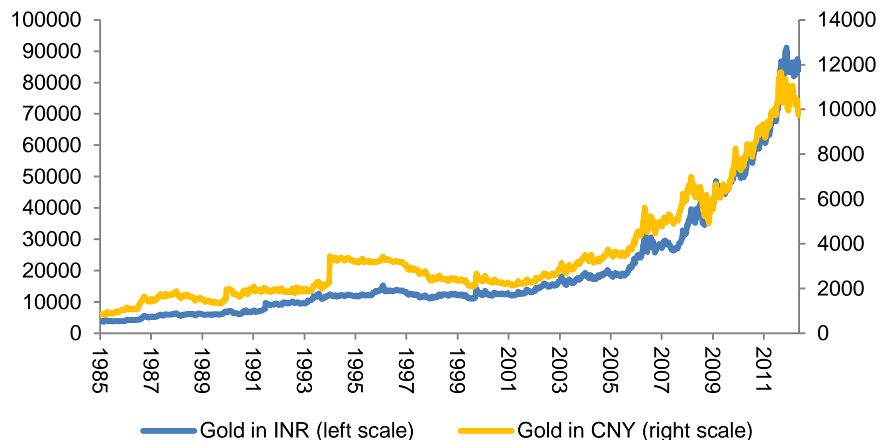
"*If India sneezes, the gold industry will catch a cold*" Ajay Mitra

In India, there are 21 different terms for gold. No other country in the world has a similar soft spot for the metal. Estimates put the private Indian gold reserves at more than 20,000 tonnes, or USD 1,000bn in value terms. Last year India accounted for almost 27% of global demand, with jewellery making up 61% thereof, and coins, bullions, and other investments accounting for the rest.

Indian jewellers went on strike because of proposed hike of import taxes

But the annual gold imports also mean an enormous burden for the Indian balance of payments. Due to intensifying budget problems the Indian government doubled import duties on gold at the beginning of the year. After another hike announced in April, Indian jewellers went on a 3-week strike. More than 90% of the jewellers participated, which impressively highlighted their aversion to this measure. It was the first nationwide strike in seven years.

Gold price in Indian rupee (left scale) and Chinese yuan (right scale) since 1985



Sources: Datastream, Erste Group Research

Turkish population holds more than 5,000 tonnes of gold

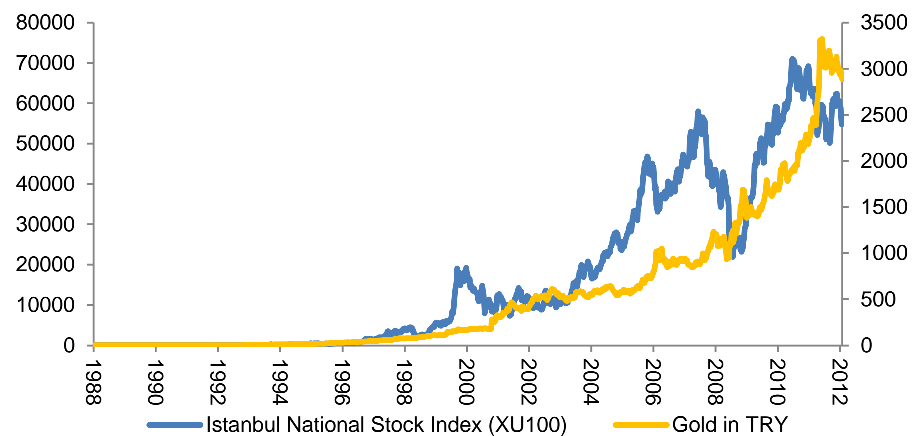
Turkey, too, is one of the biggest gold consumers. According to the World Gold Council, Turkey accounts for the fifth-largest jewellery demand and has the eighth-largest retail market. The Turkish population holds more than 5,000 tonnes of gold, i.e. USD 250bn. The majority thereof is held as jewellery outside of the banking system.

Not only the Turkish population buys gold, but the central bank as well

Last year, gold purchases were up almost 100% on 2010, in spite of the weak Turkish lira. Investment demand exceeded jewellery demand for the first time. Not only the Turkish population has stepped up its accumulation of gold reserves, but the Turkish central bank as well. In April alone it bought 29.7 tonnes and now holds gold reserves of about 239 tonnes or 13.7% of the total central bank reserves.

Gold is a traditional and time-proven form of saving in Turkey. From 1965 to 2010, annual inflation amounted to 40%, with prices multiplying in triple-digits in 1980 and 1995. The following chart juxtaposes the development of gold and Turkish equities. Equities gained 642,083% (including dividends), i.e. 43.44% per year, and gold was up 577,115% or 42.71% per year. **This illustrates the development of tangible goods in an environment of high inflation.**

Gold in Turkish lira vs. Turkish equity index



Sources: Bloomberg, Erste Group Research

The Turkish government now wants to create incentives for the population to deposit their private holdings with the banking system. This is supposed to support the financial sector and help cut the balance of trade deficit. According to Deniz Bank, a total of USD 8.6bn worth of gold reserves have been deposited with Turkish banks so far [85]. In addition, the Turkish central bank has increased the amount of gold that credit institutions can hold as reserve, from 10% to 20%.

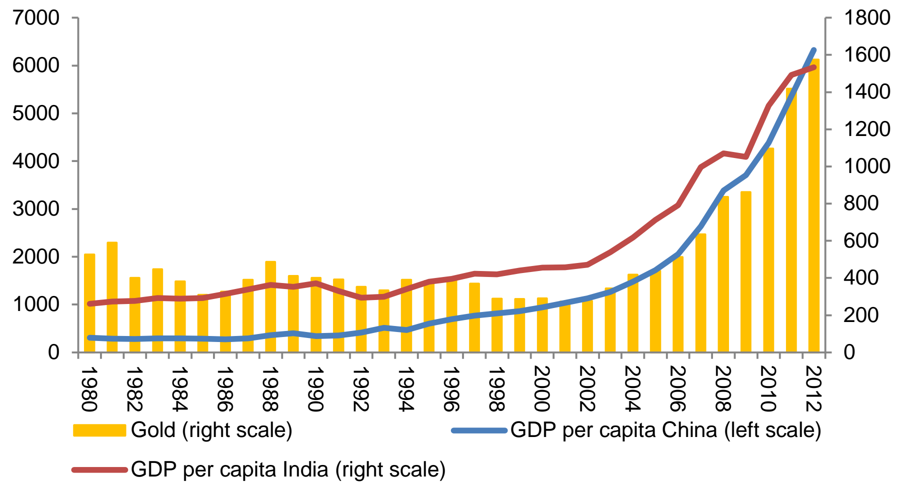
Why gold remains (dirt) cheap in India and China

For US and euro investors the nominal gold price may currently look “expensive”. But a look at the inflation-adjusted gold price (US CPI) puts matters into perspective. The gold price would only reach its all time high at USD 2,300 on an inflation-adjusted basis.

However, in view of the fact that Asia already accounts for the majority of gold demand, the US data is of limited significance. Therefore the development of household income in China and India is a crucial factor for physical gold demand. In terms of the Indian rupee, the gold price has posted an average increase of 18% p.a. since 2001, while in Chinese yuan the growth rate was only slightly lower at 16%. Nominal income has been going up at the same rate and pace, which means that the gold price is basically unchanged in real terms for the Chinese and Indian population since 2000. The following chart illustrates the rapid development of Chinese (left scale) and Indian (right scale) GDP per capita.

[85] *“Ankara will Türken ans Gold“ (Ankara wants the gold of its citizens), Financial Times Deutschland, March 2012*

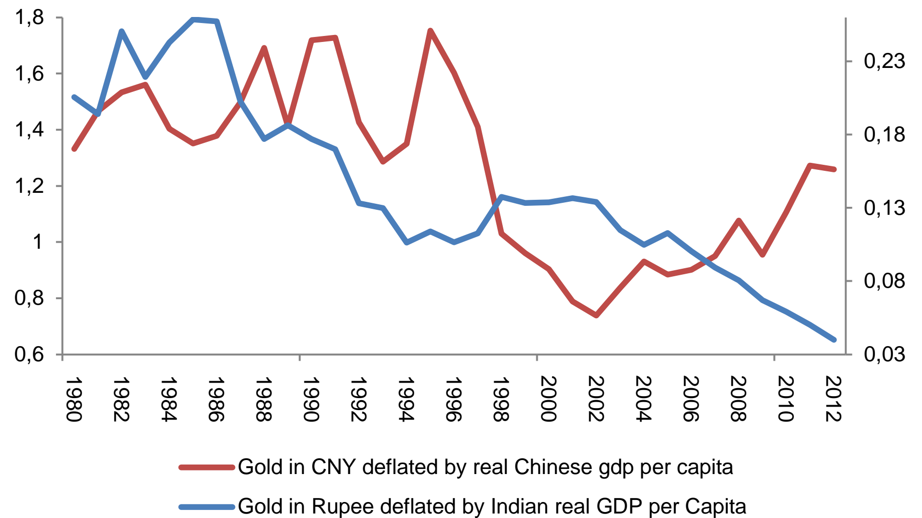
GDP per capita in India (right scale) and China (left scale) vs. gold price (right scale)



Sources: Datastream, Erste Group Research

The comparison of real GDP per capita and the gold price (in INR and CNY) yields a similar result.

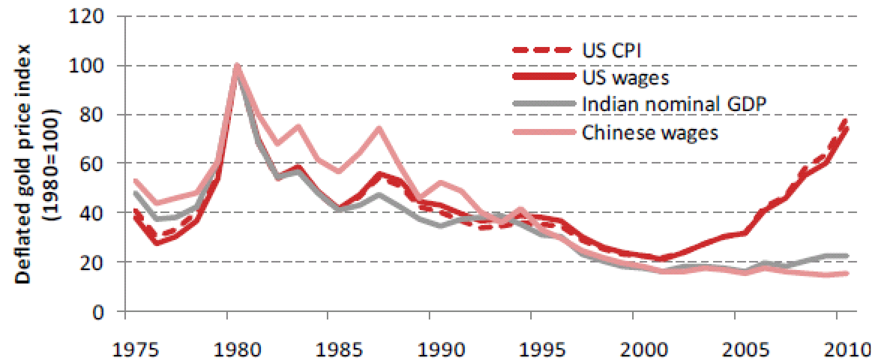
Gold in CNY and INR deflated by GDP per capita



Sources: Datastream, Erste Group Research

Since the officially reported inflation in Asia is often a rather vague depiction of reality, we have looked at the gold price in terms of disposable income. This angle grants an interesting insight. For example, the gold price in terms of purchasing power in China and India is currently about 80% lower than in 1980. This means that, to Asian investors, gold is still amazingly cheap.

The difference in deflators – gold is cheap in Asia



Source: "Why Gold is cheap in Asia", Nomura Research

Conclusion

Gold is often called the investment of doomsayers and chronic pessimists. This component is currently presented as the only reason for the gold bull market. However, this point of view fails to acknowledge the fact that China and India are the driving factors on the demand side. Real interest rates remain negative in both countries. On top of this the market is clearly underdeveloped with respect to its investment universe. Basically local investors are very limited when it comes to the use of their savings. Gold has been a time-tested store of value for centuries. The traditionally high affinity for gold and the rising net worth will support demand in the long run. **Whoever expects incomes in China and India to continue rising and real interest rates to remain negative or low, will by default recognise gold as the beneficiary of these developments.**

Silent farewell to the petrodollar?

"When the dollar collapse comes, it will happen two ways: gradually then suddenly. That formula, famously used by Hemingway to describe how one goes bankrupt, is an apt description of critical state dynamics in complex systems. The gradual part is a snowflake disturbing a small patch of snow, while the sudden part is the avalanche. The snowflake is random yet the avalanche is inevitable. Both ideas are easy to grasp. What is difficult to grasp is the critical state of the system in which the random event occurs.
Jim Rickards, Currency Wars

Many countries want to cast off the shackles of the US dollar

As already discussed in the previous reports, the voices critical of US dollar hegemony have become increasingly louder. It seems that many countries want to cast off the shackles of the US dollar. China, Russia, India, as well as Japan intend to increase the share of trade invoiced in their own currencies so as to circumvent the US dollar. This clearly marks a paradigm shift, not least because more than two thirds of all US dollars are held abroad.

The following examples indicate the increasing scepticism vis-à-vis the US dollar[86]:

- The internationalisation of the renminbi has made progress. At the beginning of 2010, less than 1% of Chinese foreign trade volume was invoiced in yuan; this percentage has meanwhile increased to 8%, and to even 14.5% in transactions with Asian partners. HSBC expects the share to increase to 50% by 2015. At the moment, the total volume of swap agreements with China's trading partners accounts for more than a quarter of total trading volume[87].

- The Nigerian central bank wants to increase the share of reserves held in yuan to 10%.

- India wants to pay for Iranian oil in gold[88]. Media reports suggest that China might want to follow suit. China and India account for almost 40% of Iranian oil exports and are at the same time by far the largest gold consumers.

- The BRICS countries[89] have stepped up mutual cooperation. The five countries currently account for almost 28% of global economic output, with a sharply rising tendency. The newly created BRICS Bank is supposed to finance development projects in emerging countries in the future. In addition, the idea is to facilitate bilateral trade and credit in the local currency as well as to circumvent the US dollar.

- In October, China reported that it had entered into free trade agreements with the ASEAN members[90], within the framework of which it would invoice in yuan. China also announced that it would establish a central bank for the entire ASEAN group, with the yuan

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[86] Please refer to Special Report Oil "Nothing to Spare", Erste Group Research, March 2012
[87] Please refer to "China verschärft globale Devisenattacke" (China steps up global foreign exchange attacks), Manager Magazin, 12 March 2012
[88] Please refer to "India to pay gold instead of dollars for Iranian oil", Debka
[89] Brazil, Russia, India, China, and South Africa
[90] ASEAN member states: Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam

constituting the reserve currency. In addition to the ASEAN nations, Japan and South Korea would also be invited to participate in the central bank. Since the bilateral free trade agreement from 2010 was put in place, the trade volume between China and the ASEAN members has increased substantially. The ASEAN bloc has turned into the third-most important trading partner for China (behind the US and the EU). ASEAN wants to create a single market for its 600mn citizens by 2015.

- China has recently signed a swap agreement worth USD 31bn with Australia. In past years Beijing has entered into more than 20 such bilateral agreements.

- India and Japan have signed a currency swap agreement worth USD 15bn in order to simplify bilateral trade.

- South Africa has already taken concrete steps to replace the US dollar as the favoured currency for international trade transactions. From now on, the country wants to invoice in Chinese renminbi when trading with other emerging countries. Standard Bank, the largest African bank, expects trading volume in renminbi between China and Africa to hit USD 100bn by 2015. China seems to regard South Africa as the gate to the entire African market.

- China and Japan, too, want to increasingly avoid the USD. In December, Prime Minister Wen Jiabao and the Japanese Prime Minister Noda agreed to promote trade in yuan and yen. China has become the most important trading partner for Japan (USD 340bn per year). The two countries hold the biggest volumes of US Treasuries. Therefore, the importance and symbolic power of this piece of news cannot be over-emphasised.

- At the beginning of 2012, the South American alliance ALBA[91] agreed to promote the common artificial currency "SUCRE". The idea is to try to avoid the use of the US dollar and to convert parts of their central bank reserves into the sucre.

Shanghai Cooperation Organization

The Shanghai Cooperation Organization (SCO) will continue to play an ever more important role in this context. The organization currently consists of the member states China, Russia, Kazakhstan, Kyrgyzstan, Tadzhikistan, Uzbekistan, and states holding observer status, i.e. Mongolia, India, Pakistan, and Iran. Turkey and Turkmenistan, among others, have declared an interest in joining. Partners in dialogue are also Belarus, Afghanistan, CIS, and ASEAN.

The basic goals of SCO are:

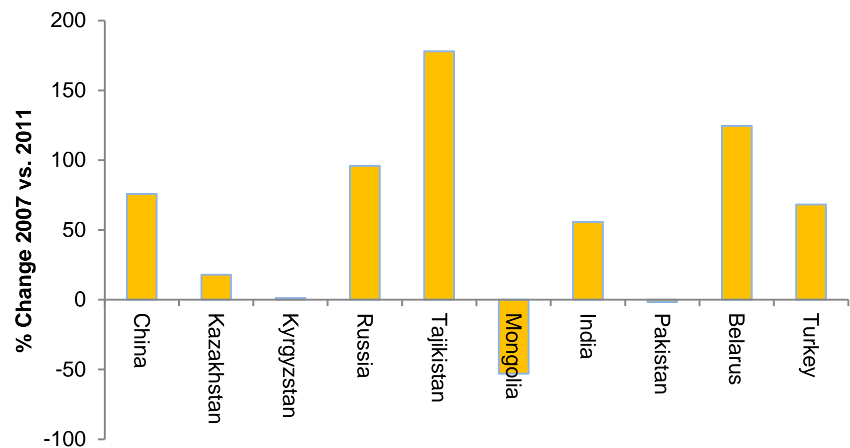
- the strengthening of mutual confidence among the member states
- cooperation in political, scientific, technical, cultural, tourist, and ecological areas, in trade, energy, and transport

[91] *ALBA – "Alianza Bolivariana para los Pueblos de Nuestra América" - Bolivarian Alliance for the Peoples of Our America*

- the common ensuring of and support for peace and safety throughout the region

Delicately, the region accounts for a large share of global gold production. Most of these countries have recently expanded their gold reserves by a significant degree, as the following graph shows.

Changes in central bank gold holdings 2011 vs. 2007



Sources: WGC, Bloomberg, Erste Group Research

China should also be keen on pushing special drawing rights (SDRs)

The governor of the People's Bank of China recently suggested the continued promotion of SDRs of the IMF. He said he considered them the "light in the tunnel that is the reform of the international monetary system" [92]. SDRs are a monetary unit introduced by the IMF that is not traded on the foreign exchange markets. The current weighting is as follows: USD 41.9%, EUR 37.4%, JPY 9.4%, and GBP 11.3%.

Robert Mundell also suggested that central banks should fix the exchange rates between USD and EUR in order to create a currency anchor called "Eurodollar" [93]. The Eurodollar, which would account for almost 50% of global economic output, was a crucial step towards the creation of a common global reserve currency, as Mundell pointed out. Via the resurrection of the SDRs the Eurodollar could spawn the global currency INTOR, including the renminbi. "INT" was short for international, and "OR" suggested the French word for gold.

Russia, too, wants to attach greater importance to gold in the international currency system. For example, Arkady Dvorkevich, the chief economic advisor of the Kremlin, maintained that Russia would support the inclusion of gold in a weighted basket of a new global currency. The SDRs of the IMF should be the basis of the new currency. He also said it was logical for the rouble, the yuan, and especially gold to be given higher levels of relevance[94]. We regard most of the suggestions with respect to a more intense utilisation of SDRs as little practicable, given that they would be met with a very limited welcome. **SDRs are derivatives on derivatives, which is why we believe that they would not amass a sufficient level of trust.**

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[92] *Please refer to "China eyes SDR as global currency", China Daily*
[93] *Please refer to "Einheitsweltwährung aus der Logik der Zerstörung" (Common global currency from the logic of destruction) , Prof. Thorsten Polleit, eigentümlich frei*
[94] *Please refer to "Russia backs return to Gold Standard to solve financial crisis", The Telegraph, March 2009*

Does China plan a gold-backed renminbi?

We expect the Chinese central bank to continue gradually accumulating gold, and we think that it might be planning a gold backing for the renminbi. If that were to happen, international acceptance would soar. Not for nothing was the enormous amount of gold reserves in the United States (N.B. the US reserves were at 29,663 tonnes in 1953) along with military dominance a central reason for the US dollar becoming the global reserve currency.

***"If some lose their whole fortunes, they will drag many more down with them...believe me that the whole system of credit and finance which is carried on here at Rome in the Forum, is inextricably bound up with the revenues of the Asiatic province. If those revenues are destroyed, our whole system of credit will come down with a crash."* Cicero, 66 B.C**

Since the Chinese current account surplus has been on a steady decline, the widely held opinion of the massive undervaluation of the yuan seems to become more susceptible to questioning as well. Therefore, a quick internationalisation would make perfect sense from a Chinese point of view. Officials have also confirmed this hypothesis. The Head of Research at the People's Bank of China recommends investing in gold in order to protect and diversify China's currency reserves[95]. Zhang Jianhua said that gold was the only safe haven for risk-averse investors, whereas other forms of investment from government bonds to property were losing value". It was necessary for the Chinese government to further optimise the portfolio structure of its currency reserves. He advised buying gold on relative weakness.

***"No asset is safe now. The only choice to hedge risks is to hold hard currency - gold."* Zhang Jianhua, People's Bank of China**

A former central banker claimed that US Treasuries were not safe in the medium to long term[96]. In addition, China will launch a new investment fund that will invest parts of the more than USD 3,000 in currency reserves in energy and precious metals. PBoC advisor Xia recommends holding only USD 1,000bn in currency reserves, with the rest to be earmarked for strategic investments. He goes on to suggest a **gradual increase in gold reserves** and recommends pursuing a "buy the dip" strategy over an extended period of time. He also advises PBoC to add silver to the official reserves[97]. At the same time, an official of the Chinese Chamber of Commerce[98] said China should step up its gold reserves to as much as 8,000 tonnes. Ji Xianonan, head of the Chinese State Council's State-Owned Enterprise Supervisory Board, has recently suggested that China ramp up its gold reserves within the next three to five years to 6,000 tonnes. Within ten year's time, China would want to own 10,000 tonnes of gold. This means that China would have to buy almost 40% of annual production until 2020. **The significance of such statements can hardly be overestimated. Experience shows that they tend to be accorded with the government and party leaders.**

We expect the PBoC to continue stepping up gold reserves aggressively

According to the statistics of the World Gold Council, the Chinese central bank did not make any purchases in 2010 or 2011. Official reserves were last reported in June 2009 at 1,054 tonnes. The gold imports from Hong Kong amounted to more than 100 tonnes in April alone; in the year to date, 240 tonnes of gold have been imported. There is a clear upward trend in place: between May 2010 and April 2011 China imported 66 tonnes, and a year later imports were at 489 tonnes – an increase of 640%[99]. In total, imports in 2011 amounted to 427 tonnes (as compared to

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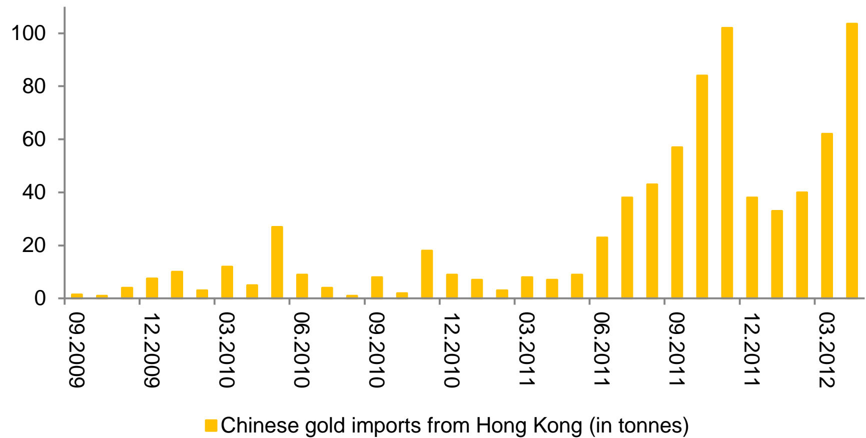
[95] *Please refer to "Chinesischer Notenbanker rät zu Gold" (Chinese central banker recommends gold), Financial Times Deutschland, 27 December 2011*
[96] *"Treasuries lack safety, Liquidity for China, Yu Yongding says", Bloomberg, August 2010*
[97] *Please refer to Zerohedge.com – "China Central Bank Advisor urges increase in official Gold and Silver reserves", January 2011*
[98] *Please refer to "China should significantly boost gold in reserves", Reuters, October 2010*
[99] *Please refer to "Gold Alert", Sprott Asset Management, June 2012*

118 tonnes in 2010). **We expect not only Chinese private investors but also the PBoC to continue stepping up their accumulation of gold reserves massively. We believe that China holds definitely a far higher volume of gold reserves than the officially confirmed 1,054 tonnes.**

Chinese gold imports from Hong Kong (in tonnes)



Sources: Datastream, Bloomberg, Reuters, Erste Group Research

Felix Somary's account of the Chinese mentality of 1913 makes for a fascinating read, *"In Europe nobody would understand the Chinese mentality back then; Europe was at the peak of its power, full of confidence in the present and the future, amused at people who would reject banknotes and who would suspiciously put metal money on a scale to verify its weight.* ***The consensus was that they were trailing us by five generations – when the truth is, they were one generation ahead****. They had experienced the fortune of billions on paper under Mongolian emperors – war conquests and road construction – and they had then seen the bitter ending of it all. This experience had stayed with them throughout the centuries."* [100]

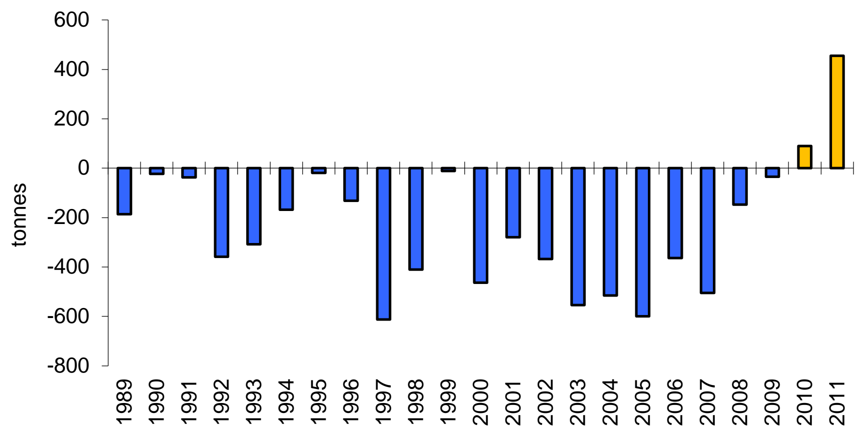
[100] *Please refer to "Erinnerungen aus meinem Leben" (Memoirs of my life), Felix Somary*

Renaissance of central bank buying

Official sector continues to be net buyer – highest volume since 1964

The last time that central banks bought as much gold as they did last year was in 1964. From our point of view, this constitutes a clear paradigm shift in the official sector. Total purchases amounted to 455 tonnes, according to the IMF (as compared to 77 tonnes in 2010).

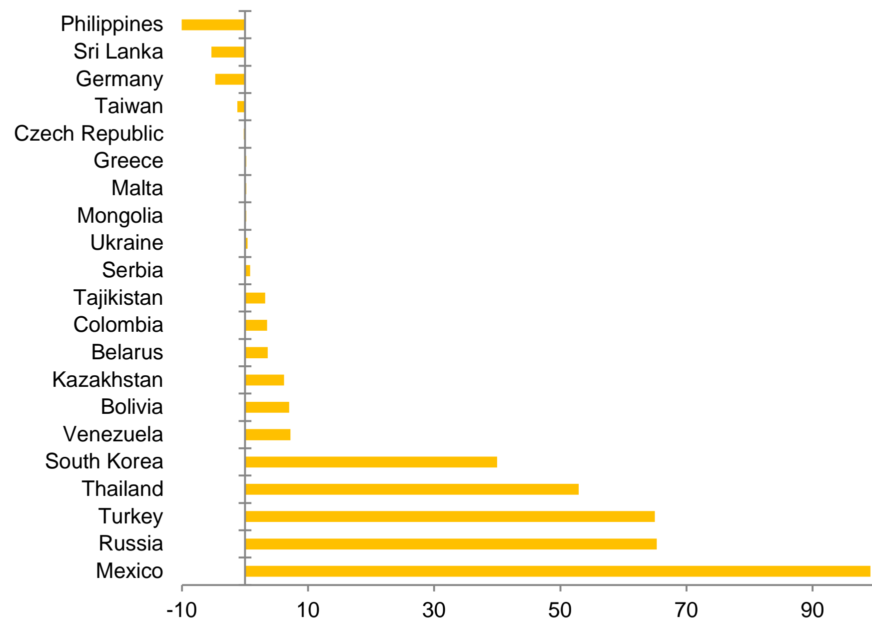
Net purchases and sales by central banks in tonnes



Sources: WGC, Bloomberg, Erste Group Research

Mexico (99 tonnes), Russia (65 tonnes), Turkey (65 tonnes), Thailand (53 tonnes), and South Korea (40 tonnes) were among the biggest buyers. **And the momentum does not seem to wane in 2012 either.** Purchases in the first quarter amounted to 81 tonnes. The trend seems to be continuing in Q2 as well; in April and May alone the Philippines (32 tonnes), Turkey (36 tonnes), Russia (15t) and Mexico (3 tonnes) were buying according to the IMF.

Central bank purchases 2011



Sources: World Gold Council, Reuters, Erste Group Research

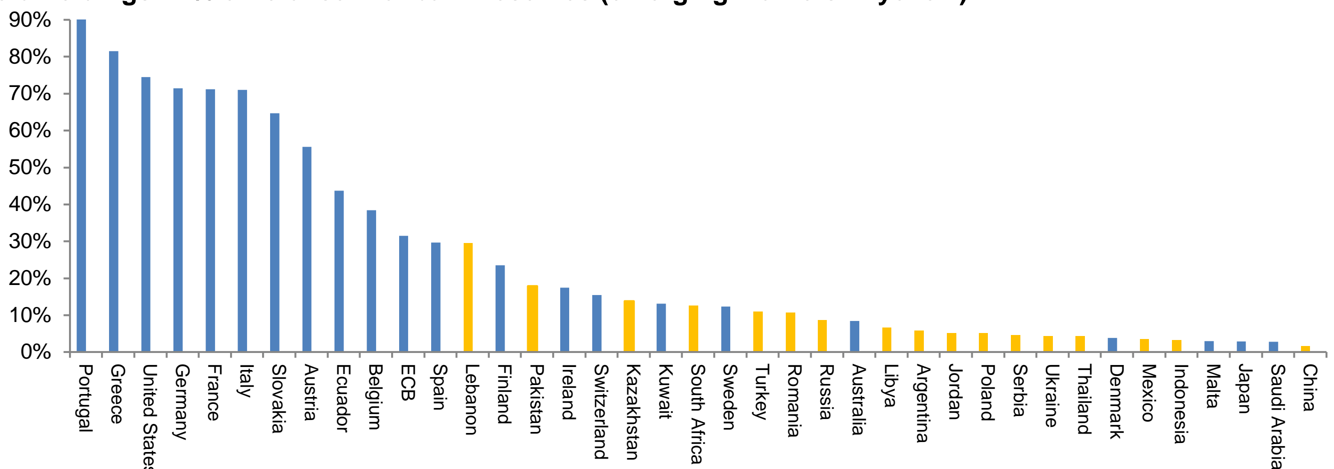
Can central bank purchases also be interpreted as a contrary indicator?

It is of course a legitimate question as to whether the trend reversal towards net purchases could not be interpreted as a contrary indicator. It is no secret that central banks tend to be civil servants with an extremely pro-cyclical investment behaviour. With good reason: since the purchase of asset classes with negative performance in the past years is difficult to justify vis-à-vis the public and also to internal committees, purchases tend to be made on a past-performance basis[101].

Asian central banks are clearly underweighted in gold

We believe that the central bank purchases signal a new phase of the bull market. Since the buyers are mostly emerging countries, we regard these efforts as a logical catching up. Compared with the industrialised nations, the majority of the central banks in emerging nations remain clearly underweighted in gold. Thus the hedging of their enormous US dollar holdings is inadequate. The following chart illustrates the low share of gold in terms of total reserves in the emerging countries relative to the industrialised countries.

Gold holdings in % of total central bank reserves (emerging markets in yellow)



Sources: World Gold Council, Erste Group Research

Bank of England as "ultimate contrary indicator"?

Cynics would call the Bank of England the "ultimate contrary indicator". In the years 1999 to 2002, 395 tonnes of gold were sold at an average price of USD 275 under the then Chancellor of the Exchequer, Gordon Brown. Given that this was the absolute low of the gold price, it is also called the "Brown bottom". **If the Bank of England were to announce purchases, we would therefore regard this as a warning signal for the gold price.**

***"the results are consistent with the view that a central bank's gold position signals economic might"* National Bureau of Economic Research**

In times of turbulences on the global financial markets, gold has regained its attractiveness as "ultimate hedge", as numerous studies confirm[102]. According to the study "Central Banks and Gold Puzzles" the holding and/or buying of gold signals "global power" and tends to go hand in hand with strengthening national self-confidence and national pride. This theory is confirmed by reality. China, Russia, India, Thailand, Mexico etc. have stepped up their gold reserves in line with their growing economic importance. China currently (officially) holds the sixth-largest volume of gold reserves, with Russia following in eighth rank and India ranked eleventh.

[101] *Please refer to Markus Mezger – "Gold – Ende eines Megatrends" (Gold – the end of the mega-trend)*
[102] *Please refer to Baur and McDermott, 2010*

We expect the countries to continue diversifying their reserves towards gold in order to signal their growing economic power[103].

Gold has gained attractiveness due to the euro crisis

According to the IMF, the US dollar still accounts for the lion's share of 61.7% of all global currency reserves, followed by the euro (27.5%) and gold and other currencies (12.6%). These shares should go through major shifts in the future. According to a survey of 54 central banks, that hold total assets of USD 6,000bn, 71% said that gold has clearly gained in terms of attractiveness due to the euro crisis[104].

China will have to buy 170 tonnes of gold to maintain its share of 1,8% gold allocation

If the 18 central banks (outside the EU and the USA and excluding China) with the largest US dollar reserves were to increase their gold reserves to 10% of total reserves, aggregate demand would amount to 3,400 tonnes[105]. If China wanted to increase its share of gold reserves to 10%, it would have to buy more than 5,300 tonnes. We think it is an unlikely scenario for China to step up its share quickly and publicly to 10% or more. On the one hand, it would signal a lack of confidence in the development of the purchasing power of the US dollar reserves worth USD 3,300bn, on the other hand, such amounts could hardly be placed on the market. If China wanted to maintain its share of gold at 1.8% in terms of total currency reserves it would have to buy close to 170 tonnes of gold per year (provided that US dollar reserves were to keep rising at the current rate).

[103] *Please refer to "Central Banks and Gold Puzzles", National Bureau of Economic Research*
[104] *Please refer to "Risk averse Central Banks Favour Gold over Euro", FT.com*
[105] *Please refer to "A new era for gold producers", Nomura*

Excursus: Interventionism

The opposite of good is not bad, but good intention

According to the Austrian School of Economics it is impossible to explain and predict the complexity and dynamics of human behaviour through mathematical models. The more profound the interventions in the system are, the more unpredictable and grave the consequences will be. The actual problem is usually not solved. While intervention tends to come from a place of good intentions, Kurt Tucholsky has pointed out that the opposite of good is not bad, but good intention. **Therefore, interventions tend to cause worse long-term problems than a laissez-faire approach[106].**

As Rothbard said, "*If government wishes to see a depression ended as quickly as possible, and the economy returned to normal prosperity, what course should it adopt? The first and clearest injunction is: don't interfere with the market's adjustment process. The more the government intervenes to delay the market's adjustment, the longer and more gruelling the depression will be, and the more difficult will be the road to complete recovery.*"[107]

An analogy taken from nature shows how counterproductive interventions can be:

In the 1960s, a large number of devastating forest fires occurred in the Midwest of the United States. Given the zero-tolerance policy in place, fire-fighters would show up on the scene of even the smallest fires. But the interventions of the forest authorities were very ineffective, and indeed, most of the time they caused the situation to deteriorate. As it turned out, the constant extinguishing of small fires was providing fertile soil to substantially larger ones. As a result of the interventions, the forest would age, and older, brittle trees would not be replaced by younger ones, and the density of flammable material in the shape of brushwood and deposits would increase. The natural cycle had been manipulated. **This artificial intervention in the ecological system of the forest led to a gradual destabilisation.**

Authorities pursued "let it burn" policy and relied on nature's ability to self-regulate

Over the years, officials finally started catching on to the fact that fire was part of the natural life cycle of a forest. It regulates the density, reduces the amount of pests, keeps tree diseases in check, and creates new space for younger trees. Since 1988, forest authorities have therefore pursued a "let it burn" policy, i.e. they will only intervene if human life or historical buildings are in danger. This means the authorities rely on nature's ability to self-regulate.

The following example shows that the long-term effects of even a major fire disaster are relatively insignificant. In 1988 a major fire in Yellowstone National Park destroyed more than 1.5mn hectares of forest. One third of the park was burning. Ex post, the supposed disaster led to surprising insights. Green shoots were covering the park again only one year after the fire. In fact, the fire was ecologically beneficial to the forest because the cones of certain conifers would open only at higher temperatures and their seeds would fall onto the fertile ashes on the

[106] *Please refer to "LaRasmussteinmontians in Yellowstone Park", the Ineichen Dialogues Act II, Alexander Ineichen*
[107] *Murray Rothbard, America's Great Depression*

ground[108]. **From our point of view, this is an impressive example of the self-regulatory power of nature. Austrians would suggest that this insight could also be applied to economic systems.**

It is a fine line between manipulation and intervention

"***The fatal investment anomaly in today's world is that nobody knows what anything is worth anymore because nobody is allowed to meet in an unfettered market to determine it*" Bill Buckler**

It is a fine line between intervention (usually a governmental / political interference) and manipulation (negative connotation in terms of "exerting influence"). There have been official and legitimised interventions by central banks in bond rates (Operation Twist, Quantitative Easing) and currencies (Swiss franc, Japanese yen). Both the quantity and the price of money are managed, i.e. controlled. The oil price is subject to interventions (OPEC cartel, release of strategic reserves), as are the food prices (subsidies). Kevin Warsh has recently confirmed this: *"Now that I am out of government, I can tell you what I really believe… Central banks are now so heavily influencing asset prices that investors are unable to ascertain market values… This influence is especially evident with the Fed's purchase of government bonds, which has made it impossible for investors to use bond prices to learn anything about markets."*[109]

Seeing as a strong gold price signals a decline in trust in the financial and monetary system, we believe that it would be naïve to think that gold is exempt from interventions. **However, according to Dow theory, the primary trend cannot be manipulated, because the inherent market forces are simply too strong.**

[108] *Please refer to "Ein nützlicher Waldbrand" (A useful forest fire), Welt Online*
[109] *Please refer to "Welcome to 2012 – the Financial System and the Real Economy", Philip Barton, The Gold Standard Institute*

On the search for a "fair value" for Gold

Value does not exist outside the consciousness of men

According to the Austrian School of Economics, there is no objectively measurable value of a good, and according to Carl Manger's theory of subjective value, the value of a good is derived from the marginal utility with regard to the set goal. This means that the value of a good or a service is therefore of no objective value, but the result of a subjective process of valuation. According to Roland Baader, every value is a phenomenon of subjective valuation and can only be ranked in the scale of preferences of an individual. Since there are as many different scales of preference as there are people (and since the ranking of preferences keeps changing all the time as well), **the value of a good or a service can never be objectively measured[110].**

Value of a good is determined by its marginal unit

A classic example: a glass of water after a dry spell in the desert is probably the most valuable good on earth. But after the thirst has been quenched, the marginal utility quickly declines. The one hundredth glass of water is hardly given any value anymore. But it is this last glass of water that sets the market price. The marginal utility is therefore the utility provided by the last available unit of a good that satisfies a need. **In other words, the value of a good is determined by the subjective assessment of its last unit (the marginal unit)** [111].

"*It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest.*" Adam Smith

According to Baader, this subjective evaluation of value is the deepest source of progress and welfare. Because if all people were to attach the same value to all goods, there would not be any form of trade or division of labour. An act of trade is therefore never an act of "*equal for equal*", but rather a "*win-win*" scenario, i.e. an act at the end of which every party is better off than before[112].

Possible price targets for gold

On the basis of the aforementioned, it is impossible to calculate a "fair value" of gold. It is only possible to analyse the relative (over- or under-) valuation vis-à-vis other asset classes and monetary aggregates. Is the comparison of the trends of different asset classes actually tenable? We think it is, since human behaviour and emotions are similar during periods of extremity. **A chart reflects the collective vote of market participants[113].**

Therefore, we believe that bull markets basically tend to look alike, given that human behaviour and emotions are similar in extreme situations. On this basis, we can compare the psychological pattern of the various trend phases. **Greed, fear, and panic determine the beginning and the end of bull markets. Therefore we expect that gold and gold shares could develop along similar lines as the Nasdaq at the end of the 1990s.**

Gold price = 1/T

So how then do you "value" gold? Jim Grant answers this question by proposing that the price of gold be 1/T. "T" symbolises the trust of people in the currency guardians. The lower the trust in the abilities of the central bankers, the higher the price. **This means the gold price equals the**

[110] Roland Baader: "Geld oder Gold" (Money or gold) – CNE Monatsmagazin

[111] Please refer to Wikipedia „marginal utility"

[112] Please refer also to the "Montaigne error", which describes the erroneous assumption that in a trade transaction one party is always fleeced.

[113] Please refer to "Euro-Krise ist eigentlich eine kapitale Staatskrise" (Euro crisis is actually a veritable crisis of government), Erwin Grandinger, Die Welt, May 2012

inverse of the trust in central banks. 1 divided by a falling number is the definition of a bull market and of a decline in trust[114].

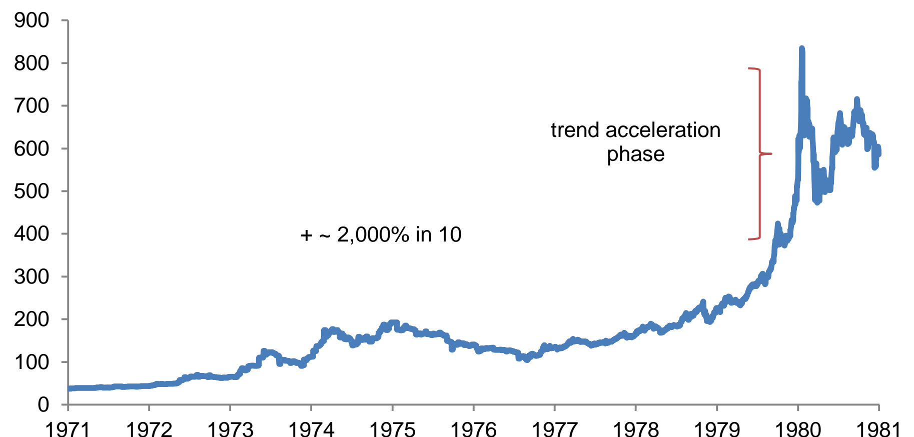
"*The denominator of the gold price is the US dollar, which itself has no definable intrinsic value. Dividing an item with no intrinsic value by another with no intrinsic value is an exercise that cannot produce an intrinsic value. The relative value of the numerator to the denominator is the key, which, given the expanding supply of paper money vis-à-vis gold, argues for an increasing intrinsic gold value in US dollar terms. This has been the trend of this decade thus far in fact.*" QB Asset Management[115]

"***The amount of gold is finite by weight or volume, it is not finite by price***", **John Butler**

The Pareto distribution (80/20 distribution) describes the statistical phenomenon of an uneven distribution that can be seen in many areas (e.g. in the distribution of income). Interestingly, it can also be applied to bull markets: 80% of the price performance tends to occur in the last 20% of the trend. The third and last phase is the phase of euphoria and ends in a "blow-off", i.e. a parabolic increase. It is dominated by excessive optimism and a "this time it's different" attitude. Gold would probably be increasingly traded in backwardation during this phase, which would be a clear sign of a buying frenzy. At the end of this cycle the smart money will have distributed.

The following chart shows this trend-acceleration phase. From autumn 1979 to January 1980, the gold price increased due to a buying frenzy/panic by more than 100% within a few weeks.

Bull market 1970-1980



Sources: Datastream, Erste Group Research

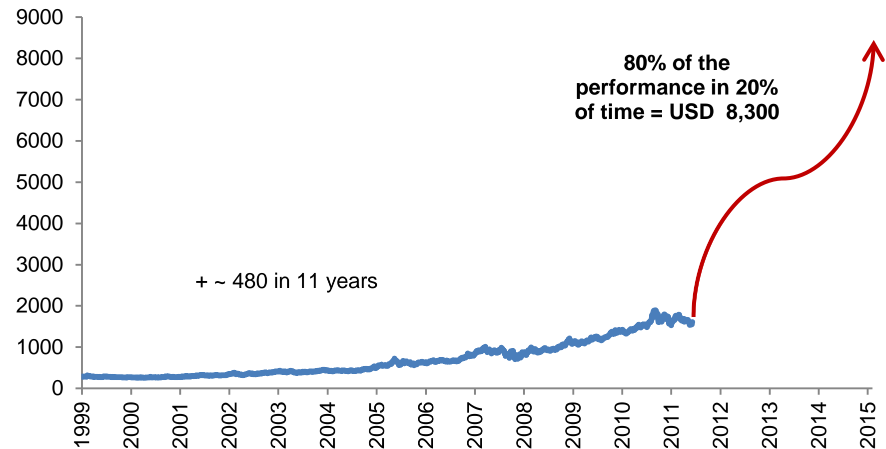
Target according to Pareto distribution: USD 8,300 until spring 2015

Applying the Pareto principle to the current gold price, we find a theoretical price target of USD 8,300. If we were to assume that the last trend phase were to start in August 2012 at USD 1,600 and the bull market had begun in August 2001, the parabolic phase would last 29 more months and thus end

[114] *Please refer to "Jim Grant: gold price is the reciprocal of faith in central banks", Goldmoney.com*
[115] *"Gold's No Bubble", QB Asset Management, Lee Quaintance and Paul Brodsky, December 2009*

in spring 2015. **The price target according to the 80/20 principle is therefore USD 8,300[116].**

Current bull market with 80/20 Pareto distribution

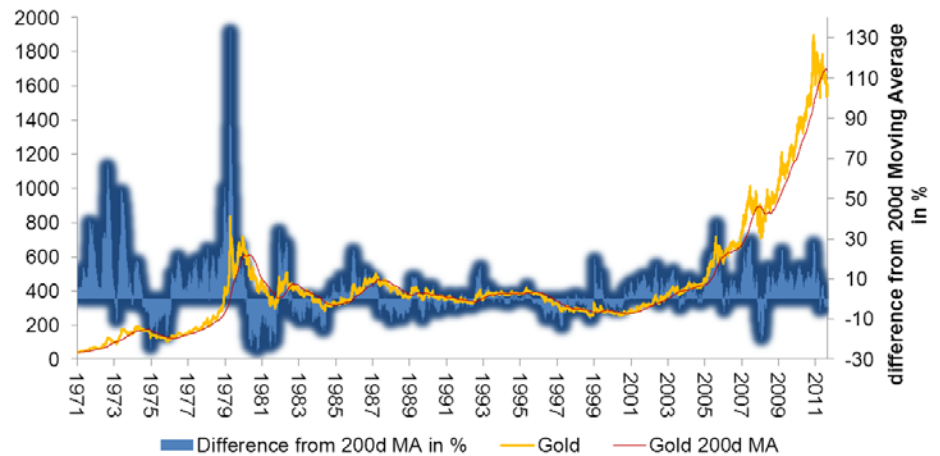


Sources: Datastream, Erste Group Research

Normally, a good is traded way above its moving average price during the final days of the trend acceleration. The following chart illustrates that during its final manic phase the gold price on 18 January 1980 was 130% above its 200-day average, which means that gold was massively overbought. One year later it had fallen about 25% below its 200-day line. This enormous volatility is typical of the final phase of a trend.

What is the situation like in the current bull market then? Even on September 6, when the gold price closed at USD 1,900[117], it was only 26% above the 200-day line. **We believe the fact that gold is currently traded slightly below the 200-day line clearly argues against a current overheating.**

Deviation from 200d Moving average



Sources: Datastream, Erste Group Research

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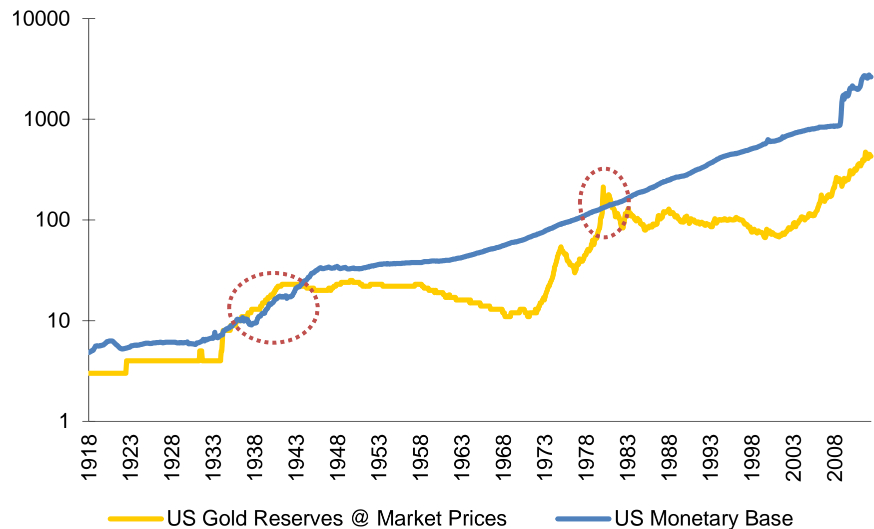
[116] Based on our model, the increase from USD 260 to USD 1,600 accounted for 20% of the total movement. This means that 80% equals USD 6,700, which, when added to the current price, yields the hypothetical price target of USD 8,300.
[117] Closing price. The intraday-high was set at USD 1,921 on September 6.

US monetary base has already been fully covered by gold reserves twice in history

What options are there now to cut the debt ratio on a sustainable basis? The answer is relatively simple: saving, massive tax hikes, inflation, haircuts, and national bankruptcy. It would be much more comfortable to appreciate the gold price. Even if this seems unlikely at this point in time, the subsequent chart highlights the fact that the US money supply has already been fully covered by the US gold reserves twice in history.

Gold reserves at market prices vs. monetary base (logarithmic scale)



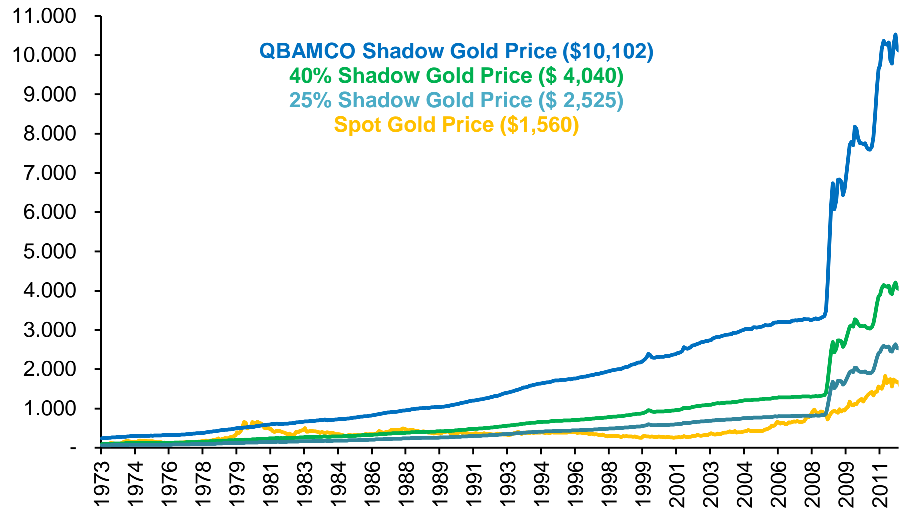
Source: Mike Maloney, QB Asset Management, Erste Group Research

Shadow Gold Price describes theoretical gold price at which monetary base would be covered by gold

QB Asset Management calculates the so-called "Shadow Gold Price". This model is not purely academic, but rather it is the way the exchange rate of paper money and gold was calculated during Bretton Woods (US monetary base divided by US gold reserves). The Shadow Gold Price describes the theoretical gold price at which the entire monetary base would be covered by gold. This way a debt-based currency could be transformed into a currency covered by assets.

Currently, the Shadow Gold Price is above USD 10,000. Given that the Federal Reserve Act of 1914 called for a gold cover of at least 40% we also depicted this cover ratio in the chart. The gold price would have to rise to USD 4,040 for this percentage to be reached. From 1945 to 1971 the required cover ratio was only 25%, which you also find in the chart. A 25% cover ratio would currently require a gold price of USD 2,525.

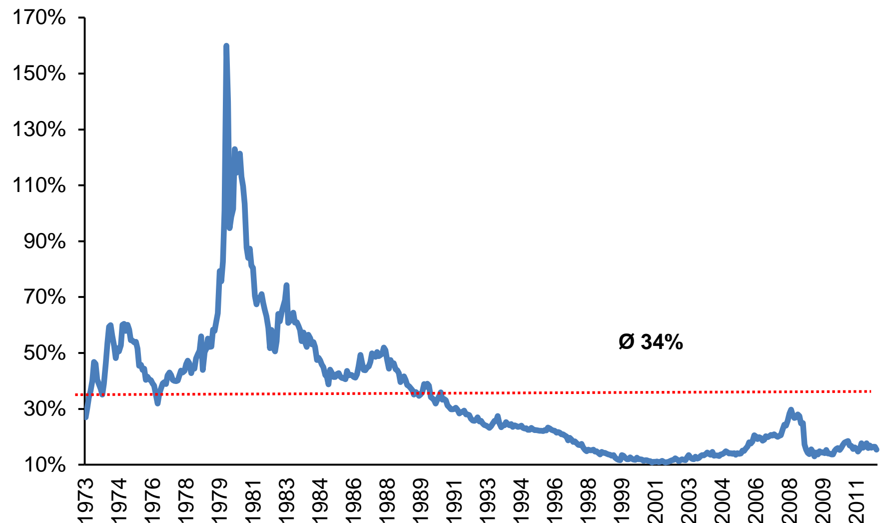
Shadow Gold Price vs. spot gold



Sources: QB Asset Management, Erste Group Research

A different way of illustrating this concept shows that in the USA at the moment only 16% of the monetary base is covered by gold. In spite of the eleven years of bull market this is only slightly higher than at the time of the absolute low in terms of gold cover of 11% in 2001. The high after the end of Bretton Woods was set in 1980, when 168% of the monetary base was backed by US gold reserves.

% of dollar backed by gold (market value of Federal reserves' gold / balance sheet)



Sources: QB Asset Management, Erste Group Research

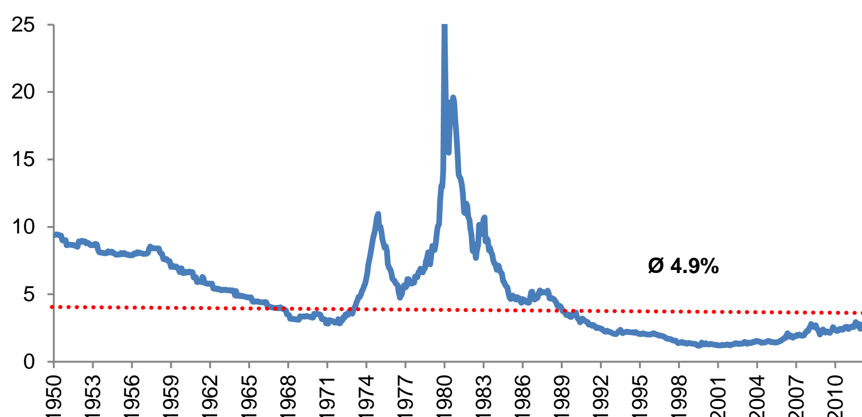
The following table shows the historical Shadow Gold Price at varying monetary bases. While the monetary base in 1980 was backed by 168% of gold reserves, this ratio has in the meantime fallen to only 16%.

Year	Official US Gold Holdings (moz)	Monetary Base	Gold Price (oz)	$ Value of Gold Reserves	Coverage Ratio	Shadow Gold Price
1971	290.24	67,398,000,000	41	**11,841,792,000**	**18%**	**USD 232**
1980	263.07	133,420,500,000	850	**223,611,200,000**	**168%**	**USD 507**
2008	260.25	936,414,000,000	822	**213,930,432,000**	**23%**	**USD 3,598**
2012	260.25	2,678,768,000,000	1610	**419,012,160,000**	**16%**	**USD 10,062**

Sources: Baker Ave, Federal Reserve St. Louis, Erste Group Research

At the moment, only 2.4% of US government debt is covered by the US gold reserves. This is substantially below the long-term average of 4.9%. If the gold price were to double (or the government debt were to drop by 50%, which is rather less likely) the coverage ratio would only match the long-term mean. Only at a price of about USD 16,000 would the ratio reach the highs of 1980.

Ratio US debt / value of gold reserves

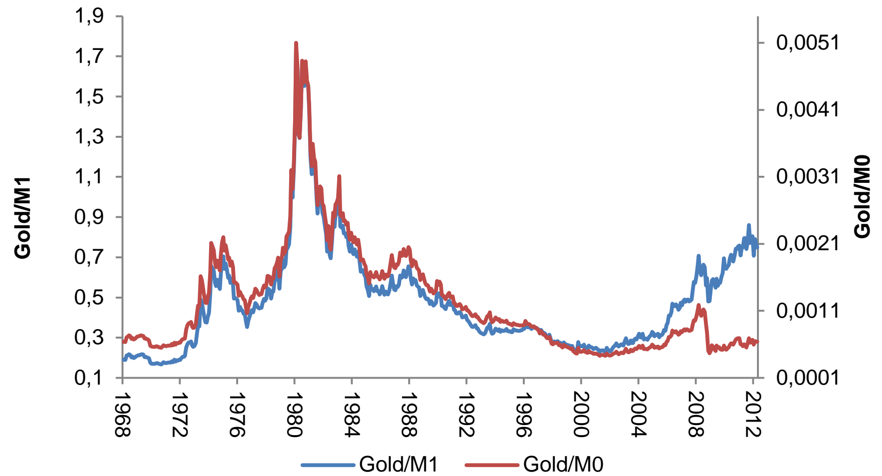


Sources: Datastream, Erste Group Research

Long-term bull markets never end around averages but always set extreme values vis-à-vis other asset classes at the end of the trend. This supports our argument that gold is still attractively valued and that the gold price has not entered into its final trend acceleration phase yet.

The ratio of gold and the money supply aggregates M0 and M1 also underpin the significant upward potential that gold has. In order to reach the high of the ratio of gold to M0, gold would have to increase to USD 12,000 (at constant money supply). To reach the high of the same ratio for M1, the gold price would have to rise to USD 3,800.

Ratio gold/M1 and gold/M0 money supply

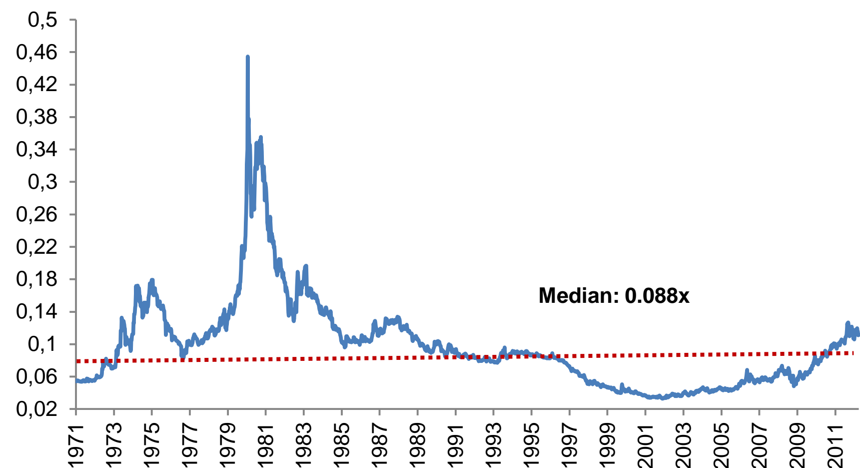


Sources: Datastream, Erste Group Research

"***History shows that once an enormous debt has been incurred by a nation, there are only two ways to solve it: one is simply to declare bankruptcy – repudiate the debt. The other is to inflate the currency and thus to destroy the wealth of the ordinary citizen***" **Adam Smith**

The broadest concept of money supply, M3[118], indicates a low gold price as well. While M3 totalled USD 1,800bn in 1980, according to Shadow Stats it has meanwhile increased to almost USD 15,000bn. Currently the ratio is at 0.11x and thus only slightly above the long-term median of 0.088x In order to reach the 1980 ratio, the gold price would have to soar to USD 8,300 (at constant M3).

Ratio M3/Gold



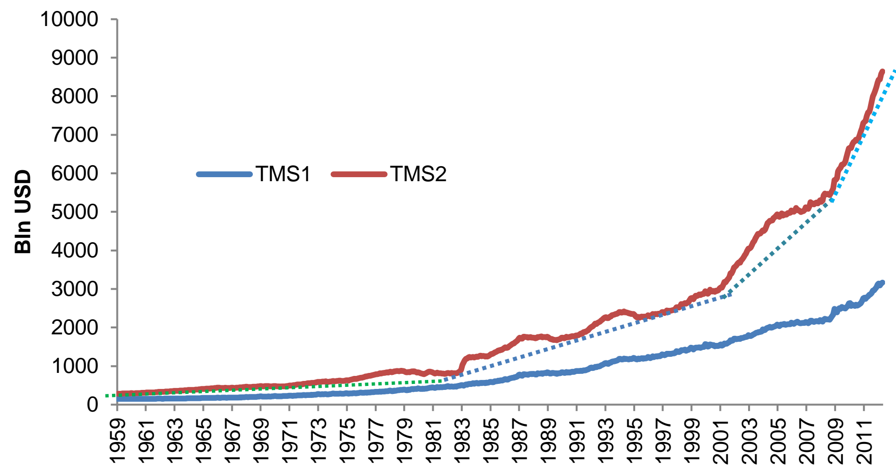
Sources: Nowandfutures.com, Erste Group Research

When relating the gold reserves at market prices to the "True Money Supply" (TMS)[119], we also find further upward potential for the gold price. The TMS has increased by a factor of more than 10 since the end of the last bull market in 1980, from USD 833bn to USD 8,642bn. TMS1 has

[118] According to the definition given by the Federal Reserve, M3 contains: M2 plus large and long-term deposits. Since 2006 this money supply is no longer published by the Fed
[119] The TMS was defined by Murray Rothbard and further developed by Frank Shostak to the Austrian Money Supply. TMS2 (the broad Austrian Supply) contains all elements that can immediately be exchanged for goods or services; i.e. mainly cash, demand deposits, and savings that can be called on at any time.

doubled since the beginning of 2000, whereas TMS2 has increased by almost 200%. This is equal to the biggest inflation of money supply since the end of WWII. The chart shows the development of TMS1 and TMS2 since 1959. The broken line of TMS1 highlights the different trend phases. We can see that a new trend phase originated in 2002, which seems to be accelerating as we speak.

Development of TMS1 and TMS2 since 1959 (Chart in Excel TMS)

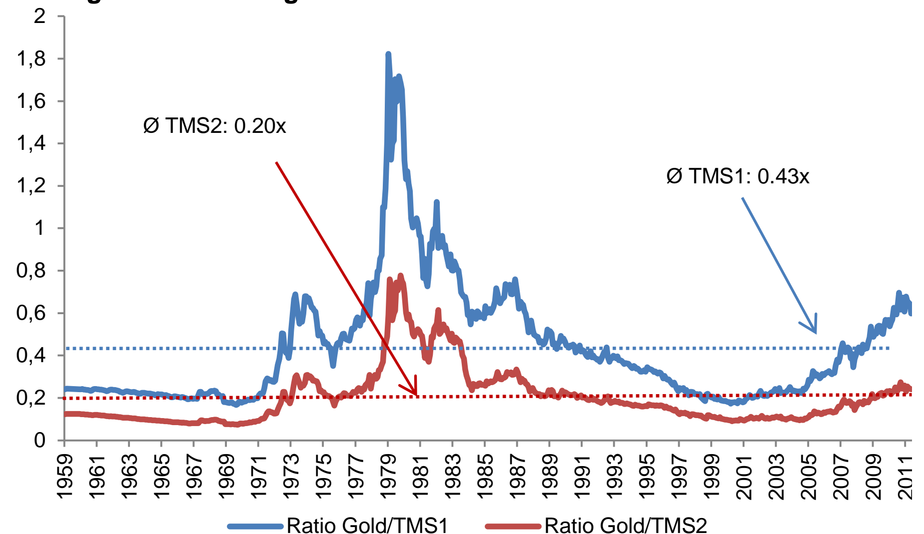


Source: Michael Pollaro, http://blogs.forbes.com/michaelpollaro/austrian-money-supply/

At constant TMS, gold would have to rise to USD 5,000

If we now relate the gold price to the two money supply aggregates, we also see that gold is currently not expensive at all. The gold/TMS1 ratio is 0.59x and thus above the long-term average of 0.43x. The ratio of gold to TMS2 is currently 0.22x. Thus gold is valued around the long-term average. In order for the ratios to reach their extreme values of 1980, the gold price would have to rise to above USD 5,000 (at constant TMS).

Ratio gold/TMS1 and gold/TMS2



Source: Michael Pollaro, http://blogs.forbes.com/michaelpollaro/austrian-money-supply/

Why gold is (still) no bubble

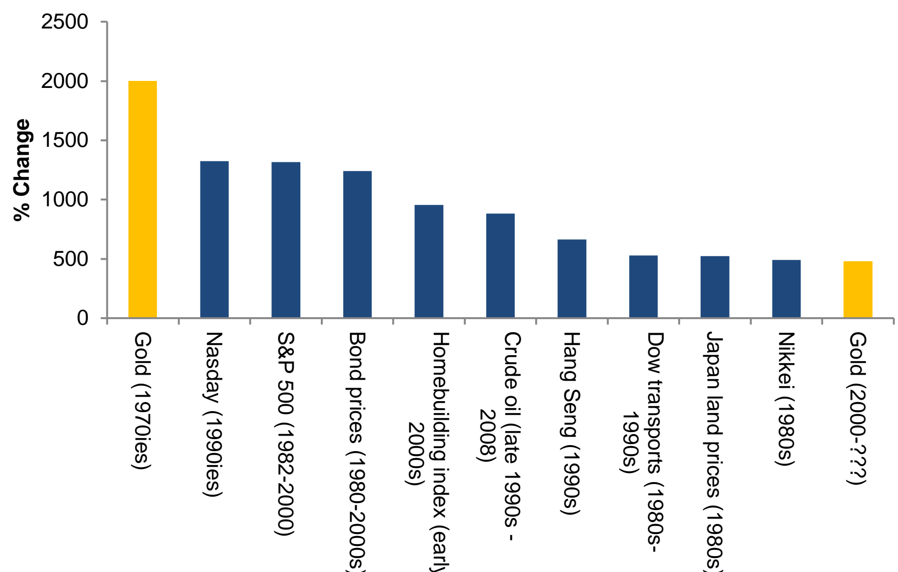
***"A bubble is a bull market in which the user of the word "bubble" has not fully participated*", Jim Grant**

In the previous reports we have discussed the alleged "gold bubble" at length, and our conclusions have always been that the gold price is still far from being in "bubble territory". Many market participants and commentators find it difficult to differentiate between a bull market and a bubble. On top of this we wonder why none of the bubble augurs proclaimed the trend reversal towards a bull market at the end of the bear market. **Also – why do those people refuse to open short positions if they are so convinced that gold is in a bubble?**

Looking at the numbers, there is a lot that defies the notion of a gold bubble. According to the World Gold Council in Germany 159 tonnes of gold were bought last year, i.e. a total worth of about EUR 6.3bn, or EUR 79 per capita. The sum spent on life insurance policies, by comparison, amounted to EUR 76bn or EUR 1,000 per capita – an amount that substantially dwarfs the spending on gold. Q4 demand for gold was at 39.7 tonnes, i.e. 0.5 grammes or EUR 20 per capita. **Crisps or toilet paper are surely a bigger item in the quarterly household budget than that every quarter[120].**

Total global physical gold demand amounted to 4,067 tonnes or USD 206bn last year. By comparison, the new debt taken out by the US government amounted to USD 231bn in February 2012.

Historical bull markets



Sources: Shayne McGuire "Hard Money", David Rosenberg, Gluskin Sheff+Associates

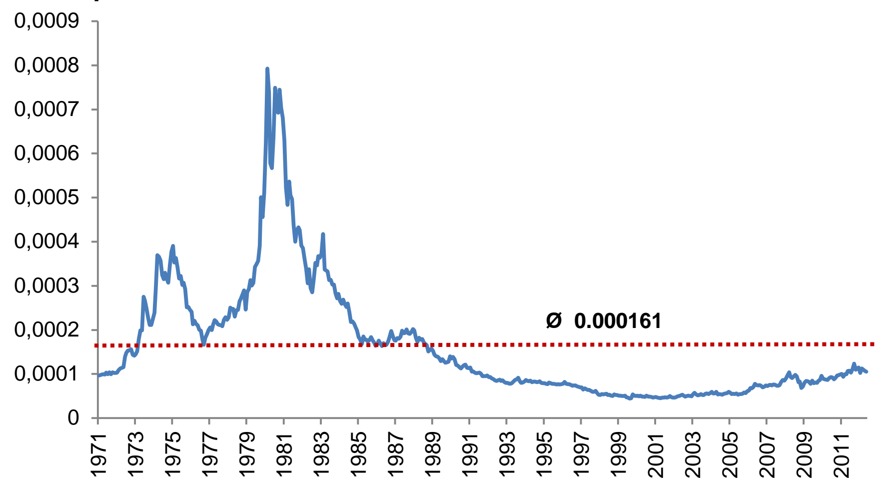
When comparing the development of US government debt (US Total Treasury Securities Outstanding) with the development of the gold price, we also find that it is rather government debt that is running the risk of developing a bubble than gold. At the beginning of 2012, the total volume of all government bonds worldwide amounted to USD 100,000bn.

[120] *Please refer to "Wahnsinn in Unzen, neues von der Goldblase" (Madness by the ounce, news on the gold bubble), Rott&Meyer,*

This is equal to 150% of global GDP – drastically up from the 1980s, when it had been USD 15,000bn[121].

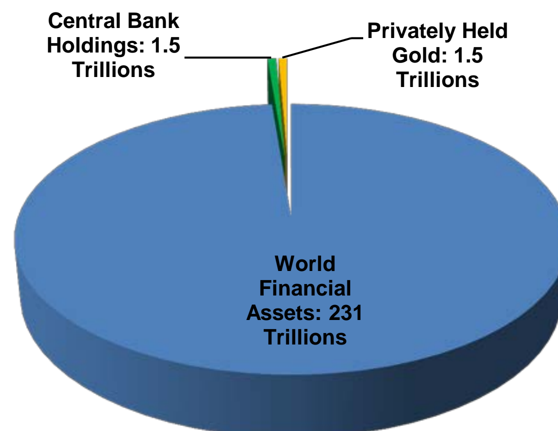
The ratio of gold to public debt is currently 0.0001x, which is significantly below the long-term mean. If the level of debt remained the same, the gold price would have to rise to USD 11,900 for the ratio to reach the extreme values of 1980.

Gold / public debt ratio USA



Sources: Datastream, Erste Group Research

The following pie chart shows the gold reserves held by private households and by central banks in relation to global financial assets. Here, too, we can see that gold accounts for only a marginal share of the total pie at current prices.



Sources: Bullion Management Group, Erste Group Research

As discussed earlier, a substantially increased level of volatility is a distinctive feature of a trend having made it to its later stages. For the following chart, we analysed the biggest daily changes of the gold price. As is obvious, both the biggest up-days and the biggest down-days occurred during the previous bull market. This also confirms that the gold price has not entered an advanced trend phase (yet).

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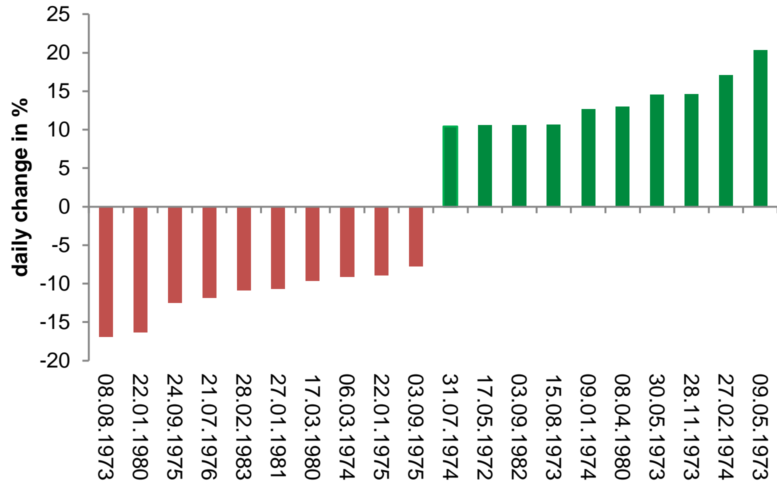
[121] *Please refer to Silberjunge, Silberbulletin, 26 May 2012*

Biggest daily changes since 1971



Sources: Datastream, Erste Group Research

A glance at Google Trends shows that neither the search results of "gold bubble" nor articles about gold in general have picked up dramatically within the previous years. But interestingly, the number of search results for "gold standard" has been on a gradual increase. Geographically, the majority of queries come from the US, followed by Singapore and Ireland.

Google Trends – queries "gold standard"

Source: Google Trends

An analysis of Bloomberg searches yields a similar picture. The white line shows that the number of news reports containing the word gold is currently low. The orange line indicates the gold price. The lower panel shows the correlation between the gold price and the frequency of gold related news.

Bloomberg keyword query "gold" (white line) vs. gold price (orange line) vs. correlation

Sources: Bloomberg, Erste Group Research

Conclusion

In 2007, we set our long-term price target of USD 2,300 for the first time. **We continue to expect the gold price to increase at the very least to its inflation-adjusted all time high of USD 2,300/ounce set in 1980.** Long-term bull markets never end around averages but always set extreme values vis-à-vis other asset classes at the end of the trend. This supports our argument in favour of an imminent entry into the trend acceleration phase.

By drawing some historical comparisons we can see that even prices between USD 5,000 and USD 10,000 seem realistic.

Vietnam: Heralding a gold ban?

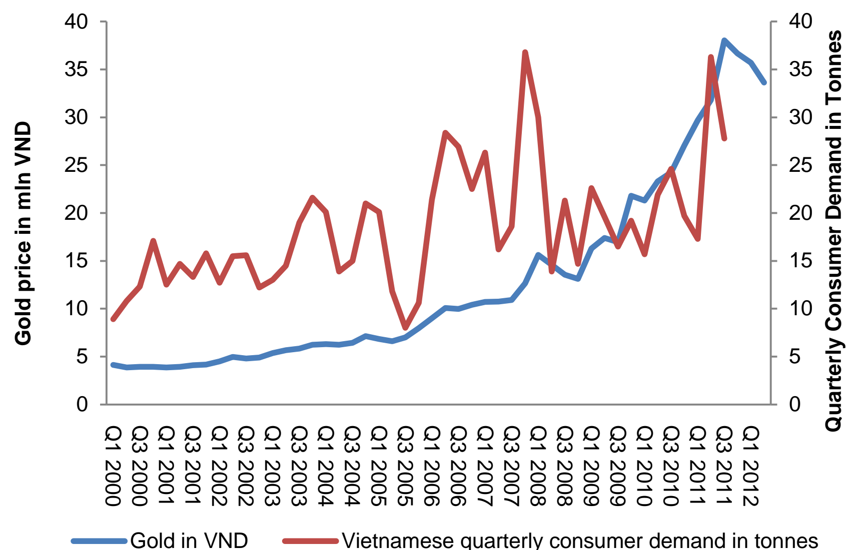
High gold affinity in Vietnam

Gold affinity in Vietnam is extremely high. Gold is accepted as an every-day means of payment. For example, house prices are given in dong and in gold. Although the German GDP is almost 40 times higher than the Vietnamese one, gold demand per capita in Vietnam almost matches that of Germany. Overall gold demand amounts to roughly 3.1% of GDP (N.B. by comparison in China it is less than 0.5%). According to estimates, private households in Vietnam hold at least 500 tonnes of gold. Last year gold demand was up 18% according to the World Gold Council. This makes perfect sense, given that interest rates were at a negative 5%.

Vietnamese hardly trust their currency anymore and have started accumulating gold

Vietnam is a prime example of Gresham's Law[122]. In simple terms, the law states that "bad money drives out good money from circulation". Actually, the correct version of it would say that legally overvalued money drives out legally undervalued money. Specifically, this means that the money that in physical terms is worth less will be used as a means of payment, while the higher valued money – in this case, gold – will flow abroad or be hoarded as a store of value and thus be withdrawn from circulation[123]. Given that inflation was significantly above 15% last year, foreign exchange reserves were falling rapidly, the trade deficit has been growing relentlessly and the Vietnamese dong has already been depreciated six times since 2008, it comes as no surprise that the Vietnamese people hardly trust in their currency anymore and have started accumulating gold.

Gold price in VND (left scale) vs. Vietnamese gold demand (right scale)



Sources: World Gold Council, Erste Group Research

The Vietnamese government has now reacted to this scepticism vis-à-vis the purchasing power of the dong. Plans are to "restrict and centralise" the gold market. According to a decree, the Vietnamese are still allowed to buy and sell gold, but a ban has been imposed on its use as a means of payment.

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[122] *Please refer to our previous Gold Report.*
[123] *Please refer to "Gold, Greshams Law & the Dong", Daily Reckoning*

The most important points of the decree:

- The number of gold traders will be substantially reduced and will be put under tighter scrutiny. Licensed gold traders now have to register on the basis of a minimum nominal capital of VND 100bn (i.e. close to USD 4.7mn), they have to have been in the gold trading business for at least two years, and they have to have paid taxes of at least VND 500bn.
- The central bank will control gold imports, the production, and the buying and selling of gold jewellery.
- Gold terminal trading and international accounts are supposed to be centrally monitored. When in doubt, the central bank may intervene.
- The gold market will be "regulated" by taxes.
- A campaign is to be launched that will try to persuade the Vietnamese population to transfer their privately stored gold into the custody of banks.

Saigon Jewellery, which accounts for more than 90% of Vietnamese gold bullion production, was placed under governmental supervision last year. Due to the recent measures, gold prices have increased substantially, the black market is thriving, and counterfeit and inferior goods have entered the market. **This is the logical consequence of such interventions.**

Many have wondered whether such a confiscation approach seems realistic in our region. According to Shayne McGuire this will only become a likely scenario once the gold boom has gained substantially in dynamics and width and has turned into a veritable gold rush. In that case, he argues, restrictions might be imposed on the gold trade. In view of the fact that gold is still a very low-key affair, such considerations are premature[124].

[124] *Please refer to Shayne McGuire, "Hard Money", page 250*

Gold improves portfolio characteristics

"Investing is about positioning capital to profit from the outcomes one expects. Insurance is about incurring a relatively small cost to protect against the outcomes that one does not expect but that may prove catastrophic if they, in fact, occur" Simon Mikhailovich, Eidesis Capital

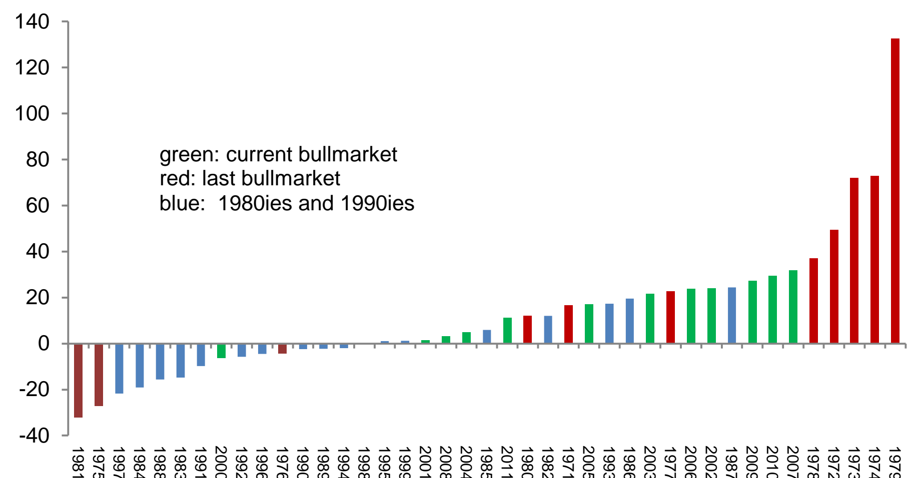
Unique characteristics guarantee diversification

As we have already pointed out in earlier reports, we believe that every portfolio should contain gold for reasons of diversification and insurance. Numerous quantitative studies show that gold is a successful means of diversification and a reliable store of value[125]. The unique characteristics (especially stock-to-flow) affect correlation and volatility and thus guarantee "real diversification" at times where it is needed the most: during black swan events (i.e. under extreme market conditions).

"*For investors, it is not how often you are right that counts: it is how much you make when you are right and how much you lose when you are not*" Nassim Taleb

A positive skew[126] means that there is a higher chance of a 1% increase than of a 1% decrease. The combination of positive skew and low correlations makes gold a safe haven. Higher volatility on the upside is consistent with the assumption that gold reduces overall risk in diversified portfolios, as the following chart of annual gold performance illustrates. The red bars denote the annual performance of the previous big bull market, the green ones show the performances of the current bull market, and the blue bars denote the performances of the 1980s and 1990s. This, too, illustrates the fact that so far we have seen no trend acceleration, given that the five top annual performances were all set in the previous bull market.

Annual change in %

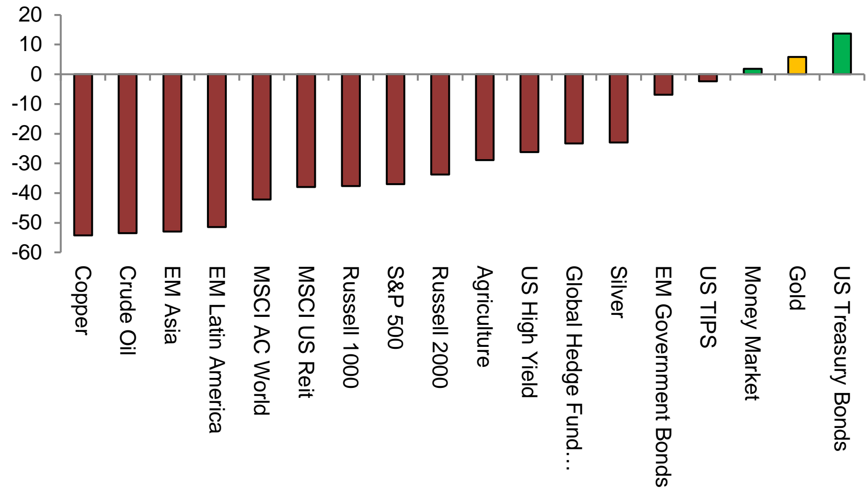


Sources: Datastream, Erste Group Research

The following chart also illustrates that gold is an excellent "event hedge": in the disastrous year of 2008, the performance of gold was positive both in relative and in absolute terms (behind US Treasuries).

[125] *Please refer to "Gold as a strategic asset", World Gold Council*
[126] *The skew measures the deviation from the mean of the normal distribution*

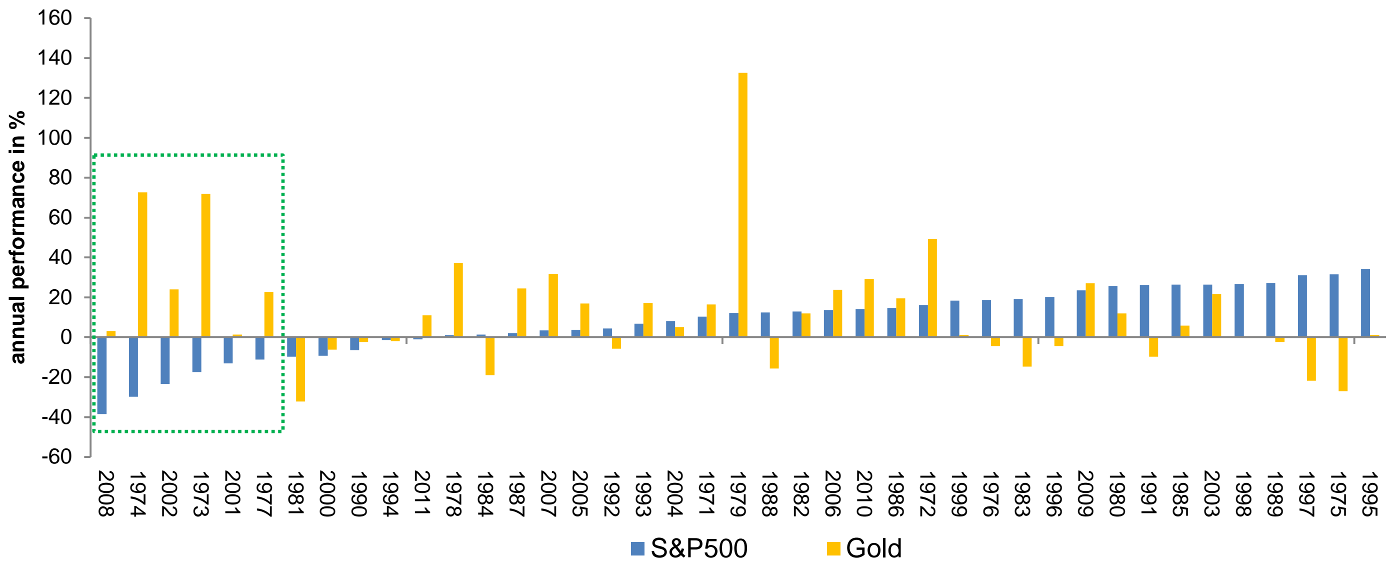
Performance in 2008



Sources: Bloomberg, Shayne McGuire "Hard Money"

The chart underneath indicates a similar theme. The annual performances of the S&P are sorted in ascending order from left (weakest year) to right (strongest year) and are juxtaposed with the respective development of gold. Clearly, gold outperformed the S&P in the six worst years not only in relative terms, but also posted a year-on-year increase in absolute terms.

Annual performance of gold & S&P (sorted in ascending order, starting from the weakest performance of the S&P)

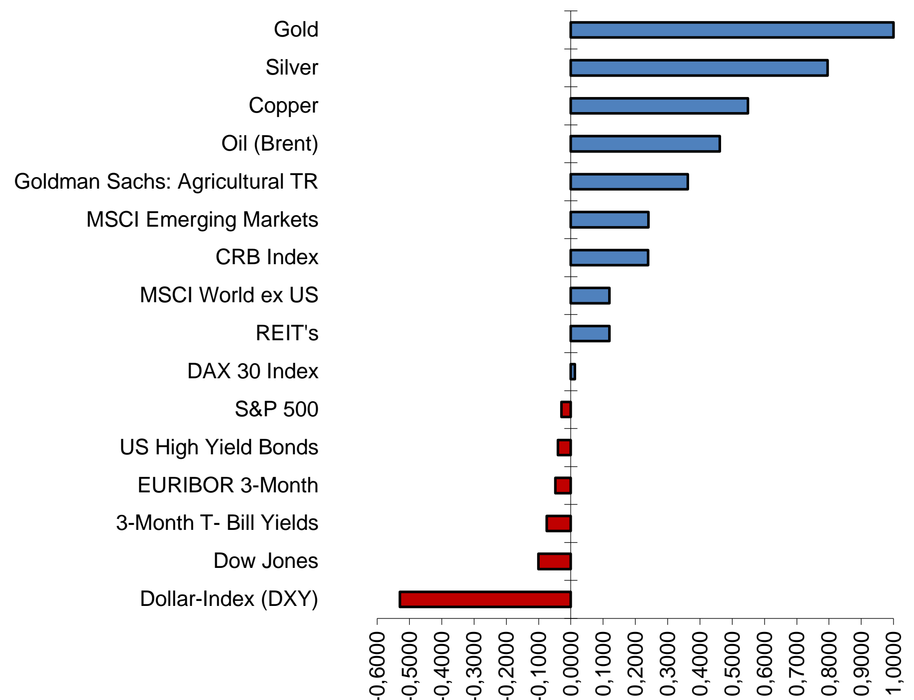


Source: Datastream

***"Those entrapped by the herd instinct are drowned in the deluges of history. But there are always the few who observe, reason, and take precautions, and thus escape the flood. For those few, gold has been the asset of last resort."* Antony Sutton**

Gold has a low correlation to other asset classes. Since 1970, the correlation coefficients have been -0.02 to the S&P 500 index, -0.04 to US Treasuries, +0.19 to the CRB commodity index, and +0.13 to house prices (based on the Case-Shiller index from 2000 onwards). As an asset class with very low correlations, gold is therefore highly suitable for portfolio diversification. A short-term analysis yields similar correlations. The following graph shows the 5Y correlation coefficient of the weekly performances to commodities, bond indices, commodity indices and equity indices. **This, too, confirms that gold provides sensible portfolio insurance in terms of efficient risk management.**

Correlation gold vs. other asset classes



Sources: Datastream, Erste Group Research

Academic studies suggest allocation between 5 and 25%

Numerous scientific research papers in the field of gold in the investment process prove the fact that at least a small allocation in gold is advisable[127]. A total of more than 300 studies investigate this topic. Sherhman (1982) recommends a 5% weighting of gold in equity-driven portfolios, while Chua (1990) recommends a weighting of up to 25%. Bruno and Chincarini (2010) advise 10% for investors outside of the USA, while Scherer (2009) recommends an allocation of 5-10% for public funds – the same allocation Klement/Longchamp (2010) recommend for high-net-worth-individuals. Oxford Economics[128], too, recommends gold as a risk hedge in a balanced portfolio, suggesting a weighting of 5 to 9%. According to a WGC study[129] portfolios that contain gold have a tendency to show better performance results than those without (by increasing profits and cutting losses). The study suggests that a gold allocation of 3.3 to 7.5% leads to a significantly improved portfolio profile.

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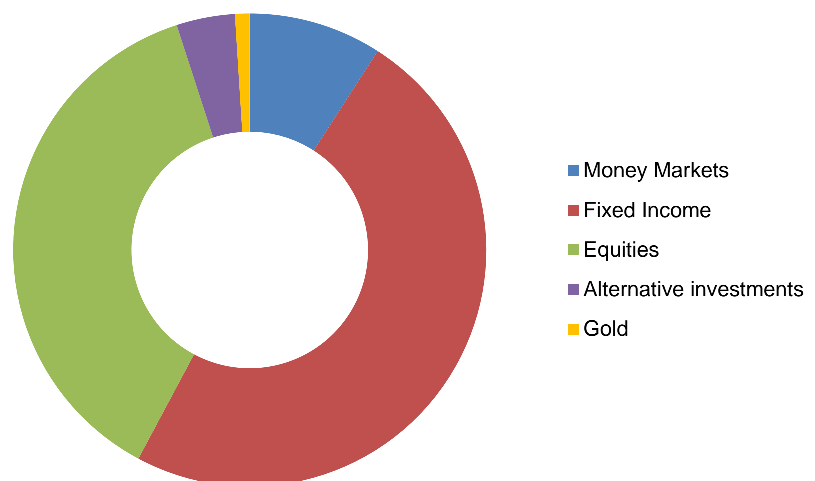
[127] Please refer to "What do Academics think they know about gold", Brian M Lucey
[128] Please refer to "The impact of inflation and deflation on the case for gold", Oxford Economics, July 2011
[129] Please refer to "Gold: alternative investment, foundation asset, WGC

Gold is extremely liquid: daily turnover more than USD 240 bln

The gold sector is liquid, transparent, and comes with low transaction costs. According to the LBMA, 10.9bn ounces of gold worth a total of USD 15,200bn were traded in the first quarter of 2011. This equals 125 times the annual production, or twice the amount of gold that has ever been produced. And that is probably an underestimate considering that not all members of the LBMA participated in the survey[130]. A turnover of USD 240bn per day means a higher turnover than for most of the currency pairs. Only EUR/USD, USD/JPY, USD/GBP, and USD/AUD recorded higher trading volumes. At the time of the survey, only USD 168bn were traded on a daily basis in USD/CHF, another safe haven currency. **By comparison, the daily turnover of Apple shares is USD 5.5bn. This means that gold is one of the most liquid asset classes in the world.**

The following diagram illustrates the still low allocation by institutional investors.

Distribution of investor holdings by asset class (as %, est. 146 trillion USD)

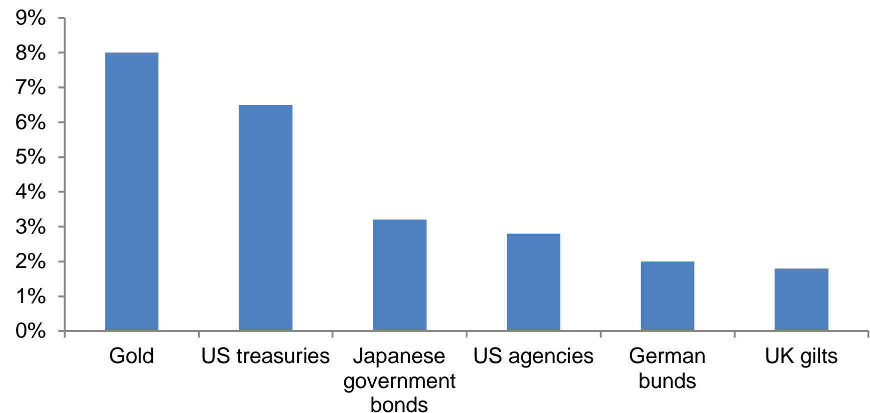


Sources: World Gold Council, BIS, Hedge Fund Research, J.P. Morgan, Preqin, Thomson Reuters, GFMS, World Federation of Exchanges

Gold is produced on all continents with the exception of Antarctica, where mining is banned as a matter of principle. While in the 1970s there was still a clear geographic focus in production (N.B. almost 70% came from South African mines), the production nowadays is broadly diversified from a geographic perspective. Moreover, due to the high stock-to-flow ratio, we will never see a supply shock. This is what clearly sets gold clearly apart from commodities such as oil, since there is no country or region that dominates production[131]. For example, 75% of total platinum production comes from South Africa, while Russia is responsible for 43% of total palladium production.

[130] *Please refer to "Sizing up the gold market", Financial Times, September 2011*
[131] *Please refer to "The Importance of Gold in Reserve Asset Management", WGC, June 2010*

Average daily turnover as % of total outstanding



Sources: WGC, Bloomberg, Datastream

Gold is therefore a useful means of risk diversification. And the often-cited "high volatility" of gold is a fairy tale as well. For example, the volatility was at 14.6% between January 1987 and June 2011 according to the World Gold Council. During the same period, US blue chips were recording a volatility of 15.7%, mid-caps were fluctuating by 17.3%, and small-caps by 20%. This is even more remarkable since equity indices already contain hundreds of shares, which already smoothes volatility, whereas gold is one single asset. In comparison with commodities (e.g. oil (38%) or copper (27%)) gold is substantially less volatile anyway, which presumably results from the high stock-to-flow ratio and the resulting market depth.

A study by Oxford Economics[132] also confirms the robustness of gold in times of crises. In stress phases (measured by credit spreads, an increased volatility on the equity markets, and a drastic increase in the TED spread) gold would clearly outperform the market. In the crisis years of the 1970s it would gain an annual +33%, in the 1980s +18.1%, and in the 2000s +15.8%. This substantially exceeds its annualised performance of 1971 to 2012, which amounted to 9.7%.

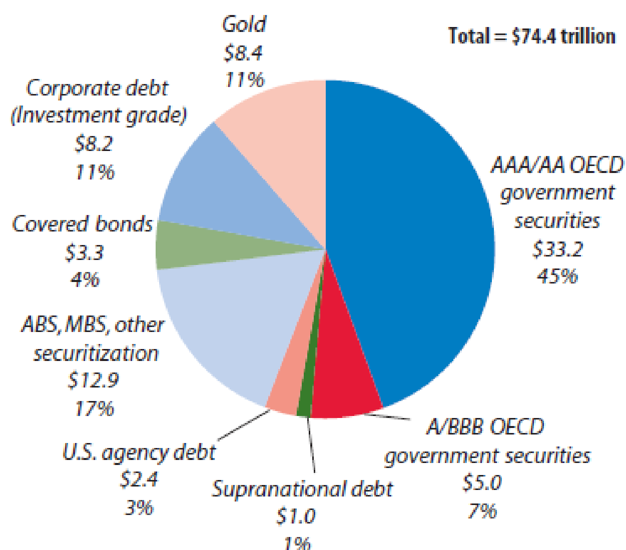
The renaissance of gold in traditional finance

"Both the lack of political will to reshape fiscal policies at times of rising concern over debt sustainability and an overly rapid reduction of fiscal deficits limit governments' capacity to produce assets with low credit risk." IMF

In a study, the IMF forecasts a drastic increase in the demand for safe investments as well as a significant decline in the supply of such investments. The IMF expects the share of safe haven assets to fall by 16% or USD 9,000bn by the year 2016. Due to the turbulences, which are expected to continue, the IMF envisages a continued strong increase in demand for safe investments, but at the same time a drastic decline in their availability. This process has already started. At the end of 2007, 68% of all industrialised nations commanded a AAA rating, whereas nowadays this percentage has fallen to 52%. **In accordance with the law of supply and demand, this will trigger an increase in the "insurance premium" of safe investments.**

[132] *Please refer to "The impact of inflation and deflation on the case for gold", Oxford Economics, July 2011*

Outstanding amounts of marketable potentially safe assets (in USD 1,000bn and in % of total safe haven assets)



Sources: IMF, The Safe Asset Universe

Reliable stores of value that are supposed to preserve the assets are called "safe haven assets". According to the IMF, they act as a lubricant and sign of trust in financial transactions and strengthen the capital and liquidity base.

Safe assets should fulfil the following criteria:

- Low credit and market risks
- High market liquidity
- Limited risk of inflation
- Low foreign exchange risk
- Low idiosyncratic risk

Gold fulfils these criteria without any problem.

Renaissance of gold as collateral

Due to its high liquidity and unique characteristics, gold is becoming ever more prominent as collateral. Along with LCH.Clearnet, IntercontinentalExchange, JP Morgan, and the CME Group, Eurex, too, now accepts gold as collateral. This step definitely makes sense for clearing houses. On the one hand these institutions can diversify their assets (due to the low or in some cases even negative correlation), on the other hand they honour the wish of many market participants, who want to lodge gold as collateral. This initiative is currently also supported by the World Gold Council, which in addition wants to have gold acknowledged as "tier 1" asset within the framework of Basel III. **This clearly highlights the renaissance of gold in international finance[133].**

This is also substantiated by the fact that a Japanese pension fund has now for the first time invested in gold. The Okayama Metal & Machinery has allocated 1.5% of its assets under management to gold bullion. In total, Japanese pension funds have USD 3,400bn worth of assets

[133] *Please refer to "LCH.Clearnet to accept gold as collateral", FT Alphaville*

under management, 59% of which are allocated to bonds. Only 6% are invested in alternative assets such as property, private equity, hedge funds, and commodities.

Conclusion

We expect the debt and system crisis to cause a thorough review of the international monetary system. The downgrading of the ratings of numerous countries and companies will likely continue and come with a clearly positive effect for gold as safe haven.

Why is gold such a highly emotional topic? Cognitive dissonance and normalcy bias as possible explanation

What are the reasons for the continued sceptical attitude towards gold? Gold is having a hard time ridding itself of the reputation of being a "barbarous relic"; a reputation created in the 1980s and 1990s. Demystification and relativisation as far as a number of unshakable myths and misunderstandings go ("buying physical gold is expensive", "gold is highly speculative" etc) are slow. With 20 years of bear market having instilled many investors with a whole range of such arguments, defamations, and convictions, a reversal of opinion is accordingly drawn-out and tedious. This process of reassessment is definitely based on psychological reasons**. It seems as if the behaviour of many market participants with regard to the current crisis were dominated by cognitive dissonance and the "normalcy bias".**

According to Wikipedia, cognitive dissonance in social psychology "*is a discomfort caused by holding conflicting cognitions (e.g., ideas, beliefs, values, emotional reactions) simultaneously. In a state of dissonance, people may feel surprise, dread, guilt, anger, or embarrassment. The theory of cognitive dissonance in social psychology proposes that people have a motivational drive to reduce dissonance by altering existing cognitions, adding new ones to create a consistent belief system, or alternatively by reducing the importance of any one of the dissonant elements.*"

"*People can foresee the future only when it coincides with their own wishes, and the most grossly obvious facts can be ignored when they are unwelcome*" George Orwell

Cognitive dissonance occurs for example when a decision has been taken although the alternatives were also attractive; when the decision taken turns out to be the wrong one; or when one acts in opposition to one's beliefs without existing external justification (benefit/reward or cost/punishment). **An especially strong dissonance is created when the stable, positive concept of oneself is in danger of being negatively affected, i.e. when one receives information that makes one look stupid, immoral, or irrational[134].**

What must not happen, will not happen

The second crucial factor seems to be the so-called normalcy bias. It refers to a mental state of distorted perception, which people enter when facing a disaster. It leads people to underestimate or disregard the possibility of the occurrence of disasters and their possible consequences along the idea of "*what must not happen, will not happen*" and "*what has been that way, will remain that way*".

Information that refutes own expectations is deliberately blanked out

Many times this causes a situation where people are not adequately prepared for disasters, because it exceeds one's capabilities to imagine a situation that has not happened before. In addition, people tend to interpret warnings in the most favourable way, succumbing to the phenomenon of selective perception[135]. This means that only a limited array of things supporting one's opinion are perceived, which is also in line with the so-called confirmation bias. In cognitive psychology, this concept describes the tendency to search, select, and interpret information in such a way that it confirms one's own expectations. Therefore, any information that refutes one's own expectations is deliberately blanked out. As a result, the person in question suffers from self-delusion and self-deception[136].

[134] *http://en.wikipedia.org/wiki/Cognitive_dissonance*
[135] *Please refer to Wikipedia, "Normalcy bias"*
[136] *Please refer to Wikipedia, "Confirmation bias"*

“*We hear a lot about “worst case” projections, but they often turn out to be negative enough. I tell my father’s story of the gambler who lost regularly. One day he heard about a race with only one horse in it, so he bet the rent money. Halfway around the track the horse jumped over the fence and ran away. Invariably things can get worse than people expect. Maybe “worst case” means “the worst we’ve seen in the past”. But that doesn’t mean things can’t be worse in the future“* Howard Marks

What explains Warren Buffets “aurophobia”?

“***First they ignore you, then they laugh at you, then they fight you, then you win.”*** **Mahatma Gandhi**

It seems as if we were faced with something like “**aurophobia**“[137], especially in the financial sector. This pathological fear of, or aggression towards, gold does not seem to exist for any other currency or other asset class. After all, we have not heard of such a profound aversion against copper, we do not know of any “bond haters”, nor are militant property bashers a popular concept. We regard ourselves as analysts rather than psychotherapists, which is why we do not really want to dwell on the reasons for that strong aversion. **However, in the following we want to dispel an often quoted mistake.**

“***There are about three hundred economists in the world who are against gold, and they think that gold is a barbarous relic – and they might be right. Unfortunately, there are three billion inhabitants of the world who believe in gold.*”** **Janos Fekete**

For reasons we do not understand, Warren Buffet has more and more frequently declared the low esteem in which he holds gold. He criticises the low industrial use, the lack of intrinsic value, and questions the general reasonableness of buying gold. **We believe that Buffett has made a fundamental error, having missed the connection between gold and money and is thus comparing apples and oranges. The majority of demand is based on monetary requirements. Therefore in this case he should not compare gold with equities, but with cash. Gold is an alternative currency and not an investment. Taking this train of thought further, the same arguments then apply also to the US dollar – it has no intrinsic value, no industrial use, and does not pay any interest at this point in time either.**

Warren Buffett’s aversion to gold may also be explained by a certain rebellious behaviour against his father, Howard Buffett. Buffett sr. was a liberal senator (in the sense of classical liberal) who spent every living day campaigning for a return to the gold standard[138].

“I warn you that politicians of both parties will oppose the restoration of gold, although they may outwardly seemingly favour it. Also those elements here and abroad who are getting rich from the continued American inflation will oppose a return to sound money. There is no more important challenge facing us than the restoration of your freedom to secure gold in exchange for the fruits of your labours”

“Is there a connection between Human Freedom and A Gold Redeemable Money? At first glance it would seem that money belongs to the world of economics and human freedom to the political sphere. But when you recall that one of the first moves by Lenin, Mussolini and Hitler was to outlaw individual ownership of gold, you begin to sense that there may be some connection between money, redeemable in gold, and the rare prize known as human liberty.

[137] “Gold: The Currency of FIRST Resort”, Hinde Capital, June 2010
[138] *Please refer to “Human Freedom Rests on Gold Redeemable Money”, Congressman Howard Buffett, May 1948*

"Also, when you find that Lenin declared and demonstrated that a sure way to overturn the existing social order and bring about communism was by printing press paper money, then again you are impressed with the possibility of a relationship between a gold-backed money and human freedom."

"*Civilized people should buy gold when uncivilized people are in charge. They should also buy it when civilized people in power adopt the economic policies of uncivilized people*" Gary North

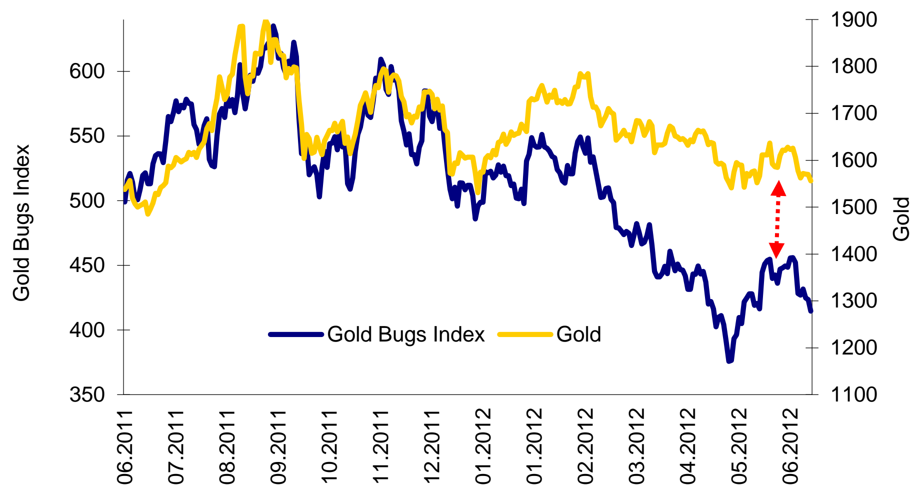
Buffett's long-term partner, Charlie Munger, showed his critical attitude on CNBC, saying that "*gold is a great thing to sow into your clothes if it is 1939, you are in Vienna and you are Jewish, but civilised people do not buy gold – they invest in productive companies*". It seems he regards billions of people in India and China as uncivilised. There are good reasons why people around the world have been accumulating and hoarding gold in every (civilised) culture for thousands of years.

Gold mining shares

"risk off" leads to disappointing performance of gold miners

Gold mining shares have developed a significantly negative divergence from the gold price in the past months. The Gold Bugs index has incurred a decline of 20% since the previous Gold Report, while the gold price has gained 2%[139]. On the one hand this was due to the increase in input costs (especially energy), on the other hand the rising risk aversion within the framework of a general "risk-off" in equities seems to have been responsible for the underperformance of gold shares.

HUI Gold Bugs index vs. gold since the previous Gold Report



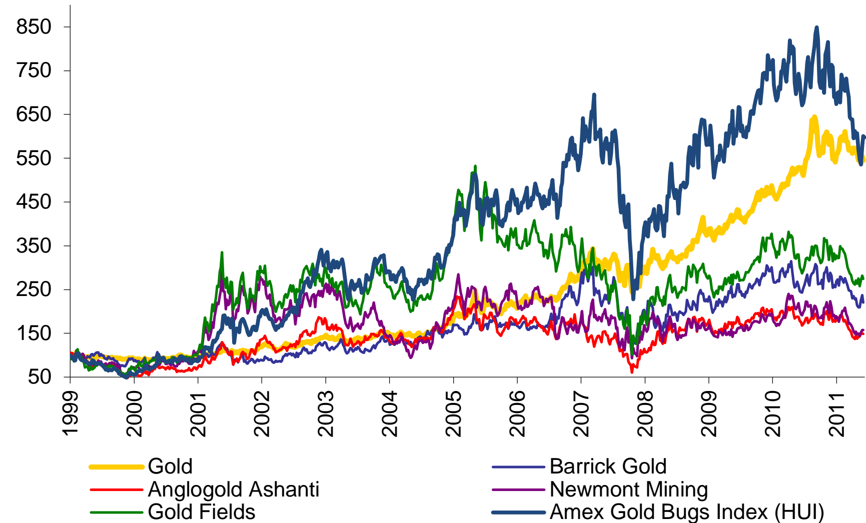
Sources: Datastream, Erste Group Research

Majors have disappointed investors

The following chart illustrates the underperformance of the major producers in comparison with the Amex Gold Bugs index and with the gold price since the beginning of the current bull market. There is an abundance of reasons for this. Organic growth is hardly possible (anymore) for the major players, given that greenfield exploration has been neglected in the past and the cost of capital has increased drastically. The hedging programmes had to be cancelled at huge expenses. The disappointing performance of the shares of the majors vis-à-vis gold of course also results from the dramatic increase in input costs. The lack of skilled labour, a sharp rise in fuel costs, the more costly mining of "low grade" and foreign exchange effects have been the most prominent reasons for the pressure on margins. Earnings and cash flow have only been marginally up in spite of the increase in the gold price. Also, the major players have clearly underperformed some companies of the HUI (e.g. Agnico Eagle, Buenaventura), which have significantly lower market capitalisations.

[139] *As of July 5*

Gold price vs. Amex Gold Bugs vs. major gold producers since the end of 1999 (indexed to 100)



Sources: Datastream, Erste Group Research

The difference between the gold price and production costs still remains the single most important factor for the profitability of the gold mining shares. The absolute level of the gold price, on the other hand, is relatively irrelevant.

Gold shares are on a long-term basis negatively correlated with the broad equity market

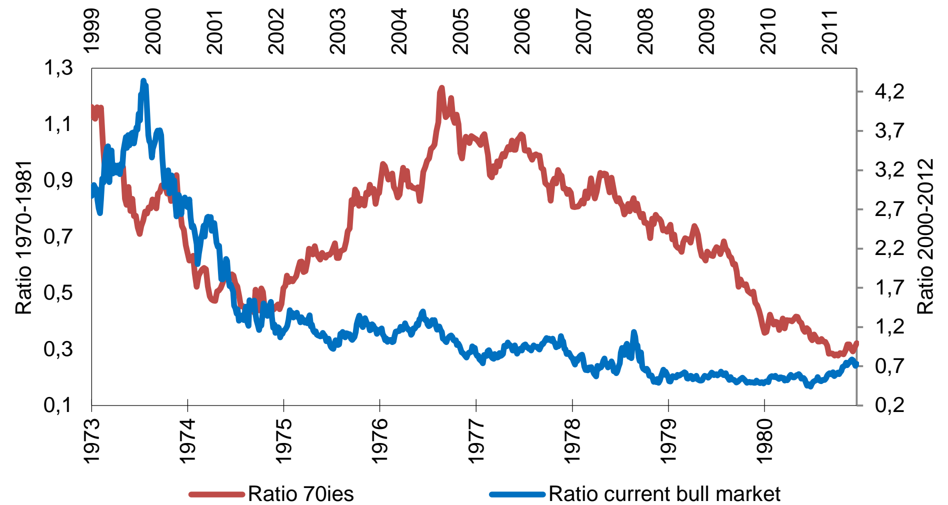
As such, gold benefits from times of growing economic uncertainty and recessions. Therefore, gold shares are one of the few sectors that are negatively correlated with the broad equity market in the long run. In the short run of course the falling liquidity and the rising risk aversion somewhat erode this correlation, but in the long run, the correlation is robust. For example, the S&P 500 traded at 1,500 points in 2000 at the outset of the gold bull market, while the HUI set its all time low at 35 points that year. At the moment, the S&P 500 is at 1,300, i.e. down more than 10% from the aforementioned value, while the HUI has climbed to 450 and has thus gained more than 1,100%[140].

Something similar happened in the 1970s. The S&P was practically going sideways between January 1973 (118) and January 1981 (135). During the same period, the Datastream World Gold Mining Index soared from 100 to 407 points. The following chart shows the ratio of S&P 500 and the US Goldmining index in the 1970s (left scale and lower time axis) and by comparison the same ratio during the current bull market (right scale and higher time axis).

We can see a clear outperformance by the S&P from mid-1974 to mid-1976 (rising ratio line) within the last bull market. During the same phase the gold price corrected from USD 180 to USD 100. Over the same period of time the gold share index lost only 30%, while the S&P was showing relative strength at this point, which is why the ratio increased. In comparison with the current bull market (blue line) we can see a clear downward trend that reached its low in August 2011. Since August 2011 the S&P has shown some relative strength again.

[140] *Please refer to "Gold and gold mining stocks, an update", www.acting-man.com*

Comparison S&P 500 / gold shares – ratio in the previous and the current bull market

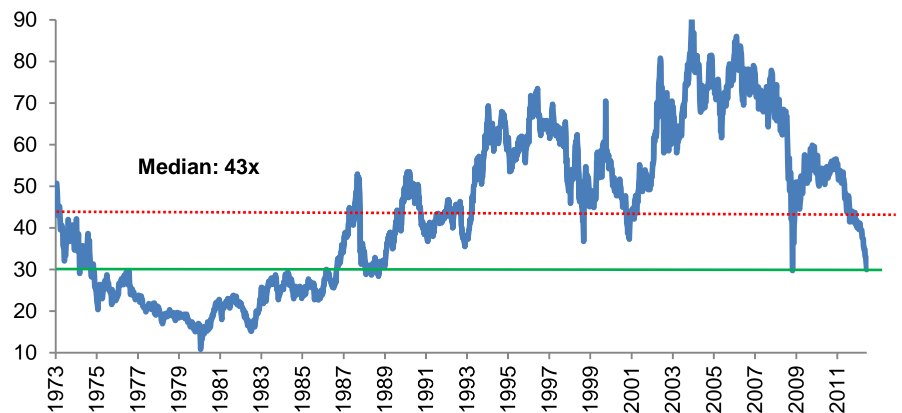


Sources: Datastream, Erste Group Research

Mining shares at the cheapest level since 2008 and 1989

In the chart below, we can see how many units of the Datastream World Gold index one gramme of gold would buy. The value is currently below 30x and thus clearly below the long-term median of 43x. This means that gold shares are currently about as cheap in relation to gold as they were last in 2008, and before that in 1989. There seems to be a support in the area of 30x (or in fact a resistance line from the 1980s). **This could indicate an attractive time to invest.**

World Goldmining index / Gold – ratio since 1973

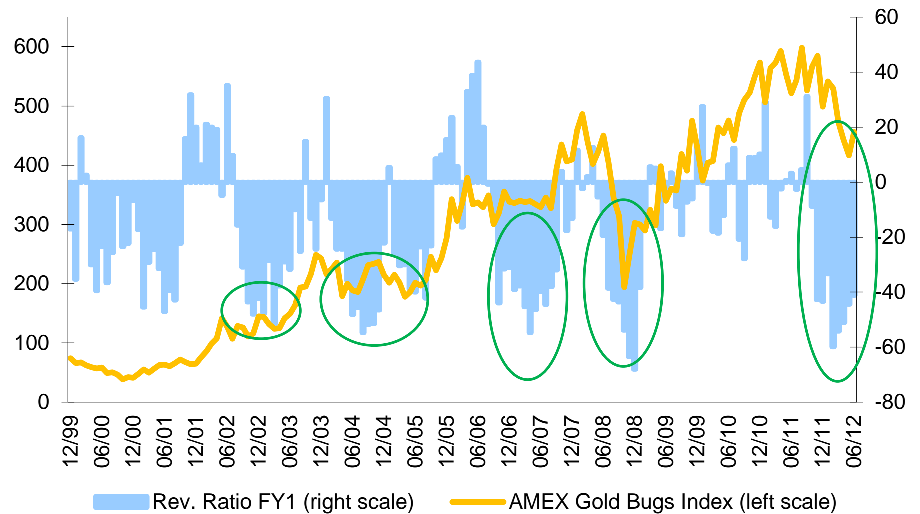


Sources: Datastream, Erste Group Research

Earnings revisions extremely negative, this looks like a comforting contrary indicator

The earnings revisions of the Gold Bugs index remain extremely negative. This means that at the moment more analysts revise their earnings estimates downwards than upwards. It highlights the primary analysts' profound pessimism. 2008 was the last year we saw similarly sharp adjustments of earnings forecasts. By relating earnings revisions to the price development of the Gold Bugs index (golden line and left scale), we find that the timing of the greatest pessimism tends to provide investors with reliable signals to engage. **To this extent we can recommend the revision ratio as a comforting contrary indicator.**

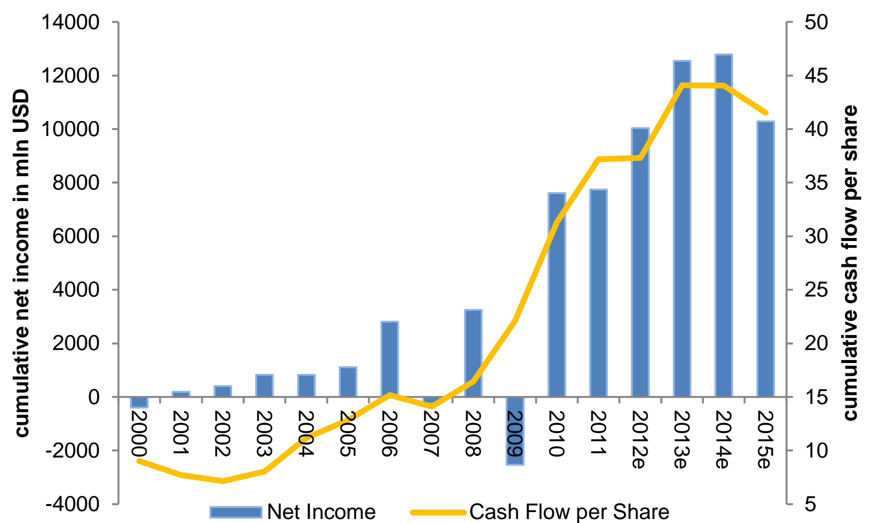
Earnings revisions Gold Bugs index vs. gold price



Sources: JCF Factset, Erste Group Research

In the following we added up the results of four major producer (Barrick, Goldcorp, Newmont and Newcrest). The cumulative net income has increased from USD -391mn in 2000 to USD 10bn at the moment. The cumulative cash flow per share (golden line, right scale) draws a very positive picture as well. It has soared from USD 9 in 2000 to currently USD 37.

Cumulative net income (left scale) and cumulative cash flow of the four major producers



Sources: JCF Factset, Erste Group Research

Since the last Gold Report 74 takeovers[141] have occurred. The average transaction size was USD 547mn, with an average premium of 31.02%. The premiums were substantially higher for projects in politically stable regions. 49% of buyers were Canadian, 15% from Australia, and 14% from the US. The increasing political risk is also reflected in the increased takeover

[141] *Transaction volume above USD 50mn*

activity in stable regions. 25% of projects are based in Canada, 15% in the US, and 11% in Australia. The majority of the transactions were friendly takeovers, it seems as if hostile takeover battles are a thing of the past. Also, most of the acquired projects have already gone through the largest part of their approval procedures. Interestingly, more and more deals are settled in cash and shares. Last year the majority was still paid in cash only.

Selected takeovers in the gold sector since the last Gold Report

Target	Buyer	Total Value (Mio. USD)	Payment
Polyus Gold OJSC	Polyus Gold International Ltd	7,325	Cash
European Goldfields	Eldorado Gold	2,555	Cash or Shares
Northgate Minerals	AuRico Gold	1,310	Share Exchange
Polymetal JSC	Polymetal International	1,190	Cash
Minefinders Corp	Pan American Silver	1,131	Cash or Shares
Minera Andes	McEwen Mining	846	Shares
Trelawney Mining	IAMGOLD	498	Cash
Extorre Gold	Yamana Gold	360	Cash or Shares
Far South East Gold	Gold Fields	340	Cash
Adamus Resources	Endeavour Mining	339	Shares
Grayd Resources	Agnico-Eagle Mines	265	Cash

Sources: Bloomberg M&A, Erste Group Research

We expect the takeover activity to continue accelerating. According to a survey by PWC[142], 40% of companies want to replace their reserves with acquisitions. **The war chests of the major producers are filled to the brim, giving them room to manoeuvre when it comes to M&A transactions.** The cumulative free cash flow of the 16 companies in the Gold Bugs index this year will amount to USD 11.5bn, and it is expected to rise to USD 13.7bn by 2013. On the premise of a stable gold price, Barrick Gold alone will generate more than USD 14bn worth of cash flow by 2015. **This indicates the enormous potential of further consolidation, given that the top ten producers alone have to replace more than 40mn ounces of gold production in 2012.**

Challenges for the gold miners: Peak Gold and increasing resource nationalism

The six P's remain essential challenges for the mining companies[143]:

- **People:** the lack of skilled workers, geologists, and engineers leads to a drastic increase in personnel costs
- **Procurement:** rising procurement costs for goods and services involved in gold production
- **Power:** rising energy costs, e.g. because of falling gold content
- **Permits:** more stringent regulations and higher costs for mining permit
- **Projects**: increasingly difficult to replace exhausted reserves

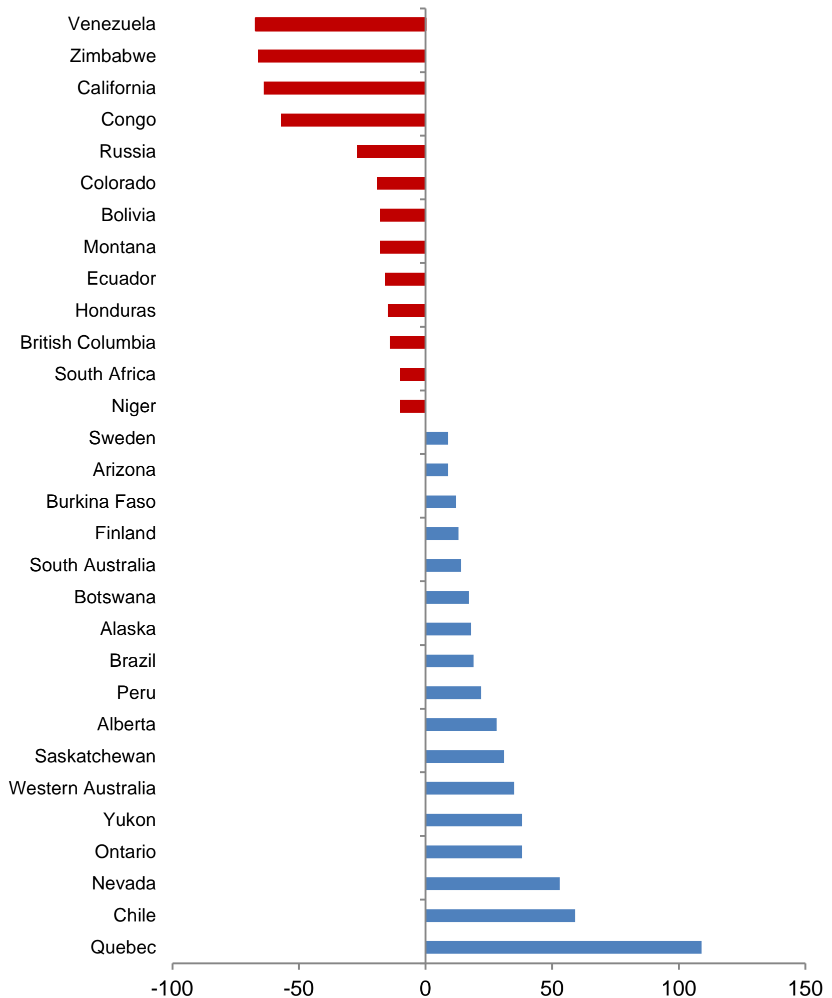
[142] *2012 Gold price report, PwC*
[143] *South African Chamber of Mines, seen in Müller "Modellierung der globalen Goldproduktion durch Anwendung der Hubbert'schen Peak Oil Methodik" (Model of global gold production by applying Hubbert's Peak Oil methodology)*

- **Politics:** rising level of market interventions e.g. on behalf of environmental or job protection and increasing duties such as new taxes

Selection of the right jurisdiction is essential for gold share investments

We believe that growing resource nationalism puts additional pressure on companies: the trend towards nationalisation and higher taxation of the mining industry has again picked up from last year. **The chronic budget deficits around the globe trigger a certain degree of greed. A vast array of new taxes and licence fees have recently been introduced or proposed. This means that for the investor the selection of the right jurisdiction has become one of the most important criteria for gold share investments.** The chart in the following shows the most (blue) vs. the least (red) attractive mining jurisdictions on the basis of a survey.

Difference between the "most favourable" and the "least favourable" policies towards mining



Source: Fraser Institute, Erste Group Research

From the NIMBY stage (not in my back yard) to the Banana stage (build absolutely nothing anywhere near anyone)

"*One reason gold mining and oil shares are so cheap is that these industries are almost uniquely subject to political risk: once you have spent billions to open a mine or an offshore oil field, you are, potentially, a hostage to politicians who can raise your taxes at will or even seize your*

assets…..There is no longer a limitless supply of cheap commodities in politically secure regions of the world. “[144]

Various kinds of political risk:

- Mining reforms / new legislature / re-negotiation of existing licences (Mongolia, Guinea Bissau, Brazil, Zimbabwe)
- Expropriation / nationalisation (Argentina, Venezuela, South Africa)
- “National champions“ (South Africa, Brazil, Russia)
- Safety (Ivory Coast, Mali, Niger, Mexico)
- New taxes and duties (Tanzania, Zambia, Peru, Brazil, Australia)

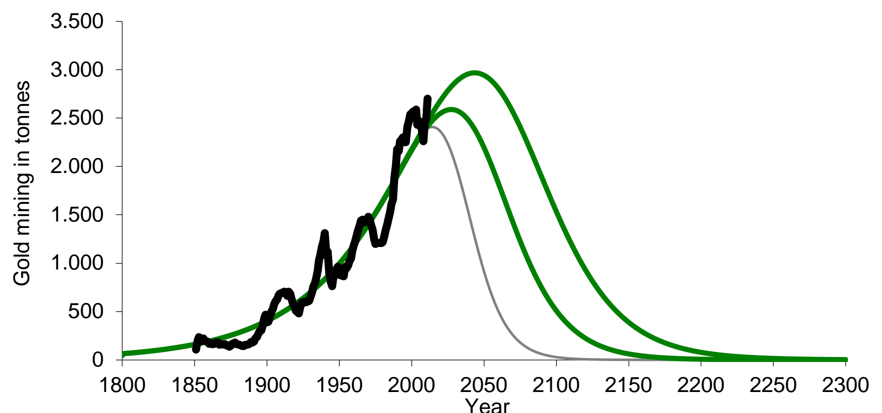
Hubbert’s oil model also applies to gold production

In his very interesting dissertation[145], Jürgen Müller applies the insights of Hubbert’s oil model to gold production. He shows that the production curve of mines is almost bell-shaped. As a result, not only has the gold content of the ore fallen for decades, but the colliery waste has increased massively as well. The impurities of the ore intensify, and the distribution of gold within the ore becomes more and more fine-grained, which results in an increased energy input for gold production.

Model suggests maximum gold production of 3,000 tonnes per year

The study claims that in the future gold will be increasingly derived from secondary sources, such as production from porphyric copper/gold deposits[146]. Falling primary production, for example in South Africa, can still be compensated for by rising secondary production. According to Müller, this trend could continue up to an annual production of 3,000 tonnes. This maximum (peak gold) should be reached between 2027 and 2044. Prior to that, the increase in annual production will be a moderate one. In three different scenarios, Müller estimates total production of 245,000 to 440,000 tonnes of gold.

Peak Gold scenarios



Source: Jürgen Müller

Exponential relationship between gold content in the ore and required energy input

The similarities between (conventional) oil production and gold production are remarkable[147]. The proven reserves cannot be replaced at the same speed that they are exploited. Therefore since 2002 only about

[144] *Please refer to Don Coxe, Basic Points; May edition*
[145] *“Modellierung der globalen Goldproduktion durch Anwendung der Hubbert'schen Peak-Oil Methodik“ (Model of global gold production by applying Hubbert’s Peak Oil methodology), dissertation at the Universität of Würzburg, 2012. Also available as book, BoD Verlag, Norderstedt 2012, ISBN 978-3-8448-1813-0.*
[146] *E.g. Grasberg mine (Indonesia) or Escondida (Chile)*
[147] *The oil reserves are stable due to unconventional oil (offshore, shale oil)*

1,250 tonnes of gold reserves have been discovered annually, but 2,500 tonnes have been produced. For comparison: in the 1970s, an average 3,500 tonnes of gold were discovered annually, and 1,370 tonnes were produced; i.e. the proven reserves were continually expanded. **The relationship between gold content and required energy input per unit produced is not linear, but exponential.**

This means that if the gold content in the rock decreases, more rock has to be broken, mined, transported and processed in order to produce the same amount of gold. As a result, the ecological challenges have increased drastically as well. Due to the higher share of surface mining, the ratio of colliery waste to ore has soared since the 1980s from below 1x to above 10x, which has caused costs to increase exponentially. In 2007, the gold content of newly discovered ore lodes was down to 1.1 gram/ton and has been continuously falling. The ratio of return on investment has decreased from 105x in the 1960s to 11x in the first decade of the new millennium. This means that, since the turn of the millennium, for every dollar spent on exploration, only 11 dollars worth of gold are discovered anymore. In other words, the ratio has fallen by a factor of 10 since the 1960s. The following table shows the average ratio of ounces discovered (expressed in USD) to exploration costs (in USD) per decade.

Return on exploration costs for gold

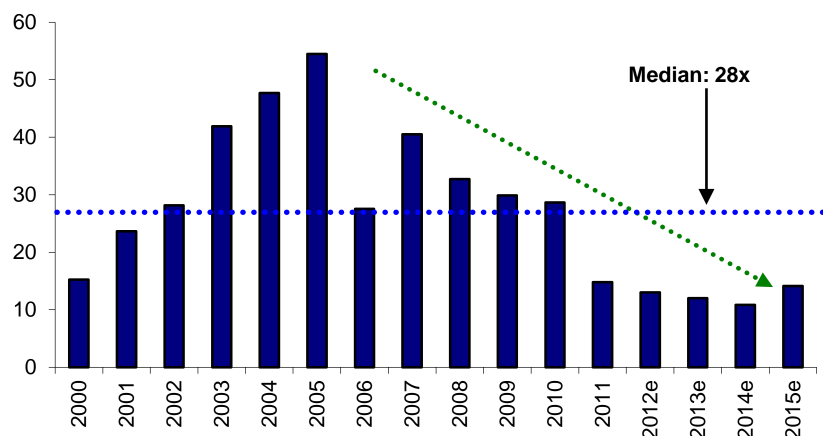
Decade	Ratio return/cost
1950s	42
1960s	105
1970s	83
1980s	57
1990s	23
2000s	11

Sources: Müller, McKeith (2009)

Gold shares (still) with historically low valuations

At the moment, the fundamental valuation of gold shares is historically low. The shares in the Gold Bugs index command an estimated PE (2012e) of currently 13.9x. This is expected to fall to 12x in 2013. In comparison with its own historical time series (median PE 2000-2012: 28x), but also relative to numerous other sectors this constitutes an extremely attractive valuation.

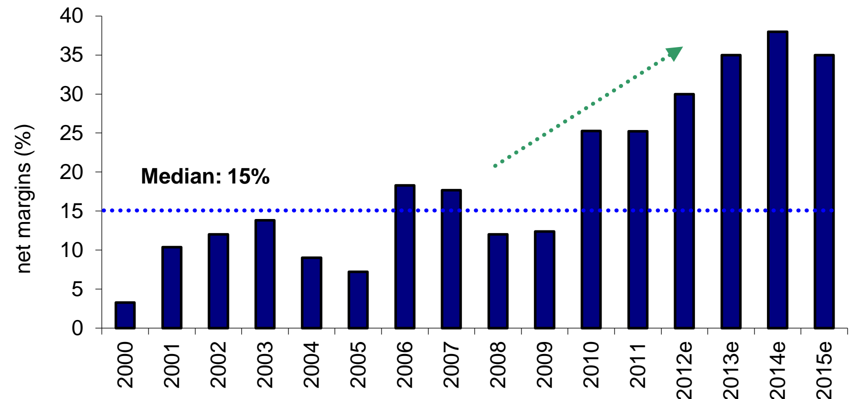
Historical and estimated PE of the Gold Bugs index



Sources: JCF Factset, Erste Group Research

The median net margin of the companies in the Gold Bugs index is 30% for 2012. The median of the past ten years has been only 15%. By the year 2014, margins are expected to increase to 38%.

Gold Bugs index: net margins 2000-2015e



Sources: JCF Factset, Erste Group Research

The EV/EBITDA ratio is at its lowest level in 20 years. ROE has recently increased to 12%. However, dividends are still at disappointing levels. It is currently at 1.39% in the HUI, and consensus estimates expect it to rise only marginally in the coming years. **We regard the absent willingness to distribute higher dividends as one of the most striking negative features of the mining sector.** No wonder the mining sector is the fund managers' stepchild: utilities pay out 80%, the energy sector distributes 67%, and financials pay out 52% of their earnings as dividends, while the gold sector currently pays out 15%. Only the technology sector has worse payout ratios.

But it seems that companies are reassessing their position. In a PWC poll 27% of participants said they were going to consider higher dividend payments. On top of that, Barrick and Anglogold have recently stepped up their dividend payments. Newmont Mining, on the other hand, has pegged its dividend to the gold price. An increase or a reduction of USD 100 translates into an increase or a decline in dividends of 20 cents per share. **We believe that this makes sense both for management and for the investor, due to the increased transparency and ability to plan ahead. We expect similar steps from other majors.**

Conclusion

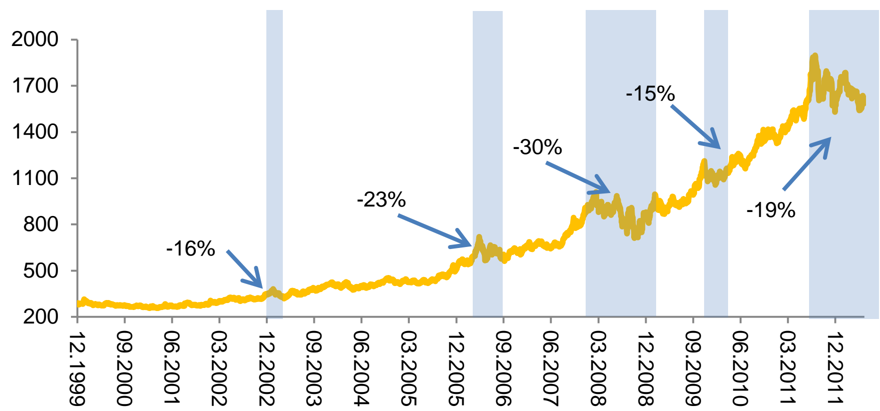
We wish to point out yet again that we regard gold as currency and thus as a form of saving, whereas we consider gold shares an investment.

We believe that the sector has a solid base. Although the pessimism is about as profound as four years ago, the fundamental shape the gold industry is in, is substantially healthier today than it was back then. Strong balance sheets, high free cash flows, a substantial increase in margins, low debt levels, and rising dividends all speak in favour of the sector. In addition, it seems like the industry has reassessed its former "growth at any cost" approach. Therefore we believe that solid mining shares in politically stable regions currently represent a high-leverage bet on the gold price with an attractive risk/return profile. **We believe that the current, historically low, valuations offer a very attractive opportunity to invest.**

Technical analysis of the gold price

It seems that the correction is now coming to an end. When gold set its new all-time-high at USD 1,920 last year, it was trading three standard deviations above the 40-day line. It had only twice been as overbought during the current bull market before, i.e. in May 2006 and March 2008. Both times, sharp corrections ensued. The following chart shows that the 19% correction is average in terms of the drawdown. The duration (blue bar) of the current correction, however, is clearly above average.

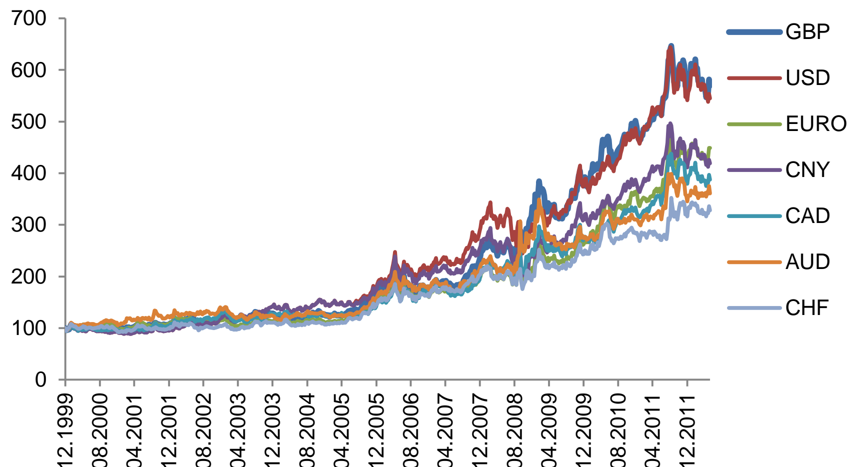
Larger corrections since the beginning of the bull market



Sources: Datastream, Erste Group Research

In addition, the upward trend in practically all paper currencies around the globe is still intact. The chart below highlights the upward trend in British pound, US dollar, euro, Chinese yuan, Canadian and Australian dollar, and Swiss franc. Only once we can see divergences in this field will it be time to re-evaluate the bull scenario. But this is still a long way out; **the upward trend is intact and shows no signs of overheating or weakening.**

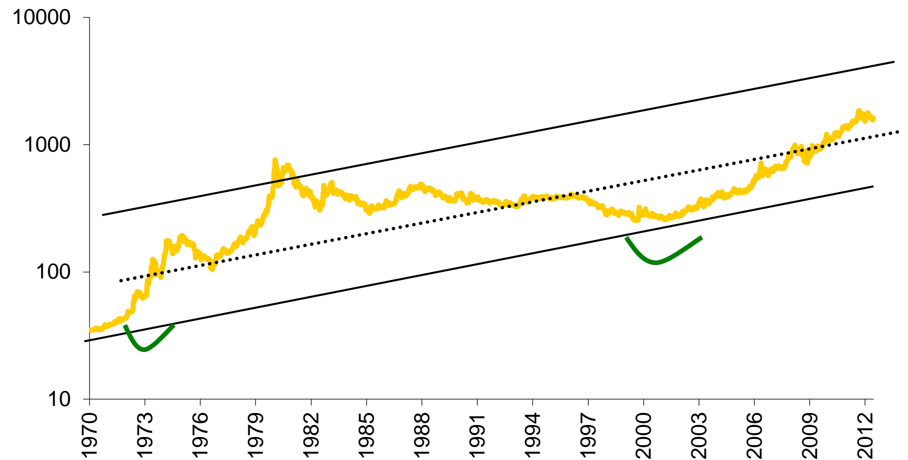
Gold in different currencies since the beginning of the bull market (index = 100)



Sources: Datastream, Erste Group Research

The logarithmic scale also shows that the price development has not overshot and that it is in fact in the middle of the long-term trend channel.

Gold since 1970 (logarithmic scale)



Sources: Datastream, Erste Group Research

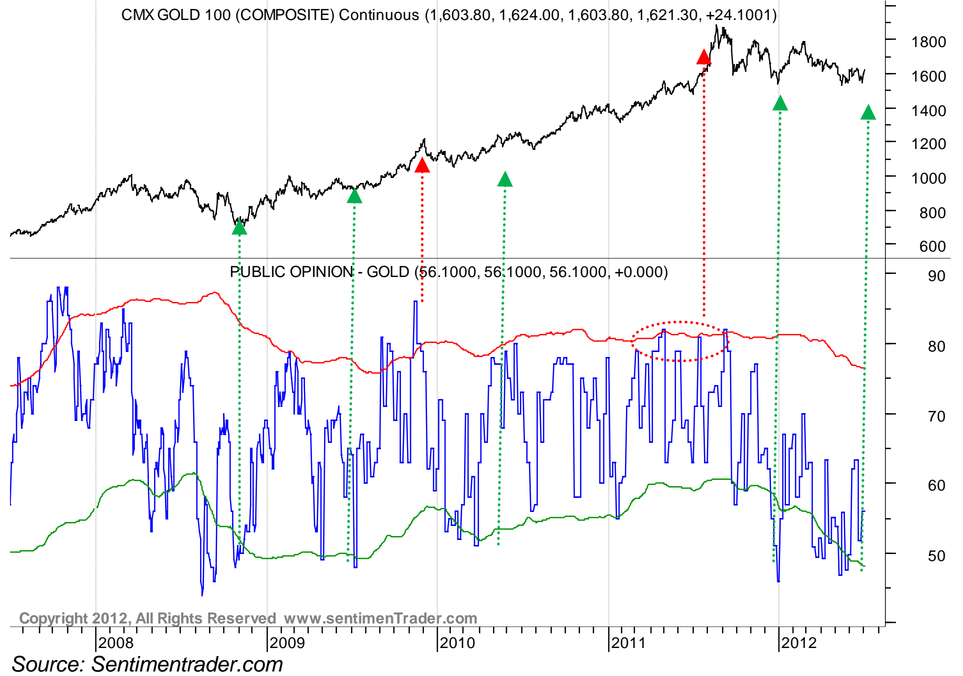
Sentiment as reliable contrary indicator

The fact that during corrections (e.g. in September 2011) sentiment tends to turn bearish very quickly fills us with optimism. On the basis of the sentiment indicators; such as for example Market Vane, Hulbert Survey or the Rydex Precious Metals Cash Flow; we find that the gold price is still far off any exceedingly euphoric levels.

The Public Opinion indicator, as depicted hereinafter, aggregates the sentiment surveys of Market Vane, Consensus, Daily Sentiment Index, Bloomberg, Larry Williams, and Ned Davis Research. It currently signals a rather tepid mood among the gold bugs.

The red and the green lines indicate the extreme values (1.5 standard deviations above the 1Y moving average) and tend to constitute reliable contrary indicators). This means that bulls become too optimistic amid rising prices and vice versa. Therefore trend reversals tend to be “telegraphed” by extreme values. We therefore used green and red arrows to highlight the reliability of the signals. **Given that in spring 2012 we saw the most bearish level since 2008, we expect this to constitute the bottom of the corrective movement.**

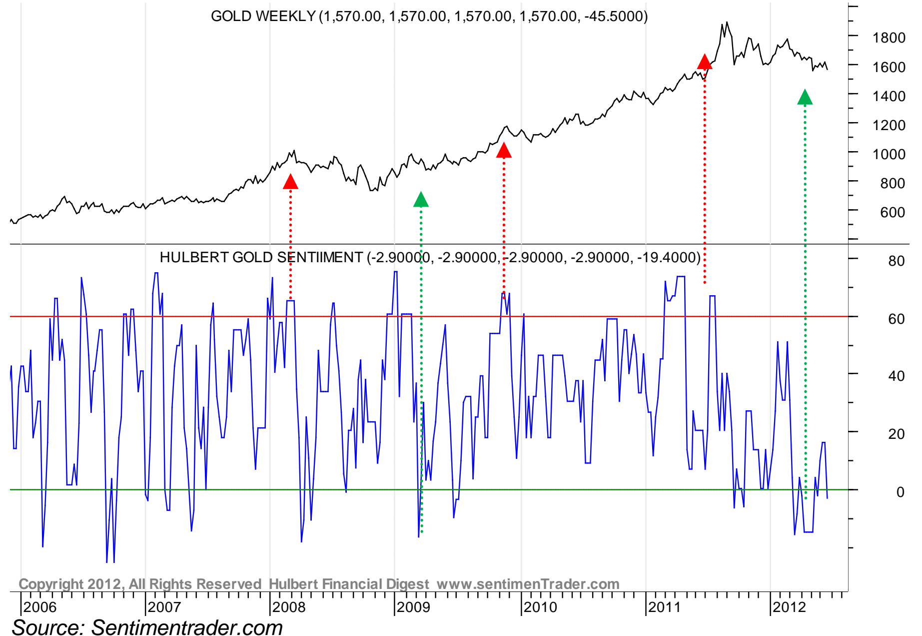
Public Opinion indicator



Source: Sentimentrader.com

According to Hulbert Financial Digest, the weighting suggested by gold newsletters currently amounts to minus 2.9%. Hulbert monitors the recommendations of hundreds of newsletters. The net exposure can oscillate within a range of 100% short to 100% long. Here, too, extreme values tend to herald a trend reversal. We interpret the fact that in spring 2012 we saw the most bearish level since 2009 as a further indicator of an end of the correction.

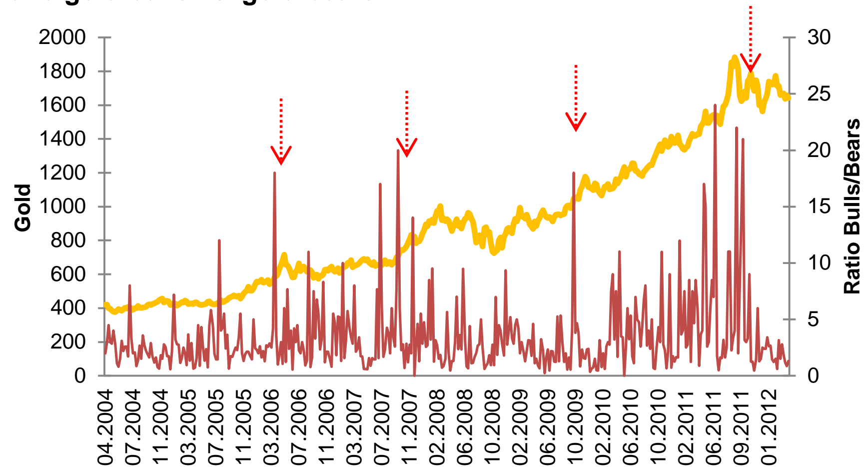
Hulbert Gold Sentiment index



Source: Sentimentrader.com

The following chart depicts the ratio of bulls and bears (red line) according to a Bloomberg survey. Here, too, we can see that the optimism is still miles away from euphoria. Spikes above 20 would often indicate a correction of the gold price. But this indicator does not suggest excessive optimism either, which is a clearly positive sign.

Ratio gold bulls vs. gold bears



Sources: Bloomberg, Erste Group Research

The Commitments of Traders report (CoT) paints a strongly positive picture (from a contrarian's point of view). The weekly report by the US Commodity Futures Trading Commission (CFTC) contains the positions of the commercial traders (Commercials), large speculators (Large Specs), and Small Speculators (Small Specs). The Commercials are also referred to as "smart money", and they pursue a strongly anti-cyclical strategy. Commercials provide the most helpful signals around extreme values. Large Specs are hedge funds and institutional investors following a highly cyclical strategy. Extreme values can usually be interpreted as reliable contrary indicators. The Small Specs tend to follow the trend as well, representing the "dumb money".

CoT positioning indicates attractive time to invest

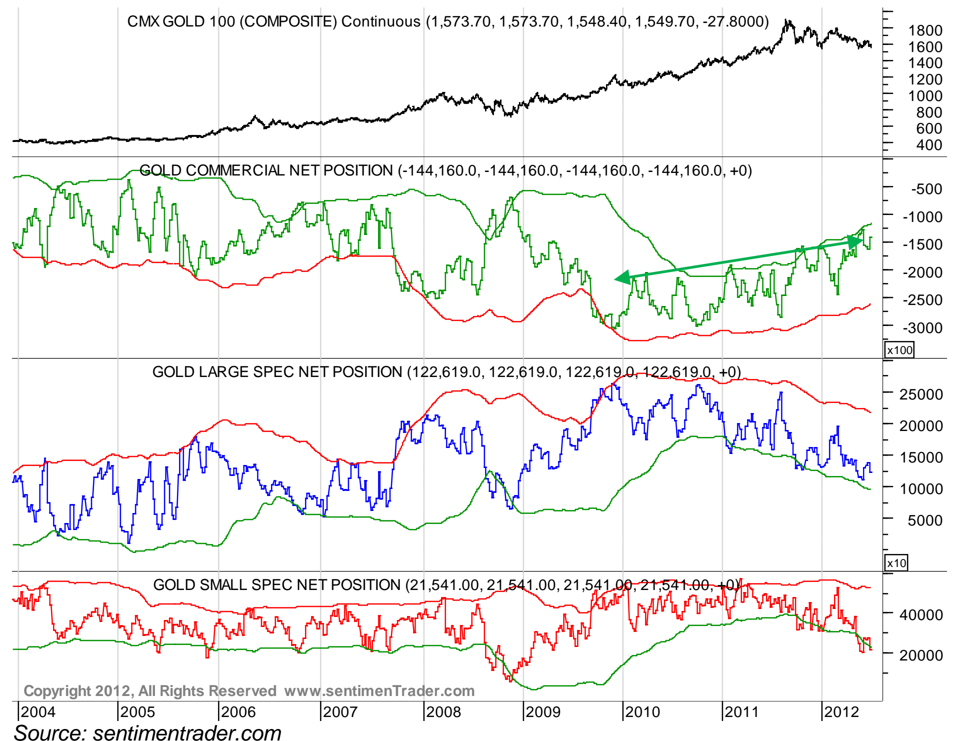
The graph underneath illustrates the fact that within the past months many speculators have left the sector, i.e. many bulls seem to have thrown in the towel. The currently increasing interest of smart money (Commercials) supports this hypothesis. Relative to August 2011, the Large Specs have reduced their net long positions by 60%. This means these positions are currently at their lowest level since 2008/2009. More or less the same is true for the Small Specs, which indicates an attractive time to invest.

Look for backwardation until the price moves violently higher

The high short positions held by the non-commercial funds are buying power once gold proves it has broken the down trend. It also suggests the funds used short positions to hedge their long positions rather than closing them. In addition, the very, very low level of commercial net short positioning, most especially in silver, is intensely bullish in a contrary way. The conditions today (with high short positions for the Specs) are rare. The only other time we have seen that in the COT was in 2008. **Look for backwardation to show in the futures strip until the price moves violently higher**[148].

[148] *Please refer to Gene Arensberg, Got Gold Report*

Commitments of Traders (CoT) Report



Source: sentimentrader.com

Gold in backwardation

On 15 May gold was traded in backwardation again for the first time since December 2008. What should not have happened, did happen again. For silver, it was the May and June contract, for gold the June contract. So what does that mean? In simple terms this means that the price of a futures contract is lower than the price on the spot market. The crucial issue is the so-called cost of carry. The cost of insurance, storage, financing, and transport has to be accounted for. If this were not the case, arbitrageurs could sell the physical good for cash and buy the cheaper futures contract and thus make a safe profit. **The phenomenon where this risk-free profit is not preferential to investors is called backwardation.**

"*Lasting backwardation in gold is tantamount to the realisation that 'gold is no longer for sale at any price*", Prof. Antal Fekete

So what does backwardation mean in terms of gold? Lasting backwardation of the gold price can only be interpreted as a lack of confidence in the future delivery of the physical good. In the case of a common good, physical scarceness is usually resolved by higher prices. At a sufficiently high price of wheat, demand will have fallen and the existing supply will be sufficient to meet the reduced demand. But gold is different: backwardation should de facto never happen because due to the high stock-to-flow ratio there can be no "gold scarceness". **In other words, backwardation indicates a massive erosion of trust in the financial system**[149]. Gold backwardation means that the confidence in a future delivery – as compared to the safety that current ownership provides – is low. Given that at the moment only 0.3% of all contracts are exercised by physical delivery, any sudden increase in physical settlements could trigger massive turbulences.

[149] *"Permanent Gold Backwardation: The Crack Up Boom", Keith Weiner*

I wanna get physical…

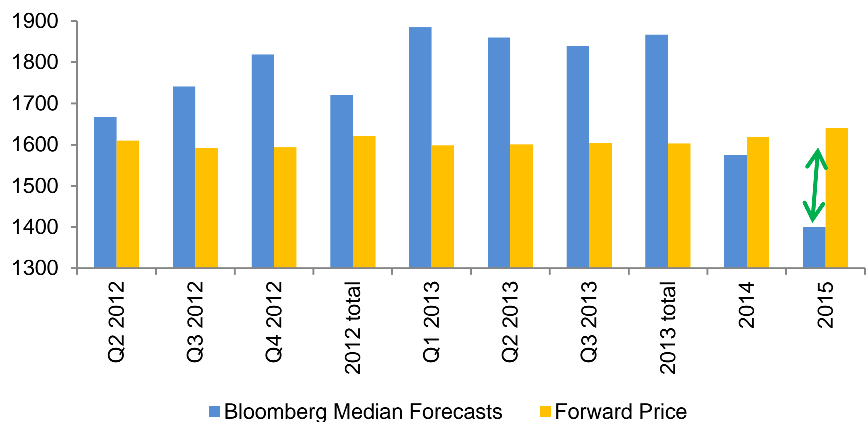
Generally speaking, it seems that we have been going through a gradual shift from paper gold investments towards physical purchases. This year, physical investment demand will probably exceed ETF demand by a factor of 5. Only a few years ago the situation was exactly the opposite, with ETFs accounting for 80% of investment demand. **This paradigm shift shows the gradual loss of confidence in paper gold.**

Gold analysts remain bearish – reliable contrary indicator

The market opinion held by the analyst community is not exactly over-the-top either. Normally, the consensus at the end of a trend should have substantially higher price targets; in the case of gold, however, no such irrational exuberance can be seen. The 24 gold analysts covered by Bloomberg show little signs of excessive optimism, as the following chart highlights. The consensus estimate expects a falling gold price from 2014 onwards. The median price targets are USD 1,720 (2012), USD 1,835 (2013), USD 1,600 (2014) und USD 1,400 (2015). This is in stark contrast to the forward price, which signals a gold price of USD 1,650 for 2015.

Our price target of USD 2,300 represents by far the highest long-term target, but we remain comfortable with the role of contrarians.

Bloomberg gold forecast vs. forward price



Sources: Bloomberg, Erste Group Research

Seasonality explains sideways movement – gold tends to perform best in the fourth and first quarter

The profound level of seasonality has been an essential factor in the recent sideways movement of the gold price. The so-called wedding season and the Diwali festival in India result in a seasonal uptick in demand. Given that most weddings in India take place in autumn and spring, the jewellery industry stocks up in the third and fourth quarter. On top of that, jewellers also step up their inventories for Christmas in the third and fourth quarter. Therefore, gold tends to perform best in the fourth and the first quarter, whereas it would correct substantially in the second quarter and move sideways in the third quarter.

This seasonality has been observed in 75-80% of the cases. It is also no secret anymore and thus reinforces this development by means of self-fulfilling prophecy.

The table in the following shows the yearly lows and highs of gold and silver since the beginning of the bull market in 2001. The lows were mostly set from January to May, the highs from September to December.

Yearly highs and lows of gold and silver

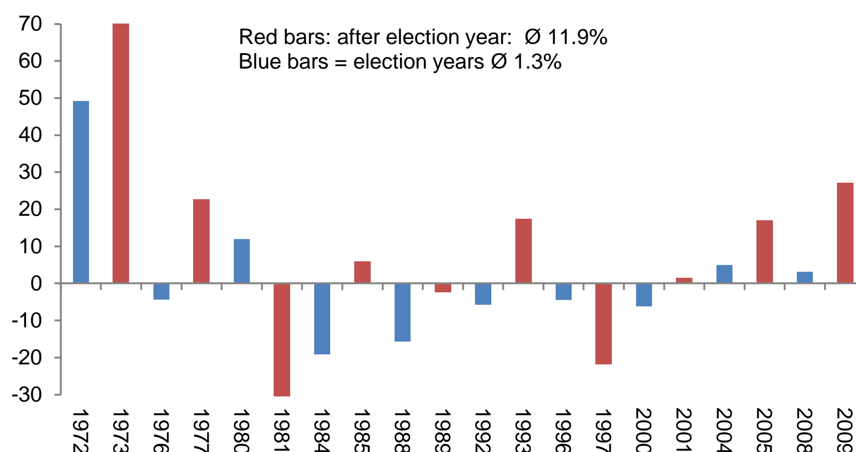
Year	Annual low – GOLD	Annual high - GOLD	Annual low – SILVER	Annual high - SILVER
2001	April 2	September 17	November 21	January 19
2002	January 4	December 27	January 29	July 16
2003	April 7	December 31	April 3	December 31
2004	May 10	December 2	May 10	December 2
2005	February 8	December 12	January 4	December 12
2006	January 5	May 12	January 6	May 12
2007	January 10	November 8	August 21	November 7
2008	October 24	March 17	October 24	March 17
2009	January 15	December 2	January 15	December 2
2010	February 5	November 9	February 8	December 30
2011	January 29	September 5	January 28	August 22
2012	May 16	February 28	May 16	February 29

Source: Datastream, Erste Group Research

Does the election cycle influence gold prices? Year after the elections shows significant strength

The chart underneath illustrates the annual performance of gold in election years and in the year after elections. Gold often ends up on the negative side in election years (blue bars), with an average annual performance of only 1.3%. This could on the one hand result from an open declaration of strength by the US dollar prior to elections, on the other hand a drastic rise in the gold price, acting as a fever thermometer of the financial system, is probably not desired. The red bars, on the other hand, highlight the positive performance that we tend to see in the year after the elections. The average performance of those years was 11.9%.

Annual performance in election years and years after elections

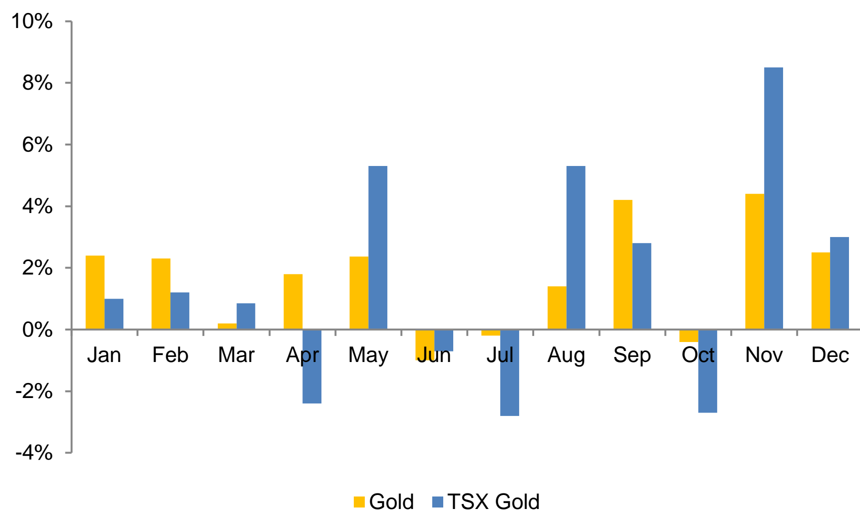


Sources: Datastream, Erste Group Research

The following chart supports the notion of seasonality associated with the gold price and the TSX Gold index. The time series covers the current bull market since its beginning. Clearly, the best seasonality starts in August. **Due to the strong seasonality we believe that the gold price should be moving sideways until the end of July.** After that, it should pick up on the

back of the aforementioned seasonal effects. The gold price has increased in September in 65% of the cases.

Monthly seasonality of the gold price and the TSX Gold index



Sources: Dundee Capital Markets, Erste Group Research

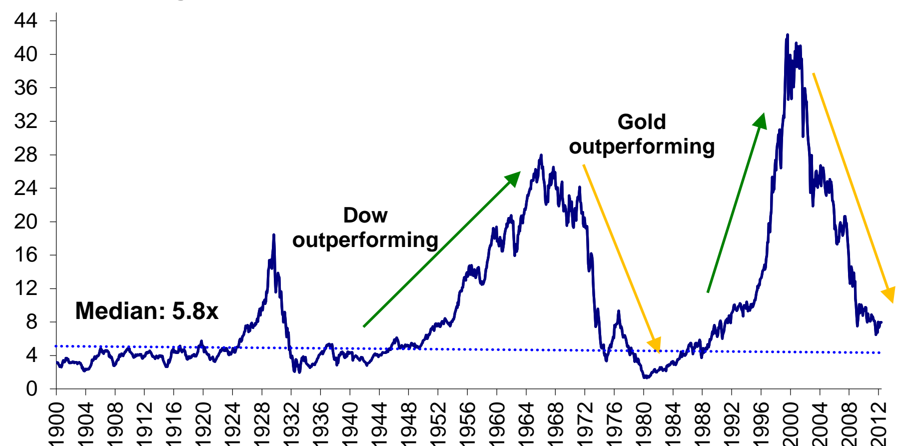
Ratio analysis

Ratio analysis is a simple yet extremely useful part of technical analysis. By simply dividing one value by another one, one obtains a ratio, which can be depicted as a ratio line in the charts. If the line increases, the numerator is gaining vis-à-vis the denominator. This means that a rising line indicates relative strength. The analysis of long-term relations between gold and other assets is meant to help the investor look at the current market situation from a new and long-term perspective. The simple mathematical operation of the division, representing a direct, long-term comparison of the variables involved, shows whether gold is fairly valued, overvalued, or undervalued.

1) Dow / Gold (currently 7.8x)

At 7.8x, the ratio is currently above the long-term median of 5.8x. This means that gold is still relatively inexpensive in comparison with the Dow Jones index. However, it is not "dirt-cheap" anymore. But bull markets tend to end in euphoria and excess, which is why we expect a substantially lower ratio. In 1932, the ratio was 2x, and at the end of the last bull market the ratio was 1.3x. We think that values of 2x might be reached again as a result of the secular bull market. Under the assumption of a constant Dow Jones index, gold would therefore have to rise to USD 6,200/ounce.

Dow Jones / gold ratio since 1900

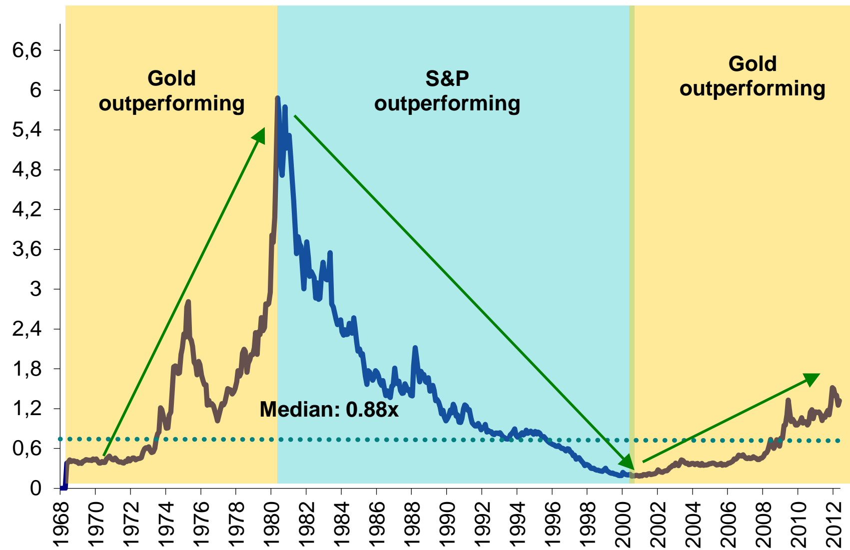


Sources: Datastream, Erste Group Research

2) Gold / S&P 500 (currently 1.2)

Currently, the ratio is above its long-term median of 0.88x. The chart shows the formation of a bottom, much like a cup & handle formation, from 1994 to about 2008. Comparing the current situation with the development in the 1970s, we expect a dynamic increase towards higher levels. Bull markets do not end around the long-term median – they end *in extremis*. In order to reach 6x, gold would have to increase to USD 7,800/ounce (given a constant S&P index).

Gold / S&P 500 since 1968

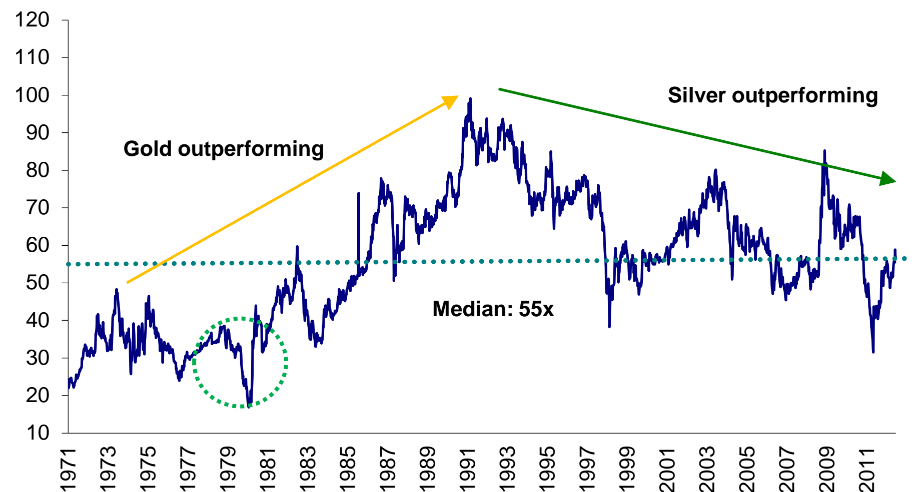


Sources: Datastream, Erste Group Research

3) Gold / silver since 1971 (currently: 56x)

At the moment, the ratio is about 56x and thus only marginally above the median of 55x. This means that over a historical 40-year time horizon silver is fairly valued. The ratio hit its low in 1980, when one ounce of gold would buy 14 ounces of silver. The all time high had been set in 1940, when one ounce of gold would get you 100 ounces of silver. Similarly high values were reached in 1990. We continue to expect silver to show clear relative strength towards the end of the gold bull market, as is also exemplified by the development of the ratio at the end of the 1970s (see the green circle) [150].

Gold/ Silver since 1971



Sources: Datastream, Erste Group Research

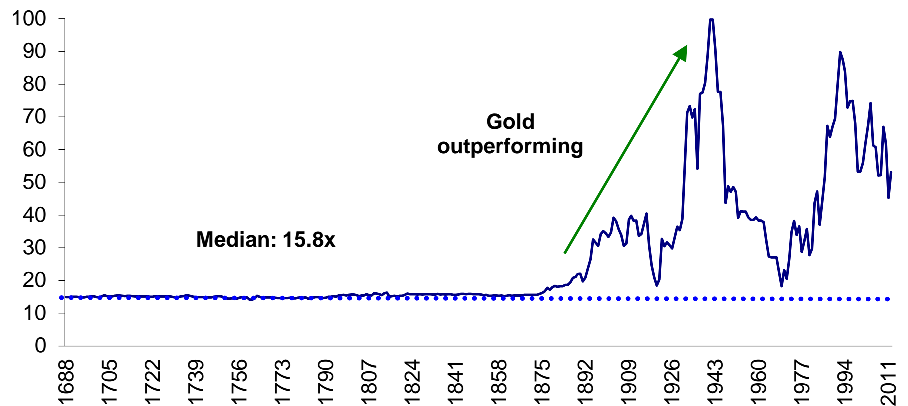
[150] *With the silver speculations of the Hunt brothers playing a crucial role in this context*

4) Gold / silver since 1688 (currently: 56)

Looking back over the centuries, we find that gold has recorded a substantial increase in purchasing power vis-à-vis silver since the beginning of the 20th century. The long-term median (since 1688) is 15.8x. This also reflects the actual ratio of geological deposits: gold is about 17 times more scarce than silver. According to USGS, the measured and assumed silver resources are actually only about 6 times as high as those of gold.

In ancient Egypt, gold was worth 13.3 times as much as silver. This ratio was based on astronomical calculations (seeing as the silver moon was moving 13.3 times faster through the zodiac than the golden sun[151]), and this lasted for more than 800 years until the times of the Lydians. In times of bimetallism the ratio would usually be situated between 10x and 15x. Of course that ratio had not been established by the market, but by the various governments. **The ratio has been on the increase since 1870, which could also mean that the free market regards gold as the primary monetary metal.**

Gold / Silver since 1688



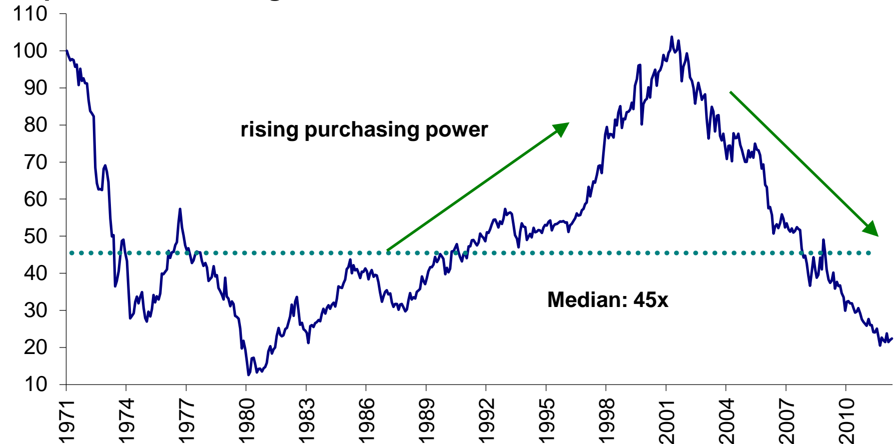
Sources: Measuringworth.com, Erste Group Research

5) Disposable income / gold (currently 22x)

The comparison of per capita income in the US with the gold price reveals the drastic decline in purchasing power relative to gold. Whereas at the beginning of 2000, the disposable income would have still bought you 100 ounces of gold, this ratio has in the meantime fallen to 22x. The all time low of the ratio was set at 12x in 1980. For this low to be reached again, the gold price would have to increase to USD 3,100 (at constant disposable income).

[151] *Please refer to "Geld-Gold-Gewissen" (Money-Gold-Conscience), Gérard Klockenbring, and Ferdinand Lips "Gold Wars", respectively*

Disposable income / gold

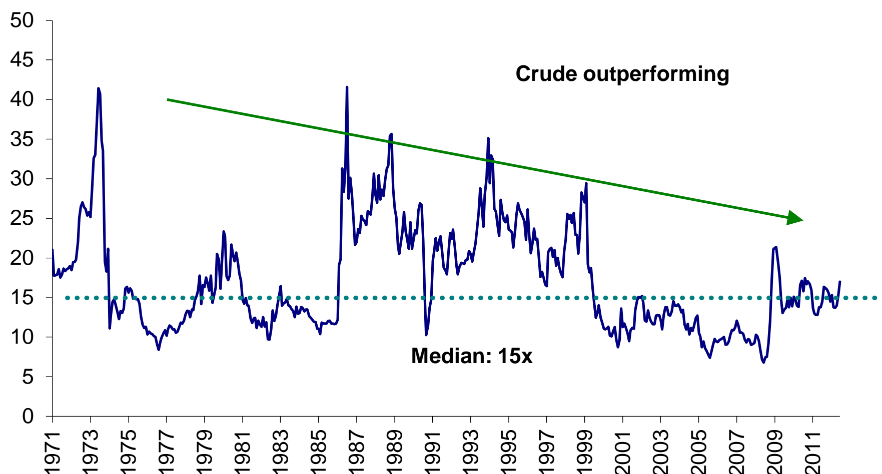


Sources: Datastream, Erste Group Research

6) Gold / oil (currently 15x)

One ounce of gold currently buys 15 barrels of oil. This is exactly the long-term median, and it means that gold is fairly valued in relation to oil. The all time high of 1986 would have bought 40 barrels of crude oil. The historical low was set in 2008 at close to six barrels for one ounce. But now it seems that the almost 25 years of outperformance of oil are coming to an end, and gold is gaining in relative strength again.

Gold / Brent oil

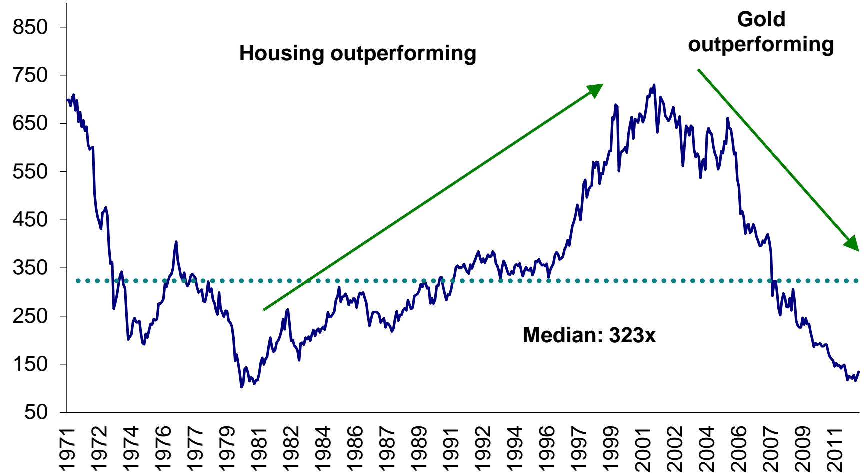


Sources: Datastream, Erste Group Research

7) House price / gold (currently 134x)

At the moment it takes 134 ounces of gold to buy an average home in the US. This means that in comparison with 2001, where the ratio was at 700 ounces per home, gold is relatively expensive in relation to property. The long-term median is 323x. However, we are still far away from the 1980 all time low of 100x.

House price / gold

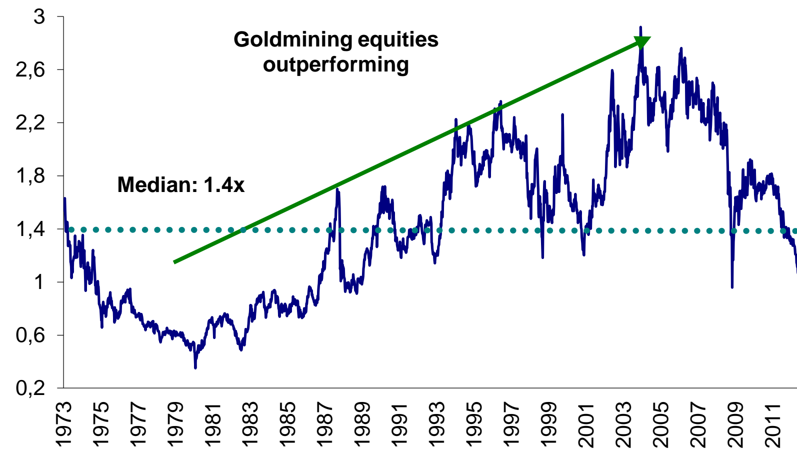


Sources: Datastream, Erste Group Research

8) World Gold Mining index / Gold (currently 1.13x)

Currently, the ratio of the Datastream World Gold Mining index and gold is 1.13x and thus below the long-term median of 1.4x. A rise indicates that gold shares are outperforming gold. The chart shows that, since the beginning of the bull market, shares have not outperformed gold. At the same time, it also highlights that from the end of the previous gold bull market in 1980 to 2005, gold mining shares were clearly outperforming gold.

World Gold Mining Index / Gold



Sources: Datastream, Erste Group Research

Conclusion ratio analysis

The long-term comparison of gold and other asset classes paints a clearly positive picture. While many ratios are close or slightly below the long-term median, this goes to show that the current valuation is certainly not excessive**. It is therefore also very easy to rebut the heavily cited argument of the "gold bubble".** Gold only seems expensive in relation to US property. We expect the highs of 1980 to be tested or even exceeded, given that the extent of the current debt crisis goes much beyond the situation at the end of the last big bull market. **Bull markets end in euphoria, and this substantiates our argument in favour of an imminent transition to an accelerated trend phase.**

CONCLUSION

"***The key is not to predict the future, but to be prepared for it.*" Pericles (495-429 BC)**

No – gold is no panacea. We are certainly not among those radical gold fundamentalists who regard gold as a solution to every problem. However, we are convinced that, in the current environment gold represents a reasonable and low priced protection against "worst case scenarios".

"***There are decades when nothing happens and there are weeks when decades happen*", Lenin**

The gold standard nowadays has only remained within the living memory of just a few. One dollar used to be equivalent to 1.555 grammes of gold; the value then decreased to 0.888 grammes, and today it has fallen to 0.0194 grammes per dollar. To this extent, the idea of convertibility into gold is a completely abstract idea to the majority of the general public. But calls for a new gold standard have become louder. Initiatives such as those recently taken in Utah or in Switzerland (gold franc) show that political resistance against the precious metal is decreasing and the idea of gold as the ultimate currency is becoming more acceptable. **We can see a slow progress in this trend towards remonetisation. The foundation for a return to "sound money" seems to have been laid.**

"***Problems cannot be solved by the same rationale that created them.*" Albert Einstein**

We believe that financial repression will continue to crop up in many shapes and sizes and gain in importance over the coming years. However, the long-term costs of missing efforts made towards consolidating national finances will be substantial. While the artificially low bond yields in the short run suggest that the saving measures are on course, one has to bear in mind that this has mainly been achieved by market interventions. Therefore we regard the gradual transfer of assets – a rather euphemistic term for gradual expropriation – as a disastrous strategy in the long run. What happens is that none of the previous problems of misallocation are resolved, but instead redistribution takes place (in the beginning mostly invisibly) and problems are dragged out, having to be addressed later. As the dependence on these measures rises, so does the collateral damage to be expected later, and **the seeds for an even bigger crisis have been sown.**

Negative real interest rates and expansive central bank policies constitute the perfect environment for gold

So what does this mean for gold? Last year, we described in detail why negative interest rates constituted a perfect environment for a rising gold price. During the 20 years of the gold bear market in the 1980s and 1990s, the average real interest rate level was around 4%. Real interest rates were negative in only 5.9% of all months. The situation in the 1970s, however, was completely different: real interest rates were negative in 54% of the months. Since 2000 real interest rates have been negative for 51% of the time, which constitutes an optimal environment for gold. **The fact that the Federal Reserve will now maintain its zero-interest policy until 2014 should result in prolonged negative real interest rates and thus create a positive foundation for further increases in the gold price.**

Gold is a beneficiary of rising incomes in China and India

Gold is often called the investment of doomsayers and chronic pessimists ("fear trade"). This component is currently presented to the public as the only reason for the gold bull market. However, this point of view fails to acknowledge the fact that China and India are the driving forces on the demand side. Real interest rates remain negative in both countries. Basically, local investors are very limited when it comes to investment opportunities for their savings. Gold has been a time-tested store of value for centuries. The traditionally high affinity for gold and rising net worth will support demand in the long run. **Whoever expects incomes in China and India to continue rising and real interest rates to remain negative or**

low, will by default recognise gold as the beneficiary of this development ("love trade").

Gold is now officially again "as good as gold" – this decision will come with a wide range of positive implications

In accordance with the recent proposals by the FDIC, the OCC, and the Federal Reserve with regard to regulatory capital requirements, the risk weighting of gold has now for the first time been set to zero. Gold is now officially again "as good as gold" and ranks on the same level as cash. We expect this decision to have a wide range of implications. For example, the opportunity cost of holding gold will be reduced massively.

"The great corollary of over indebtedness is the relative scarcity of good collateral to support the debt load outstanding. This imbalance of debt to collateral is impacting the ability of banks to make loans to their customers, for central banks to make loans to commercial banks, and for shadow banks to be funded by the overnight repo market. Hence the growth of gold as a collateral asset to debt heavy markets is inevitably in the cards and is de facto occurring. ***Gold is stepping up to the plate as "good" collateral in a world of bad collateral."*** Prof. Lew Spellman, former economist of the Federal Reserve

Mining shares currently represent a high-leverage bet on the gold price with extremely attractive risk/return profile

We believe that the gold mining sector has a solid base. Although the pessimism is about as profound as four years ago, the fundamental shape of the gold industry is substantially healthier today than it was back then. Strong balance sheets, high free cash flows, a substantial increase in margins, low debt levels, and rising dividends all speak in favour of the sector. There are also only few sectors that are more underweighted by investors. In addition, it seems as if the industry has reassessed its former "growth at any cost" approach and is heading towards increasing shareholder value. **We believe that solid mining shares in politically stable regions currently represent a high-leverage bet on the gold price, with an attractive risk/return profile. We therefore believe that the current, historically low valuations offer a good opportunity to invest. At this point, we wish to point out again that we regard gold as a currency and thus as a form of saving, whereas we regard gold shares as a form of investment.**

"*Gold is a very underowned asset, even though gold has become much more popular…It's an imprudently small percentage, particularly at a time when we're losing a currency regime*" Ray Dalio

Gold remains a highly popular issue for discussion, but not a highly popular asset in portfolios. The underweighting of gold by institutional investors is particularly profound. Institutions continue to hold only 0.15% of their assets in gold. We do not expect an imminent paradigm shift, this is practically impossible for regulatory reasons. But even a weighting of 2-3% in institutional portfolios would trigger enormous effects. The allocation of investment capital in gold mining shares is similarly insignificant. **The market capitalisation of all 16 stocks in the Gold Bugs index amounted to USD 180bn as of the end of June. By comparison, the monthly budget deficit of the US was USD 198bn in March alone.**

We believe that the current bull market continues to offer an attractive risk/return profile. What negative factors would have to materialize for the upward trend to come to an end?

- Real interest rates above at least 3% for a longer period of time
- Gold reaches new extreme values in relation to other asset classes (please refer to the ratio analysis)
- Severe structural reforms in order to slash debt sustainably
- End of further stimulus measures by central banks (QE, LTRO, Operation Twist…)

- Profound recession in China and India
- Sustainably strong US dollar
- Massive hedging by producers
- Extremely positive sentiment, gold price with divergence

The best time to plant a tree is 20 years ago. The second best time is today…

Given that the majority of debt was neither redeemed nor written off but has only been transferred, the problem of excessive debt has still not been resolved. Fiscal problems cannot be (sustainably) solved with monetary measures. That would be like sorting out a hardware problem with software updates[152].

Still an excellent risk/return profile

As far as sentiment is concerned, we definitely see no euphoria with respect to gold. Scepticism, fear, and panic are never the final stop of a bull market. **Therefore we believe that our long-term price target of USD 2,300/ounce could be on the conservative side.**

At the end of the parabolic phase we expect at least USD 2,300

In the short run, seasonality seems to argue in favour of a continued sideways movement, but from August onwards, gold should enter its seasonally best phase. **USD 2,000 is our next 12M price target. We believe that the parabolic trend phase is still ahead of us, at the end of which our long-term target of USD 2,300 should be reached.**

[152] *Please refer to Tomas Sedlacek, "Keynes stünde heute am rechten Rand" "Keynes would be considered right-wing today", Interview FuW, May 2012*

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