Antifragile Investing with Gold?

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In 2012, Nassim Nicholas Taleb published *Antifragile: Things That Gain From Disorder*, a book in which he presents a kind of "theory of everything". It is a kind of instruction manual for a world that cannot be completely understood, and as such it is suggestive of the paradoxical Socratic formula "I know that I know nothing" — an insight in terms of which Taleb believes himself to be ahead of the crowd of top economists, central bankers, politicians and financial market actors who are obsessed with feasibility mania and blind faith in predictability.

However, Taleb wouldn't be Taleb if he were humbly despairing in the face of this insight regarding his own ignorance; instead he wants to become a guru in how to best handle it. He shows how one can act successfully in light of one's ignorance. To this end he has constructed a scheme that categorizes things either as "robust", "fragile" or — and this is Taleb's revolutionary ingredient — "antifragile". It is clear what fragile and robust things are: The former break easily, they are vulnerable to exogenous shocks, while the latter are resilient and remain unchanged under the influence of different environments. Antifragility, on the other hand, is a characteristic of things which benefit from volatility, randomness and certain kinds of stresses.

Of course, the antifragility theory has some appeal for investors, particularly for bearish ones. What kinds of investments do naturally get stronger when there is turbulence on the markets? It seems natural to think of gold in this context: Gold is after all perceived as *the* classical crisis currency, which does well when all other asset prices are plummeting. Systemic stress — in the form of chaos, uncertainty, instability, unrest, volatility, etc. — is commonly held for precisely the environment which gold needs to reach operating temperature.

IS GOLD AN ANTIFRAGILE INVESTMENT?

As obvious as this question seems to be, Taleb astonishingly avoids it completely in his book. At the Strategas Research Macro Conference in New York in March 2013 he was asked directly about gold. He stated that he once believed in its ability to function as a portfolio stabilizer, but had come to change his opinion in the meantime: "It's too neat a narrative, gold".[1] Let's take this statement as the point of departure for a discussion of different aspects of gold:

Aspect 1: *The value of gold rests on its "trust capital"*

While Taleb's statement indicates that this trust is partly blind faith, which mainly informs the attitude of slightly spaced-out gold aficionados and thus represents a shaky foundation, it should be noted that faith is a necessary precondition for every form of money. The value of "reputation money" like Bitcoin even depends entirely on whether its users expect that it will be accepted by other users.

This not only applies to money, though. In their book *Der fiktive Staat* (English: *The Fictional State*), Albrecht Korschorke and his colleagues argue that the entire State, and indeed every community and its institutions, are fictions. Nevertheless, they can be very real, stable and powerful entities:

> *They are a complex of perceptions, which has functional character, as the entire reference frame of social addressing and authorization rests on it.*[2]

The authors analyze the meaning of narratives, which are fundamentally important for these institutions, as the trust of the reference group rests on them:

> *Between the "soft" instruments of metaphors, narratives, and fictions on the one hand, and "hard" institutional arrangements on the other hand, exchanges in both directions are continually underway. [...] Societal organization [...] is imagery that has attained functionality.*[3]

1 Michael Santoli, "Gold Not Antifragile Enough for Black Swan Author", finance.yahoo.com, March 22, 2013.
2 Albrecht Korschorke, Susanne Lüdemann, Thomas Frank and Ethel Matala de Mazza, *Der fiktive Staat: Konstruktionen des politischen Körpers in der Geschichte Europas*, Fischer Taschenbuch Verlag, Frankfurt am Main, 2007, p. 11.
3 Ibid. p. 57.

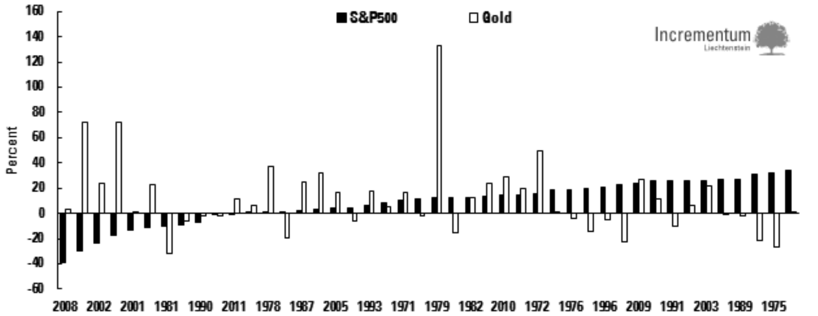
In short, gold's narrative character, which Taleb takes exception to, is by no means a weakness. However, neither is it necessarily a strength, as narratives can lose their functional character or may not even be in possession of one in the first place. With respect to this first aspect, however, it remains impossible to come to a firm conclusion on whether gold is fragile, robust or antifragile. A strong narrative is a precondition for trust and sound money. We therefore have to ask whether the narrative and the associated trust are strong. What is gold's trust capital based on?

Aspect 2: *In the past, gold was the most stable and enduring means of payment worldwide*

The "narrative" of gold enthusiasts includes the statement that gold was universally accepted as a means of payment in the past and served as a safe haven currency in times of crisis. Speaking to the Congress in 1999, even Alan Greenspan, who was chairman of the Fed at that time, remarked:

> *Gold still represents the ultimate form of payment in the world. [...] Fiat money, in extremis, is accepted by nobody. Gold is always accepted.*[4]

Figure 1 **Comparison of Annual Performance Record, Gold vs. S&P 500**



Sources: Federal Reserve St. Louis, Incrementum AG

Figure 1 compares the annual performance data of gold and the S&P 500 as an (admittedly imperfect) proxy for stress in mainstream investments. An inverse relationship can be discerned. Moreover, in the six years in which the S&P's biggest losses were recorded, gold posted not only an excellent performance in relative terms, but in absolute terms as well; bull markets in US stocks by contrast tended to weigh on gold's price performance. However, it has to be pointed out that this inverse correlation is not perfect either: For instance, both gold and the S&P 500 rose between 2002 and 2007, when the economic machine was running pretty well, and again in the aftermath of the 2008 financial crisis; occasionally there were also times when both declined concurrently. The statement "Gold benefits from stress and suffers from stress withdrawal" is therefore not always applicable; thus gold cannot be a textbook example of antifragility. However, within the period under consideration, times of extreme stress (incl. "tail risk events") were a sufficient condition for a rally in the gold price. This may be a hint that demand for gold becomes especially strong when the system is facing a fundamental threat — namely when doubts about the ability of counterparties to perform begin to arise.

However, Taleb would certainly not accept a mere reference to the past, as the future is unpredictable; never-before-seen events could occur. So-called "black swans" can render forecasts which are based on historical patterns completely useless. However, one must also keep in mind that for the narrative of crisis-resistant gold, history is a factor that strengthens confidence in its monetary character. Empirically we can, however, conclude in connection with aspect 2: *Gold is not a perfectly antifragile asset, but in severe times of stress in the past, it has exhibited antifragile characteristics.*

Aspect 3: *Gold is intrinsically stable/durable*

Let us look at what the historical trust in gold is based on:

- *Physical durability:* Gold is resistant to air, humidity, most acids, caustic solutions, and solvents, and as a result retains its physical attributes over time.
- *Stable total stock:* Mining new gold can only take place at great cost and effort and it changes the size of the total stock only slightly, as gold isn't used up and all the gold ever mined therefore remains available (high stock-to-flow ratio).

With respect to aspect 3 it can be stated: *Gold is robust*. The fact that gold is durable and stable creates trust. This trust has so far ensured that gold was always highly valued and accepted as a medium of exchange. Ultimately, this is precisely what is of greatest importance: namely, the value others attach to gold. It seems therefore appropriate to take a closer look at the valuation of gold.

4 Quoted in Dan Popescu, "The canary of the currency markets", goldbroker.com, December 14, 2015.

Aspect 4: *The valuation of gold is multi-dimensional and allows for price fluctuations*

Industrial demand for gold barely plays a role, as a result of which price determination is mainly based on the metal's monetary characteristics. In other words, gold is primarily money. However, the gold market is susceptible to manipulation as well.

The fact that central banks hold a large share of the global stock of gold as part of their strategic currency reserves, on the one hand politicizes the market to some extent. On the other hand, it's also a positive signal for other gold holders: Even the upper echelons of the financial world have faith in gold as the ultimate insurance against risk (even if unofficially) and thus strengthen the narrative. Moreover, central banks hold only around 30% of the total global stock of gold — the majority of gold holders comprises countless decentralized actors who are dispersed across the world.

In addition to this, speculation of course plays a role in the gold market as well. Gold serves as an inflation hedge or a safe haven currency, resp. it is also amenable to technical analysis — the corresponding expectations and bets hence have an impact on the gold price. As a result, the gold market isn't immune to exaggerations and the formation of bubbles. With the growing importance of automated trading systems, it should be expected that price spikes in both directions will become greater. An increase in short-term volatility seems inevitable in this context.

In summary one could state with respect to aspect 4 that *the gold price tends to be fragile*. It depends primarily on whether its narrative happens to be popular or not at a given time. After the Nixon shock the gold price rose by a factor of 50 until 2011, but lost 40% of its value again in the subsequent years. That's quite a degree of volatility. However, there exists a firm base of hardcore gold fans, resp. "people who understand gold", who have faith in the narrative regardless of short-term fads, which tends to limit gold's downside potential.

Aspect 5: *Gold is liquid, even in stress situations*

Gold is among the most liquid investment assets in the world. Its daily trading volume is only exceeded by that of three other currency pairs (USD/EUR, USD/JPY and USD/GBP). Due to its tight bid–ask spread, gold can be sold in stress situations without significant price discounts. In this respect, *gold is therefore robust*.

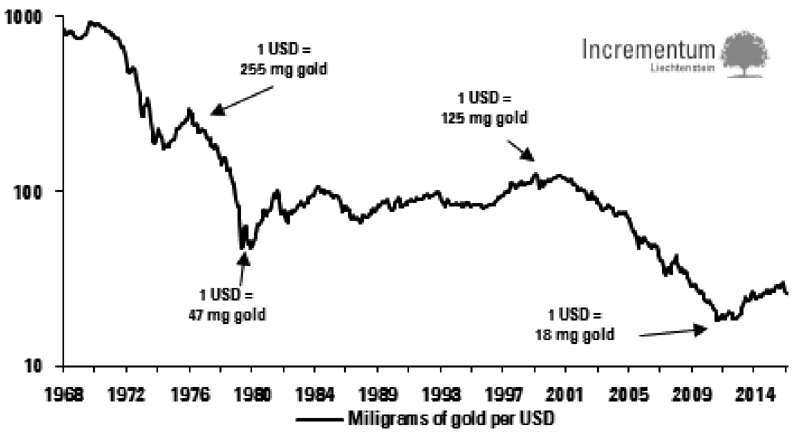
Aspect 6: *Gold is in a reciprocal relationship with the monetary system*

Gold has neither maturity risk, nor commodity risk, and above all: gold has no counterparty risk. The market in paper assets on the other hand is based on the promises of countless different counterparties. As long as confidence is high and the economy performs well, an asset without counterparty risk tends to be out of fashion; however, when concerns about potential defaults grow (deflationary environment), assets such as gold can rapidly regain importance. The attractiveness of gold is therefore an inverse function of the faith in the system.

In this context it makes sense to look at gold as the measure of other things. After all, the global stock of gold has only grown by 1.5% annually over the past century, while the US dollar's monetary base alone has been inflated by nearly 10% per year. The fluctuations of the monetary system also lead to fluctuations in the price of gold, though, as it is measured in fiat currencies, primarily in terms of the US dollar. Figure 2 shows the exchange rate between gold and the US dollar inverted for a change: The US dollar has lost an enormous amount of value relative to the precious metal since 1971.

This conveys the insight: The long-term trend in the gold price is not a gold story, but rather a story of the monetary system. The long-term uptrend in the gold price is the result of the system's addiction to inflation. Moreover, periods during which the monetary system comes under pressure lead to the gold price being pushed up. Periods during which the world seems to be doing fine – and these can last a long time – can result in gold and the associated narrative falling into oblivion. In short, with respect to aspect 6, *gold is clearly antifragile*.

Figure 2 **How Many Milligrams of Gold Can be Purchased for One US Dollar?**



Sources: Federal Reserve St. Louis, Incrementum AG

Aspect 7: *Black swans exist in gold's universe as well, but their destructive potential appears limited*

In order to assess the fragility or antifragility of an asset, Taleb recommends that one should ask what the largest possible loss could be, the so-called "black swan". When securities markets are affected by black swan events, the environment tends to be especially beneficial for gold. However, are there also potential black swans for gold itself?

First, there is the threat of a gold ban. However, a comprehensive, effective gold ban appears highly unlikely, as controlling compliance would be ineffective, resp. too cost-intensive. Restrictions and taxation of gold trading, which would diminish the advantage of gold ownership considerably, are however definitely possible.

Secondly, gold's monopoly position in the area of alternative currencies could be challenged by emerging crypto-currencies, which are also regarded as a counter-concept to the current monetary system. Such competition for gold is a historical novelty. However, many crypto-currencies are gold-based as well; it appears highly unlikely that gold will be completely displaced by superior competition.

Thus, even in a worst case scenario, gold would continue to play a prominent role. Moreover, as Taleb remarks with respect to predictions: Things that have endured for a long time, in most cases tend to survive things which are newly emerging — the similarity between the future and the present tends to be far greater than one is inclined to assume ("Lindy effect"). With respect to Aspect 7, we can therefore state that *gold tends to be robust*.

All in all, it can be said that the question whether gold is fragile, resp. antifragile, is multi-dimensional. An answer has been attempted to approach by addressing seven aspects of the precious metal, which are summarized in Table 1.

Finally, gold cannot be understood as an antifragile panacea. It has many attractive and also antifragile features and is definitely an interesting investment vehicle, but one can also get one's fingers burnt over gold. However, if it is well-managed, gold can be an essential module in constructing an antifragile portfolio.

Table 1 **Summary of Different Aspects of Gold and Their Degree of Fragility**

Aspect	**Fragility**
Trust capital	No statement possible
History as a medium of exchange	Not perfectly antifragile, but antifragile features
Intrinsic stability/durability	Robust
Valuation	Rather fragile
Liquidity	Robust
Reciprocity to monetary system	Antifragile
"Black swan" for gold	Rather robust

Source: Incrementum AG