Academic Research on Gold: What do we know (or think) that we don’t know?

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Rumsfeld, Žižek and Gold

“[T]here are known knowns; there are things we know that we know. There are known unknowns; that is to say there are things that, we now know we don’t know. But there are also unknown unknowns – there are things we do not know we don’t know.”

- Donald Rumsfeld

“If Rumsfeld thinks that the main dangers in the confrontation with Iraq were the "unknown unknowns," that is, the threats from Saddam whose nature we cannot even suspect, then the Abu Ghraib scandal shows that the main dangers lie in the "unknown knowns" - the disavowed beliefs, suppositions and obscene practices we pretend not to know about, even though they form the background of our public values”

- Slavoj Žižek
Putting gold research in the picture

✦ Most rewards come from the unknown: what do we not know (known unknowns) and what have we suppressed (unknown knowns)

✦ Gold: just another asset
✦ How do we trade it?
✦ Why do we trade it?
✦ Where do we trade it?
✦ When do we trade it?
✦ Who trades it?

Gold: just another asset?

✦ Significant academic research on gold in three areas

✦ Monetary aspects of gold (gold standard etc)
✦ Commodity aspects of gold (extraction, mining stocks etc)
✦ Investment aspects of gold (hedging, bubbles etc)

✦ For this see <alchemist article>
✦ LBMA bursary
How this works

- A number of key aspects (imho) of academic finance research mapped to gold research
- The reason we as academics and you as practitioners should care
- The kinds of questions we could answer

Microstructure

- Microstructure: how the trade and order process impacts on the price formation process
- Usually but not always about high frequency data analysis
- Issues such as price discovery, liquidity measurement, order flow etc
- Vast empirical literature on this in stocks and bonds, very little in gold or PM
LIQUIDITY: Breadth, depth and resilience unknown – volume, price variability and TC unknown, especially in OTC market –

More liquidity > greater value

Depth: a market is deep when there are orders both above and below the trading price of an asset.

Breadth: a market is broad when there is a large volume of buying and selling orders. The spread is large when the order flow is scarce.

Resiliency: a market is resilient if there are many orders in response to price changes.


HOW IS INFORMATION PROCESSED? Sequentially or Mixed? Implications for the derivatives markets; Role for Volume


VOLUME-VOLATILITY-PRICE Relationship: what moves first? Do market or limit order traders move the market and if so when?


Microstructure

- MARKET ARCHITECTURE: especially important in the light of LIBOR, how is benchmark bullion price set? Is the auction process optimal? How to obtain “fair price” that reflects all traders true beliefs?


Investment

- One of the most studied aspects of finance: portfolio management

- PM portfolio management elements a mature discipline

- Consistent finding of usefulness of gold as a diversifier (5-10% holdings); less work on other PM’s


- Still unanswered questions however …
Investment

✦ TIME VARIATION IN HEDGE/HAVEN: what causes gold to switch from hedge to haven status? Will the knowledge that this is happening destroy it?


Skewness

✦ ROLE OF HIGHER MOMENTS: What is the payoff for skewness in gold? For kurtosis? How do we manage time variation in these?


Behavior

ADAPTIVE MARKET HYPOTHESIS

- Time variation in risk-return, medium term arbitrage, technical trading profitable, and need for adaptation in investment strategy due to periods of predictability – needs to be fully documented for gold

HEURISTICS AND BIASES: So many many biases and heuristics – do they matter for gold? E.g. Salience, loss aversion, prospect theory,

PERSONALITY TRAITS OF GOLD INVESTORS AND TRADERS AND IMPLICATIONS OF SAME

MACRO SURPRISES ON BULLION: we know that macroeconomic surprises matter (but dissipate) in futures - what about bullion?
Some biases

✦ SALIENCE: does investment in gold vary with salience of gold?

✦ HOME BIAS: do investors in gold mining countries overhold gold or gold products?

✦ EMOTION: gold is both an investment and adornment - does emotion affect the decision? What about gender…
Some biases

**PSYCHOLOGICAL BARRIERS**

**ANCHORING**

Some more biases

**MOOD: does mood or other external influences matter?**
And yet more

- **DISPOSITION EFFECT**: do we hang onto gold too long when falling and sell too soon?

- **HOUSE MONEY**: as returns increase so too does risk

Globalization

- **INFORMATION SPILLOVER OF GOLD**: Where does the information come from in the gold market?

Globalization

GOLD AND OTHER ASSETS IN CONTAGION
- METEOR SHOWERS, SUNSPOTS AND HEATWAVES: If gold is volatile in market A today does it stay that way (heatwave) or move (ss/ms), and what about gold vs other assets?

Gold “peculiarities”

GOFO & LEASE BEHAVIOUR: Do we see “calendar” anomalies in these? Linked to other markets?

MINE-HEDGE ISSUES: Does it still work?

GOLD YIELD CURVE
† INFORMATION FLOW BETWEEN PM PRICES, FORWARD RATES AND LEASE RATES,


† GOLD BUBBLE: is there one and if so where and when?

