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[TheMoneyIllusion](#)

A slightly off-center perspective on monetary problems.

One by one, the anti-EMH arguments collapse



Tweet



When I started blogging in early 2009, the anti-EMH forces were riding high. The previous decade had seen tech and housing “bubbles”, there were studies showing that hedge funds and elite college endowments outperformed the broader markets, there was the absurdly high price of Bitcoins, and there were academic studies finding market “anomalies”. In the eight years since, all of these arguments have either mostly or entirely collapsed.

1. Remember those people who told you not to buy Bitcoin at \$30 because it was a wildly inflated bubble? They stopped you from becoming filthy rich, as it’s now at over \$2400. Yes, it could collapse by 90%, but it would still be 8 times higher than when anti-EMH pundits were calling it a bubble. Alternatively, if 98% of Bitcoin-type investments fell in value to zero, it would still be a good idea to invest in *all of them* as long as one in 50 went from \$30 to \$2400. Yes, the anti-EMH argument is that weak—even if they were right 98% of the time on bubbles bursting, they’d be wrong in their broader argument that markets are not efficient.
2. Hedge funds have done poorly since I started blogging (Buffett [won his bet](#) that they would not continue outperforming the S&P500.) [College endowments](#) haven’t even been able to beat index funds.
3. House prices are back up to the peak, and NASDAQ is almost 24% above the 2000 peak. In fairness, in both cases the real price remains below peak levels. But there is no longer a serious argument that these markets were “obviously” ridiculously overvalued, especially given that so many other foreign housing markets are now far above 2006 levels. Back in 2002, when NASDAQ was at roughly 1100, people were claiming that 5000, and even 4000, had been an absurdly overvalued level. Now it’s over 6200. And yet most of these pundits seemed to have no problem with a NASDAQ of 1120 in October 2002. Don’t let anti-EMH people tell you how to invest.
4. [Alex Tabarrok](#) linked to a recent academic study by Kewei Hou, Chen Xue and Lu Zhang, which looked at a large number of market “anomaly” studies, and found that the results were heavily influenced by data mining (aka p-hacking):

The anomalies literature is infested with widespread p-hacking. We replicate the entire anomalies literature in finance and accounting by compiling a largest-to-date data library that contains 447 anomaly variables. With microcaps alleviated via New York Stock Exchange breakpoints and value-weighted returns, 286 anomalies (64%) including 95 out of 102 liquidity variables (93%) are insignificant at the conventional 5% level. Imposing the cutoff t -value of three raises the number of insignificance to 380 (85%). Even for the 161 significant anomalies, their magnitudes are often much lower than originally reported. Out of the 161, the q -factor model leaves 115 alphas insignificant (150 with $t < 3$). In all, capital markets are more efficient than previously recognized.

In retrospect, 2009 was “peak anti-EMH”, and it’s been all downhill from there.

PS. Just when you think the GOP and its fake news co-conspirators can’t get any further down into the gutter, they hit a new low. Remember the saying; “The fish rots from the head down”? A pro-Trump Republican assaulted a reporter in Montana, while running for Congress. There was a [Fox News reporter](#) standing three feet away. But during the next few hours, Fox News reported the candidate’s pathetic lie (notice how these bullies don’t even have the courage to stand up for their beliefs?), but failed to report its own reporter’s eyewitness account—which contradicted the candidate. Perhaps Fox is spending too much time trying to find the real killer of Seth Rich.

And of course GOP politicians just run and hide when asked to comment.

Update: The editors of [Bloomberg](#) want the Bank of Canada to stop trying to stabilize the economy and shift over to trying to control asset prices:

Canada Must Deflate Its Housing Bubble



Tweet



Tags:

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63 Responses to “One by one, the anti-EMH arguments collapse”

1.  Major.Freedom
[25. May 2017 at 18:28](#)

EMH has already collapsed as a theory, because even if we assume it is true for the sake of argument, then acting on the basis of it being true would make the market disappear.

Any theory that when put into practise leads to performance contradiction, is a false theory.

EMH is just a sloppy way of thinking about the market, it isn't empirical and it certainly isn't true.

>Remember those people who told you not to buy Bitcoin at \$30 because it was a wildly inflated bubble?

Not a refutation of anti-EMH and not proof of EMH. Even if Bitcoin collapsed and never recovered, you'd claim EMH is not disproved.

>Hedge funds have done poorly since I started blogging

Not a refutation of anti-EMH and not proof of EMH. Even if Hedge funds have performed well since you started blogging, you'd claim EMH is not disproved.

>House prices are back up to the peak

Not a refutation of anti-EMH and not proof of EMH. Even if home prices have not yet recovered, say where prices were two years ago, you'd claim EMH is not disproved.

>Alex Tabarrok linked to a recent academic study by Kewei Hou, Chen Xue and Lu Zhang, which looked at a large number of market "anomaly" studies, and found that the results were heavily influenced by data mining

You mean like data mining the timings of prices of Bitcoins, hedge funds, and homes?

>Just when you think the GOP and its fake news co-conspirators can't get any further down into the gutter, they hit a new low.

Just once will this blog ever report on any one of the DOZENS and DOZENS of fake news from the Democrats? That are easily found using Google?

Let's see:

>A pro-Trump Republican assaulted a reporter in Montana, while running for Congress. There was a Fox News reporter standing three feet away. But during the next few hours, Fox News reported the candidate's pathetic lie...but failed to report its own reporter's eyewitness account—which contradicted the candidate.

<https://i.imgur.com/eIM19kt.jpg>

>Perhaps Fox is spending too much time trying to find the real killer of Seth Rich.

At least you're mentioning his name. That's a start.



2. Benjamin Cole
[25. May 2017 at 18:36](#)

Hooray for EMH. It seems to work 90+% of the time, and generally explains how the economic world works.

I do wonder about October Black Monday 1987, the day the Dow fell 22.6% in one day, possibly due to computer trading.

But one episode does not destroy as very useful way of looking at the world and making policy.

Indeed, back in 1987 markets were hit hard in October, but one could also posit that was a “reverse bubble.” It was a great buying opportunity.

So history is also rife with “reverse bubbles.” Which means EMH is wrong? And where are the reverse bubble mongers?

No, not EMH is not wrong, and still very useful.

On the Bank of Canada: We have yet another nation running trade deficits, but with good property rights yet extensive property zoning, and facing resultant house price explosions. And the central bank is undercutting the action.

Macroeconomists need to include ubiquitous and extensive property zoning into their world views, if they are to have meaningful insights into monetary policy issues.



3. Ted Sanders

[25. May 2017 at 19:04](#)

Don't forget how inflation was always around the corner and the China bubble was about to burst, despite neither being priced into the market.



4. Ted Sanders

[25. May 2017 at 19:10](#)

And of course the debate should not be framed as whether the EMH is true or false. Just like the theory that the Earth is a sphere, it is not 100% true. The question for sophisticated thinkers is not *is* it true, but *how* true is it and how is it useful?



5. tpeach

[25. May 2017 at 20:02](#)

hi Scott

off topic, but have you seen Bernanke's article from this week; Some Reflections on Japanese Monetary Policy?

<https://www.brookings.edu/blog/ben-bernanke/2017/05/23/some-reflections-on-japanese-monetary-policy/>



6. Maurizio

[26. May 2017 at 00:25](#)

If the EMH is correct, then you regularly win bets against the Anti-EMH. But then you have an infallible strategy to get rich. But then the EMH cannot be true, because it implies such a strategy cannot exist 😊



7. jb

[26. May 2017 at 04:03](#)

The EMH is definitely true... at least for everyone not on Long Island:

<https://www.bloomberg.com/news/articles/2016-11-21/how-renaissance-s-medallion-fund-became-finance-s-blackest-box>



8. dtoh

[26. May 2017 at 04:59](#)

Scott,

So what do you think the market rise since November implies?



9. Christian List

[26. May 2017 at 05:00](#)

House prices are back up to the peak, and NASDAQ is almost 24% above the 2000 peak.

In fairness to the bubble guys, I don't think most of them assume that prices can not go back to peak.

Maybe it would be better to redefine the term bubble. A bubble should not be defined as a price that strongly exceeds the asset's intrinsic value, because this rarely happens (if ever). It should also not be defined as wrong views about the future (in total at the given time), because this is not possible in an efficient market either. A bubble should simple be defined as the bubble-like-looking price growth before a massive and lasting price crash. A price growth and a price crash that happened for completely legitimate reasons (most of the time). And since a bubble needs a price crash, it can be identified only in retrospect, which makes it a pretty useless concept regarding predictions.

I think a lot of people are already using the term "bubble" in that way. They don't think about intrinsic value necessarily and surely not about EMH.

To make fun of the bubble mongers you could add the concept of reverse bubbles as well. It's price growth + crash, just the other way round, and can not be predicted as well.



10. Stuart Armstrong

[26. May 2017 at 05:33](#)

I think you should distinguish between stronger and weaker versions of the EMH. The weak form – “you can't really beat the market” – has a lot of evidence for it, while the strong form – “prices are in some sense always rational” – does not.



11. Benoit Essiambre

[26. May 2017 at 06:04](#)

As a Canadian in a high unemployment province: fuck you Bloomberg editors I hope you and your families end up jobless and on the street.

12.  ssumner

[26. May 2017 at 06:08](#)

Ben, Yes, 1987 is probably the best argument against the EMH.

Note that Canada ran a CA surplus during its 2000-06 house price boom.

Ted, Good points.

tpeach, Thanks I'll take a look.

Maurizio, That assumes the anti-EMH forces are willing to bet. One did a bet with Buffett, but in general I doubt they would bet on this.

dtoh, I'd say the market rise since 2009 has basically the same two causes—growing confidence that corporate profits will stay high, and growing confidence that interest rates will stay low. And of course there are many reasons for this growing confidence, which I am not able to pin down. But one reason is clear—the persistence of these trends for 8 years make them more likely to continue—especially given the economy shows no sign of “overheating”.

Christian, My point about NASDAQ at 1120 is that most pundits don't call reverse bubbles.

Stuart, I don't see that distinction as being very meaningful.

13.  ant1900

[26. May 2017 at 06:11](#)

It's your blog of course and I know Trump is a major topic for you. (I happen to have a Straussian reading on your Trump takes but in any case.)

Why ruin a very interesting post with that PS? This would be a great post to share with someone but the political rant pushes me away from sharing it. It has nothing whatsoever to do with EMH.

I would keep the Trump stuff in posts that are clearly political in nature. Just a suggestion from a fan.

14.  Maurizio

[26. May 2017 at 06:31](#)

“That assumes the anti-EMH forces are willing to bet. ”

What is you create an ETF where you can basically bet on the difference between hedge funds and index funds? (Just thinking out loud)

15.  Patrick R. Sullivan

[26. May 2017 at 06:46](#)

I'm all for assaults on reporters. Somehow someone has to knock some sense into them.



16. [jg](#)

[26. May 2017 at 06:55](#)

That Montana bum should go to jail fox six months.



17. [Antischiff](#)

[26. May 2017 at 07:03](#)

Dr. Sumner,

If anything, the crash of '87 supports EMH. My view, for what it's worth, is that markets around the world rationally misread newly appointed Fed Chairman Greenspan.

This crash was a global phenomenon, not just a Wall Street flash crash. Treasury yields turned down sharply.

Greenspan pulled out the stops greatly surprising markets on the upside and stabilizing the economy.

To be explicit, expectations for tight monetary policy caused the '87 crash.



18. [Bob](#)

[26. May 2017 at 07:10](#)

While I am pretty sure the EMH is about as good a way as we have to look at markets, I'd not mention Bitcoin as an example at all, because it's not much of a market. In practice, the signals that we have for its value are, for all intents and purposes, controlled by very few people, all of which want bitcoin to keep going up.

Utility wise, it has some very severe, mathematically unfixable design problems, shared with every cryptocurrency out there, but there's no sensible ways to to long term shorts, as you are betting against people that can artificially raise prices without costing them a dime. So, in practice, I'd not even call its trading a market.

I wish the economic libertarian press would study this, instead of give this catastrophe free publicity.



19. [Randomize](#)

[26. May 2017 at 08:48](#)

So according to Bloomberg, inflation has been low but home prices are up so thus, the BoC should tighten? What makes home prices more important than all the other prices that are used to calculate inflation?

Scott,

Some additional comments on Bitcoin would be appreciated. It seems like it has failed as a currency in that it is wildly deflationary and people are prone to hoard them rather than spend them. As a Ponzi scheme, however, it has succeeded beyond our wildest dreams...



20. Chuck

[26. May 2017 at 10:02](#)

Does time mean absolutely nothing to you?

If you have to sell stock to pay for open heart surgery, then timing matters a lot. You can't just wait ten years for the price to recover.

When bubble mongers claim asset X is overvalued, very few probably mean forever and ever. They're predicting its price will go down soon.

If someone in 1949 asked you whether they should flee China after the Communist takeover, would you respond:

No, eventually the Chinese will get their act together and there will be tremendous opportunities so just sit tight.

You would be right about the eventual recovery, but very wrong about sticking around.



21. msgkings

[26. May 2017 at 10:06](#)

@Chuck: exactly right



22. ssumner

[26. May 2017 at 11:11](#)

Thanks Ant1900. The posts you should be sharing are over at Econlog, where I put my better posts.

Maurizio, If the EMH were false there would be lots of such funds, and they would outperform the S&P500. But there aren't, and they don't.

Patrick, Why am I not surprised.

Antschiff, I haven't seen any evidence for that theory.

Bob, Do you have any evidence for that theory?

Randomize, It's deflationary nature is not really a failure because goods and labor are not prices in Bitcoin. Thus the value of Bitcoin has no macro significance.

Chuck, I read them as saying the price is too high, relative to fundamentals.

If we are looking at the short term predictive ability of bubble theorists like Shiller and Roubini, it's not very good, it it?



23. Randomize

[26. May 2017 at 11:28](#)

Dr. Sumner,

For it to succeed as an alternative currency, wouldn't things would have to start being priced in Bitcoins?
What could a Bitcoin be if not an alternative currency?



24. Christian List

[26. May 2017 at 15:34](#)

@Chuck

Does time mean absolutely nothing to you?

...

When bubble mongers claim asset X is overvalued, very few probably mean forever and ever. They're predicting its price will go down soon.

You are correct, timing and time is everything here. And that's exactly the reason why bubble mongers are doing so bad.

@Randomize

For it to succeed as an alternative currency, wouldn't things have to start being priced in Bitcoins?

The (main) unit of account is still the US dollar. That's why Bitcoins are called "alternative" in the first place, it's not the usual medium of exchange and surely not the unit of account. It's just a store of value and a limited medium of exchange.



25. E. Harding

[26. May 2017 at 15:43](#)

Based Gianforte won Montana by a full six points. He lost by four in 2016! Great result!

BTW, though I'm usually skeptical of EMH-style claims, those results of the Chinese dudes' study are impressive!

"had been an absurdly overvalued level."

-Don't just compare nominal prices; compare with what you would have earned by investing the same amount into treasuries.

"Yes, the anti-EMH argument is that weak—even if they were right 98% of the time on bubbles bursting, they'd be wrong in their broader argument that markets are not efficient."

Interesting argument, and potentially a very good one.

26.  Major.Freedom
[26. May 2017 at 18:21](#)

Maurizio demolished EMH even better than I did

“If the EMH is correct, then you regularly win bets against the Anti-EMH. But then you have an infallible strategy to get rich. But then the EMH cannot be true, because it implies such a strategy cannot exist.”

This is a logical demolition of the theory, goodness that is effective

Of course it goes over Sumner’s head, who retreated to guesswork and presuming what people would or would not do, as if that had anything to do with Maurizio’s argument

“That assumes the anti-EMH forces are willing to bet.”

They do that everyday, millions of them. Every individual entrepreneur or capitalist who invests in anything other than your boring index linked mutual fund or whatever, is expecting to do better than the boring index linked mutual fund or whatever. That is your “anti-EMH” staring at you in the face, but you’re so blinded by the a priori theory, you cannot even perceive it.

Congrats Maurizio, I wish I was as effective with such few words.

27.  Dan W.
[27. May 2017 at 04:24](#)

By Sumner’s own logic, if the S&P was to fall back to 700 then it could be said that:

“there is no longer a serious argument that these markets were “obviously” ridiculously undervalued”

Truth is a nation’s asset prices will invariably trend higher as long as people have confidence in that nation’s currency and its banking system. Thus it behooves a nation to not corrupt its banking system and to not spoil its currency.

Sumner seems to take it for granted that such corruption will never happen in America – or that the only corruption that can happen is the banking system will put too little money into circulation. For someone who likes to present himself as so open-minded, this is one of the most myopic blogs on the interwebs.

28.  Scott Freeland
[27. May 2017 at 07:04](#)

Scott,

Scott, this is the first time in quite a while I’ll be on the other side of an economic argument with you. I hesitate to argue, given you know far more about economics than I ever will, but I find your skepticism about EMH applying in 1987 interesting.

As I define EMH, it merely says, in its strongest defensible form, that investors on average cannot beat stock market rates of return on a consistent basis. Those who do beat the market rate of return for a long

period of time are lucky.

Given that definition, how can the crash in 1987 be inconsistent with EMH? Prima facie, worldwide stock markets crashed and the values of safe assets rose. There was not, in fact, the kind of economic downturn that such crashes would predict, but the definition of EMH I mention above doesn't say markets price correctly. It merely says they price better on average than market participants. It makes sense that sometimes events unfold such that there's good reason to believe an economic slowdown is approaching that never materializes.

Also, let me point out that a 23% drop in the S&P 500 is unusually large over such a short period of time, for example, and is still a record, but is not unreasonably large. Given the P/E ratio at the time, it was predicting only roughly a little over 1% drop in the NGDP growth path. The 10 year Treasury yield fell a bit over 1.4% during the crash, so Antishiff's claim seems to have some merit on the surface.

The question will require further study on my part, but I see the EMH as the null hypothesis, so I see no reason to reject the null on the surface.



29. Scott Frelander

[27. May 2017 at 07:19](#)

I guess I should be more explicit and with one of the rough calculations above. I'm trying to eye a chart here, so take it with a grain of salt, but the P/E ratio was somewhat close to 20 just before the 1987 crash.

Given this simple rule of thumb, which says:

$\% \text{ change in S\&P 500} = (\% \text{ change in NGDP})(\text{S\&P 500 P/E ratio}).$

$(\% \text{ change in S\&P 500})/(\text{S\&P 500 P/E ratio}) = \% \text{ change in NGDP}$

Hence,

$(\sim -.23)/(\sim 20) = \sim -1.1\% \text{ decline in NGDP}$

Or, if the P/E was, say, ~ 16 , you get

$(\sim -.23)/(\sim 16) = \sim -1.4\% \text{ decline in NGDP}$

Obviously, this is very crude, back of envelope stuff at best, but the numbers are at least consistent across markets.

By the way, I'm using this historical chart for S&P 500 index:

<https://finance.yahoo.com/quote/%5EGSPC?p=^GSPC>

And I'm using this chart for the historical S&P 500 P/E ratio:

<http://www.multpl.com/>



30. Christian List

[27. May 2017 at 14:11](#)

@MF

I wish I was as effective with such few words.

Believe me MF we all wish dreadfully that you were using way fewer words instead of your useless fake news spam during the last days/weeks/months/years.



31. Major.Freedom
[28. May 2017 at 06:45](#)

Exposing fake news is not a useless endeavor, Christian.

From the perspective of the readers of blogs, this blog spams the Internet with fake news. Yet I don't see you complain, which can only mean you are a believer in fake news yourself, which explains your comment to me.



32. Major.Freedom
[28. May 2017 at 07:29](#)

“If the EMH were false there would be lots of such funds, and they would outperform the S&P500. But there aren't, and they don't.”

No that is a false description of anti-EMH and of EMH. It is not necessary that there be “lots” of such anti-EMH funds. For if lots of such funds were started, then they would become a significant component of the market, and would no longer be anti-EMH. They would largely be betting against each other, which would violate the whole point of anti-EMH investing.

By your false understanding of anti-EMH, the standard of proof would have to be that even if every fund in the world started to invest on the basis of anti-EMH principles, then every single fund would have to beat “the market”, even though there wouldn't even be such a market to beat, since the funds ARE them market. In other words, you are claiming that EMH must be true on the basis that investors cannot beat themselves.

It is in fact only necessary that individual investors beat the market. There does not have to be “lots” of them. You cannot assume that the only way anti-EMH investors must beat the market is by “replicable” formulae, or constancy based decision criteria of “If X is true, then invest according to Y”.

Believing they must do so in order to be called anti-EMH investors is showing you don't understand EMH.

Anti-EMH is by design “fringe” and “temporary”. It is based on the principle that most investors can be wrong and that a minority of investors can be right, depending on the “when”, and on what choices people have made, neither of which are repeatable because we can't turn back time and choices cannot be scientifically predicted based on empirical constants .

It is in fact possible for the majority of people to be wrong about something at any given moment in time, such as the S&P500. You for example claim a political form of anti-EMH when you say the voters made a mistake in the general election. You also do so when you from this blog criticize the Drudge Report, as that site has literally billions more views than your blog and is very much like the S&P500 of internet

news.

Warren Buffet as an individual investor beat the market for 20 years, but he didn't do so by using a secret mathematical formula, nor did he do so by throwing darts at a dartboard. That is where you become unable to understand how it is done. No mathematical formulae and no darts. Damn it ****must**** be luck right? That in EMH we should expect to see 20 year long successes. Even 80 year successes. One person can go to Vegas and roll 100 7's in a row, right?

All that is necessary for anti-EMH to be true, is the existence of the possibility that the majority of investors be wrong occasionally and for the minority to be right occasionally. There does not need to be a repeatable formulae of investing. It does not require the existence of a permanent majority that is wrong or a permanent minority that is right. Investors can move from one to the other.

Usain Bolt does not need to permanently be the fastest man in the world, for there to exist people who can outrun others on the basis of more than just luck. If Usain Bolt grew up eating only Cheetos and Pepsi, and never exercised, and never trained, he would not have become the fastest. That would not have been luck, that would have been poor choices. Just because there is no mathematical formula to becoming the fastest man in the world, it doesn't mean it is all luck driven.



33. ssumner

[29. May 2017 at 07:33](#)

Randomize, It seems like people intend to use it as a medium of exchange, but not a medium of account.

Dan, You said:

“Sumner seems to take it for granted that such corruption will never happen in America – or that the only corruption that can happen is the banking system will put too little money into circulation.”

I see that you still haven't figured things out.

Scott, You said:

“Also, let me point out that a 23% drop in the S&P 500 is unusually large over such a short period of time, for example, and is still a record, but is not unreasonably large. Given the P/E ratio at the time, it was predicting only roughly a little over 1% drop in the NGDP growth path. The 10 year Treasury yield fell a bit over 1.4% during the crash, so Antishiff's claim seems to have some merit on the surface.”

I don't agree that a 1% drop in NGDP growth should have that sort of effect. What model are you using? Why would it have any impact on stocks? In any case, it's highly implausible that on October 19, 1987 there was a big drop in expected NGDP growth, which has never occurred on any other day of American history. Especially given that there was no important news that day.



34. Scott Frelander

[29. May 2017 at 12:56](#)

Scott,

The reasoning goes like this: The P/E ratio in this case has temporally discounted future expected earnings

in the numerator and most recent past earnings in the denominator. It assumes that P is the result of the expected future NGDP multiplied by the expected future earnings growth, controlled for NGDP growth.

So, if the NGDP growth path is suddenly expected to fall by say, 1.4% over a 15 year period, that suggests that P should fall 23%, due to the smaller NGDP growth multiple.

Hopefully that was clear.



35. ssumner

[29. May 2017 at 13:31](#)

Scott, I'm afraid that doesn't help me at all. First of all, why do you assume that P/E ratios are at all helpful in this analysis?

Again, I don't see why stocks should fall if trend NGDP growth falls by 1.4%. Why are you assuming a non-neutrality of money? What sort of change in the discount rate are you assuming?



36. Scott Frelander

[29. May 2017 at 17:53](#)

Scott,

I think P/E ratios are helpful in this analysis, because P reflects future expected earnings, given an expected economic growth path. This is in contrast to E, which reflects the most recent earnings reports. This is an indicator of how important future expected earnings are to current stock prices.

Here's another way of looking at it: As NGDP is expected to fall due to expectations of tighter money, the value of each unit of currency is expected to rise proportionately. The expected rate of return on stocks will then suffer proportionately, such that

$$(\% \text{ change in S\&P 500})(\text{expected ROR on S\&P 500}) = \text{expected \% change in NGDP growth}$$

expected ROR on S&P 500 = E/P, so the above can also be expressed as

$$(\% \text{ change in S\&P 500})(\text{P/E of S\&P 500}) = \text{expected \% change in NGDP growth}$$

On your question about discount rates, they fall nominally, but remain constant in real terms, *ceteris paribus*.

I don't understand your question about money non-neutrality.



37. Stuart Armstrong

[30. May 2017 at 02:13](#)

>Stuart, I don't see that distinction as being very meaningful.

It's very meaningful for the sort of things that I'm looking at, such as looking to using markets to predict probabilities of existential risk or other large scale disasters (the data is poor, but as far as I can tell, markets didn't pick up the Cuban missile crisis in any sensible way – and a rational efficient market would

have, because there was a non-zero chance of the market continuing, even after a nuclear war).

Even in classical markets, there are some things that seem hard to reconcile with strong EMH but that are perfectly compatible with weak EHM, such as volatility smiles.



38. rob

[30. May 2017 at 05:51](#)

I remember I once wrote a paper where I had just simply data-mined past stock data until it confessed it's anomalies. I found a new anomaly which is that the ides of march have higher than normal returns dubbing it "Is Caesars lose your gain?". To me it would be more amazing if you had thousands of people running thousands of tests looking for effects and not find any in such a large data set .05 is 1 in 20 after all.



39. rob

[30. May 2017 at 05:54](#)

I am a very big believer of EMH, but the most plausible criticism I have heard is that markets overreact to bad information which makes investing during a crash profitable, in America's case this is indeed very true. Has America just been lucky thus far?



40. ssumner

[1. June 2017 at 11:12](#)

Stuart, I have a hard time seeing how market inefficiencies would not lead to investment opportunities with excess returns. I.e. sell the market short during the Missile Crisis.

Rob, You ask,

"Has America just been lucky thus far?"

Compared to most other countries, the answer is clearly yes.



41. Scott Freeland

[2. June 2017 at 04:48](#)

Scott,

To clarify, I see the path of NGDP being important for stock prices for the same reason it's important generally. I assume non-neutrality of money when it comes to effects on stock prices, but the prices themselves are nominal. It's the adjustment of wages vis-a-vis other prices that longer run makes money neutral, I thought.

That's why I don't understand your question about the non-neutrality of money in this case.

On the simple discount rate, or if considering the weighted average cost of capital, both either call with NGDP expectations, or even rise if real interest rates rise. The latter occurred briefly during the last

financial crisis.

42.  Scott Freeland
[2. June 2017 at 04:50](#)

It should read above that the discount rate and WACC tend to fall with NGDP in nominal terms, but remain constant or rise in real terms.

43.  Scott Freeland
[2. June 2017 at 05:02](#)

I should also clarify my point about the importance of the P/E ratio in this context. The higher the P/E, and the longer the duration of the expected change in the NGDP growth path, the more dramatic the effect one should expect on stock prices. A higher P/E market is placing relatively more weight on future versus current earnings.

If you accept this model, one only then has to accept that world markets briefly mistakenly expected a drop in US NGDP growth of between 1% and about 1.4%, perhaps due to miscommunication between new FOMC Chairman Greenspan and the markets. I've just begun examining news from the era and the approach of the Fed and its communication were indeed seemingly in flux at the time.

44.  ssumner
[2. June 2017 at 05:36](#)

Scott, I look at stock values in terms of expected future profits and the interest rate at which those profits are discounted.

Slower NGDP growth would reduce both, but it's not clear to me why stock prices would fall sharply, unless the slower growth sharply reduced RGDP. But that wasn't a big issue in 1987.

45.  Scott Freeland
[2. June 2017 at 06:08](#)

Scott,

As I see it, slower NGDP growth has real effects in the short-term due to sticky wages, which leads to higher unemployment, which lowers aggregate demand/output, which in turn means a drop in real GDP. Without expected catch-up to the previous trend, the economic growth path, both real and nominal, will be expected to be lower in the future than otherwise. I thought that was the whole point in favoring NGDPLT.

If that's the case, then stock prices will be lower, *ceteris paribus*. What I'm saying, in effect, is that many economists, like Shimmer, have gotten this wrong for a long time. The stock market is not more volatile in most ways than one should rationally expect.

46.  Scott Freeland

[2. June 2017 at 06:09](#)

Shiller, not Shimmer.



47. Scott Freeland

[2. June 2017 at 06:29](#)

I should be clearer and say that even an expected drop in just inflation, say due to announcement of a one percent inflation target versus the previous two percent target, will cause the expected value of the unit of currency to rise by 1%, hence risk free interest rates fall 1%, and then the stock prices should fall by $1\%/(E/P)$, or $1\%(P/E)$, ceteris paribus, and assuming perfect central bank credibility, etc. Stock prices and prices on similar assets fall in line with their expected rates of return relative to the rise in the value of the unit of currency. For the stock market as a whole, of course, ceteris paribus, increased earnings can only come as the result of higher inflation(nominal), or higher output and demand(real).



48. Scott Sumner

[3. June 2017 at 08:30](#)

Scott, You said:

“I thought that was the whole point in favoring NGDPLT.”

No, just the opposite. I don't think that monetary shocks have a long term effect on RGDP.



49. Scott Freeland

[3. June 2017 at 10:28](#)

Scott,

Of course monetary shocks don't have a long-term effect on RGDP growth rates, because wages adjust, but RGDP levels can be below where they could've been without the monetary shock, if monetary policy remains too tight get RGDP back to it's trend path. This is particularly true near the ZLB when a central bank lacks credibility with respect to level targeting.

You disagree with this?



50. Scott Freeland

[3. June 2017 at 11:28](#)

I mistated above. I should say that RGDP will be lower than where it would have been in absence of a monetary shock, and that is increasingly the case the more severe the shock. The severity of the shock is limited by the ability of wages to adjust, even if policy remains tight.

So, a monetary shock occurs. and the RGDP can, ceteris paribus, grow at the pre-shock rate from a lower base.

51.  [CryptoInvesting in the Age of Whales – the internet's best kept secret](#)
[3. June 2017 at 12:20](#)

[...] It's just that the fast sell-outs make the most news. This, along with the incredibly durable efficient market hypothesis, suggests that, in general, this is not a bubble, this is underwriting, and there are plenty of [...]

52.  [Op Ed: Crypto-Investing in the Age of Whales - Your Daily Satoshi](#)
[3. June 2017 at 12:31](#)

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53.  [CryptoInvesting in the Age of Whales - Blockalerts](#)
[3. June 2017 at 13:04](#)

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54.  [Op Ed: Crypto-Investing in the Age of Whales bitcoin news](#)
[3. June 2017 at 16:55](#)

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55.  [Op Ed: Crypto-Investing in the Age of Whales – Bitcoin my Faucet](#)
[3. June 2017 at 17:43](#)

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56.  [Op Ed: Crypto-Investing in the Age of Whales - Altcoin Today](#)
[4. June 2017 at 13:00](#)

[...] It's just that the fast sell-outs make the most news. This, along with the incredibly durable efficient market hypothesis, suggests that, in general, this is not a bubble, this is underwriting, and there are plenty of [...]

57.  ssumner

[4. June 2017 at 19:18](#)

Scott, I am saying that monetary shocks have little or no impact on the long run level of RGDP, so I do disagree.



58. Scott Freeland

[5. June 2017 at 07:43](#)

Scott,

Even a cursory glance at the evidence suggests you're right. RGDP tends to go from under-trend to over-trend, and then back down to trend.

I'll re-examine this model in light of Rusty fact



59. Scott Freeland

[5. June 2017 at 07:44](#)

That



60. Scott Freeland

[5. June 2017 at 07:45](#)

The model fits recession data well, but maybe it'll work even better now. Sorry to waste your time disagreeing with what was apparently an obvious fact.



61. Michael D Sandifer

[10. June 2017 at 07:35](#)

Sorry to join this discussion late, but Scott Freeland you were misusing the formula. A roughly 23% drop in the market with a p/e around 20 would predict a 1.4% recession, not merely a 1.4% drop in NGDP growth.



62. Scott Freeland

[12. June 2017 at 12:48](#)

Mike,

Thanks for the correction. Sorry to cause so much confusion with basic mistakes. I have to admit that a 23% drop in stock prices is much more plausible given a recession. So the markets were expecting a recession in late '87 that didn't occur. Rusty reminds me of the Samuelson quote about the stock market predicting 9 of the last 5 recessions.



63. [Crypto-Investing in the Age of Whales | BITCOINS NEWS - MAKE A LOT OF MONEY WITH](#)

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[19. June 2017 at 04:06](#)

[...] It's just that the fast sell-outs make the most news. This, along with the incredibly durable efficient market hypothesis, suggests that, in general, this is not a bubble, this is underwriting, and there are plenty of [...]

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Bio

- My name is Scott Sumner and I have taught economics at Bentley University for the past 27 years. I

earned a BA in economics at Wisconsin and a PhD at Chicago. My research has been in the field of monetary economics, particularly the role of the gold standard in the Great Depression. I had just begun research on the relationship between cultural values and neoliberal reforms, when I got pulled back into monetary economics by the current crisis.

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