

«Inflation is Totally Out of the Control of Central Banks»

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English

Eugene Fama, Nobel laureate and Professor of Finance at the University of Chicago, doesn't believe in a stock market bubble. But he is worried about the high levels of government debt. He warns that investors could stop perceiving government bonds as risk-free. A conversation with the «father of modern finance».

Christoph Gisiger 10.08.2020, 03.00 Uhr

Deutsche Version

Few economists have had a greater influence on the financial markets than Eugene Fama. According to his Efficient Market Theory, competition among investors is so intense that all information and expectations are immediately and correctly priced in. Therefore, it's impossible to beat the market in the long-term.

Never shy of making pointed statements, the Professor of Finance at the University of Chicago doubts the power of the central banks. «The business of central banks is like pornography: In essence, it's just entertainment and it doesn't have any real effects», he says. In contrast, he warns that investors could begin to question the credit worthiness of governments because of the high national debt levels.

In this in-depth interview with The Market/NZZ, which has been edited and condensed for clarity, Prof. Fama explains why he welcomes the boom in passive investing and why he sees no problem in the high capital concentration at tech giants like Apple, Amazon or Microsoft. In his view, absurd price swings such as negative oil prices are no reason to doubt the rational behavior of markets.

Professor Fama, the efficient market hypothesis has revolutionized the way people invest. What goes through your mind when you look at the wild swings the stock market made this year?

The market seems pretty good. It held up even though the economy is deep in the bucket. This is a good example of how forward looking the market really is: It's looking past what we are going through now, and it's saying that the future doesn't look that bad.

Do you think that's the correct assumption?

If I could forecast, I wouldn't be a professor.

Still, since the crash in February/March, we basically went from 1929 to 1999 in just a few months. What are the chances stocks are in a bubble?

Bubbles are things people see in hindsight. They don't identify them in advance. Sure, you can look at the behavior of prices, and you may be able to identify cases where they are too high. But if you only look back and say: «Oh, stocks went down a lot, so that was a bubble», then that's 20/20 hindsight. At the time, there was no evidence that there was a bubble.

On the other hand, sometimes there are obvious signs of excess. Let's take the final stage of the great dotcom bull market of the late nineties as an example.

Let's go back to that period before the crash. Alan Greenspan, the head of the Federal Reserve, made his famous «irrational exuberance» speech about the market being too high in early December 1996. But even after the crash, the market never went back to the level when he made that speech. So what do you think of that forecast?

Is there really no way to spot a bubble?

Here's another example: In the fifties, there was a famous professor at Stanford who was an agricultural economist. He brought plots of agricultural prices into the faculty lounge and asked people to identify bubbles. Of course, they saw the ups and downs, and all of them identified bubbles. Afterwards, he told them that these were just numbers he had randomly generated. That tells you how good people are with identifying bubbles.

Against that backdrop, what do you make of the growing discipleship of behavioral finance which focuses on the influence of psychology on investment decisions and questions the efficiency of markets?

What I say is that we agree on the facts but we disagree on the interpretation. In my view, there is no such thing as behavioral finance. Essentially, it's just a criticism of efficient markets. They don't have a theory of their own. Hence, that makes me the most important person in behavioral finance. Without me, they don't have anybody to disagree with. So I think behavioral finance is just a branch of efficient markets.

But what about factors like emotions, herd mentality or cycles? Aren't they important at all?

Tastes and behavior are important in economics. Nobody denies that. But you have to translate these things into something testable, so we can take the data and test it, looking forward and not looking backward. That's my response to all that stuff. It never works out.

Yet, we also know that investors regularly mix up similar-looking stock tickers or company names and thereby cause absurd movements in stock prices. How is this rational behavior?

It isn't. You can identify mistakes like that. It's common that names confuse investors and as a result, you can get temporary price movements. But they are usually tiny and go away quickly. I don't say markets are completely efficient, but they're efficient for most questions that I address. Models are never a 100% true. If they were, we would call them reality, not models. But for almost all purposes, market efficiency is a very good approximation. I'll go even further: Almost all investors should regard markets as efficient for their own investment decisions. If they do that, they will be better off in the long-term.

Still, recently we saw some truly strange things that are hard to explain rationally, like negative oil prices or credit spreads on fortress balance sheet companies like Apple exploding. Is this the way rational markets are supposed to behave?

It's always foolish to look at individual cases because every individual case is different. I don't know how to judge those particular events and I don't get into the business of valuing individual companies. But the fact that the oil price went briefly negative tells you that all storages were full. Therefore, people weren't able to buy oil since there was no place to put it. The negative price didn't last very long, but it shows you that once you start producing oil, this stuff keeps coming out of the ground no matter what. That means the price can go negative, and someone who has storage capacity can make money at that point.

Would you ever have expected to see negative oil prices?

We've seen a lot of things that we thought could never happen before. But they did, like negative interest rates all over the countries in Europe.

Negative interest rates are turning the financial system upside down. Are markets still able to function efficiently when bonds are yielding less than zero?

Negative interest rates tell you that there is some cost to storing cash. That's why you get negative rates, mostly in short-term bonds. The alternative to holding those bonds is to hold cash, but holding cash is apparently not costless. This means you're bound by the cost of holding cash. So, what do you do with your cash? If we're talking about a position of hundreds of millions of dollars you don't want to have that in cash.

And what about the fundamental consequences of negative rates? How are they impacting the real economy?

I don't think they impact the real economy, but it's a problem for the financial system. What's more, in 2008, in response to the financial crisis, the Fed started to pay interest on its reserves. But there is no interest on the currency, and currency is exchangeable for reserves on demand by the banks. So based on classic monetary theory, you don't really know what's determining inflation at this point. There is no control over the stock of what qualifies as money, since reserves aren't really money anymore because they are paying interest. That means you can't control the currency supply. In other words: Inflation is totally out of the control of central banks.

In the coming months, the Fed is expected to make a major commitment to ramping up inflation soon. What would it mean for investors if we really get inflation?

Inflation and return on investments is a tough topic that's been around since the early seventies. In principle, you can see the effects of inflation on long-term interest rates, but you can't see them in stocks very well because the volatility is so high. Hence, we don't know what effect inflation will have on markets. It depends on the effect on real activity: High, but stable inflation wouldn't be a big deal. What's really a big deal is when it gets unstable.

It's not just the Fed, around the globe central banks are flooding the system with liquidity like never before. Is this a reason for concern?

Frankly, I think this is just posturing. Actually, the central banks don't do anything real. They are issuing one form of debt to buy another form of debt. If you are an old Modigliani–Miller person the way I am, you think that's a neutral activity: You're issuing short-term debt to buy long-term debt or vice-versa. That's not something that should have any real effects.

Then again, the financial markets sure seem to love it. At least it looks like that the S&P 500 is moving upwards in tandem with the expansion of the Fed's balance sheet.

Every day we hear a story about the movement of stock prices. But the story is different each day. So basically, these stories are made up after the fact. But when we look at it systematically, we don't see a big effect of Fed actions on real activity or on stock prices or on anything else. That's why I use to say that the business of central banks is like pornography: In essence, it's just entertainment and it doesn't have any real effects.

But how about the effects of this «free money» on borrowing? Isn't the record amount of corporate and government debt a real problem?

That really bothers me. We haven't hit it yet, but there has to come a point where people start questioning whether government debt is really riskless. Piling on debt even in good

times is a new thing: In the US, we cut taxes and increased the deficit as a consequence, but that happened when the economy was booming. How are we going to pay that back? It has to come out of taxes in the future. As a matter of fact, we didn't really lower taxes. What we did was we lowered them now and raised them in the future, when we have to pay off that debt. That's why I worry that investors will become skeptical of whether governments can actually pay off so much debt. Now, we're piling on like crazy because of the Covid-pandemic. That was unavoidable, but it was avoidable in the past, when we did it in good times. When does the market say «enough»?

In recent years, we've also witnessed a revolution in passive investing. How does the amazing indexing and ETF boom impact valuations of stocks and bonds?

That's a complicated question, and nobody knows the answer. For almost sixty years, I have been saying that there should be more passive investing since there's no evidence that active managers generate a superior performance for their high fees. Finally, passive investing is catching on. Of course, you can't go 100% passive because somebody has to determine prices.

But aren't ETFs undermining the generic price discovery of markets? In principle, they just buy stocks mechanically and don't care about prices or valuations.

They don't but the people who buy ETFs pay attention. But here's the key issue: Who are you knocking out of the market when you go passive? Are you knocking out bad active investors or good active investors? If you are knocking out bad active investors, you are making the market more efficient. If you are knocking out good active investors, you are making it less efficient. In general, there are very few good active investors. That's what all the evidence says, going back fifty years now: It's very difficult to find people who can beat the market.

How about Warren Buffett for starters?

The real question is: How do you pick Warren Buffett? The way you pick him is after the fact, since he has done very well. Now, suppose I take 100,000 investors and say: Let's let them run for 30 years and pick out the winner. Because you roll the dice so many times, even if none of them is a good or bad investor, many investors will do well and many will do poorly purely by chance. Statistically there is also going to be a big winner, but solely due to chance. In other words: There will be extremely good outcomes and extremely bad outcomes, but you just can't tell who is successful because of luck and who because of skill.

So you're saying that Warren Buffett was just lucky?

The problem with picking a winner after the fact is you can't tell. If you would have

identified him fifty years ago and you looked at him and would have said: «That's the guy!», then I would believe you that you can tell if someone's going to be an investment genius. But you couldn't do that fifty years ago, because there's a statistical problem.

Another concern people are talking about is the extremely high market concentration. Today, five tech giants make up more than 20% of the S&P 500. What does this mean for the efficiency of the stock market?

In the past, it's always been the case that the largest fifty companies account for more than 50% of the total value of the market. Now, we've got a technological revolution, and it turns out that there are five or six big winners, these trillion-dollar companies. They are a pretty large fraction of the market, but they did it through innovation, not through theft or any other illegal behavior. So I don't know why that's a negative. These are all new businesses that provide new services we didn't have before.

In addition to that, more trades than ever are based on algorithmic high-speed trading. How does that impact the functioning of financial markets?

This has been an open question for around fifteen years. No one really knows what effect high speed trading has on prices. One of my colleagues has worked a lot on that topic. His suggestion is to slow trading down to something like a tenth of a second between trades and thereby kill the advantage of these fast traders. I don't see any problem with that.

There's also a fierce debate about factor investing. For example, value has underperformed growth for the past decade. Is value investing death?

Who knows? The problem is that you can't tell from ten years of data. We don't know if the last ten years are just a statistical blip or not, because the variance of returns is so high. Ken French and I recently published a paper called «[The Value Premium](#)». We basically say that it's not just ten years. If you go back 28 years and compare that period to the previous 28 years, you cannot tell whether expected returns have changed, or whether the premium is zero, or equal to its historical value. The volatility is so high that you can't make any statements like that. There is no way to know the answer. Besides, the value premium has done poorly in the US, but not in international markets.

What does this mean for investors?

The challenge in asset pricing is to come up with the right dimensions of risk and how they relate to expected returns. That's been a challenge as long as I have been in the business. I suggested solutions every twenty years or so. None of them worked perfectly. Sometimes they work for a while, and then they don't seem to work anymore. The problem is that we're always buried in volatility which makes it hard to tell what's right and wrong.

What exactly are these risks?

We've identified what we call the five potential dimensions of risks: Stocks relative to bonds, small relative to big stocks, value relative to growth stocks, high versus low profitability stocks, and high investment versus low investment stocks. All of these things seem to capture some of the variation in returns. But whether that's the right breakdown or not is hard to tell.

What sort of lesson should investors take from that? For example, can we say that small stocks should theoretically perform better than large stocks over the long run?

It's really hard to tell because you get buried in volatility. For instance, the January effect, which refers to a premium of small stocks in the first month of the year, was identified in hindsight. And, once it was identified, it wasn't there anymore. That begs the question whether the value premium, the size premium, the profitability premium or the investment premium were also temporary. If they are not real dimensions of risks and if they are not things people are concerned about, then you would expect them to go away because that's fundamental economics: If there is a profit opportunity out there, and it's generating expected returns, people will bid up or down the price on those things so that they disappear.

Is there anything you now would watch out for specifically as an investor right now?

This experience we're going through is totally unusual. If you go back in the past, we experienced the same kind of pandemic in 1918 towards the end of World War I. But at that time, we didn't take the same measures we're taking now, shutting down whole economies. So we really don't know what the response will be if and when there's a cure for this disease. For instance, what will the response of consumers be at that point? Everybody wants to know if we are going to get a V-shaped response. But nobody knows because you don't know what people are going to do when this is over.

What's your advice for investors in this environment?

I don't do investment advice. But the general prescription is to decide how much risk you're willing to bear and then let that be guiding your decision into how much to put in stocks versus bonds. Also, stay away from hedge funds because you're going to lose a lot of money fast.

Eugene Fama

Eugene «Gene» Fama is a titan of finance. His 1964 doctoral dissertation «The Behavior of Stock Market Prices» laid the foundation for the efficient markets hypothesis that has transformed the way finance is viewed and conducted. In 2013, he was honored with the Nobel Prize in Economic Sciences for his empirical analysis of asset prices.

Professor Fama is a prolific author, having written two books and published more than 100 articles in academic journals. He has done groundbreaking work with the Fama–French three-factor model. Developed with Dartmouth finance professor Kenneth French in the early 1990s, the model explains equity returns based on risk dimensions such as market risk, valuation and company size. Two additional dimensions were added later.

Dimensional Fund Advisors, an investment company founded by Professor Fama, Professor French and David Booth in 1981, is putting the insights from this model into practice. Today, the firm has more than \$510 billion assets under management and employs over 1,400 people worldwide.

In his spare time, Eugene Fama is an avid golfer. Often, his golf partner is Professor Richard Thaler who also teaches economics at the University of Chicago and received the Nobel Prize in Economic Sciences in 2017 for his research in the field of behavioral finance - the new economic theory, which questions the thesis of rational markets.