

Memo to: Oaktree Clients

From: Howard Marks

Re: Conversation at Panmure House

I recently was asked by Patrick Schotanus of Edinburgh Business School to participate in their inaugural symposium on the subject of cognitive economics. The symposium took place at Panmure House, the final residence of the great economist Adam Smith, and the theme was the Market Mind Hypothesis (MMH), which Patrick developed. I spent an hour recording a video interview with him, which on May 24 was shown at the symposium and followed by a live question-and-answer session. We then used software to create a transcript of the taped interview. I've edited it only to make my remarks more intelligible and less painful to read (without changing their message); any serious additions are shown in brackets.

While little of my content is totally new (in fact, you might recognize some thoughts that I went on to incorporate in [Bull Market Rhymes](#)), it seems only right to share it with Oaktree's clients because it's never all been presented in one place before. I hope you'll find something worthwhile in the conversation.

* * *

Patrick Schotanus: *Hello, Howard. Thank you first of all for participating in our symposium by way of this fireside interview, in which we'll discuss some of your memos as well as other reflections that you've shared with investors over the years. For the benefit of our multidisciplinary audience, I'll introduce some of these questions with some explanatory background, especially from a cognitive angle. So I'd like to start with a few questions by MMH team members. The first one is from James Clunie:*

You often write about the concept of the pendulum. More recently, in a [podcast](#), you applied it to international affairs. While the pendulum appears at first glance to be a mechanical model, importantly, you have also applied it to human psychology, especially mood swings. These fit much more with a spontaneous "market mind," which you have also referred to, for example, in your memo [You Can't Predict. You Can Prepare](#). Consequently, the question is, in what way and to what extent is the pendulum mechanical? For example, would it be correct to say that while the pendulum implies mean reversion, the latter is not a mechanical process and is thus difficult to predict?

HM: Thanks for that question, Patrick. I'm very pleased to be discussing these topics with you. As you know, they're something I'm fixated on, and it's great to have someone to talk with about them. I think the pendulum is a good example of many of the things we're going to discuss today. It's an idea. It's a concept. The idea is that it's something that swings back and forth. Something that oscillates, something that fluctuates around a midpoint. That's the whole concept.

It's certainly not mechanical. In physics, I think the pendulum has certain qualities, and as a result, its behavior can be predicted. But in the things I'm talking about, no. As you know, my last book, in 2018, was called *Mastering the Market Cycle*, and I talked a lot in there about the pendulum. I got a note from Nick Train of Lindsell Train in London, saying something like, "I disagree with you, Howard: this isn't a pendulum. Its movement is not regular, it's not predictable, the speed of the fluctuations varies, and their extent varies." And I said, "Nick, let's have lunch." So, when I next got to London, we sat down and I explained to him that there are multiple definitions of a pendulum. One definition says it's mechanical and thus predictable, and governed by the laws of physics. And another definition says that it's a swing."

In your question to me, Patrick, you used the term "mood swing," and I think understanding it as a mood swing is much more useful for our purposes. As this discussion progresses this morning, I think the main thrust is going to be that these things are not scientific and thus not consistent and repeatable.

PS: *Russell Napier, another member, has a related question also covering the mechanical angle. Mainstream economics, also known as mechanical economics, which partners the unlikely bedfellows of Neoclassical and Neo-Keynesian economics, views and treats the market as some automaton, in a way, that can be centrally engineered, planned, and steered. If instead we view the market as embodying our collective extended mind, acknowledging its warts and all, which obviously is our thesis, which two episodes in your career would be best suited to study the market mind?*

HM: Russell's question about the two episodes, contained in your last sentence, would limit me too much. So, if you don't mind, I'm going to go way beyond that, because I think my answer to this question is central to our whole discussion today.

Your first few words, when you discussed what Russell said, refer to the economy as mechanical, and I think that isn't helpful. Applying the word "mechanical" (again, as with the first question) suggests that it's governed by the rules of physics, the laws of nature, that it's a science, that it performs the same each time, that it's repeatable, studiable and extrapolable. And I think these are all wrong.

And in fact, I aggressively remind people that I'm not an economist, but also that economics is called the "dismal science." And I'm not sure it's a science at all, but if it is, it's certainly dismal, in the sense that it's not like physics, where if you do A, you always get B. Sometimes you get C or sometimes nothing at all. Richard Feynman, the great physicist, once said, "Physics would be much harder if electrons had feelings." You walk into a room, you throw the light switch, and the light goes on. It always goes on, because every time you throw the switch, the electrons flow from the switch to the light. They never forget to flow; they never decide to flow in a different direction; they never flow from the light to the switch. They never go on strike or complain that they're underpaid.

So, the point is that economics is not a science, in my opinion. You know, science is all about causality and predictability, and if A happens, then B is sure to happen. Well, that's certainly not true in economics. If A happens, B might tend to happen most of the time. That doesn't make it a science.

Now let's talk about using these concepts to refer to investing, not economics. I have a presentation that I give, called *The Human Side of Investing, or the Difference between Theory*

and Practice. It was inspired by a quote from a great philosopher. You may know him (or maybe not, since you're mostly not Americans): Yogi Berra. Yogi was a great catcher for the New York Yankees baseball team in the 1950s – a highly skilled baseball player, but more famous today for the things he said, or maybe he didn't say them. (One of the things Yogi said is, "I never said half the things I said.")

But anyway, he once said, supposedly, that "In theory there's no difference between theory and practice, but in practice there is." And to me, that's the essence of this answer to you. It's the essence of my work, and in my opinion, it should be the essence of your work and that of your colleagues at this conference.

What we learn in school, in my opinion, and what we should learn in school, is how things are supposed to work. That goes for the economy, and that goes for the markets. However, the teachers might also help by adding, ". . . but it doesn't always work that way. That's a framework; that's a thought model. It certainly doesn't govern all the time." And that's the key. Using the term "mechanical" to refer to the economy – or to the markets – is describing the way things are supposed to work. The "psychological" or "behavioral" is all about the way things do work. And there's a big difference between the two.

I've spent a lot of my career trying to reconcile the two: the things I learned as a student at the University of Chicago's Graduate School of Business 55 years ago and the things I've experienced in the markets since then.

I was introduced to the concept of the efficient market hypothesis and so forth back at Chicago. I was very fortunate: those things were developed there mostly, I think, between '62 and '64. I got there in '67, so by definition I was in one of the first classes taught these things, and it was very helpful to me. Not in the sense that the Chicago School of thought should govern your actions, but it should inform them. And, as I say, I've worked hard to reconcile this education with what I saw later.

As an undergraduate, I went to Wharton, which was entirely qualitative and pragmatic. Then I went to Chicago, which was entirely quantitative and theoretical. At Chicago, most of the professors dismissed anything that was qualitative and pragmatic or "real world." But I took a course in investing from James Lorie, who co-headed the Center for Research in Security Prices. His course was derided as "Lorie's Stories," because he would bring in actual practitioners every couple of weeks to talk about what they did, and that was considered heresy at Chicago. The final examination consisted of one question: "You've learned the theory at Chicago, how do you square that with real world considerations?" I think that's the key.

In the late '90s, I wrote a memo called [*What's It All About, Alpha?*](#) You may recall that there was a movie called *Alfie*; I think it starred Michael Caine (it was a long time ago, maybe 40-50 years ago). It had a theme song, "What's It All About, Alfie?," sung by Dionne Warwick. Wonderful song. I borrowed the title and changed it to "Alpha" for a memo talking about reconciling the Chicago theory, and in particular the efficient market hypothesis, with the real world. In there, I stated my view that the hypothesis says that because of the concerted actions of so many investors, security prices are "right," meaning investors price securities so that you can expect a fair risk-adjusted return, no more, no less. Again, that's how it's supposed to work, but certainly not how it does work.

I think I said in the conclusion of that memo that if you ignore the efficient market hypothesis, you're going to be very disappointed, because you're going to find out that very few of your active investment decisions work. But if you swallow it whole, you won't be an investor, and you'll give up on active success. So the truth, if there is one, has to lie somewhere in between, and that's what I believe.

PS: *In fairness to Russell, it was in my introduction to Russell's question [i.e., not in Russell's question itself] that I said the economy is mechanical and that's the definition of mainstream economics. Russell and I do not necessarily agree on that. But to continue on mechanical economics as a theory: In your memo [On the Couch](#), you talk about your own early exposure to the efficient-market-type classes. For the audience, EMH is based on the rational expectations hypothesis; EMH states that markets are rational because any pockets of irrationality are averaged away [i.e., the errors made by the group become smaller than those made by individuals]. In contrast, you also highlight the reality of irrationality that can be observed in markets, something that both Alan Greenspan and Robert Shiller called "irrational exuberance." Later, the GFC, or the Global Financial Crisis, painfully hit home that what seems rational for an individual can be dangerously irrational if done collectively. So my first question is, can we square this circle? For example, is irrationality just about semantics, or is it something real that not only exists, but because of the collective dynamic, can actually threaten the economic system and may thus not necessarily be averaged away?*

HM: To me, Patrick, the answer lies in my view of the efficient market hypothesis. Again, the efficient market hypothesis says that due to the concerted actions of so many investors, who are intelligent and numerate and computerized and informed and highly motivated and rational and objective and willing to substitute A for B, prices for securities are right, such that they presage a fair risk-adjusted return. I believe that's the definition.

But you get into a problem, because when I listed off the qualities that are necessary for a market to be efficient, I snuck in there the economist's notion of the perfect market and its requirement that the participants be rational and objective. And in investing, they're not. That's really the point.

"Economic man" is supposed to make all these decisions in a way that optimizes wealth. But she often doesn't, because she's not always objective and rational. She has moods. And those moods interfere with this arriving at the right price. So my definition of the efficient market hypothesis is that because of the concerted efforts of all the participants, the price at a given point in time is as close to right as those people can get. And because it's as close to right as most of them can get, it's very hard to outperform the market by finding errors – what theory calls "inefficiencies" and I just think of as "mistakes."

Sometimes prices are too high. Sometimes prices are too low. But because the price reflects the collective wisdom of all investors on that subject, very few of the individuals can identify those mistakes and profit from them. And that's why active investing doesn't consistently work, in my opinion. I think my version of the efficient market hypothesis makes it roughly just as hard for active managers to beat the market as does the strong form of the hypothesis, that everything's always priced right. But I think mine is more reflective of reality. I wrote in one of my memos – maybe it was *What's It All About, Alpha?* – about a stock that was \$400 in 2000 and \$2 in 2001. Now it's possible – but to me it's unlikely – that both of those observations were "right." Rather, I think they merely reflected the consensus of opinion at the time.

This business – I shouldn't say "this business"; that sounds derogatory – the idea that inefficiencies will be arbitrated away by the operations of the market ignores one of the key elements that I think describes reality, and that is mass hysteria. And I think the markets – economies too, but more importantly the markets – are subject to mass hysteria.

I think it was in *On the Couch* that I said, "in the real world, things fluctuate between pretty good and not so hot. But in the markets, they go from flawless to hopeless." Just think about that one sentence. If it's true – and I believe it's true – that shows you the error, because nothing is flawless and nothing is hopeless. But markets, I believe, treat things as flawless and hopeless, and there's the error.

The book I mentioned, *Mastering the Market Cycle* (I'm going to keep repeating the title in the hope that everybody will buy a copy) . . . You know, I'm a devotee of cycles. I'm a student of cycles. I've lived through a half a dozen important cycles in my career. I've thought about them. I think they dominate what I do. And I got about two-thirds of the way through writing that book and something dawned on me, a question: Why do we have cycles?

The S&P 500 – I mentioned Jim Lorie – the Center for Research in Security Prices told us almost 60 years ago, that from 1928 to '62, the S&P 500 had returned an average of 9.2% a year. Things have been better since then, and I think if you go back and look at the whole last 90 years, it's 10½% a year, the return on the S&P 500.

Here's a question: Why doesn't it just return 10½% every year? Why sometimes up 20% and sometimes down 20%, and so forth? In fact – and I included this factoid in one of my memos – it's almost never up between 8% and 12%. So if the average return is 10½%, why isn't the return clustered around 10½%? Why is it clustered outside the central range? I think the answer is mass hysteria.

And by the way, the same is true of the economy and mainstream economics, which of course you described as mechanical, and I think that many people would describe as mechanical. But, certainly, economics is driven by decisions made by people, who are not always rational and objective. Maybe in theory they're closer than investors to being rational and objective, but still they're not always.

But anyway, my explanation for the occurrence of cycles is "excesses and corrections." You have a secular trend or a "normal" statistic. Let's say it's the secular trend of the S&P 500. Sometimes, people get too excited. They buy the stocks too enthusiastically. The prices rise. They rise at more than a 10½% annual rate until they get to a price that is unsustainable. And then everybody says, "No, I think they're too high." So then they correct back toward the trendline. But, of course, given the nature of psychology, they correct through the trendline to an excess on the downside. And then people say, "No, that's too low," so then they bring it back toward the trendline and through it to an excess on the high side.

So excesses and corrections: that's what cycles are about, in my opinion. Where do the excesses come from? Psychology. People get too optimistic, then they get too pessimistic. They get too greedy, then they get too fearful. They become too credulous, then they become too skeptical, and so forth. Oh, and the big one: they become too risk-tolerant, and then they become too risk-averse.

PS: If I can just follow up on that – particularly for our cognitively inclined audience – implied in this you suggest that there might be mental causality, and my next questions are basically also to motivate future research as part of economics revision. But during your September [podcast](#), in which you revisit the On the Couch memo, you talk about causality and how complex it can be. And we agree and highlight this in our work.

For example, when Alan Greenspan, in that famous '96 “irrational exuberance” speech, mentions the complexity of the interactions of asset markets and the economy, and I’m quoting him now: “It chiefly concerns, at least in our view, this dualism of the psychological of the former and the physical of the latter.” Now, saying this, mental causality is highly controversial and complex in cognitive science, but cognitive science is the area that really studies this. So, you also specifically refer to Soros’s reflexivity in that context, and as you already indicated just now, but also in your memo, you equate prices almost to psychology. And finally, we’ve all experienced this dangerous – to the point of existential – tail-wagging-the-dog dynamic surrounding Lehman’s collapse. So my first question is, if we agree that we will not gain much by identifying yet another behavioral bias, nor by running yet another regression, what would you like to see investigated by cognitive scientists that could potentially lead to more important insights, especially regarding our understanding of the interaction between these two domains of the real and financial economies?

HM: Well, the people at this symposium know much more than I do about how to get to the bottom of these things. But clearly there’s so much grist for this mill. Now, exactly how you quantify mood, and so-called animal spirits and irrational exuberance, is beyond me. I always say, Patrick, and I think I said it in *Mastering the Market Cycle*, that if I could know just one thing about every security I was thinking about buying, it would be how much optimism is in the price.

When you watch TV and you hear the newsreaders talking about what happened in the stock market today, you get the impression that prices are the result of fundamentals and changes in prices are the result of changes in fundamentals. And that is vastly inadequate. (By the way, they always say, “The market went up today because of X” or “The market went down today because of Y.” I always say, “Where do they go to find that out, because I haven’t found it yet?” I haven’t found where you go to get an explanation of the market’s behavior, even after the fact.) But it’s not true that it’s all about fundamentals. The price of an asset is based on fundamentals and how people view those fundamentals. And a change in an asset price is based on the change in fundamentals and the change in how people view those fundamentals. So, facts and attitudes. Any research that could capture changes in attitudes, I think is important.

Now, what about quantifying these animal spirits? In one of the more jocular portions of my first book, *The Most Important Thing*, I include something I called “the poor man’s guide to market assessment.” I have a list of things in one column, and I have a list of things in the other column, and whichever list is more descriptive of current conditions tells you whether it’s optimism or pessimism that’s governing the market. There are things like, do deals get sold out or do they languish? Are hedge fund managers being welcomed on TV or not? Who does the crowd form around at cocktail parties? What is the media saying: “We’re going to the moon” or “We’re cratering forever”? I don’t know how to quantify these things. But these are among the very important things that I listen to in order to figure out where we stand in the cycle. And I believe where we are in the cycle plays a very strong role in figuring out where we’ll go next. (In fact, take the title of my second book, *Mastering the Market Cycle*. When I was thinking

about writing it, it was called *Listening to the Cycle*. “Listening” in the sense of taking our signals from where we are in the cycle. “Listening” also in the sense of obeying. The publisher thought we’d sell more books if the title implied the book would help you master the market cycle.) But I, as a practical investor, try to figure out what’s going on around me.

Now let’s go back. I didn’t do what I should have, because I didn’t answer Russell Napier’s real question: can I name two episodes that showed this kind of thing in action? I was glad to have the questions in advance, because it allowed me to think about the two episodes I want to propose.

In the spring of 2007, I wrote a memo called [*The Race to the Bottom*](#). This was when the subprime mortgage mania was at its apex, I think, and when the logs had been stacked in the fireplace for the conflagration that became the Global Financial Crisis. It happens that I was driving around England in the fall of ’06 – maybe November or December ’06 – and I was reading the *FT* (I mean I wasn’t driving and reading; I was being driven so I could read), and there was an article in the *FT* that said that, historically, the English banks had been willing to lend people three-and-a-half times their salary in a mortgage. But now, XYZ Bank announced that it was willing to lend four times your salary, and then ABC Bank said, “No, we’ll lend five.” And that bidding contest – to make loans by lowering credit standards – seemed to me to be a race to the bottom. And I wrote that markets are an auction place where the opportunity to make a loan, or the opportunity to buy a stock or a bond, goes to the person who’s willing to pay the most for it. That is to say, get the least for his money, just like in an auction of a painting. And so, in this case, the bank that was willing to have the lowest credit standards and the weakest loans was likely to win the auction and make the loans: race to the bottom. And I said this is what happens when there’s too much money in the hands of providers of capital and they’re too eager to put it to work. Mood! And, of course, we all know the Global Financial Crisis ensued.

Now fast forward from February ’07 to October ’08: Lehman Brothers goes bankrupt on September 15, 2008, and now, rather than being carefree, the pendulum has swung, and people are terrified. Rather than seeing risk as their friend, as in, “The more risk you take, the more money you make, because riskier assets have higher returns,” now people say “Risk bearing is just another way to lose money. Get me out at any price.”

So the pendulum swung, and of course people’s optimism collapsed, the S&P 500 collapsed, and the prices of debt collapsed. So I wrote a memo right around October the 10th of ’08 – maybe that day was the all-time low for credit, I don’t know exactly – that was called [*The Limits to Negativism*](#), based on an experience I had. I needed to raise some money to delever a levered fund that we had that was in danger of melting down due to margin calls, and I went out to my clients. I got more money. We reduced the fund’s debt from four times its equity to two times. Now we’re again approaching the point where we can get a margin call. Now I need to delever it from two times to one time. I met with a client who said, “No, I don’t want to do it anymore.” And I said, “You gotta do it. These are senior loans, and the default rate on senior loans has been infinitesimal over time. There’s potential for a levered return of 26% a year from what I consider incredibly safe instruments.”

This client – excuse me if I belabor this, but I think it’s interesting – this client said to me, “What if there are defaults?” And I said, “Well, our historical default rate on high yield bonds – which are junior to these instruments – is 1% a year. So if you start with 26% and you take off

1% for defaults, you still get 25%.” So she said, “What if it’s worse than that?” I said, “The high yield bond universe default rate has been 4% a year, so you’re still getting 22% net.” She says, “What if it’s worse than that?” And I said, “The worst five years in our default experience is 7½%, and if that happens, you’re still getting 19%.” She says, “What if it’s worse than that?”, and I said, “The worst year in history is 13%. If that recurs every year for the next eight years, you’ll still make 13% a year.” She says, “What if it’s worse than that?” And I said, “Do you have any equities?” She said, “Yes, we have a lot of equities.” I said, “If we get a default rate on high yield bonds of more than 13% a year every year into the future, what happens to your equities in that environment?”

I describe myself as having run back to my office after that meeting to write that memo, *The Limits to Negativism*. What I wrote there was that it’s very important when you’re an investor to be a skeptic and not believe everything you hear. And most people think being a skeptic consists of dealing with excessive optimism by saying, “That’s too good to be true.” But when it’s pessimism that’s excessive, being a skeptic means saying, “That’s too bad to be true.” That particular investor couldn’t imagine any scenario that couldn’t be exceeded on the downside. So, in other words, for that person, there was no limit to negativism.

And when I conclude that the other people in the market, the people setting the market prices, are excessively negative and excessively risk averse, then I – an inherently conservative person – and my partner, Bruce Karsh, who runs our distressed debt funds – also an inherently conservative person – we go crazy spending money when we conclude there’s excessive pessimism, fear, and risk aversion incorporated in asset prices [meaning they’re lower than they should be]. So it’s not just the mechanical aspects that determine market prices – it’s psychology. It’s mass hysteria, which comes in waves from time to time, that leads to market cycles that prove excessive.

PS: Before I go to my next question, I’d like to come back to your point where you say it’s hard to quantify mood. But perhaps that’s exactly the problem: that we’re trying to capture it with analytical tools like Excel and MATLAB. Or it is when, for example, you talk about, we need to measure the temperature of the market, and when we’re perceptive, we can gauge it. And it seems to me almost like when you’re trying to assess a mood in a restaurant, it’s a qualitative aspect. And some people perhaps have this innate ability, whereas others would perhaps be helped with different methodologies and different tools, and we can try to grasp mood better in that way, because, nowadays, people talk about market sentiment and try to capture it by looking at the VIX or put/call ratios or things like that, which I think you would disqualify as market mood. That’s not market mood.

HM: Those things are indicators or symptomatic, but they don’t all move in the same direction at the same time. Sometimes A and B will go up, and C won’t. Sometimes A and C will go up, but B won’t. So, clearly, they’re not reliable indicators, and they also can’t be dealt with in a mechanical sense. But I wrote in one of my memos – I think it was [Risk Revisited Again](#) in 2015 – I said superior investors have a better sense for the shape of the probability distribution that will govern future stock price movements, and thus a better sense for whether the expected return justifies taking on the potential negative events that lurk in the left-hand tail. I think that’s it, and there’s nothing in there about measuring, Patrick, or anything mechanical.

You know, I was locked up with my son for several months during the pandemic. He and his family moved in with us, so we had a lot of time for talking. He’s an optimist. (He would say

he's not an optimist – that he's a realist – but of course all optimists think they're realists, and all pessimists think they're realists.) Anyway, he has an optimistic bent. He's a tech investor, a venture capitalist; he runs a VC fund; he does a fabulous job at it, and we talked about these things at great length. He made a point, which I incorporated in a memo called [*Something of Value*](#) in January of '21 about our conversations – and that's the memo that has gotten the most positive reaction of all of them over 30-plus years. He made the point that, as he puts it, because information and understanding are so widespread, so ubiquitous, “readily available quantitative information with regard to the present” cannot be depended on to produce superior returns.

This is the epitome of the efficient market hypothesis. If everybody has all the same “readily available quantitative information with regard to the present,” then being a superior investor has to be a matter of going beyond that. You have to have something else. And if he's right in that description, then what are the things that can be the source of superior investing? It seems to me there are two:

- Number one: A better comprehension, if that's the right word, of the future. Some people see the future better than others, and that could do the trick, because, remember, what he says doesn't suffice is readily available quantitative information about the present. By definition, there's no information about the future, but maybe some people can see the future better than others.
- Or the other thing that could be a source of superior results is a superior ability to process qualitative information. Remember, what he described as not helpful is readily available quantitative information about the present. What about qualitative information? Qualitative information includes mood, and we've been talking about the market mood. And maybe some people have a better feeling than others for the collective psyche and for whether it's too depressed and therefore presenting great opportunities to buy or too enthusiastic and thus offering great opportunities to sell or short. [In addition to mood, qualitative information also includes things like the quality of management, the effectiveness of the company's product development capability, and the strength of its accounting.]

The point is that a superior investor has to do at least one of those two things better, and maybe both. I think that that's where the superiority comes in.

And, by the way, to take it one step further, we can ask, “How many people have a superior view of the future? And how many people have a superior understanding of the market mood [and other qualitative factors]?” And if the answer to both is “not so many,” then that explains why active investing has been a flop for most people who've tried it.

PS: My next question goes in a somewhat different direction. Investing offers many dilemmas and conundrums. And specifically, to assume that things will remain roughly the same, also known as “history rhymes,” may be just as dangerous as expecting change, also known as “it's different this time.” Which side of the debate are you generally on and why?

HM: There's a quote widely attributed to Mark Twain: “History does not repeat, but it does rhyme.” I'm a believer in that. When Twain says history doesn't repeat, what he's saying is

that the causes of events vary, the consequences of events vary, the form they take varies. But there are things that do recur. For example:

- Number one: Generally speaking in the markets, when things have been going well for a few years, people become less risk-averse. When they become less risk-averse, they do riskier things. When the economy eventually turns down, those things produce outsized losses.
- Number two: When people are feeling good and things have been going well for a while, people use more leverage. And, eventually, they reach a level of leverage such that they can't survive in tough times, and they melt down when tough times arrive.
- Number three: Because borrowing for the short term is cheaper than borrowing long, people tend to borrow short for long-term projects in order to maximize the delta. But if a bad day comes when you have to refinance your short-term debts because they're due and the market is closed, you can't, and you're out of business.

These are themes that we see recur over time. Not exactly the same every time, and with different reasons from time to time. But I do think that themes – mostly relating to psychology – tend to rhyme, you know. The particulars of market mechanics, the use of different forms of fundraising, and different forms of securities – these change all the time: ETFs, algorithmic funds, index funds, senior loans, and high yield bonds. These things are innovative; they're the reflection of people's minds as applied to financial problems. But the tendencies of the human mind itself tend to rhyme over the years.

By the way, the first time I ever came across the saying you mentioned – “It's different this time” – was October the 11th of 1987. There was an article in *The New York Times* entitled “Why This Market Cycle Isn't Different.” It talked about the fact that people often say it's different this time and that this saying is generally employed to explain why historical norms don't apply anymore: norms of valuation and the rhymes that I was just talking about. Anise Wallace wrote that article – it made a big impression on me – and she said, “You know what? This time it's no different; these things will eventually lead to the same outcomes as they always have.” [The assertion that things were different was being used at the time to justify the very high stock market valuations. As it happens, the article ran just eight days before “Black Monday,” on which the Dow Jones Industrial Average declined by 22.6% in a single day.]

Wallace mentioned that Sir John Templeton said, “About 20% of the time, things actually do change.” I wrote another memo within the last two years in which I said that, given the ubiquity of technology and the high rate of innovation, I think things actually do change more than 20% of the time. So you shouldn't bet your life on the fact that the world doesn't change. But you also shouldn't bet your life on your ability to predict the change, and especially the timing.

PS: It was John Templeton who also said, “The most dangerous words in investment are ‘it's different this time.’”

HM: Exactly, so I think you have to balance the two. Things like the psychological or behavioral themes I've mentioned – and by the way, this goes for the various biases, including confirmation bias – I think these things do repeat from year to year, decade to decade, cycle to

cycle, however you want to define it. But there's also change, and a lot of that takes place in the mechanical world: changes in information processing, changes in technological products, and so forth.

PS: I'd like to talk more about the memo [Investing Without People](#). You basically express your worry about mechanical investing, specifically passive investing. I'll quote as follows: "When everyone decides to refrain from performing the functions of analysis, price discovery and asset allocation, the appropriateness of market prices can go out the window as a result of passive investing, just as it does from a mindless boom or bust." Do you think mechanical investing could have a negative impact on informational efficiency because it only uses market internals like market cap, bid/ask, momentum, and, in a way, therefore distorts or ignores the transmission of information coming from the real economy? And, as a consequence, if we look at a chain of discovery through the economic system – starting with a scientist having an insight, and then an inventor having an invention, and an entrepreneur making an innovation, eventually ending up in financial markets valuing this stuff – when things become more and more mechanical through the growth of these strategies – which include high frequency trading, trend-following, smart beta, which you mentioned, and of course passive investing – we run the risk that the separation between Mr. Market and the real economy just increases ... that, in other words, this chain becomes more vulnerable and can break?

HM: You know, Patrick, I think the flaw in passive investing lies in the fact that you have to view passive investing – things like indexation, especially – as kind of a hitchhiker, a free-rider on the market. In other words, there are 1,000 people out here doing active investing and distilling all the information and thinking about the future of the company and thinking about the fairness of the price, and the result is a market price. And, as I said before, that price is the best everybody collectively can do in trying to value the company and its future. And then there are ten people over there who run index funds, and they just buy at the market prices because they think those prices are probably fair, or the best you can do, so why go to all the trouble and expense of doing fundamental analysis? [The managers of passive funds feel no need to independently think about company fundamentals or the fairness of price. They take the active investors' word for it.] So, that's why I say, "free-rider." The ten free-ride on the efforts of the 1,000.

But what happens if the number of people doing fundamental analysis – active investing – declines from 1,000 to 500 to 100 to 50 to 10? Now you have 1,000 people free-riding on the efforts of the ten. The potential for divergence between price and fair price increases, and free-riding is not as easy to do or as risk-free. I think the irony, as I said in that memo, *Investing Without People*, is that active investing is no good; passive investing works better, but only if people keep doing active investing.

You mentioned conundrums. This is a conundrum: the less people invest actively, the greater scope there is for price to diverge from value. In theory, it becomes easier to find bargains and overpriced securities, and the return from active effort rises. So that's the irony.

And, the other thing is, we have to bear in mind that, let's say everybody at this conference stipulated that over the next ten years, every dollar that went into the stock market would go into the S&P 500, perhaps through index funds or ETFs. Clearly, the prices of the S&P 500 stocks would rise, maybe more than they should, and everything else would languish. Given the fundamental realities, eventually the things outside the index would be so demonstrably cheap

relative to the things inside the index that they have to begin to do better, at which point active investing outperforms and maybe a few people at the margin give up on passive. So it's kind of reflexive. I take reflexivity to mean that the actions of the participants change the formula for success, and that's what we could be talking about here.

PS: But if we come back to the chain of discovery, if this growing mechanization has an impact on the transmission and allocation of capital at the core of where people innovate, then that clearly is detrimental for society. To put it controversially, but acknowledging this risk, should passive investing be charged for its free-riding and subsidize the extra costs of active investing?

HM: The only way to do that, of course, would be to keep the prices of assets secret and charge people for admission to that room, but I don't think that's ever going to happen. In the memo *Investing Without People*, there are three sections. The first is passive and index, which is here now in a big way. The second is algorithmic and systematic, which is here in a small way. And the third is AI and machine learning, which is really – for investing – not here yet. We know what's happened with passive investing, because it has outperformed active [and now is employed to manage a substantial portion of equity investments]. There are systematic and algorithmic funds like Renaissance that have done a fabulous job and produced very, very high returns, based primarily on finding exceptions to historical patterns, I think. But then what happens when we get into artificial intelligence and machine learning? The questions I posed in the memo included “Can a computer read five business plans and figure out which of them will be the next Amazon?” and “Can a computer sit down with five CEOs and figure out which will be the next Steve Jobs?” Things like that.

I believe not. I believe computers can't. First of all, I don't think the essence of the business plans or the CEOs can completely be converted into data and input into the computers. And I'm not an expert, but I wouldn't think computers can make those qualitative subjective judgments better than the best people. Now clearly, not every person can do those things either. Most people can't sit down with business plans and find Amazon, for example. A few can. They invested in it. Maybe it was Kleiner Perkins, maybe it was Sequoia, or maybe it was Benchmark. So not all the people can do it, but a few have been able to – we can argue about whether that was luck or skill. But I don't think computers will be able to do it, either. To me, the key conclusion of that memo was that computers can outperform most people, but not the best people. If so, there will still be room in active investing for the best. As my mother used to say, it's the exception that proves the rule.

PS: Howard, once again, thank you very much for sharing your insights with us, and we hope to welcome you in person one day in Panmure House. There are many questions on my list that we haven't touched on. I'd like to ask them perhaps one day, another time, but thank you.

HM: Very good Patrick. Thank you for your good questions and for conducting this discussion, and I hope it's what you wanted for yourself and your colleagues.

June 23, 2022