UCD STUDENT
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THIS MONTH IN MACRO

IN THIS ISSUE

FOREWORD

Dear Readers,

It is the intention of this publication to provide a platform for members of the UCD SMF to showcase some of their research and analysis, as well as providing a learning opportunity for our broader readership. We welcome submissions from all SMF members on any topics that are in some way related to macroeconomics and the work of the SMF. In order to increase the quality and scope of the publication, we encourage our readers to give us feedback, ask us questions, submit your own articles, and criticize our work. In summary, we are a publication that hopes to be as open as possible to your direction and recommendations as we go forward.

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Interview with the German Ambassador to Ireland, Her Excellency Mrs Deike Potzel

James Wyatt, Senior Macro Analyst

"Being a member of the EU brings a closeness of relations that otherwise would not exist..."

Abbreviations: **JW** *for James Wyatt and* **HEDP** *for the German Ambassador.*

JW: The EU was initially created in part to prevent the major regional powers from waging war in Europe. While it has developed into other areas since then, do you think the inclusion of smaller, more neutral countries like Ireland in the European Commission, Council, etc. framework strengthens this EU function?

HEDP: Well you see, from the outset the EU had been a major peace project, and we have been striving on our side to protect and strengthen it. And let me just also remind you that the Nobel Peace Prize Committee recognised this important function and role in 2012 by awarding the EU with the Nobel Peace Prize. It is, we are convinced, in the interests of course of all EU member states. We share important values, and we want to secure a peaceful and prosperous future for all of our citizens. This peace project has of course gained even more strength by, in the course of time, new member states. The EU, which actually today consists of many more "small" as they say, countries than big member states, is a platform for structured cooperation. We see how different our relations with the UK are and will be structured now after Brexit. Germany, as well as Ireland as I understand, are actually looking at new structures for our cooperation with the UK, because in the last 40 years we regularly met in Brussels, we had direct contacts on a daily basis, but that has fundamentally changed since Brexit.

Being a member of the EU brings a closeness of relations that otherwise would not exist. And that enhances, I feel understanding, cooperation, that we work towards a common goal, we find compromises, very importantly. Let me also underline the fact which sometimes I think might be forgotten, every member state does have a voice. Germany has always been very clear about the importance of relations to all member states, with larger or smaller populations or bigger or smaller landmasses and so that is extremely important to us.

When preparing for this interview I once again came across a quote by one of the founding fathers of the EU, Paul-Henri Spaak. He once said, "There are only two types of states in Europe: small states, and small states that have not yet realized they are small" (laughs). A fabulous quote! Especially in today's world. We have said time and again that in today's globalized and interconnected world, no country is big enough to tackle these enormous challenges by itself, and that is so very true.

And if you allow me, I would like to give you just one example of Ireland's impact which is really of great significance to Germany.

Ireland's support was crucial for German reunification. Their support at the EU special summit in Dublin in 1990, here in Dublin castle, led to the summit actually welcoming German reunification. Our chancellor at the time, Helmut Kohl, said "we will never forget what you have done for us.". And that I think is an excellent example for the important role Ireland had, and has in the EU, and we as Germans are really grateful for that support in 1990 in the example that I just cited.

JW: A very good example, yes.

On to my next question then. Following this pandemic and restrictions, I'm sure many students will have a renewed appreciation for and will treasure the Schengen agreement. From your experience, why would you say it is important for students to take advantage of opportunities to live work and study in for example Germany or learn languages?

HEDP: Well, I am deeply convinced myself that the EU offers tremendous opportunities for young people. The travelling, studying, working abroad, it really opens new horizons ad provides opportunities to learn and make you understand other cultures and other people. It really builds bridges. And of course, it helps future cooperation in all kinds of fields, not least in universities with research and science. I think an excellent example again is the fight against the pandemic, which has shown very clearly the cooperation of researchers and businesses from different countries and backgrounds, it to me really was instrumental in developing vaccines quickly for instance.

By exposing ourselves to other cultures, we get to know each other far better. By more people getting engaged in exchanges, and overcoming stereotypes, which I find is very important, also if you want to call it "bonding" with other cultures. And as you were mentioning languages, to me language learning deepens that process. A language opens up a whole new world to you I feel. It makes you understand other cultures better it also opens up opportunities, for instance on the job market.

I know for example that people with German language knowledge here in Ireland are very much sought after in the Irish job market. There are, believe it or not, thousands of job opportunities here with German as a forging language, which currently cannot be filled by the Irish market alone.

JW: Yeah, that's absolutely true.

HEDP: And if I may, I also would want to share a personal experience with you, because learning languages has helped be a great deal in my personal life and in my career too.

I was born in east Germany, and listening to the BBC World Tour for instance, in East Germany, in English, provided me with a different worldview, and very different news! Shortly after the fall of the Wall, it also allowed me to work in the UK, a great experience for a 21-year-old at the time, which also helped me to become more independent.

Once I had joined the foreign service, and again I think that my language skills were helping me there as well, we were posted to Iran, and learning a bit of Farsi when posted there opened up ways to understand the country better, to get to know Iranians much much more closely, and to really indulge in daily life there. I can also from personal experience highly recommend and encourage everyone to get around, and learn a language, it is no doubt personally very enriching.

JW: Yes, I can attest to that myself, I one hundred percent agree with you there.

HEDP: Fantastic! I really wish people would go on that challenging path, it's not always easy, but it's definitely a great experience.

JW: Very rewarding, yeah. Onto my third question then, while quite different, on the surface there are many similarities between the stated aims/goals of the EU, and the defunct USSR. For example: reducing wealth disparity between regions, trade cohesion and business development across the bloc, promoting fairness and equality in the union, etc.

In your view, what are the key foundational differences between the two that allow the EU to hold together and make real progress on its goals - without falling prey to the challenges of managing such a large group of very different economies and countries?

HEDP: Hmm, well let me say at the outset, that I would very much hesitate to in any way compare the former Soviet Union with the European Union, because they are such completely different entities. From a historical outset, the organizational structure, policy and politics, the political system is so different, there's the democratic values that we have in the EU, you know it's a very different method, the status of the state, identity issues, et cetera, so I find it very hard to compare the two. The EU is a union of sovereign states, who decided for themselves to join this, as you said at the outset, peace project. And who underwent the process of preparing to join, to implement the policies, sharing values, and as a European family working towards a common aim. So I figure that it is clear in most people in the EU, that as an EU member state we are stronger together in tackling major challenges. Yes, we are certainly not always on the same page – clearly! - but we have the structures that allow us to debate, and also to challenge each other constructively, and then to find compromises, to achieve our goals. All member states of the EU are democracies that have pledged to protect freedom and human rights, and who want to secure prosperity by - very importantly - peaceful cooperation. It is a union of stability and shared values, and that is an important achievement.

I also feel that solidarity is a key feature in the EU, so If you think of cohesion funds, and the Common Agricultural Policy. Economic support helps all of us and not only the recipient states. The EU has the second biggest internal market worldwide and provides businesses with huge opportunities. Not to forget the free movement of workers that has been contributing to higher incomes, reduction in unemployment, and also countering the lack of skilled workers in some EU countries.

And there is also the wonderful add-on, which sometimes we take for granted: Freedom of travel. There is the single currency, which makes a lot of our lives a lot easier, European consumer protection, and not to forget to mention a huge variety of products and services that are available to us and have a big effect on our daily lives.

JW: And so, you would say, possibly that this focus on cooperation and working together will grant the EU the ability to last long into the future.

HEDP: Oh absolutely, and because of the structures we have established and because of the incorporation that we have, there's the possibility find compromise. I think that is very important, to have structures to talk to each other. And also, as I said, challenge each other constructively to find a compromise that works for all - and not everybody will always achieve his or her highest goal, but a compromise that works for all of us, and I think that is a huge emphasis that we have.

JW: Very interesting, thank you. I have more of a pandemic focused question here, how do you think remote working, and international virtual cooperation that we see so much today, affects things like shared research, trying to learn a language and cultural exchange and all that? Do you think it actually provides a new strength, or is it too much of a drawback to be as good as before?

HEDP: Well you know I think it is a little bit too early to answer that question properly.

JW: Good point.

HEDP: Because, I think there are many questions on remote work that still have not been answered, for employees and employers alike, for the way we work with each other and all that. And just to give you one example we should not forget that not everybody has the luxury of a study at home. I don't know about you, but I have seen far too many kitchen tables and bedrooms in online meetings over the past year. I am however, really impressed by how the pandemic has pushed forward the way we adapted to the virtual world. It's just fantastic to see that its been proven on a large scale that remote work works, and that we can cooperate, and that we are efficient, and that it actually can work really well. Its something I myself have been able to practice since the early 2000's. But to me personally though, I would very much still prefer the mx, and to me that makes a difference.

I really am very much in favour of the social aspect of our work environment too, we are social beings, and I for one would not ant to lose the possibility to see my colleagues in person, to talk to them, work with them, I think that there's a lot of energy in the room, a lot of creativity that comes from that. I personally, at the moment, really do miss that energy. Particularly as an Ambassador, part of my job description is to meet people and to engage, and to be with people, and I miss that very much, there is a different energy there.So, as I say, it's really in the mix. To provide more flexibility in the workplace, which makes it easier for people to balance work and private life, I think that is very important, it makes it easier for families with more children to find the right balance, caring for the children and looking after the career.

And we have seen during the pandemic, it is particularly important for women and young mothers. It's good that we now have the tools, and I think also if we think of the impact on climate change that might arise from not so many people travelling around the globe for a two-hour conference or something, hat definitely helps.

It also helps to make the world smaller, in the sense that you can now bring people from the states, or Latin America or Asia into European debate much easier, without having them fly around the globe and all. I think that makes a lot of things easier, but I would still be happy to meet people physically in my workspace I really have to say. So it's in the mix.

JW: You're optimistic that in the end it will make an even better work environment, using both physical and remote together?

HEDP: I think yes, as long as you get the balance right, I believe it can really make a positive difference.

JW: My last question here is, since the macroeconomy has been getting even more connected today regarding trade of goods and even services, do you think economic cooperation between countries is now becoming not just important but almost mandatory to secure prosperity into the future.

HEDP: I do. And I actually believe it to be an obvious fact, at least to me. I think that especially the EU and its prosperity is one excellent example to prove that. We are a prosperous and secure union, we are one of the regions enjoying some of the highest per capita income rates in the world, right? Let's not overlook the fact that free trade and cooperation have also had a very concrete impact on our daily lives as consumers, in terms of prices, and product variety. EU countries export a huge amount of their products to other EU countries. And that also is helped by the fact that we profit from the same rules and regulations. Avoiding a diverse set of regulations that would make trade and cooperation much more difficult. And that is why we, Germany, is not in favour of protectionism at all, and why Germany - just as Ireland is by the way - are pro "Open Market". I think that if you look at it more closely, you will find ever so many countries worldwide which are proof of the fact that economic cooperation make and makes them more prosperous, and more secure, not only in the short run, but also in the long run.

JW: Would you be also to say perhaps, what you feel the dangers are of not taking this approach?

HEDP: As I say, you have so many positive examples of how countries have prospered because of this interconnectivity, because of economic cooperation. And how countries in the past lost out, because they didn't open up, and because they implemented protectionist rules. And as we have those facts on the table, that is why we are convinced, especially given todays world, which is so very interconnected, that economic cooperation is a founding pillar to securing prosperity for our country.

JW: Absolutely, as you said you need only look around at the world to see it. Thank you very much for interviewing with me today.

HEDP: You are more than welcome!

Renewables are already the cheapest way to generate electricity, here's why!

Fiachra Barry, Equity Analyst

Note: this article was first published on Quantamental, the UCD I&E data science & financial research blog. For more articles like this visit medium.com/quantamentalresearch

Renewable energy technologies clearly have a low impact on the environment as no greenhouse gases are emitted during the electricity production process but, they have only recently become cost-competitive with legacy generation methods like nuclear, coal or gas. That is, if you were to go by the numbers released in reports by Lazard, the United States Energy Information Administration (U.S. EIA), or the International Energy Agency (IEA).

Tony Seba, the co-founder of the independent think-thank RethinkX, believes that we reached cost-competitiveness much earlier than shown by these reports and that they are massively underestimating the cost of conventional forms of generation such as coal, gas, nuclear, and hydro power. According to a research report published by RethinkX titled "The Great Stranding: How Inaccurate Mainstream LCOE Estimates are Creating a Trillion-Dollar Bubble in Conventional Energy Assets" [1], mainstream analysts underestimate these costs by making one common error. It is this error that is creating the trillion-dollar bubble referred to in the report.

"When I first read this report my mind was blown. How could all these respected analysts be making the same mistake?..."

The price of generating electricity from different sources is usually measured by a metric known as levelised cost of electricity (LCOE). These figures are used by policymakers, regulators, utilities, asset owners, and investors to make decisions regarding the economics of different electricity sources. LCOE is calculated as the present value of all the costs associated with the entire lifetime of the generating project including construction, installation, operation, maintenance, fuel and decommissioning, divided by the present value of the electricity generated by the project over its entire lifetime. This allows you to calculate the entire cost of producing a unit of electricity by the selected generation method. The formula in its entirety is given below:

$$\mathrm{LCOE} = \frac{\text{sum of costs over lifetime}}{\text{sum of electrical energy produced over lifetime}} = \frac{\sum_{t=1}^{n} \frac{I_t + M_t + F_t}{(1+r)^t}}{\sum_{t=1}^{n} \frac{E_t}{(1+r)^t}}$$

I_t : investment expenditures in the year t

M_t : operations and maintenance expenditures in the year t

F_t : fuel expenditures in the year t

E_t : electrical energy generated in the year t

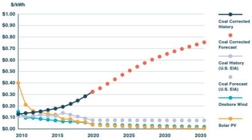
r : discount rate

n : expected lifetime of system or power station

This may seem complicated but that's ok. You only really need to understand the basics. This calculation is extremely sensitive to the E_t term that sits in the denominator of the formula. This represents the amount of energy generated per year and is calculated as the power rating of the generating unit multiplied by the amount of time multiplied by the capacity factor. Power rating is the theoretical maximum output of a generating unit, and capacity factor is the ratio between this theoretical maximum output and the unit's actual generation output over the period.

Nuclear power plants must operate at a high capacity factor (approximately 90%) as they are expensive and inefficient to power up and down. Wind farms, on the other hand, have to operate at a much lower capacity factor as wind is unreliable and wind turbines are often not spinning. As you can see the Et value is very sensitive to the capacity factor and therefore the final LCOE value is also very sensitive to the capacity factor. It is in the estimation of capacity factors that Tony Seba believes there is an egregious error being made.

RethinkX's report states that analysts are overestimating the capacity factors of coal, gas, nuclear, and hydro power and this is very much backed up by the data. Take Lazard's "Levelized Cost of Energy Analysis — Version 14.0" [2]. In this report the capacity factor assumed for coal powered generators is between 83% and 63%. Despite the historical average capacity factor for coal power plants being less than 10% in the UK in 2019 [1]. In the US, coal plant capacity factors are higher, sitting at around 40% for 2020 but still nowhere near the lowest bounds of the range assumed in the Lazard report. The higher US capacity factors are likely due to the tax breaks and subsidies provided to the coal industry by the Trump administration and will likely drop in the future as more wind and solar generation is built and the Biden administration cracks down on carbon intensive forms of electricity generation.



Source: U.S. EIA, RethinkX.[2,17]

The Lazard report not only assumes that capacity factors will start at an unrealistically high rate, but also that they will stay there for the full lifetime of the generator. With the increasing penetration of solar and wind generation and their decreasing costs, this is extremely unlikely. What is more likely is that capacity factors for conventional generating assets will drop in the next 10-15 years as they are undercut by cheaper solar and wind generation.

According to the RethinkX's report, the corrected LCOE of coal power sits at 32.4 cents per kilowatt-hour, which is over 4 times greater than the 7.6 cents reported by the U.S. EIA [1]. When I first read this report my mind was blown. How could all these respected analysts be making the same mistake? So, I decided to read these reports thoroughly to see how they were calculating LCOE and what assumptions they were making. In RethinkX's report there are 12 major sources of LCOE estimates that are shown to have committed an error in capacity factor estimates, however, the only ones I examined closer were the reports by Lazard, the IEA and the EIA.

In these reports they all make the same baseline assumption that allows them to use unrealistically high capacity factors. They assume that the power plant will operate as a base load unit. This means that the power plant will always have someone to buy every single kilowatt of electricity produced. This is clearly unrealistic as solar and wind generation will continue to offer cheaper electricity than conventional generation which will further squeeze down actual capacity factors of these generators. The reason this assumption is made is to allow LCOE comparisons across regions where average capacity factors vary immensely and this is acknowledged in methodology or assumptions segments of these reports.

In fact, Lazard's report contains a section where they compare the cost of new-build renewable energy to the marginal cost of selecting existing coal power generation. In this calculation they use a capacity factor between 35% and 65% percent which is much more in line with historical market data but it still does not consider the likely drop in capacity factor in the future [2]. In this section they found that building a new renewable generating unit is cost competitive with continuing to operate existing conventional generating units.

The existence of this trillion-dollar bubble that Tony Seba mentions hinges on whether policymakers, regulators, utilities, asset owners, and investors read the fine print and assumptions behind the LCOE calculations presented in these reports. If they don't, then perhaps there is a massive misallocation in the energy market and the value of these conventional energy assets has been artificially inflated. If one of the providers of LCOE estimates decides to use historical average capacity factors instead of theoretical maximums then we could see large downward revisions in the value of conventional energy generation assets as the value of an energy generator directly linked with its LCOE.

So, the existence of this bubble is up for debate. Two-thirds of new power capacity added globally in 2019 was solar and wind [3]. Perhaps people do read the fine print. More likely, is that when considering investment in energy generation assets, analysts calculate the specific LCOE for that project. Also, while I agree with RethinkX's condemnation of oil and gas I would not be so quick to dismiss nuclear and hydro. Nuclear power can provide a stable, reliable and emission free source of base load electricity even if the sun is not shining or the wind is not blowing. Hydro power can be an efficient provider of peaking power. Most hydro plants can power up from complete cold start to full load in 60-90 seconds [4]. Nuclear and hydro LCOE estimates also use capacity factors that are more in line with historical averages compared to coal or natural gas. Until there is a form of electricity storage that is more reliable, affordable and has a lower environmental impact, there will be a place for nuclear and hydro in generation mixes.

Whether you believe RethinkX's trillion-dollar bubble hypothesis or feel that the market is over glorifying the death of conventional energy assets, one thing is clear. There will be a massive shift in energy generation sources in the next ten to twenty years for many reasons, beyond pure economics or LCOE calculations.

References/Further Reading:

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The Disposition Effect: A Behavioural Pitfall in Financial Decision Making (*Part One*)

Dylan McCroary, Senior Macro Analyst

"It is imperative that the cognitive biases and behavioural pitfalls associated with financial decision making be examined, detailed, and avoided...."

Shefrin and Statman labelled the regularity in financial markets of investors holding on to their losing stocks too long and selling their winners too soon as the "disposition effect" (Grinblatt et al., 2005). The disposition effect can be best explained and understood through prospect theory and mental accounting working together. The primary process is that investors tend to segregate different types of investments into different accounts, and then apply Kahneman and Tversky's prospect theory to each account by ignoring possible interactions. Investors will behave differently in terms of their risk attitudes and in terms of timing of closing a mental account (or selling a stock). The differing patterns of behaviour are driven by whether a stock has generated a paper capital gain or a paper capital loss. This results in investors selling stock which have increased in value since they were first purchased. We can also simplify what's occurring and describe it by means of pride and regret. Regret is the emotional pain associated with a previous decision (investment) which turned out to be bad (lost value) and pride is the emotional joy associated with a decision (investment) which turned out well (gained value) (Nofsinger, 2018).

Terence Odeon added further proof to Shefrin and Statman's work in his 1998 study in which he examined the behaviour of individual investors and found that investors do exhibit disposition effects. The observations were obtained from analysing trading records of

10,000 accounts at a large discount brokerage house (Odeon, 1998). The results indicated that investors 'realise their profitable stocks at a much higher rate than unprofitable ones, except in December'. Odeon also found that throughout the year on average stocks that were up in value were approximately 60% more likely to be sold than a stock that was down in value (Shefrin, 2007). Such behaviour has huge financial impacts on portfolios as the winner stock sold ends up beating the market over the next year by an average 2.35% and the loser stocks which are still held by the investor continues to underperform the market by -1.06%. By selling their winners more often and making more trades investors are not maximising their wealth creation as they are paying more in capital gains tax and also more commission fees than they would if they held on to winners for longer and sold losers. On top of this their portfolio will also be earning lower returns in the meantime as they have lost their high performing stocks and are left with the underperforming losing stocks. Another clear example of the disposition effect is demonstrated by Ferris et al. who examined the trading volume of stocks after price changes (Nofsinger, 2018). In order to maximise wealth, investors should sell their stocks with price declines and realise the tax benefits as well as holding their stocks which are performing well to avoid paying taxes. This would indicate that if we were observing a market full of rational actors making rational economic decisions then the market should show a high trade volume for stocks with losses and a low trading volume for stocks with gains. Unfortunately, this is not the case and our irrationalities are demonstrated for all to see as Ferris et al.'s findings were consistent with the disposition effect showing that there is an observable higher volume of trades for stocks with gains and a lower volume of trades for stocks with losses.

Overall, the disposition effect has a huge impact on an investors wealth and in turn causes stock price distortion in the market via the biased trading patterns of the actors within them. Disposition effect allows for patterns to be taken advantage of and also for the momentum affect to be observed less inadvertently as there are even 'momentum investment strategies' which have provided many investors with positive returns over many years. It also appears that investors who can avoid the disposition effect obtain better returns. Studies by Wermers (2003) and Locke et al. (2005) document how the disposition effect distinguishes outperforming investors from underperforming investors (Shefrin, 2007). This shows the importance of being aware of the behavioural pitfalls associated with the disposition effect and some of the ways to overcome the pitfalls include; "cut your losses and let your winners run". This enables you to benefit from tax swaps and reduces commission fees while also reducing the amount of trading you are actually doing. Self-control and a clear investment strategy are key here and are important in dealing with other behavioural pitfalls with regards to financial decision making. This 'risk-policy' for the disposition effect could be useful but it will not be the only one an investor should rely upon. They should also restrain themselves from looking at their investments as often because it makes them prone to overtrading which as I will explore further in the next section dealing with overconfidence has been proven to produce worse results than those who trade less often.

Emotions and Investor Sentiment: A Behavioural Pitfall in Financial Decision Making (*Part Two*)

Dylan McCroary, Senior Macro Analyst

"It is frighteningly evident that these pitfalls can and do have extremely detrimental impacts on our wealth

A main component of traditional finance theory is that it holds the assumption that people make rational decisions to maximise their wealth in the face of risk and uncertainty (Nofsinger, 2017). However, the evidence suggests that the opposite is true and that the traditional theory cannot account for these anomalies in the market because it makes such a blind assumption which disregards the irrationalities of human behaviour. One of the most telling examples of human irrationalities is the case of emotions affecting our decision-making process and overpowering logic and reason at times. Kuhnen and Knutson provide a clear illustration of this; the subjects of their game had to continuously choose between a risky asset with known probabilities for each outcome and a risk-free asset (Kuhnen et al., 2011). Prior to their decisions being made a state of positive, neutral or negative emotions are induced as a primer for their financial decision making. They found that positive emotions led to riskier choices and more confidence in these choices and that negative emotions led to more risk-averse choices. Therefore, too much positivity or optimism can inhibit an investors ability to properly evaluate risk and also to be less prudent when estimating the investments expected performance. This also shows that optimism and miscalibration are singing off the same hymn sheet and are out of tune to the rest of

the choir causing our portfolio to underperform. We can also see emotions playing a part in overconfidence as a positive or optimistic emotional state cannot only cause investors to buy up riskier assets but also to overtrade. We can see how excessive optimism leads to overconfidence and in turn leads to high, detrimental, levels of trading.

To demonstrate our irrationalities even further and how fickle the EMH and traditional financial theories are, Hirshleifer and Shumway examined whether something as non-related to investing as the weather would affect the mood of investors enough to affect their financial decision making (Shumway et al., 2003). It has been found that the sun has a positive affect on our mood and emotions and through examining the relationship between the weather and the stock returns at 26 stock exchanges internationally from 1982 to 1997, they found that there was a correlation between sunshine and daily stock returns. Investors are more optimistic when the sun is shining and therefore are less likely to sell, this behaviour has massive impacts on the market prices of stocks.

Hirshleifer and Shumway also found that “an investor with very low transaction costs would have improved on the Sharpe Ratio of the market portfolio, though somewhat modestly, by trading on the weather”. Findings of this sort go against the two staples of the EMH, ‘the price is right’ and ‘you can’t beat the market’. How can the price be right if it was affected by whether or not the sun was shining? There is no rational explanation for why a day of sunshine near a country’s stock exchange should be relevant to the returns on a national market index. These results would suggest that avoiding such pitfalls is to become aware of our emotional dispositions and to have risk policies in place for each day of trading. Simple thought processes such as ‘The sun is shining and I am in a good mood. I may be too optimistic today, I should be more prudent with my expectations and input more conservative estimations into my stock analysis calculations, I should also wait a day or two and see if I feel the same way’. Perspective and awareness such as this could save investors and their firms large sums of money.

An interesting new study on investor and market sentiment by Steyn et al. (2020) analysed the predictability of the market movements by estimating first sentiment only and then sentiment with emotions. Their results indicate that investor sentiment and emotions derived from stock-market related Tweets are significant predictors of stock market movements. Such findings are important for portfolio planning and once again go against the EMH. The testing used by the authors of this article suggest that their models can accurately predict market movements which could enable investors to exploit this information to achieve financial gains in the future. If an investment strategy is laid down using these models and is found to have consistent results predicting market movements then this would serve yet another blow to the EMH. I would suggest to avoid such a sentimental pitfall would be to ask yourself ‘Why do I like this stock? Is it because I Have seen it being mentioned a lot on social media (availability and exposure effects) which makes me more optimistic about it? I should be more prudent and analyse this stock more rigorously in order to avoid biases in my decision-making process’. I think trying to avoid this bias is currently the safest option. It could be too early to try and exploit this market anomaly as more research and findings would be necessary and it should also be considered that if everyone knows about this trend and market movement then it should also diminish your ability to take advantage of it.

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