

USIS

Review

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UoS Investment Society

In this edition:

- Value Investing
- Regulation of Cryptocurrencies
- UK Inflation
- Migration to the Cloud
- Clear Energy Sector



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A Word from the Editor

Welcome to the first quarterly edition of the USIS Review for this financial year.

The review is one of the three pillars of the University of Sheffield Investment Society which has the potential to link the trading division, the fund, and the wider society.

This edition of the USIS Review is brought to you by a range of students from a wide variety of degree backgrounds. The financial world does not exist in isolation and geographical, political, and scientific developments frequently have a huge impact on the way that markets operate. We are proud of how the diversity of our writers allows us to fully engage with this complex interrelation of factors in order to create a review of the world of investment for students at the University of Sheffield.

In our first quarterly edition of the Review we start with the Investments & Strategy team questioning the meaning of value investing before moving on to look at the role of regulation in the cryptocurrency space. Following on from this, we cover the increasingly relevant topic of inflation, looking at whether or not the worst of it is behind us. Emily then takes us through the topic of cloud storage and the role it could play in the economy. To finish the Review off, we turn to environmental affairs where we look at the clean energy sector.

Our special thanks go to the University of Sheffield Enterprise Zone and the Sheffield University Management School for their on-going support with this publication. I very much hope you enjoy this edition of the USIS Review.

Mayya Abuzayed, Charlotte Walker Prosser
Editor-in-Chief

Editors, Contributors & Sources

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What should the meaning of value investing be?

Value investing has traditionally been based on valuing a company based on current or trailing earnings and comparing it with the current market price. But in a world full of exponential technology development and earnings growth, is this definition of value still valid?

The rest of this article will be based on the following 2 possible definitions of "value":

1. Valuation based on current/trailing and short-term earnings.
2. Valuation based on future earnings growth potential regardless of its current price to earnings multiple (although still important)

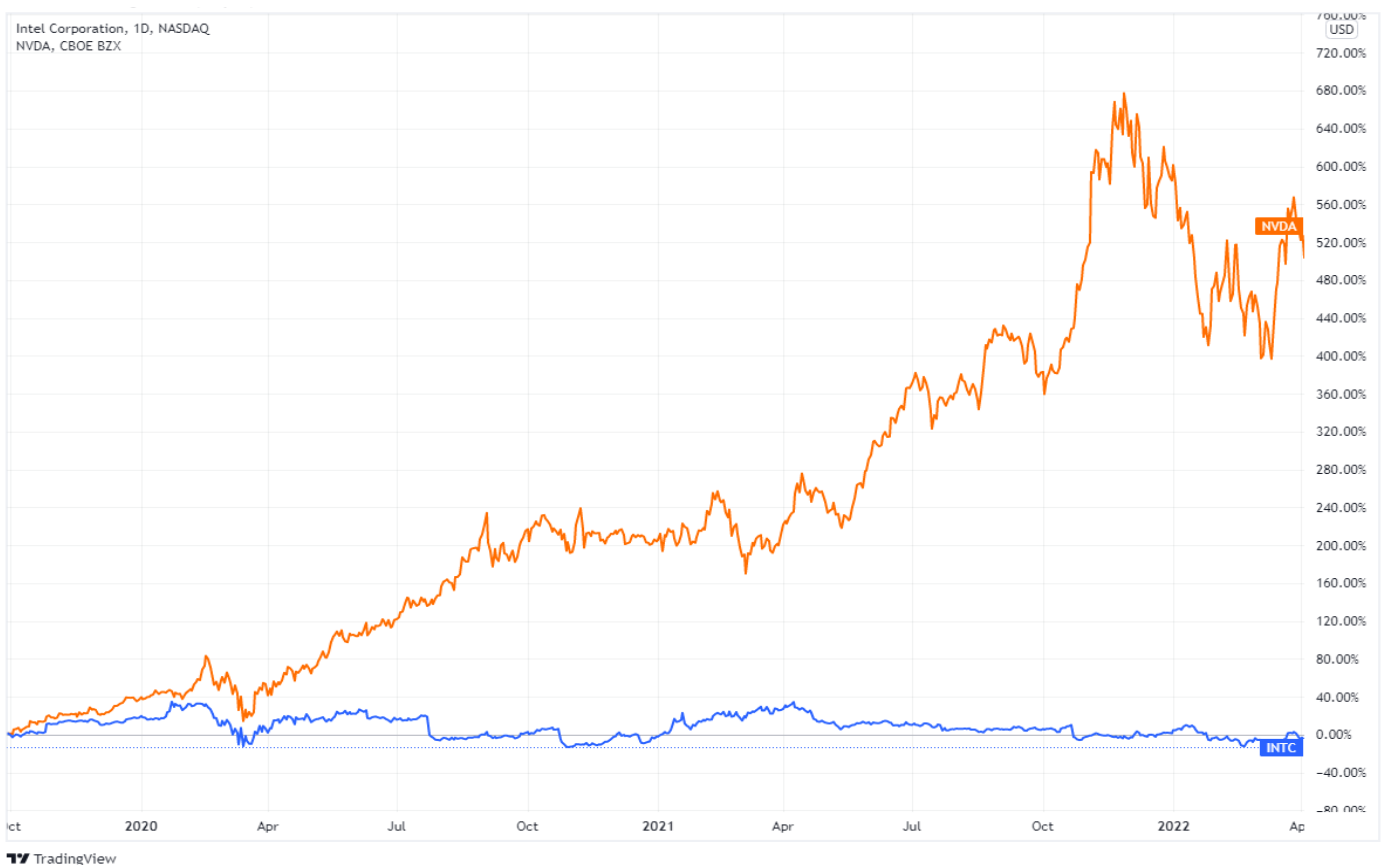
This distinction was made apparent during an interview with Amazon founder and CEO Jeff Bezos, where he said that any given quarter's earnings were baked into the company 3 years

beforehand, so why should we value Amazon on its trailing 12-month earnings if the future 3 years have been baked into the mechanism of the company? The question here is the following, if we find a company with a high PE ratio, should we just discard it to focus on other companies or should we just ask...why? Why does that particular company have a high earnings multiple? And can such companies be valuable despite the traditional definition of value investing?

An example of this is Tesla. On January 1st 2021, its PE was 1103 which then decreased to 661 by the end of Q1, 352 by the end of Q2 and currently trades at 328 times earnings and a forward PE of only 122 (23rd December 2021). How long will it take to reach a PE of 30 or 40? 1 year? 2 years? 5 years? Why not buy in advance of it being valuable based on traditional methodologies rather than waiting for it?

Owning Tesla at a PE of over 1000 would have scared the daylights out of a traditional value investor, but not owning such a company at a PE of over 1000 meant a sacrifice of a 222% gain just on the basis of one number, so surely owning such stocks would have turned out to be "valuable" in hindsight? This brings another question; do we focus too much on such ratios rather than focusing on the underlying business itself?

In a conversation on CNBC, Josh Brown of Ritholtz Wealth Management had a bet with Jenny Harrington of Gilman Hill Asset Management that Nvidia would outperform Intel over the following year. He won the bet, with Nvidia up 77% over the year and Intel only up by 7%, and he cited the reason for this being that many Wall Street firms lack imagination in looking towards the future. He went on to say that Nvidia





has all the products designed for the high-tech future, whilst Intel has fallen behind. His main point was that if ratio analysis is so good, then everyone would be rich. He said that of course valuation matters but that some imagination is required, particularly in technology, and he told Jenny Harrington "you imagined a world in which Intel mattered in technology anymore, but what you were doing actually is investing in the rear-view mirror, you weren't thinking about the future" and he asked the question if she ever asked herself "yes that's expensive, I wonder why?".

A book such as "The Intelligent Investor" by Benjamin Graham is an amazing way of learning about traditional value investment. Maybe there is a way of adjusting how we use these principles in a high-tech world of exponential growth in technology and a company's earnings.

The point here is that a balance is needed to invest logically. Taking too much of one method might not work, but surely it's worth trying both?

Gethin Williams
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Securing No Man's Land

Regulation of cryptocurrencies is a highly thorny area. Today the world's governments try to deal with it by balancing the market interest and preventing their illicit use, especially in money laundering. Although, in theory, money laundering through crypto seems like a valuable opportunity for criminals, in reality there is very low probability that such a thing can happen. Still, if the blockchains become a widespread-like internet, the theoretical scenarios might become a reality. That is why the U.K. Government must create definitive guidelines to regulate blockchain transactions. If the government were to issue a fiat currency, say CryptoPound (CGBP), and make it legally obligatory to use CGBP when purchasing another cryptocurrency, this can be seen as a solution. Additionally, each government-backed unit of CGBP would have a serial number to make it traceable, like money bills.

To put it another way, if a person living in the U.K. wants to buy Ether (ETH) (coin

of Ethereum blockchain) s/he must first buy CGBP and then purchase Ether with it. Doing so will allow the public authorities to track the origins of the crypto purchases, and if there is any suspicious activity, the government will have the opportunity to investigate it. Nevertheless, accomplishing such a task is more complicated than it sounds, although doable.

The first issue for establishing a CGBP is the legal status of cryptocurrencies. In *A.A. v Persons Unknown*, the High Court (H.C.) acknowledges that the cryptos are neither choses in actions, like stocks, nor are physical belongings, but are instead another type of property. That means the U.K. lawmakers must develop a creative solution to legalize CGBP. Furthermore, the absence of an authoritative case law or statutory precedent on crypto assets makes one wonder how the U.K. courts and the Assembly will define the boundaries of cryptocurrency trade in the legal framework. Even if the law allows the

creation of CGBP and makes it obligatory to use in crypto trade in the U.K, a second issue will arise.

The creation of CGBP can draw criticism because the crypto-trade (which is about sidestepping the centralized exchange, such as stock indexes and banks) favours a much riskier but more decentralized alternative in the market. In other words, if the U.K. government creates its own fiat currency, it will enforce the centralization in a decentralized market which may be undesirable to many. This is a misunderstanding. According to the Coinmarketcap rankings, the centralized crypto exchanges dominate the list compared to the decentralized exchanges (DEX). Briefly, in the former, the purchaser pays a fiat currency to a centralized exchange in return for cryptocurrencies. In this respect, centralized exchanges, such as Binance and Coinbase, are similar to stock exchanges. DEX's, such as PancakeSwap and Uniswap, are based on exchanging (swapping) the cryptocurrencies without



needing any fiat currency. For example, if the CryptoX is worth ten CryptoB, you can swap one CryptoX for ten CryptoB in a DEX. Even if a trader wishes to use a DEX to trade cryptos, s/he must at first buy cryptos from a centralized exchange and then transfer them to a decentralized exchange. That means even the most decentralized crypto exchanges like DEX, in their root, are dependent upon the use of fiat money today. Therefore, rendering the use of CGBP on exchanges will not cause further decentralization, but rather will facilitate the investigation of financial crimes occurring in the crypto world and thus maximize the customer welfare.

Furthermore, government intervention on crypto trades can also be a subject of opposition because investors may perceive it as an interference of their private financial rights. A similar backlash happened in the U.S, when The Bank Secrecy Act 1970 compelled banks to notify the government authorities of transactions of 10,000 USD or more. This was a measure against money laundering, especially by drug lords. Consequently, the U.S. government's legislative intervention against money laundering elaborately criminalized and took extensive measures to prevent it. The time showed that the legislative measures against money laundering became "potent weapons" to combat narco-money laundering. Still, when the Act first came to being, the U.S. Federal court in *Stark v. Connally*(1972) stated that although Bank Secrecy Act is a practical instrument for the government to fight money laundering, it creates the possibility of individual rights infringement. Since the first anti-money laundering legislation, the U.S. government continued to legislate different forms of anti-money laundering acts, the last being in 2020. Despite the so-called government intervention on personal banking since 1970, the United States continued to be one of the bastions of liberal trade.

Similarly in the UK, we can say that the government's CGBP creation will be about preventing money laundering, not controlling the transactions between private individuals, which will not disturb the honest crypto trades, just as the anti-money laundering legislation did not interfere with the non-criminal means of trade in the U.S since the 1970s. Therefore, unless they are "El Chapo", the layperson trading cryptocurrencies has nothing to worry about and it proves that the potential concern associated with U.K. government regulatory intervention to the crypto market through CGBP is void.

So far, the H.M. Government has given positive signals about crypto trade regulation. In January 2022, Chancellor of Exchequer Rishi Sunak acknowledged that cryptocurrencies provide an "exciting" opportunity of investment for 2.3 million crypto holders in the U.K. and thus, his cabinet is looking to protect crypto investors' savings while not curbing the innovation. This indicates that the government gives an impression of adopting a liberal and practical regulatory framework to be created in a near-future.

In conclusion, the creation of a CGBP, considering the U.K government's amicable approach towards cryptos combined with the elaborate legal framework, will make the crypto exchanges in the U.K. more reliable and thus will create more stability, which encourages even more people to invest in crypto exchanges.

Berk Tokmak
LLB Law

Is the worst behind us?- UK Inflation

The pay for workers in the UK has fallen in real terms for the first time in over a year, despite suggestions that employers had shrugged off concerns over the Omicron coronavirus variant to continue hiring. Average wage rates, after considering inflation, decreased drastically in November for the first time since July of 2020 amid growing concerns over the living standards crisis earlier this year, which has arisen from high inflation and surging energy bills. The Office for National Statistics said that although average total earnings grew at an annual rate of 3.5% in November, the impact from such high rates of inflation meant workers suffered real terms cut in their pay packets. Inflation reached its highest point in over a decade (5.1%) in November, essentially meaning a 1.6% cut in pay. Referring to consumer price inflation, including owner occupiers' housing costs, it states that real terms pay had decreased at an annual rate of 0.9%. The UK facing a pay squeeze and higher interest rates look likely, even after the Bank of England

increased its base interest rate to 0.5% this month. Although, the latest labour market positioning reveals potential rehabilitation for job creation, despite the fallout from Omicron and worsening drop in pay. According to figures published by HMRC, the number of employees on UK company payrolls rose by 184,000 on the month to 29.5 million, which is an increase of 409,000 on pre-pandemic levels as the jobs market continues to recover from Covid-19.

These new-found levels of high inflation have central banks under pressure, but by late 2022 we see a very different forecast, with stagnation becoming a more concerning risk than stagflation. In addition to raising interest rates, banks have also cut back bond-buying programmes in an attempt to control the persistent inflation. The global economy is now poised to carry out its strongest post-recession recovery in 80 years. However, the rebound is expected to be uneven across countries, as major economies look set to register

strong growth even as many developing economies may still struggle. Although, global GDP in 2022 is estimated to be 3.2% below pre-pandemic projections, and per capita GDP among many emerging market and developing economies is anticipated to remain below pre-COVID-19 peaks for an extended period.

Central banks such as the US Federal Reserve and Bank of England are set to implement tighter monetary policies in the coming months, which is contrary to the response measures implemented in early 2020, where central banks around the world cut borrowing costs to all-time lows in an attempt to counter the economic slowdown. Other types of large-scale asset purchase schemes that were used to arrest the global financial crisis a decade earlier are widely expected to start the process of "quantitative tightening" in 2022. This of course complicates the lives of bond investors who are already fighting with the runaway inflation and the aggressive interest rate fluctuations this year. The BoE, meanwhile, faces the most difficult period for monetary



policy since it was granted independence in 1997. Inflation is at levels far beyond their targets and still rising. “Central bank balance sheets will shrink in aggregate in size for the first time in history,” claims Ralf Preusser.

As expected, the new monetary policies have had drastic impacts on the UK economy. In January, job vacancies and wage growth reached new highs. The Office for National Statistics said the annual growth rate for average total pay, including bonuses, increased to 4.3% in the three months to December, up from a rate of 4.2% in the three months to November. However, these growths still failed to keep pace with the highest recorded rates of inflation for three decades. The rate was boosted by bonus payments in December, with the strongest pay growth for workers in finance, insurance and the property industry. Regular wage growth excluding bonuses eased by 0.1 percentage points to an annual rate of 3.7%. The economic recovery has moved in a more positive manner than expected, however, if the rising levels of inflation continue at their current rate, it will nullify any potential for an economic boom in the coming years.

The areas of society that feel the greatest impact of the new inflation are low- and middle-income families. April's £693 rise in energy bills have added to the financial pressures that most British households are currently under, with conditions expected to worsen. The Bank of England forecasts 2022 will see the deepest living standards squeeze on record, with the prices rising 5.5% in the year to January - the biggest rise in 30 years. Meanwhile the Treasury is struggling to help the UK get through the difficult year, in part because of the pandemic's damage to its own primary objective (the public finances). This of course has forced up debt interest costs by around £10bn, with the (discredited) retail price index, still driving the cost of index-linked gilts, up

7.8% in January. The high inflation and low unemployment mean interest rates will need to rise, but how far depends on what happens to wages, not global energy prices. Here there is genuine uncertainty. Higher inflation didn't automatically or swiftly feed through to higher wages during the last inflation spike in the early 2010s, but the labour market is much tighter today.

Whilst it is plausible to say that we have reached peak inflation levels, the long-lasting implications that the pandemic will have on the UK economy should not be underestimated.

Adam Townsend
BA Economics

Migration To the Cloud and Its Role in the Economy

First and foremost, storage on the cloud is storage in external locations, predominantly in virtual servers that are operated and owned by a third party . If hard drives are destroyed, connected devices can access any saved photos or documents, i.e., the data is transferable. Convenience and reliability are some of its key properties. Moreover, the cloud and its services are ubiquitous, most data processing services are cloud services. If you have used Gmail, you have used a cloud service. Yet what is its role in enterprise? And how is it altering the business climate?

There are four main types of cloud computing: Private, Public, Hybrid (a combination of the two) and multi clouds (the combination of two or more cloud computing platforms , i.e., operating systems of the cloud). Together with the types of cloud computing, there are three main types of cloud computing services: Infrastructure-as-a-Service (IaaS), Platforms-as-a-Service (PaaS) and Software-as-a-Service (SaaS). Key

examples consist of Microsoft Azure, for IaaS, Google App Engine, for PaaS, and Dropbox, for SaaS. At the most basic level, IaaS consists of a cloud service provider managing your infrastructure, any hardware, hard drives, data storage and servers. The customer still manages such objects as the operating system and any applications. With PaaS, the customer only manages applications running on top of the cloud platform with any data those apps rely upon. This culminates with the most extensive service SaaS, where a software application is provided and managed by a cloud service provider; no management required manually from the customer . These numerous services are significant tools in stimulating growth in businesses and increasing the scalability and flexibility of the business overall .

An inherently omnipresent ecosystem, combining numerous computer servers, hard drives, system routers and fibre-optic cables , the cloud was first conceptualised by J.C.R Licklider in 1962. Licklider, an engineer and

psychologist, advanced a novel view on computing in the need of combining resources into a network of “thinking centres, accessed when required³ ”, which was a revolutionary view at the time. The premise of cloud computing conceived by this visionary helped provoke an evolution in computational systems, resulting in the likes of the present climate with cloud service providers, such as AWS (Amazon Web Service), Microsoft Azure and Google Cloud Platform, competing to be the top provider.

Developments in the appropriation of cloud software became more prominent when popular companies such as Amazon began offering modern cloud infrastructure with the creation of AWS, an e-commerce platform. Its notable attributes are low costs and scalability to individual businesses , which help highlight the possible improvements cloud services could make to many business ventures.



A major driver in business agility, the cloud helps realise key transformations, with the possibility of creating a more agile and flexible business. It can transform an enterprise by combining technological, financial, and business priorities, whilst creating a highly responsive HR service, as enabled through streamlining the workflow with specific cloud technologies. Thus, the cloud and its various technologies can enable an enterprise to be more responsive and flexible to both internal and external challenges.

This became evident in the Covid-19 Pandemic, which forced a greater reliance on cloud-based technologies across the global economy, encompassed by video conferences and accessing company documents and software on the internet from the safety of home. The most adept businesses utilised these services quickly and efficiently, allowing them to be an integral part of their processes.

As a result of the global pandemic, many employers plan to move to 'hybrid' working. This is a combination of on-site and remote, as illustrated by Dell Technologies who sought a "connected workplace", setting the aim (prior to the pandemic) of having 50% of their employees working flexibly by the end of 2020. Dell stated that the programme "increased innovation and its ability to attract talent". Notably, a greater pursuit of flexible working renders it vital to increase the efficiency of cloud-based technologies, enhancing connections between employees, employers, and data across companies.

The increase in hybrid and remote working may also have positive effect on the environment by cutting the environmental footprint of commuter travel, but does greater pursuit of cloud-based technologies significantly reduce these negative environmental impacts? The answer is not simple. Firstly, data centres accessed by the cloud need to be

located somewhere, but where? There runs the danger of tearing up ecosystems many wildlife species are reliant on, to build a greater number of data centres required to support the increasing reliance on cloud-technologies. Furthermore, a report by the French Think Tank 'The Shift Project', stated digital technologies "represent close to 4% of worldwide carbon emissions... more than civil air transport", i.e., pre-covid levels of air transport. This, together with the electricity usage per annum of five tech groups (Amazon, Google, Microsoft, Facebook, and Apple), exceeds that of New Zealand at 45 terawatt-hours. Therefore, ultimately there may appear a rather gloomier prospect for environmental impact, although Big Tech companies such as Google aim to be powering all data centres with "carbon-free energy" by 2030. However, "the buying of clean energy from other companies... (does not) reduce the amount of dirty energy they produce"⁷, as stated by David Mytton of the Uptime Institute. Currently, as highlighted in a report by BP, only 5% of the global power grid uses renewable energy.

So, within the present economic climate, seeking further technological advancements with a greater prevalence of cloud-based technologies, how can the negative pressure on the environment be minimised globally? The ability to "pool and share scalable resources across a network", by the combination of individual technologies into cloud architectures can be certainly beneficial to businesses overall in augmenting their agility and innovation. This technology has been a lifeline across numerous areas of the global economy throughout the pandemic. The cloud and cloud-based technologies have proved valuable resources by facilitating novel remote working systems, yet can mass appropriation of these systems be balanced with the need to reduce the potentially negative global environmental

impact?

Emily Day
BSc Mathematics

The Clear Energy Sector at Stealth Stage

It is time to put yellow cakes on a table.

The natural resource markets are cyclical because they are capital and time intensive. Mineral deposit takes time and money to be found. Once a deposit is found, it comes up with a decision whether an economical mine can be built and if so, the legal authorization, financing and building corresponding infra-structure will take years. All of these must be done before the mining company can start exploiting and selling the resources. Therefore, this complicated process makes this industry impossible to react to supply and demand imbalances.

Clean-air Electricity Demand Recently, the importance of electrification and decarbonization has been greatly emphasized. Countries and companies are committing to net-zero carbon goals in 2050. It is a great thing to make the world 'greener', but electricity demand rises every year. The IEA World Energy Outlook projects that the demand will increase 75% from 2020 to 2050. Can we

fill the gap?

The well-known solution is solar energy and wind energy. Michael Shellenberger, author of 'Apocalypse Never', the founder and president of Environmental Progress, has discussed the limitations of these two energies on TED. In his opinion, the current renewable energy generation is not enough, and it causes more waste than nuclear energy.

The fact is the increase in renewable energy is lower than the increase in global energy demand. On one hand, Germany has 43% of total electricity consumption covered by renewable sources and aims to shut down all nuclear plants by 2022. On the other hand, France derives about 70% of its electricity from nuclear energy and Financial Times reported that the UK government put nuclear power at heart of net zero emissions strategy. The energy crisis that happened in Germany two months ago has proved that renewable energy currently is not sufficient for

the demand. The stability of renewable energy is questionable.

Why Uranium?

To achieve the net-zero carbon emission target, renewable energy is not enough and nuclear energy as a type of clean energy will play a significant role. Uranium is the fuel used by nuclear plants for nuclear fission. Uranium is a famous commodity for life-changing returns once a boom cycle is initiated. The prices of uranium were at US\$7/lb in 2001 and the spot market price reached to US\$113/lb in 2007 which was closed to the all-time high price in 1977. Since Fukushima nuclear disaster, either the spot price or futures of uranium has been falling. Mining companies massively reduced the exploitation of uranium because so many nuclear plants were shut due to fear of nuclear disaster.

According to the World Nuclear Association, it estimated that total world



production from mines in 2020 was 47731 tonnes, which was the smallest number since 2008 and it only met 74% of world demand.

Therefore, more production is necessary to meet the future demand. However, uranium is highly regulated, so the exploitation takes longer than any commodities. According to International Atomic Energy Agency, opening a uranium mine often involves 10 to 15 years of lag time before the mine begins operation. This furthers the supply and demand imbalances. There are currently 442 reactors operating globally and 51 reactors under construction. When the demand for uranium is rising and supply for it has been falling, there is no doubt that either the futures prices and spot market prices of uranium will go up. Alright...How do I invest in it?

By stocks screeners, you can find a lot of uranium-related equities. There are better options for beginners who are new to this sector. There are Horizons Global Uranium Index ETF \$HURA on TSX, North Shore Global Uranium Mining ETF \$URNM and Global X Uranium ETF \$URA on NYSE, and Geiger Counter Ltd \$GCL on LSE. Furthermore, Sprott Physical Uranium Trust and Yellow Cake Plc provide unleveraged position to put yourself at the lowest risk.

Long-Hin Tony Ho
BA Accounting and Financial
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Background

The review is a quarterly student run publication and is read by a range of students and staff from different disciplines. It covers developments in banking and finance, investments and strategy, technology, economics, and global affairs and has contributors from a range of backgrounds.

For students, the review allows them to fully research and develop a reasoned argument about a relevant topic in finance. An article can open up topics to debate, challenge paradigms formed by only getting information from similar sources, and help inform students about recent issues. We also hope that it is helpful for students to show their interest in different sectors at interview.

Join the team

The Review now has a huge range of sections dealing with every aspect of the business and investment world. Our contributors study a diverse range of degrees from Engineering to Medicine, Economics to Politics and History to Management, so we have no specific requirements or prerequisites.

A developed interest in business and finance is a pre-requisite for an enormous number of careers. Making the transition from reader to writer will allow you to develop your skills and knowledge, whilst gaining tangible evidence that can set you apart from the crowd in any interview.

If you are able to keep to deadlines and can work effectively, both independently and as part of a team, then you are warmly invited to contribute your own unique articles to our publication. If you are interested in contributing, or would like further information, please don't hesitate to contact us using the following email address:

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USIS *Review*

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