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Investment Week & Symposium

BUSINESS MAGAZINE

Symposium Spreakers

ING, StateStreet,
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Waves of Change

The Future of Finance,
Intersting topics and more!

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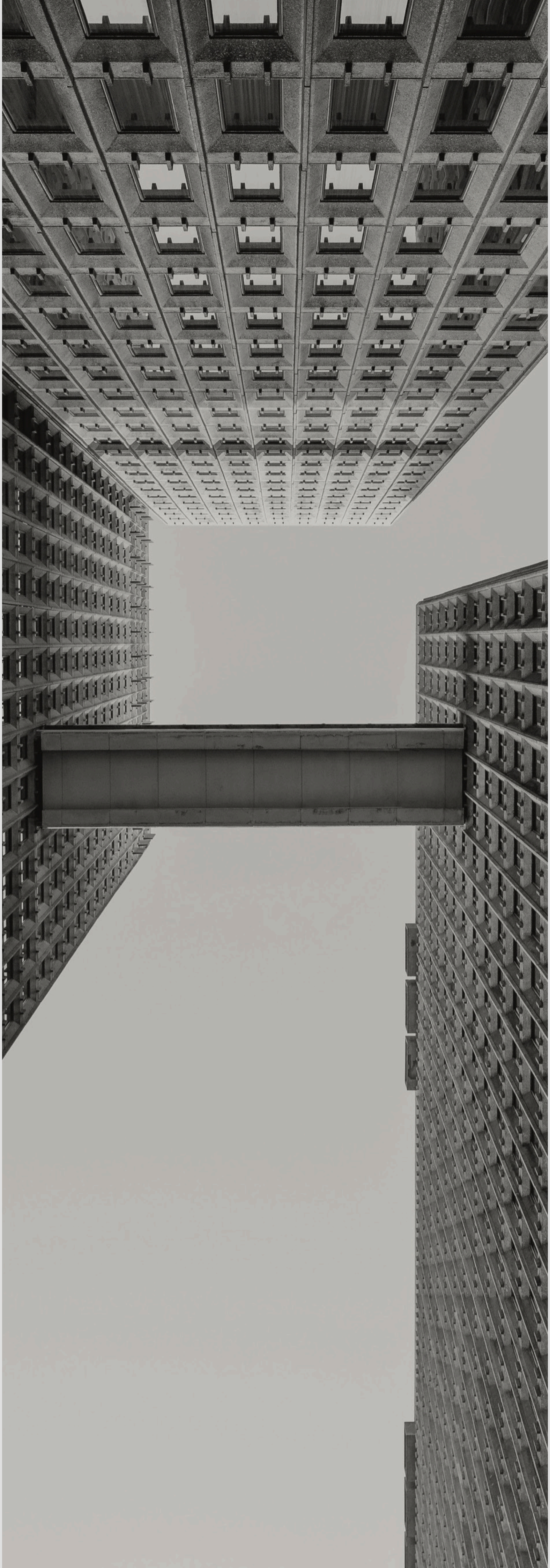
TABLE OF CONTENTS



Preface

After another year of successful cooperation, B&R Beurs and FSR proudly present The Investment Week & Symposium 2024: Waves of Change. Over the past few months, both associations have worked tirelessly to organise an exceptional event once again. A strong line-up of experts from the financial industry will deliver their insights at the Rotterdamse Schouwburg. A series of presentations will dive deeper into why adaptation is a necessity to survive and how we can manage this change.

In the ever-evolving landscape of finance, adaptation is critical. Just as waves shape the shoreline, changes in the global economy, technology, and societal dynamics continuously reshape financial markets. This year's symposium aims to explore how investors can navigate these waves of change to capitalise on opportunities and build a sustainable future.

Throughout the week, we have composed a series of workshops, in-house days, and dinners designed to provide students with practical insights into the world of finance. These activities aim to bridge the gap between academia and the industry, offering valuable networking opportunities and a deeper understanding of the financial sector.

At the heart of the symposium lies our line-up of top-of-the-line speakers from prestigious financial companies. They will share their perspectives on the current state of the market, emerging trends, and strategies for success in a rapidly changing environment. From the impact of technological advancements to the growing importance of ESG investing, our speakers will delve into critical topics shaping the future of finance.

By fostering dialogue and collaboration between students and industry professionals, the next generation of financial leaders can be empowered to thrive in an ever-changing world. Whether you are considering a career in finance or simply seeking to expand your knowledge, we invite you to join us for an inspiring week of exploration and discovery.

Thank you for being a part of the Investment Week & Symposium 2024. Together, let's ride the waves of change towards a brighter future.

For now, we wish you an inspiring symposium.

Luc Boender & Noralie Pareau Dumont

Waves of Change

In the ever-evolving finance landscape, change is not just a constant; it is the essence that propels the industry forward. As we navigate the complex currents of global markets, technological advancements, shifting global dynamics, and evolving consumer behaviours, the theme "Waves of Change" takes centre stage at the Symposium 2024.

The financial world is no stranger to upheaval. From the earliest bartering systems to the advent of cryptocurrencies, finance has continuously adapted to society's changing needs and demands. Yet, the pace and scale of transformations in recent years have been remarkable. These transformations, driven by a confluence of factors, are reshaping the industry profoundly.

One of the most notable waves of change crashing onto the shores of finance is the relentless march of technology. From artificial intelligence and machine learning to blockchain and big data analytics, technological innovations are revolutionising every aspect of the financial ecosystem. Algorithmic trading algorithms execute trades in milliseconds, robo-advisors offer personalised investment strategies and decentralised finance (DeFi) platforms challenge traditional banking models.

Moreover, the globalisation of finance has ushered in a new era of interconnectedness, where events in one corner of the world can send shockwaves through markets thousands of miles away. Geopolitical tensions, trade disputes, and the ongoing ramifications of the COVID-19 pandemic underscore the intricate web of interdependencies that characterise today's financial system. Understanding how these macroeconomic forces influence asset prices, capital flows, and investor sentiment is essential for navigating the choppy waters of global markets.

Furthermore, consumer expectations and behaviours are evolving at an unprecedented pace. Sustainability and responsible investing have emerged as powerful tidal forces reshaping the investment landscape. Investors increasingly scrutinise environmental, social, and governance (ESG) factors when making investment decisions, recognising the importance of aligning financial goals with broader societal concerns. Whether divesting from fossil fuels, supporting renewable energy projects, or promoting social justice initiatives, finance is shifting towards more ethical and sustainable practices.

Amidst these waves of change, one thing remains certain: adaptability is the key to survival in the fast-paced world of finance. The Symposium 2024 will serve as a platform to delve into this topic further, connecting industry leaders to explore the theme "Waves of Change" in depth.

B&R Beurs and FSR. are proud to present this year's Symposium, featuring the esteemed speakers Ramu Thiagarajan from State Street, Patrick Klijnsmit from A.S.R. Asset Management, Bernard Sonke from MUFG bank, Angelique Pieterse from PGGM, and Bob Homan from ING, who will be moderating the evening and will ensure an engaging and informative experience for all attendees. This evening, the industry leaders will present their perspectives on this year's theme and will discuss their expectations for future financial markets further. The Symposium will include a panel discussion, where attendees can ask the industry experts in-depth questions about the evening's topic and theme. We invite you to participate actively during the Symposium, listen to industry experts' presentations, and engage with them during the panel discussion.

In its totality, the theme "Waves of Change" captures the ethos of adaptation, resilience, and innovation that defines the modern era of finance. The Symposium 2024 will provide a platform for attendees to gain insights from industry experts on embracing change in financial markets. By embracing change, harnessing the power of technology, and prioritising customer-centricity, financial institutions and companies can ride these waves to new heights of success while creating a more inclusive and sustainable future for all stakeholders. We hope that you, as an attendee, will benefit from the speaker's perspectives and enjoy the inspiring and educational evening.

Veerle De Jonge

Bob Homan

Chief Investment Officer

Bob Homan completed his Economics degree at the University of Amsterdam, setting the stage for a career in finance. Initially, Bob ventured into the financial world with Postbank, where he honed his skills as an economist. Subsequently, he expanded his expertise at various asset management firms, contributing to his deep understanding of investment strategies.

In 1999, Bob assumed the role of Director of Investments at Westland Utrecht Effectenbank, further solidifying his reputation in the financial sector. Since 2008, he has been at the helm of ING's Investment Office, overseeing operations in Amsterdam, Brussels, and Luxembourg. As the head of this pivotal division, he is chiefly responsible for crafting ING Bank's investment policies.

Bob's responsibilities are manifold, including forecasting financial market trends, conducting thorough analyses, managing ING's investment funds, and overseeing asset management. He also spearheads communication about investments, making him the primary investment spokesperson for ING in various media outlets. Through his leadership, Bob Homan plays a crucial role in shaping investment strategies that impact the bank and its clientele globally.

Patrick Klijnsmit

Director A.S.R. Asset Management

a.s.r.
de nederlandse
verzekerings
maatschappij
voor alle
verzekeringen

Patrick Klijnsmit boasts an extensive background in financial management and academia. Educated at the University of Amsterdam, Patrick earned degrees in Actuarial Science, Business Economics, and Fiscal Economics, culminating in a PhD in Auditing.

He began his career at A.S.R. Verzekeringen in 1999; Patrick has progressively held critical organisational positions. His roles have spanned from Head of Accounting, Reporting & Control for Financial Markets to Chief Financial and Risk Officer (CFRO) for ASR Bank and Asset Management. His profound expertise in financial regulations is further highlighted by his recent directorship in the IFRS 17/9 program, a critical standard in insurance contract financial reporting.

In addition to his corporate roles, Patrick has contributed to academia as an Assistant Professor at the Amsterdam Business School, where he coordinated courses on Accounting & Control for Financial Institutions. He also briefly lectured on Auditing at Vrije Universiteit Amsterdam.

Currently, as the Director of a.s.r. Asset management: Patrick oversees the company's strategies, ensuring robust financial performance and compliance with evolving global standards. His leadership is instrumental in guiding the firm's investment policies and financial planning frameworks, reinforcing a.s.r. 's position in the competitive financial services industry.

Ramu Thiagarajan

Senior Investment Advisor

STATE STREET

Ramu Thiagarajan is a Senior Investment Advisor at State Street and a recognized expert in investment strategy. He is particularly noted for his prowess in Fixed Income, Risk Management, and Financial Modeling. Ramu holds a B.Com in Accounting from the University of Madras and advanced degrees in Accounting and Finance from the University of Illinois Urbana-Champaign and the University of Florida, earning his PhD at the latter.

Previously, Ramu was an Assistant Professor at Northwestern University's Kellogg School of Management and Tulane University's Freeman School of Business, where he focused on financial courses like Financial Statement Analysis and Credit Derivatives. His corporate career began at Mellon Capital Management as Managing Director of Active Equity Strategies, with subsequent senior roles at Pequot Capital Management and Deutsche Bank in Quantitative Strategies.

Before joining State Street, he was a senior vice president and global head of fixed-income quantitative research at AllianceBernstein, developing and overseeing quantitative investment and risk management models. At State Street, he advises on investment strategies and leads the Editorial Board for Thought Leadership Content. His significant contributions to financial research include publications like "Risk Parity: Rewards, Risk and Research Opportunities," he is respected for integrating academic rigour with practical financial strategies in global finance.

Angelique Pieterse

Senior Investment Manager

PGGM

Angelique Pieterse is a Senior Investment Manager at PGGM Investments, a role she has held since June 2007. She utilises her extensive background in Fixed-Income, Trading, and Commodity Finance. Over the past two decades, she has proven her expertise in the financial markets, significantly influencing the sectors she operates in.

Angelique graduated from Erasmus University Rotterdam with a degree in Econometrics, which equipped her with advanced quantitative skills essential for financial analysis. Her career began at OC&C Strategy Consultants in 1993 as an Associate Consultant, where she honed her strategic consulting abilities. She then joined ABN AMRO, where she rose to Vice President in Trade & Commodity Finance from 1995 to 1999, developing complex credit solutions.

In 1999, she transitioned to a crucial role in Fixed Income Structured Credit Sales at ABN AMRO, focusing on creating structured products that catered to specific client needs until 2007. At PGGM Investments, Angelique oversees investments, particularly in fixed-income and commodities, managing asset allocations and strategic portfolio planning. She leads her team towards achieving the organisation's financial goals with a strong emphasis on sustainable and ethical investment practices, underscored by her certification in Applied Responsible Investment.

Angelique's strategic vision and meticulous approach to investment management have made her a pivotal figure at PGGM Investments. She navigates complex financial landscapes with skill and integrity.

Bernard Sonke

Director Supply Chain Finance

MUFG

Bernard Sonke serves as the Director of Supply Chain Finance at MUFG—Corporate & Investment Banking in Breda, North Brabant, Netherlands. With 17 years of international experience, Bernard excels in client relationship management, business development, and performance enhancement across various sectors, including Aviation, Power, Oil and Gas, Healthcare, Retail, and Telecom.

Bernard earned a Bachelor's degree in Business Administration from HZ University of Applied Sciences and an Executive MBA from the Rotterdam School of Management at Erasmus Universiteit. His further education encompasses growth strategies at the University of Pretoria's Gordon Institute of Business Science and a course on Western economic impacts from China's expansion at The Chinese University of Hong Kong.

His career began at Connex South Eastern in London and progressed through significant roles at Office Depot and Novaxess as Key Account and Account Manager, respectively. Bernard's extensive tenure at GE Capital involved roles from Account Executive to Commercial Manager in Working Capital Solutions, where he enhanced working capital and EBITDA through innovative financial strategies.

Since March 2019, Bernard has led global corporate business development at MUFG. His responsibilities include spearheading strategic supply chain finance initiatives and driving team performance through effective leadership and mentorship. Bernard is renowned for his analytical acumen and strategic vision, positioning him as a critical figure in navigating complex financial landscapes and international markets.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EXCHANGE-TRADED FUND

A general overview

You do not have to be in finance to hear about ETFs, as these pooled investment securities are becoming increasingly popular with investors at every level. Offering low-cost, high-liquidity opportunities to build diverse portfolios, ETFs play an essential part in today's ever-changing financial scene.

At their core, Exchange-traded funds (ETFs) are investment funds comprising many different assets, such as stocks, bonds, commodities, currencies, and, as of January, crypto. These products typically aim to replicate the performance of a specific index, sector, or geographical location, providing investors with diversified exposure to the desired market segment. Many investors prefer ETFs over traditional mutual funds due to their liquidity, as ETFs can be traded during the day at market-determined prices, just like individual stocks.

An article regarding a general overview of ETF's

The history of ETFs started in 1993 when the first product was introduced to create a fund that tracks the performance of the S&P 500 Index. Over the years, the asset class witnessed exponential growth, benefiting from an overall rise in retail investing. This view has been backed by research that shows investors, on average, underperform the benchmarks; therefore, for many, investing in ETFs is a convenient way to generate higher returns. The growth in the popularity of ETFs has also been supported by local tax advantages in the US over other forms of investing.

Nowadays, more than 10,000 ETFs are available, catering to diverse investor preferences. The two main types of these funds are passively and actively managed ETFs. Passive ETFs usually offer lower costs, making them attractive to long-term investors, while active ETFs include higher portfolio fees in exchange for actively managing the fund's composition. We can also differentiate these funds based on their security types. Index ETFs track specific indices, such as the S&P 500 or the NASDAQ, while sector ETFs focus on companies from a particular sector, such as agriculture or healthcare. Commodity ETFs, which track the prices of the most popular commodities like gold and oil, can be a great tool to hedge against inflation.

A trend that has been emerging within the landscape of ETFs is thematic investing. This investment product allows customers targeted exposure to companies of a given trend/theme, such as cybersecurity or renewable energy. The proliferation of ETFs focusing on environmental, social, and governance factors (ESG) demonstrates a growing need for ethical investment options.

Given their convenience, it is unsurprising that ETFs have become the fastest-rising asset class in recent years, achieving a Compound Annual Growth Rate of 18.9% in the last five years. As of the end of 2023, the global ETF industry has reached new heights, having 11.5 trillion dollars in assets under management. According to a fresh PwC report, these funds' popularity growth does not seem to slow down, as global ETFs are forecasted to reach 19.2 trillion dollars by June 2028. While data from past years greatly support optimism, some economists believe that the net inflow into equity markets through ETFs exceeds the growth rate of value, contributing to an overall mispriced market.

ETFs can be an excellent tool for building diverse portfolios for commercial and institutional investors. Their convenience and wide variety of available products ensure everyone can incorporate them into their portfolio to gain market exposure and achieve higher returns.

By Panna Szabo
Editorial Committee

BLOCKCHAIN

A Gambler's Bubble or the Bedrock of Tomorrow?

The inception of blockchain technology in the aftermath of the 2008 financial crisis was driven by the aspiration to establish a decentralised system. This system, transparent and accessible to all, was envisioned as a potential replacement for central institutions, thereby mitigating the risk of future crises. Over 15 years, blockchain has etched a dramatic narrative that has surpassed all expectations. However, this journey has not been without its share of controversies.

What is Decentralised, but Is Blockchain Decentralised?

Blockchain technology, at its core, is a beacon of decentralisation. This means that the responsibility of maintaining the financial state is not entrusted to a central authority but shared among all participants in the system. Many mechanisms have been engineered over the past two decades to ensure consensus functionality under extreme conditions (Lewis-Pye, 2013).

However, the path to decentralisation has its challenges. Significant technical complexities, including high hardware requirements and stake fees, often make becoming a node elusive for individuals needing a technical background or sufficient financial resources.

Moreover, many people seem more captivated by the prospect of trading cryptocurrency for profit than maintaining financial states. Centralised exchanges like Binance and FTX have surfaced in response, offering services to the broader public from entrepreneurs adept in finance and technology.

This development contradicts the spirit of decentralisation, as the controllers of these exchanges wield considerable power in the ecosystem, facilitating trade between buyers and sellers. Interestingly, many retail investors seem to favour these traditional approaches to blockchain over more "native" methods, even if it means placing their trust in these entrepreneurs. The landscape seemed stable until the downfall of FTX, where people suddenly realised that the bare ownership right, the claim to one's digital asset, could not be preserved in this so-called future exchange. We have come full circle from 15 years ago when the Bitcoin whitepaper was first announced.

A myriad of sophisticated financial products are brought to life in this realm. We would never dissuade anyone from entering this world. Those with wisdom can survive and carve out a unique career path in this landscape. Success stories are not confined to Twitter; they also unfold in our investment competitions. Here, the courage to bet on an asset one truly believes in and to weather short-term fluctuations is rewarded. This aligns with a fundamental principle of finance: risk should carry a price, for without it, no one would bear the risk. However, as we conclude, it is prudent to remember the catastrophic price crash of LUNA, triggered by the inflation of LUNA converted from UST.

I see sand to diamonds, but what after summer is winter.

The tale of using 10,000 Bitcoins to purchase a pizza, a story now etched in the annals of cryptocurrency history, is still fresh in our minds. Today, Bitcoin's value is soaring towards $10,000. The crypto world is a stage where similar stories unfold daily: a cryptocurrency, previously deemed worthless, could double or even add a trailing zero to its value overnight. This potential for rapid wealth accumulation draws many to the world of cryptocurrency. They come armed with financial strategies as dazzling as they are complex, employing leverage, shorting, and derivatives.

Vitalik Buterin, founder of Ethereum, recently penned a reflective piece on his website titled "The End of My Childhood" (Buterin, 2024). From a pragmatic standpoint, recent developments underscore this trajectory. The approval of a Bitcoin ETF and the imminent arrival of an Ethereum ETF signify a maturation within the crypto investment landscape. Just a year ago, concepts like zkbridge existed solely on paper, yet today, we witness the gradual crystallisation of a community around its implementation. We must adopt an open and inquisitive stance towards blockchain's evolution, embracing its triumphs and challenges. Only then can we collectively pave the way towards a future adorned with the blossoms of progress and possibility.

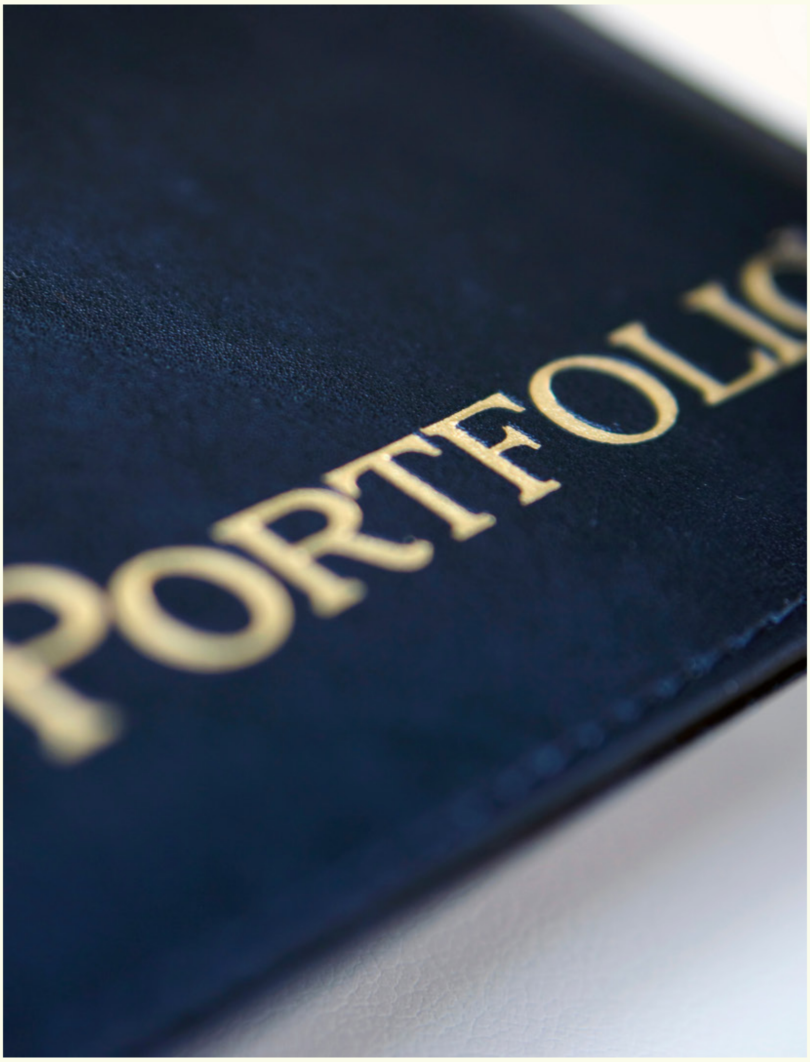
By Zhejia Hu
Editorial Committee

ALTERNATIVE INVESTMENTS

Alternative investments leading to non-traditional portfolios

The absorbing cost of entering hedge funds, real estate, or private equity markets requires such time input and due diligence, yet many investors attempt to back their financial decisions by shouldering these efforts. Although stock-following portfolios impose a disciplined approach, alternative investments also attract a predominance of potential diversification - unlike traditional financial investments, which typically include long positions in equities, fixed income, and cash. Furthermore, they provide an opportunity to earn a reasonable return with manageable risk being an indicator of the general market conditions, irrespective of its flows (Baker & Filbeck, 2013).

The ownership interests in land or structures are thus considered as a conventional, if not trite, position in one's portfolio, leaving room for both direct participation through residences, commercial real estate, or agricultural land, as well as indirect participation through real estate investment trusts (REITs), commingled real estate trusts (CREFs), or infrastructure funds. Another is commodities, agreements to buy and sell a tangible asset or actual physical goods of a homogeneous nature, such as energy products, agricultural products, metals, and building materials (Chambers et al., 2012). While securing them, investors must follow unique regulatory frameworks (MiFID II, MAR, CSMAD), meet permits and tariffs, and grasp the divergence within stock market volatility with commodities' passive exposure to prices. The preliminary research, therefore, narrows the specialisation of the management and may entail higher operation fee standards for structures of hedge funds and private equity.



The latter involves an array of investment activities, including venture capital, closely held companies, and buyout funds, and not surprisingly gains fervent adherents owing to the outperforming profitability (83-90% of studied PE funds, according to Invest Europe). Moreover, private equity offers financial assistance to start-ups and SMEs, contributing to innovations, infrastructure development, and economic advancement.

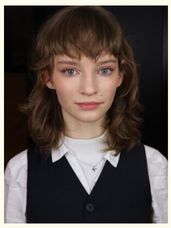
Innovations, however, are somewhat bidirectional, as in the 1980s, the private-equity secondary market arose, which accounted for $108 billion in volume in 2022 (Burroughs, 2023). It involves the buying and selling existing stakes in private equity investments, together with those in funds that invest in various sectors such as credit, real estate, and infrastructure. The private equity secondary market allows users to trade their positions in illiquid assets before their full term. Its subset, General Partner transactions, specifies a fund sponsor selling these assets from a fund they manage to another, known as a continuation vehicle. Existing fund investors can choose to sell their interests, maintain their current investment terms, or reinvest in the continuation vehicle with new terms negotiated by lead secondary buyers, with the latter option increasingly common, especially in single-asset continuation vehicles (Lussier, 2022).

GP-led transactions constitute half of the aggregate activity within the secondary market for private equity investments (Pelk, 2023). Based on data provided in Annual Comprehensive Financial Reports, the 21-year annualised return of 11.0% for private equity compares to the 6.9% return of the public stock benchmark, exceeding the typical 3% annual premium expected for private equity investments.

Modern alternative investments consist of, e.g. managed futures - a legally binding agreement to buy or sell standardised assets on a particular date and at a particular price, facilitated through a futures exchange (Definition of a Futures Contract - CME Group, n.d.), which display low correlation to the S&P 500 index. Like hedge funds "2 and 20", managed futures charge fees ranging from 1% to 3% of management and around 20% on any gains (Zhang, n.d.).

In conclusion, alternative investments offer opportunities for portfolio diversification and potentially higher returns than traditional financial investments. Many of them, such as hedge funds, private equity, or managed futures, leave active return-seeking to professionals. Leverage use supported by prudent allocation to these diversified assets can enhance resilience to risk in today's evolving financial environment.

By Agata Baczewska
Editorial Committee

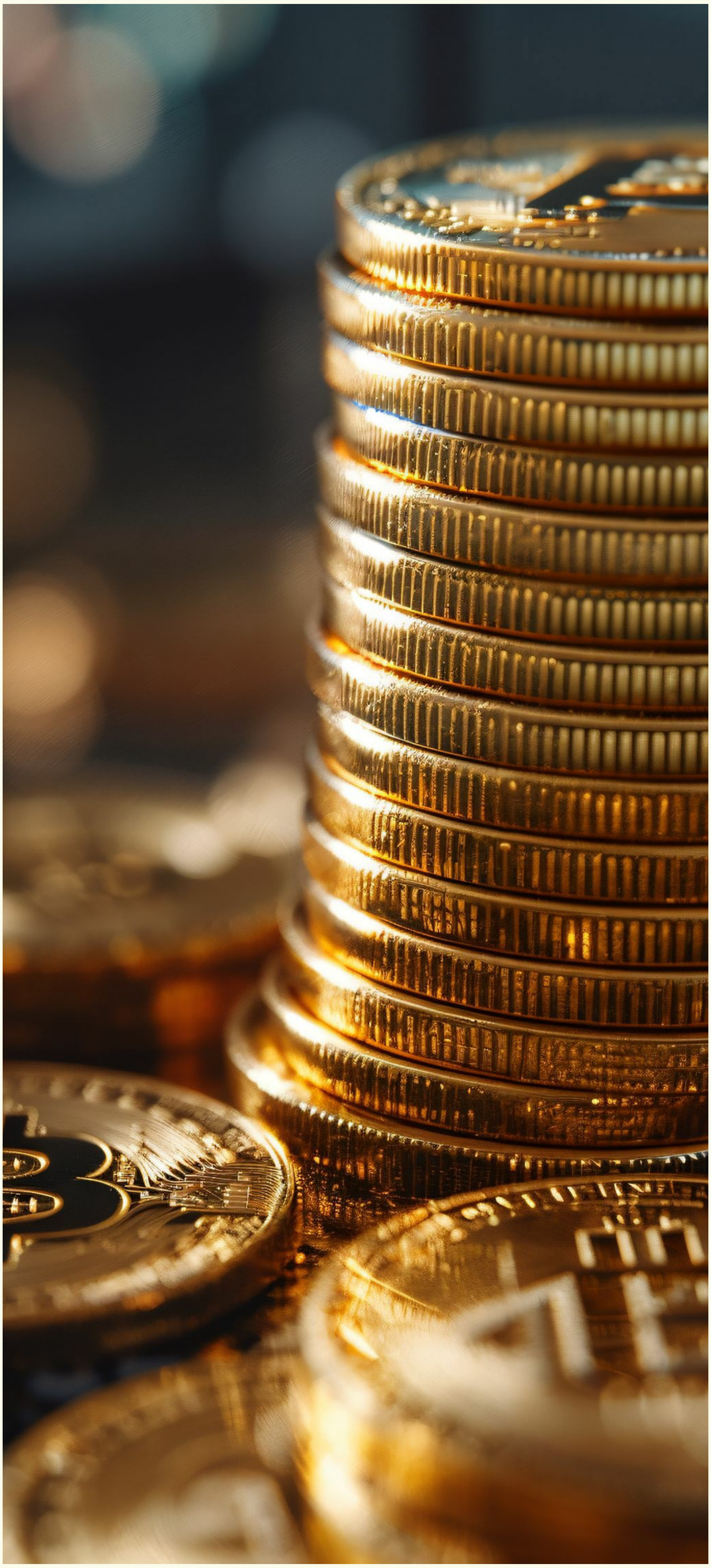


TOKENISATION

Unlocking Financial Potential: Tokenisation in Finance

In recent years, the investment landscape has been characterised by the evolution of blockchain technology, like asset tokenisation, which promises to democratise access to investment opportunities.

This article explores the potential of asset tokenisation in investing.



Asset digitisation and fractional ownership
Fractional ownership through asset tokenisation refers to dividing physical assets such as real estate or artworks into smaller, more affordable units represented by digital tokens. These tokens represent a portion of the value and ownership rights of the asset. Fractional ownership is a collaborative investment strategy with shared costs and returns for the different shareholders.

Diversification
Therefore, fractional ownership benefits investors who want to diversify their portfolios with high-value assets further. Investors can own small parts of previously inaccessible assets due to high costs.

Increased Liquidity
Fractional ownership allows investors to increase the liquidity of previously highly illiquid assets such as antiques. The low barrier to entering the market creates greater demand and, therefore, more potential buyers. Furthermore, fractional ownership through tokenisation allows a 24/7 trading period on digital asset exchanges, unlike traditional markets. This creates many opportunities for investors to buy or sell their fractional shares.

Transparency
Asset tokenisation allows investors to evaluate assets better. Blockchain networks are typically publicly accessible, which allows investors to access transaction history and information on returns, depending on the smart contract. Furthermore, provenance tracking in the blockchain checks the legitimacy of the data and thus reduces fraud.

Reduced cost
Digital tokens are changing the traditional selling and buying of real-world assets. Since the sellers and buyers communicate directly via digital asset exchanges, no intermediaries are needed, and administrative costs are also reduced. For investors, this means lower costs when selling and buying.

Definitions:

Asset tokenisation:
Representing ownership rights of real-world assets as digital tokens on the blockchain.

Illiquid assets:
Assets that are difficult to convert quickly and easily into cash at the current market price.

Smart contract:
A self-executing program that automatically executes contract terms like exchanging money.

Provenance tracking:
Recording of origin, history, and lifecycle of data.

By Noah Demuth
Editorial Committee

GEOPOLITICAL DYNAMICS

Changes in Geopolitical Dynamics

Changes in geopolitics may be one of the most significant determinants of a country or a region's economic situation. Geopolitics influences consumer confidence, financial markets, currencies, energy markets, supply chains and many more sectors. In a period where a pandemic, wars, and other major political events such as Brexit have occurred, many have seen what can be borne from the tiniest shift in geopolitical dynamics. Due to its geopolitical landscape, the European Union (EU) has been highly impacted by the ramifications of these events.

One of the clearest examples of how geopolitics greatly influences an economy is Russia's invasion of Ukraine. Before being able to recover from the adverse economic outcomes of the pandemic fully, Russia's invasion of Ukraine led to more significant problems for the EU despite all the negative humanitarian consequences. Starting around the end of February 2022, after Putin announced a "special military operation" in Ukraine (BBC, 2022), the shockwaves have influenced economic stability, growth, financial markets, and commodity trading in the EU.

Unfortunately, Russia is not just any other country and being subject to war crimes has resulted in many countries positioning themselves against Russia. However, putting sanctions against the world's second-largest exporter of gas and fuel has led to difficult times. After agreeing to ban around 90 per cent of Russian oil imports, the EU had to find replacements immediately. However, the consequences were inevitable. As a result of the export sanctions worth €48 billion and import sanctions worth €91.2 billion, the EU's economic growth of around 5% right after the pandemic dropped to 3.1% after the war. (Consilium, January 2024) (Consilium, March 2024)

The sanctions were not limited to oil and energy trade. There are also many sanctions regarding the financial sector, such as the SWIFT ban for Russian banks, Russia's access to the EU's capital and financial markets, the provision of crypto wallets to Russians, etc. Moreover, the EU decided to implement travel bans and asset freezes. As a result of the long list of all sanctioned individuals and entities supporting Putin through this war, including Putin himself, currently, €21.5 billion of assets are frozen in the EU, and €300 billion of assets from the Central Banks of Russia are blocked in the EU. (Consilium, March 2024)

Commodity price spikes, energy crises, lack of consumer confidence, the flow of Ukrainian refugees wanting to escape Russia's aggression, shortages of certain agricultural products, and many more negative outcomes have put the EU through challenging times. Now, with Israel's invasion of Palestine, even more difficult times seem to be on the horizon. The EU faces the challenging task of deciding between supporting a great power that is a significant determinant of world dynamics and intervening to become a "geopolitical force" to put an end to the brutal killings of innocent civilians as they did for Ukraine (The Guardian, 2023).

By Sude Bozçal
Editorial Committee

EMERGING MARKETS

Investing in emerging markets for a sustainable future

As emerging markets play an ever-increasing role in contributing to climate change, we cannot implement sustainable solutions globally without innovation and change in developing economies. Besides the lack of governmental and social support for creating innovative technologies, lower-income economies struggle to incorporate existing sustainable practices into their production processes due to funding deficiencies. This article presents the challenges faced by sustainable innovation in emerging markets, focusing on the crucial role of retail and institutional investors in providing financial support for the change.

To achieve the goal of net-zero emissions by 2050, emerging markets require an annual inflow of around two trillion dollars. This would represent a fivefold increase based on current investments, the majority of which need to be provided by the private sector. However, underdeveloped markets characterised by nascent stock exchange systems and insufficient private equity presence expand the challenge of overcoming this funding gap.

The dissatisfactory historical returns can explain the underdeveloped markets in developing countries. Unlike developed markets, where the same kind of investment devices earn 13-15% returns, emerging markets can provide an average profit of 11-12%. The difference between the returns is sometimes called an 'emerging market penalty' originating from credit constraints, lack of managerial experience, and currency risks. These structural issues create a self-perpetuating cycle of low returns, which, together with higher volatility, discourages retail and institutional investors from investing in markets where the monetary support could be utilised the most.

That is not to say good investment opportunities cannot be found in emerging markets, as most professionals agree that the overall markets are mispriced. Currently, the price-to-earnings ratio of the MSCI Emerging Market Index is trading at 15.16x, which, compared to the MSCI World Index (21.67x) comprising developed markets, represents a discount of over 40 percent.

According to analysts, provided the absence of major geopolitical and economic shocks, this valuation gap is likely to narrow in the foreseeable future. This shift would be driven by remarkable earnings growth, improvements in emerging market investment profitability, and an increase in the economic growth premium enjoyed by developing countries.

Given this positive outlook for the future of emerging markets, finding suitable investment opportunities in sustainable innovations can be more beneficial than ever. Astute investors who complete due diligence and risk assessment can manage the negative characteristics of underdeveloped markets to take advantage of untapped market potential.

Investing in ESG companies in emerging markets can also provide excellent risk diversification and strengthen the portfolio by offering low correlations to traditional securities in developed markets.

Investing in sustainable innovation in developing countries does not have to be a sacrifice of high returns. While challenges remain, leveraging the potential of emerging markets for sustainable development can be a great long-term financial strategy that combines portfolio benefits with ethical considerations for a better future.

By Panna Szabo
Editorial Committee

AGI

Invest in Artificial General Intelligence

OpenAI envisions AGI as a game-changer, empowering everyone with unprecedented capabilities and cognitive assistance. Imagine a world where AGI transforms the global economy and unlocks scientific breakthroughs beyond our current technological grasp (Altman, 2023). While our ultimate objectives remain on the horizon, we have already laid the groundwork with some remarkable technologies. At the forefront stands the Large Language Model (LLM), a mature system that has captured considerable attention. Its prowess lies in handling a variety of natural language tasks. What truly sets ChatGPT apart from traditional search engines is its ability to grasp the subtle nuances of human conversation. Engaging with ChatGPT feels remarkably human, akin to conversing with a helpful companion.

Beyond language, a buzz surrounds the next frontier: image and video generation from human language. In February 2024, OpenAI unveiled a series of extravagant videos on platform X, claiming they needed to be crafted using traditional filming or animation techniques. Instead, they were generated by an AI model named Sora. Sora has a unique ability to create high-fidelity videos that are up to one minute long, all from textual descriptions. AGI has significantly influenced the hardware industry, as hardware serves as the foundation for various models. A key player in this hardware revolution is the Graphics Processing Unit (GPU), a component also found in gaming computers. The rise of AGI has increased the demand for GPUs, as many of the operations required during AGI training and inference are highly simplified and can be parallelised, a task at which GPUs excel.

Nvidia, a leading supplier of GPUs, has responded to this demand by offering products such as the H100 Tensor Core GPU and supporting software like the CUDA programming language, which enables training and inference logic to work on GPUs.

Artificial General Intelligence (AGI) has precipitated a paradigm shift in productivity and restructured production dynamics. McKinsey & Company's research posits that Generative AI, a subset of AGI applications, contributes an added value ranging from \$2.6 trillion to \$4.4 trillion. These applications have permeated many sectors, including but not limited to customer operations, marketing and sales, software engineering, and research and development. Furthermore, Generative AI holds the potential to automate individual tasks, thereby enhancing workforce productivity (McKinsey & Company, 2023). Industries that may not seem directly linked to the information technology sector are also experiencing transformations due to the advent of AGI, revealing new investment opportunities.

A salient example is the fusion of AI and healthcare, where artificial intelligence algorithms are being utilised in biomedical research for drug discovery and protein structure predictive modelling.

There is also a growing trend of collaborations between large information technology companies and healthcare firms to develop healthcare systems integrated with AI (Berger et al., 2024). The AGI supply chain can be broadly divided into three sections, from downstream to upstream: AI applications tailored to specific functionalities (e.g., chatbots, code generation, virtual character generation), models (including model hubs hosting multiple dominant models, with Hugging Face being a notable example), and infrastructure.

As we draw the curtain on this discourse, we are reminded of the vision of OpenAI: "Our mission is to ensure that artificial general intelligence—AI systems that are generally smarter than humans—benefits all of humanity." Indeed, this is the heart of the matter! When we transcend the intricate labyrinth of mathematical and computational theories and the complex dance of stock trading analysis, we realise that the ultimate objective of investing in AGI is not merely about financial gain. So, as we embark on this journey into a brave new world, let us do so with optimism in our hearts and unwavering faith in the transformative power of AGI, for it is not just about building more intelligent machines but about crafting a world that is smarter, happier, and more fulfilling for each one of us.

By Zhejia Hu
Editorial Committee

FINTECH DISRUPTION

How FinTech and DeFi are Reshaping the Financial Landscape

FinTech disruption is a bold verve of technological innovations within the financial industry directed to automate traditional financial services and systems delivery. From crisis to crisis, the evolution of financial technology oscillates as to enter the efficiency gap in how the money is managed, change in people's spending-saving confidence, or need for various advancements - in terms of digital payments transactions' value, 2019 reached USD 5.32 trillion, while in the 'post-covid' 2022 it was valued at USD 8.76 trillion (Statista Market Insights, 2024). By streamlining processes with tailored software and curtailing costs, FinTech upheaval is reshaping individuals' and businesses' approach to their finances at the same time, agitating collaboration and competition; with the advent of blockchain technology, peer-to-peer (P2P) lending, and digital currencies, especially banking market structures and strategies must remain flexible not to overlook the moment of insecurity, risk of becoming obsolete, or possible gain. Can decentralised finance threaten the legacy chasers?

Karl Montevirgen (n.d.) defines Decentralised Finance (DeFi) as an emerging digital ecosystem that allows people to send, purchase, and exchange financial assets without relying on banks, brokerages, or exchanges. Indeed, democratising finance by replacing traditional institutions shifts activities, including mortgages, banking, and asset trading, into the hands of the subjects, deliberately disempowering middlemen's positions and the profits associated with their actions. The foundations of DeFi are blockchain-based networks - shared, immutable ledgers that facilitate the process of recording transactions and tracking assets in a business (What is a blockchain? | (IBM, n.d.), a subset of Distributed Ledger Technology. DLT generally functions as a decentralised database spread across multiple computers in different locations. Unlike conventional ledgers, the community self-governs updates to the database or the ledger itself. Network access can vary, being either open-source or restricted to specific users, with the stored information subject to verification and auditability. DLT enables the recording of P2P transactions of assets such as currency, securities, or personal data, rescinding intermediaries, and thus costs incurred due to third-party assistance in issuance, administration, and transaction execution, as participants manage their private keys directly (Winston & Strawn, n.d.).

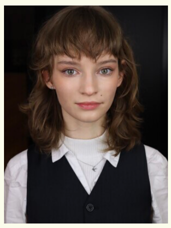
Using tokenisation technology, DeFi transactions boast speed, affordability, and smooth realisation. Including collateral in the program in the form of, e.g., a crypto deposit worth more than stablecoins borrowed protects the lender, while the automated 'smart contracts' follow the price volatility of the deposited crypto and repay the loan with any accrued interest for a borrower. Through the self-custody of assets, DeFi users can shorten custody chains. This reduces the likelihood of liquidity crises due to operational issues or defaults and promotes financial autonomy among users (OECD, 2022).

Furthermore, with decentralised applications, dApps, i.e. software programs designed to operate on a blockchain or P2P network, users have the potential to make money on cryptocurrency loans (with a contract encoded in Ethereum blockchain), selling digital assets or by pairing tokens supported by Decentralised Exchange (DEX) or DeFi platform. The equal value pair of BTC/ETH with a stablecoin (e.g. DAI, Tether, Binance) adds the liquidity into the selected pool; the provider then receives a Liquidity Provider (LP) token, representing the pool's share. They are often redeemable for the deposited tokens plus a portion of the trading fees generated by the platform.

These pools help convert assets without causing substantial price changes (Wilson, 2023). Moreover, if central banks do not engage in traditional currency creation, the decentralisation embodies crypto seigniorage of its own accord. Through reliance on market supply and demand, stablecoins deploy mathematical models to enact monetary policies that protect the token's value, altering the supply until it meets the demand and returning to its original whenever needed (Lenga, 2023). However, the DeFi market remains more minor than the broader crypto-asset market (e.g. NFTs); its market size value in 2023 was estimated to be USD 20.2 billion*, whereas it is USD 26.9 billion NFTs.

In reality, many DeFi projects eventually become highly centralised since the lack of any regulatory entity may entail susceptibility to errors or cyber-attacks. Despite the existence of DeFi-designed protocols, which consist of the decisions regarding the operation system, fee structures, and the criteria for voting, all encoded within the system (OECD, 2022), the users are vulnerable to extreme volatility. Thus, potential losses have no defined jurisdictional process. Although it allows anyone with internet access to reach their wallet, the established banking infrastructure is, at least for now, still in charge.

By Agata Baczewska
Editorial Committee



About FSR

Study Association

The Financial Study Association Rotterdam (FSR) is a study association for Erasmus University Rotterdam students interested in finance, consulting, and accounting. FSR was formed in 1999 after a merger between two other associations - the Finance Association Rotterdam 'Pecunia' and the Accounting & Controlling Association 'Pacioli'.

FSR has approximately 3,5000 members and aims to bridge the gap between academic theory and the practical world of finance, accounting, and consulting. It achieves this by organising prestigious events and providing opportunities for final-year students to gain exposure to these industries.

Events

FSR organises a variety of prestigious activities throughout the year. The flagship event is the International Banking Cycle (IBC), the largest recruitment event for investment banking in the Netherlands. Another critical project is the International Research Project (IRP), where talented Master's students conduct a consultancy project for a company. Other events include the Big 4 Cycle, Asset Management Tour, London Finance Tour, Corporate Finance Competition, and Financial Business Cycle. FSR is committed to maintaining high professional standards and continuously improving its events. Participants have the opportunity to connect with the corporate world sincerely, preparing them to make informed decisions about their professional careers. With around 3500 members, FSR aims to bridge the gap between theoretical knowledge and practical experience in finance, accounting, and consulting.

Career Website

FSR offers its members access to an extensive database of job vacancies, internships, in-house days, and business courses. Whether seeking a dream job at a major firm or trying to gain experience in a particular industry, FSR's career website (www.fsr.nl/career) is the perfect platform. The website allows you to browse various job opportunities and apply for the ones that interest you. FSR provides members exclusive access to in-house days and business courses organised by top financial, accounting, and consulting companies. These events allow members to network with industry professionals and gain valuable insights into their desired field. With FSR's career resources, members are well-equipped to kick-start their careers and achieve their professional goals.

Active Members

At FSR, our active members work closely with a board member to ensure the success of our events. Being an active member means taking on significant responsibilities and directly organising our projects. Joining a committee at FSR provides an excellent opportunity to familiarise yourself with our participating partners and gain professional experience in the field you're interested in pursuing. If you want to learn more about our committees, events, or FSR, please visit our website at fsr.nl. You're also welcome to stop by our office at G3A-06 to learn more and get involved!

In conclusion, the Financial Study Association Rotterdam (FSR) offers its members many opportunities to bridge the gap between academic theory and practical experience in finance, accounting, and consulting. With around 3500 members, FSR provides its members with exclusive access to various prestigious events, such as the International Banking Cycle (IBC), the International Research Project (IRP), and the Big 4 Cycle. These events enable members to network with industry professionals and gain valuable insights into their desired field. Additionally, FSR offers its members access to an extensive career database with job vacancies, internships, in-house days, and business courses, enabling them to kick-start their careers and achieve their professional goals. Being an active member of FSR provides students with opportunities to take on significant responsibilities and gain valuable experience in their field of interest. FSR's commitment to maintaining high professional standards and continuously improving its events makes it an excellent choice for students eager to learn and gain practical experience in finance, accounting, and consulting.

About B&R Beurs

Study Association

B&R Beurs is Europe's largest student investment society, with over 1,750 members, based at the Erasmus University Rotterdam. They provide a platform for investing with real money and aim to educate their members about investing, adding extra value to the university courses. Joining B&R Beurs also offers the opportunity to expand your professional network.

Education

B&R Beurs Erasmus Investment Society is dedicated to educating its members about investing. Through its B&R Beurs Academy, the society offers a range of lectures, workshops, and visits to companies within the financial industry. These events cover a wide range of investing topics, from the basics of investing to advanced issues like option strategies and advanced turbos. Members can also take the Investor Exam, which tests their knowledge based on the materials taught during the academies. The CFA and CAIA revise the exam, ensuring its quality and credibility. B&R Beurs aims to give its members the necessary knowledge and skills to succeed in the finance industry. Through its education program, members gain valuable insights into investing and learn to make informed investment decisions.

Career

B&R Beurs also organises various in-house events and workshops in collaboration with companies from the financial sector throughout the year. These activities and the Investment Competition help members gain an above-average understanding and interest in investing. Additionally, we aim to connect students with the right companies through our recruitment database. This allows us to guide students and companies to find the perfect match. Our goal is to take the next step in connecting students to the industry, allowing them to explore career options and make informed decisions. With our vast network of alums working in leading financial firms, B&R Beurs provides a valuable platform for students aspiring to pursue a career in finance. For more information, please visit our website or stop by our office.

Investment Competition

B&R Beurs members can participate in the annual Flow Traders Investment Competition by joining one of the over 50 Investment Groups. Each group member contributes an amount of money, typically around €300, and invests together in various assets, such as options, stocks, bonds, and ETFs. At the end of the year, the Investment Group with the best performance wins the competition. Weekly performances are measured using a risk-adjusted return measure based on the Modigliani risk-adjusted performance measure. This competition provides hands-on investing experience and encourages teamwork and critical thinking skills. It's an exciting opportunity for B&R Beurs members to put their knowledge to the test and potentially earn rewards for their group's success.

Social

In addition to its educational offerings, B&R Beurs also arranges various social events throughout the year, ranging from wine tastings to golf clinics. Bi-weekly drinks are also organised, allowing members to meet and network with like-minded individuals. This is particularly beneficial for those seeking a career in the finance industry, given the many B&R Beurs alums currently employed at leading financial firms. The society's social activities help to foster a sense of community among members, with many developing strong friendships and professional connections that endure beyond their time at university. As such, joining B&R Beurs can be an excellent way to learn about investing and expand one's social and professional networks.

To learn more about B&R Beurs, visit our office at P-1.074 or check out our website at www.bnrbeurs.nl.

Editor's Note

In a world saturated with uncertainties and ripe with opportunities, this edition of our magazine boldly navigates the 'Waves of Change'—challenging entrenched conventions and embracing the ever-evolving dynamics of the financial landscape. As we journey through these pages together, let us prepare ourselves to be inspired, question the status quo, and deepen our understanding of the forces that are reshaping our economic futures.

This year's theme has been dissected across various sub-themes meticulously chosen to reflect the pivotal transformations in finance. From the rapid adoption of emerging technologies to the strategic responses to global economic volatilities, each article is crafted to inform, provoke thought, and inspire action. These narratives serve as a beacon for current professionals and the next generation of leaders within the financial sector.

The process of designing this magazine was a collaborative endeavour that transcended the efforts of any one individual. I am grateful to thank the editorial committee members, whose dedication and keen insights have been pivotal in transforming complex ideas into compelling, accessible narratives.

Equally, the unwavering support and strategic guidance provided by FSR and B&R Beurs boards have been instrumental. Your leadership and vision have shaped the direction and success of this publication.

Our heartfelt thanks extend to the esteemed partners and distinguished speakers who contributed their expert analyses and perspectives. Your thought leadership enriches the Investment Week & Symposium and ensures our discussions are at the forefront of financial innovation.

I also want to thank the committee organising the Investment Week & Symposium. Veerle, Thijs, Sander and Fleur, your hard work and thorough planning have bridged the gap between academic theories and practical applications in high-stakes finance, enriching the student experience and professional understanding.

To our dedicated readers, your engagement and curiosity fuel our commitment to excellence. Thank you for your trust and involvement, which motivate us to continually push the boundaries of what we can achieve through this platform.

As we turn the final page of this issue, let us embrace the upcoming challenges and opportunities with open minds and stubborn hearts. The 'Waves of Change' are not to be feared but navigated with agility and informed decision-making. Let us move forward with the resolve to anticipate and actively shape change. In the relentless waves of transformation, may we find our path to innovation, leadership, and a sustainable future for all. Together, let's harness the insights from this symposium to not merely navigate but thrive amidst the undulating waves of change, propelling forward with resilience and foresight into a future redefined by innovation and informed action.

Lex Helmer

Thank You

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