Dear Members,

Branding Campaign for CFA® Designation

CFA Institute recently launched a global advertising campaign to promote the CFA® designation among stakeholders beyond our existing top employers. Visibility of the CFA designation has been low at private banks, family offices and regulators relative to investment institutions even though the expertise of our members is also highly relevant to this larger group.

The campaign was launched in March and April in the US, Canada, the UK, China and India. Members have given feedback that awareness and recognition of the CFA designation has increased as a result. In July, the campaign will be extended to Singapore, Hong Kong, Australia, Germany, Mexico and Brazil. I look forward to the branding value this will have for charterholders in this part of the world.

Volunteering on Non-Profit Boards

In Singapore, the rate of volunteerism and donations to non-profit organizations (NPOs) has increased over the past decade. Yet, a 2014 survey by Bain & Co and the Centre for Non-Profit Leadership (CNPL) found that individual and corporate support for NPOs here significantly lags international benchmarks.

Sound management of reserves, cash flow and investment portfolio can do much to stabilize the funding needs of NPOs. Recognizing that our members can do much for the sector, our Asset Management and Advocacy Committees organized a panel discussion and networking session on 25 May in collaboration with CNPL, which helps to recruit volunteers who are able to serve on the boards and committees of NPOs.

Engaging MAS for FinTech Regulation

The explosive growth of financial technology (FinTech) has given us innovative solutions in recent years. However, its advent also poses risks such as theft of confidential information.

In early June, Monetary Authority of Singapore (MAS) released a consultation paper on guidelines for a regulatory sandbox that will enable financial institutions as well as non-financial players to experiment with FinTech solutions.

For the duration of the regulatory sandbox, MAS will relax regulations so that the industry can explore how to best implement safeguards without stifling innovation. As part of our feedback loop for MAS, the Society’s Advocacy Committee held a dialogue session on 27 June where members contributed their views on FinTech issues.

Value-added members events

In the second quarter, we kept up our momentum for member events, culminating in our Annual Forecast Dinner on 30 June at the SGX Auditorium. Our panel for the evening featured experts in investment strategies spanning from macro to multi-asset.

One of our speakers, Pranay Gupta, CFA, Head of Multi-Asset Strategies at Fullerton Fund Management, recently launched a book — *Multi-Asset Investing: A Practitioner’s Framework*. We congratulate him on this groundbreaking work that addresses shortfalls in our traditional investing process. In conjunction with the book launch, our Professional Development Committee organized a lunch time talk on 30 May, where Mr Gupta provided insights into methods of improving the efficient frontier of one’s portfolio.

On a lighter note, members had a good physical workout at the JP Morgan run on 28 April organized by our Networking Committee. The CFA Singapore team carried on into the evening with dinner and drinks at Boulevard @ Craftbeer.

A big thank you to our committee volunteers who work very hard to organize these exciting and value-added events!

Jan Richards, CFA
CFA Singapore President
portfolio construction for Focused Growth

Simon Ng, CFA
Daryl Liew, CFA
Benjamin Goh, CFA
Praveen Jagwani, CFA

Multi-Asset investing
Pranay Gupta, CFA

investing in Renewables
Jay Mariyappan, PhD

Turning Point
Joerg Kuehn
Louise Tagliante

annual Forecast Dinner
David Wong
Kay Van-Petersen
Michael Thompson, CFA
Arun Kelshiker, CFA, MBA

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Is Brexit a structural game changer?

David Wong: It is very important to put a macro event in perspective. A global poll of senior portfolio managers across our firm concluded that Brexit does not have the impact of the top 5 events that have affected global markets in the past 5 years. We would probably consider the global sovereign debt crisis in 2011 a much more severe macro event.

We concede that Brexit could cut growth a little. But we already have had 2 years of earnings recession in different equity markets across the world. At the beginning of this year, we started to see earnings revisions upward for the first time since 2014. From a bottom-up perspective, we think that Brexit will not have a material negative impact on the companies that we look at.

Even though we do not think that earnings growth is going to be stellar this year, we are expecting 2% to 3% in earnings growth for the US. We haven’t seen that for a while and we think that will be a positive surprise to the market.

To put the valuation of equities in context, one of things equity investors like to say is: What is the 10-year Treasury yield today? 1.5%. What is the dividend yield of the S&P500? 2.2%. People prefer fixed income because they are willing to pay a price for lower volatility.

Not everything is about secular growth. It is also about taking market share — something new replacing something old. In the world, there are always ideas for us to invest in that are benefiting from secular growth trends.

For example, just outside this auditorium, there is a dental clinic selling Invisalign, a system for correcting misalignment of teeth. The company behind this product, Align Technology, has very strong patent protection. At 35x PE, this company looks expensive, but it has tripled its EPS in the last 3 years. We are huge fans of this company and see a huge runway for it ahead.
KVP has a decade of experience in the financial markets with over six years’ experience as a trader and analyst in finding opportunities under long/short, fundamental value, as well as event-driven and special situation strategies. His background spans multiple asset classes, products and business areas within finance, from PE to ECM, FX Trading to FI Research.

Prior to joining SAXO, he was Director in the proprietary division of BTG Pactual Asia, where he was primarily responsible for setting up the Asian Equities platform; sourcing, analysis and running of investment ideas; overseeing USD 200 million of the bank’s Asian exposure; as well as monitoring key macro and political situations in the region.

How much would you allocate into alternatives?

Arun Kelshiker: Traditionally, people would allocate a certain percentage (such as 20%) into hedge funds and alternatives. In the past, alternatives used to be quite illiquid. Nowadays, we have liquid alternatives, which offers a way to expose our portfolio to alternatives and have the option to liquidate it quickly. This means that instead of using alternatives as a tool of diversification, I can use it as a substitute for equities.

The correlation of liquid alternatives with traditional asset classes would be quite high, but if I believe equities are going to have a downside, I can use liquid alternatives to expand the opportunity set of my portfolio by having an equities long short fund instead of an equities long fund.

When we see dollar strength, what should we expect in emerging markets?

Kay Van-Petersen: With the exception of spikes in some frontier markets, I think the US market is going to be stronger than elsewhere. I think emerging markets are facing a multi-year bear. (Having said that, there are some markets like India and the Philippines that are not as exposed to what happens internationally.) I expect the US dollar to be stronger relative to other currencies. I also expect a slowdown in global growth with recession risks. These trends do not help emerging markets as an asset class.

I believe we should look at assets that on one hand are not overly exposed to global growth and on the other hand have strong structural growth drivers. The equity prices of these companies may not do well for now, but they have strong earnings growth momentum.
David Wong: One’s short term view of emerging markets as an asset class depends a lot on his view of how the USD will perform. Many people think of emerging markets as having been a basket case over the past 3 years because they look at it in terms of USD. From a USD perspective, emerging markets earnings have fallen 40% since 2012. However, that is mainly due to the appreciation of the USD over emerging markets’ currencies.

Most people will agree that China’s commodities’ super cycle is over and we will no longer see the booms that we saw after 2003.

If you agree with me that the USD is around fair value today, you will also agree that the earnings growth in emerging markets will become more visible. The consumption market in emerging markets is growing way faster than in developed markets. The household income growth across emerging markets is as high as 5% to 10% a year, and that is a strong driver for increased secular consumption.

While we do not think there is any more investment opportunity in Chinese resources, we do believe there is opportunity in China’s consumer market. This is not limited to luxury goods, but also includes basic consumer goods as well as services such as education.

Arun Kelshiker: Emerging markets funds are up 8.5% year-to-date. Brazil is up 41%. Russia is up 19.5%. MSCIThailand is up 14.9%. Argentina is up 17%.

I think the way to look at it is to use differentials: Differentials between emerging markets and differentials between developed markets. Either you look at it on a GDP basis or on earnings growth. When that differential becomes more pronounced, one way to trade is to expect mean reversion to take place at some point in time.

How long do you think the current bubble in the government bond market will hold up?

Michael Thompson: I would not necessarily agree with the notion there is a bubble in government bonds. If we think about where the neutral rate of interest is likely to be in the future, we know it is going to be lower than in previous hiking cycles.

We are in a world of lower growth and higher debt. As a result, interest rates are likely to be lower. In an environment where you have almost US$12 trillion of government bonds with negative yields, Treasuries priced at 1.5% are not in a bubble nor are broader fixed income markets. On that principle, I would challenge an analysis based on pre-crisis levels neutral rates of interest versus post crisis levels neutral rates of interest.

How sustainable is a global environment of negative interest rates?

David Wong: What both the Bank of Japan and the European Central Bank did earlier this year in furthering their negative interest rate policy was meant to push people off the risk spectrum. From our perspective, this move was a failure. We have been seeing limits to some negative interest rate policies. There are quantitative easing policies and unconventional policies that can still work, but we believe that negative interest rate policies have a negative impact on interest margins.

The loss in interest income was much as a quarter of the region’s market cap, both in Japan and in the Eurozone. We don’t see how negative interest rates help in stimulating inflation.

Michael Thompson, CFA
Executive Vice President
Head of Singapore & Head of Global Wealth Management Asia (ex Japan)
PIMCO

Mr Thompson heads a group that focuses on building distribution relationships with financial institutions that outsource to third party managers on the basis of open, guided or managed architecture. Previously, Mr. Thompson was head of European institutional remarketing and based in PIMCO’s London office.

Prior to joining PIMCO in 2006, he was responsible for UK business development and marketing at Western Asset Management Company. He has 21 years of investment experience and holds an undergraduate degree in economics and law from the University of Natal in South Africa.
What will be the impact of a Trump win on the US or in Asia?

David Wong: I think there is a relationship between the populist politics that we are seeing and the fact that interest rates are at an all-time low. When the man in the street does not earn a return on his bank deposit, there is obviously a wealth disparity and we have seen this across the world in both emerging and developed markets. This has fuelled a lot of unhappiness and populist politics across the world.

This being said, we think Trump catapulting to the White House still seems unlikely given that the Democratic Party does represent more of the less enfranchised people in the US. Certainly, Trump has not made friends amongst minority lawyers. The fundamental conservatism of the two-party political system in the US and a Republican congress that will be quite hostile to a Trump presidency are not in his favour.

Is the Fed rate hike off the table post Brexit? What’s the probability of a global recession in the next 2 years?

Michael Thompson: The probability of a near term rate hike in the US is lower with Brexit. Tighter global financial conditions are likely to push out markets expectations for future hikes.

If global financial conditions do not tighten as much as the market currently expects, there is the possibility of a US rate hike later this year. Though the probability is lower with Brexit, it is still there.

We must remember that even with a Fed funds rate hike of 25 basis points, interest rates will still be extremely low.

I would say it is highly unlikely that we would get a global recession as a result of Brexit. The UK contributes 2% to global GDP. Europe contributes 16%. Assuming GDP growth in the UK slows down from 1.5% currently to zero due to lower investments, muted business confidence and tighter financial conditions, we may get a lower trajectory for global GDP, but a recession is unlikely.
It is well established that asset allocation contributes most of the returns of a portfolio. Some 90% of variation in total plan return was explained by asset allocation (Brinson, Hood and Beebower, 1986). The remainder comes from stock selection, bond selection or manager selection.

Yet the investment industry employs far more stock and bond analysts than asset allocation specialists, and there are far more investment products from fund management firms focusing on security selection relative to a market benchmark, rather than asset allocation. Even pension funds spend the majority of their resources on selecting relative return active managers, rather than allocation.

The industry only has a disproportionately small group of people involved in allocation, when compared to its importance to a portfolio.

**Inefficient diversification**

A typical allocation strategy is 60% to equity and 40% to fixed income. Allocation is also usually done over 8 major asset classes:

- The 4 equity regions of US, Europe, Asia and Japan.
- The 3 fixed income categories of sovereigns, investment grade and high yield bonds.
- A commodity basket.

The traditional investment approach believes that investing in multiple asset classes lowers risk through a diversified portfolio.

However, data from 2000 to 2012 showed the correlation of returns between equities in the US, Europe and Asia Pacific region to be as high as 80% to 90%. Correlation between corporate and sovereign grade bonds was also as high as 90% to 95% when the credit beta is removed.

"Returns depend not so much on whether you have invested in a US index, an European index or an Asian index but whether you’ve decided to invest in equities," Pranay Gupta, CFA, Head of Multi-Asset Strategies at Fullerton Fund Management.

Despite the accepted fact that a substantial part of the risk and return of any portfolio comes from asset allocation, we find today that the majority of investment professionals worldwide are focused on security selection.

**Multi-Asset Investing: A Practitioner’s Framework** questions the basic structure of today’s investment industry and outlined fresh methods of reducing risk and increasing diversification that address shortfalls of the traditional investment process.

Its author, the award winning fund manager Pranay Gupta, CFA has been developing multi-asset investing methodologies since the time he worked for APG, the Dutch government pension fund. Over the last 15 years, his multi-asset toolkit has continued to expand and prove useful.

He addressed CFA members at a Professional Development talk on 30 May. All charts in this article come from Mr Gupta’s book.
Harnessing equity risk premium

A second basic belief is that investing in equities harnesses a long-run equity risk premium and is a hedge against inflation. When asset owners create policy portfolios, a 3-year horizon is commonly used.

Mr Gupta has found that while returns for 5-year and 10-year rolling periods over the course of 100 years have generally been above zero, the return for a 3-year rolling period is much more volatile, and can range from a negative zone in excess of 10% to a positive of more than 20%.

“From a practical standpoint, if we have an absolute return target, there is nothing like the long term horizon. In reality, institutions are people with a much shorter investment horizon that could be quarterly or annual. No one waits 30 years to believe if your investment was the right thing to do,” he said.

Intra-horizon drawdown risk

“Assume you hold the stock in Chart 1 and expect to get a 5% return over 24 months. If the stock goes down by 20% after 9 months, chances are you will sell the stock even if you were perfectly right that the stock would have gained 5% if you had held it for 2 years. The problem is the stock has touched your threshold of maximum loss.

“We know that markets can go up and down. But when you lose money in a crisis, bosses and government bodies will tell you that’s a risk that they cannot take.

“We know individuals who patronise casinos, when they touch their threshold of loss, walk out and never regain their money again. And that’s what we do in the investment space. We don’t measure this risk of breaching tolerable risk threshold that leads to investment closure.

“Even though a longer investment horizon increases the chance of reaching your investment objective, the probability of an intra-horizon drawdown also goes up. For example, the probability that the STI falls 10% tomorrow is quite low. But the probability of the STI falling 10% over the next 5 years is much higher. As we extend the time horizon from one day to 5 years, the chance of a 10% loss goes up dramatically.

“But we don’t measure, monitor or manage this intra-horizon risk in our portfolios. We don’t have the tools to do it. And this leads to the scenario that portfolios are normally not aligned with the risk tolerance thresholds of our clients.

“When we are constructing a client portfolio, we always ask the client: What is your target return? But the next question should be: How much money are you prepared to lose at any given time?

“If the committee says, I can only lose 2%, that translates into the cap on the horizon that the investment is allowed to have. You can only have a long term horizon if you truly do not need that money during your intended investment period,” he said.

Mr Gupta proposed using a tail-risk measure that comprises of intra-horizon risk and end-of-horizon risk as this should lead to a portfolio with fewer unexpected outcomes.
Mr Gupta has 25 years of experience in Europe, UK, US and Asia, managing portfolios in all global liquid asset classes. As Chief Investment Officer for ING Investment Management and Lombard Odier in Asia, he was responsible for overseeing US$85bn in institutional, retail and insurance assets with over 250 investment professionals across 11 countries at ING, and for the management of US$8bn of multi-asset absolute return portfolios at LOIM.

While at Lombard Odier, Mr Gupta was awarded as the Best Discretionary Asset Manager in Asia for two consecutive years.

Prior to this, he helped manage US$55bn in multi-asset hedge fund investments in London, and a US$22bn multi-strategy fund in Amsterdam. He has also been the Chief Investment Strategist for Societe Generale, Asia and Head of Quantitative Research for JP Morgan Investment Management, New York.

Mr Gupta’s areas of experience and interest include asset allocation, investment strategy and risk management. A detailed discussion of quantitative approaches to multi-asset investing can be found in his book, *Multi-Asset Investing: A Practitioner’s Framework*. 

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**Alpha-beta separation not a must**

“The capital asset pricing model segmented investment returns into alpha and beta. Today, it is the industry basis for passive management and active management.

“Ten years ago, if a fund manager put money into China, and China was not in the benchmark, he was considered really smart, and the return was counted as alpha. Today China is in the benchmark, so if you invest in China, it is beta. Similarly, 50 years ago if you had figured out that low P/E stocks generally outperform the market, this was considered alpha. Today if you follow this strategy, you are given a Value benchmark, and it is considered beta.

“As time goes by, all these factors that we thought were alpha, as they became available in investable form, became beta. Risks which were non-commoditised in the past (like alpha) can be now be commoditised to become available in liquid, cheap forms (like beta). This can be expressed using the arbitrage pricing theory framework, which says that return on capital is a function of the risk that you take.

“In the US, we consider market beta to be the return to the S&P500 index, and size, value and momentum are considered systematic risk factors. However, we cannot consider this to be universally true across all global markets. If you asked somebody, ‘Why do you invest in Asia or Emerging Markets’, they will tell you, it is because of high economic growth, outsourcing, domestic demand or population. These turn out to be the systematic factors in Asia, and there are no universal systematic and unsystematic risk factors across the world.

**Redefining risk premium structure**

“When we talk about equity risk, it is equity return over risk free rate. When we talk about credit risk, it is credit spread over risk free rate, and so on. But from an allocation standpoint, this does not make sense because what you would like to have are buckets which are not correlated to each other. We would like to have factors that are as distinct as possible from each other, but here they overlap.

“My colleagues and I defined equity risk premium as that which is above credit risk premium and credit risk premium as that which is above the sovereign risk premium, which in turn is above the risk free rate. We then separated out equity and credit exposures into buckets that are relatively uncorrelated to each other.

“The first thing we did was: Instead of changing allocation structure, we looked at what managers we had and analysed what were the risk factors that each of them provided exposure for. Once we have done
that, we started to create strategies across diversified structures that gave us the exposures that we wanted.

“After that, our allocation no longer needed to be between equities, bonds and alternatives. After removing the overlap between asset classes, we can now allocate such that the risk exposures are what we want to have and that can be in any direction. It can be geographic, it can be factor, it can be risk-based, or any concept. That is when you are allocating risk on a product basis and the product is fulfilling its investment objective," he said.

Mr Gupta believes portfolio diversification through exposure to multiple forms of beta and absolute return strategy will become much more widespread in the decade to come.

**Better efficient frontier**

“Traditional portfolio theory teaches us there is an efficient frontier when you plot risk versus return. If we have a client with a high return requirement, we moved him along the frontier to where there is high return and high risk. If he is more conservative, we bring him along the frontier to where there is lower risk and lower return.”

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*Evolution of risk and return in a multi-alpha fund, as number of alpha sources (N) moved from 1 to infinity.*
“What we found was that strategy diversification led to much more stable returns. For example, if we had $100 million, breaking it up into 5 tranches before calibrating any asset allocation strategy improved our risk-return ratio. When we went from one allocation strategy to five, efficient frontiers actually moved up. That meant we could maintain our return target at much lower risk. Or, we could keep the same risk at much greater return.

“A single allocation means a single time horizon of either one year or 3 years. In the manager space, we have short-term fund managers, medium term fund managers and long term fund managers. When any institution, individual or private bank places his money with a value manager, a growth manager, or a Europe manager, that is a single allocation. That is not efficient allocation strategy.

“In the last one or two decade, we have innovated ways to create alpha. If we spent more resources in allocation, we will also be able to innovate different ways to do allocation,” he said.

“Multi-asset investing is a cornerstone to building a great investment portfolio.

“Pranay’s exciting new book takes a lead in sharing innovative best practices used during his successful career in money management.”

- Arun Kelshiker, CFA, MBA (left)
CFA Singapore Professional Development Committee Chair
Investing in Renewables

A tipping point for clean energy?

Sindicatum Renewable Energy Company is a developer, owner and operator of clean energy projects in key markets that are short of electricity. It was founded in 2006 in the UK and relocated its HQ to Singapore 2 years later to tap into the huge opportunities of investing in renewable energy in Asia.

The Group currently operates about 20 renewable energy projects in China, India, Indonesia, Thailand and the Philippines, as well as the US. It focuses on bagasse (active agricultural waste), waste-to-energy and solar power.

At a Professional Development talk on 12 May, its Managing Director, Dr Jay Mariyappan, addressed CFA members about the huge investing potential offered by renewables.

“Electrical outages are common in many Southeast Asian countries, unlike in Singapore, where we always have power supply. There are also people who do not even have access to the modern electricity utilities and still use alternative fuels such as kerosene, diesel and wood fuel.

“Demand for electricity is expected to increase significantly over the next 10 to 20 years as electricity utility systems improve and infrastructure reaches more people,” said Dr Jay Mariyappan, Managing Director of Sindicatum Renewable Energy Company.

For example, about 20% of the Indonesian population still use alternative fuels. To provide these people with proper access to electricity, Indonesia wants to build capacity for 25 to 35 gigawatts of electrical power in the next 5 years.

Asia's abundance of renewable energy resources has translated into great opportunity for building new renewable energy capacity in the region. These resources include municipal waste, geothermal power, wind (onshore / offshore), solar power (ground mounted / roof top / concentrated), agricultural waste (from sugar, rice, palm oil), hydropower, biogas from wastewater, energy crops and tidal waves.

Over the past 7 years, investment in renewable power capacity has greatly exceeded that for fossil fuel. In 2015, a record US$367 billion was invested in clean energy. The greater part of this investment went into the Asia Pacific region, especially China.

“I believe renewable energy plants will be the main type of energy plants that will be built over the next 10 to 20 years. The development of Asia's renewable energy sector is just beginning,” he said.
Global push for clean energy

“Internationally, there are many drivers for the development of the renewable energy sector,” he said.

Clean energy investment is expected to be boosted by developments in financial markets such as emissions trading and green bonds.

Emissions trading is a government-mandated, market-based approach to controlling pollution by providing economic incentives for achieving reductions in the emissions of pollutants.

China, which targets to derive 15% of its energy from non-fossil fuels by 2020, and 20% by 2025, is launching a nationwide carbon emissions trading scheme next year. It is working with the UK to develop a carbon cap-and-trade system that will be compatible with the European Union’s Emission Trading System, currently the world’s largest carbon market.

“China’s launch of its emissions trading and tax scheme will affect 4 billion people by next year. More of such schemes are likely to be developed in other parts of Asia and the rest of the world with global linkage,” he said.

Green bonds are a new financing method that have grown rapidly over the past few years. New issuance of green bonds is expected to amount to as much as US$80 billion this year, according to HSBC. And much of this is debt financing for clean energy.

More than 170 countries signed the Paris Agreement at a climate conference on 22 April 2016. The treaty outlined a global action plan to avoid dangerous climate change by limiting global warming to between 1.5°C and 2°C.

“We expect the Paris Agreement to come into force prior to 2020.

“The commitments that countries have made to reduce greenhouse gas emissions currently fall short of the treaty target.

“More pledges and commitments will be needed if the target is to be met, and this means financing has to be ramped up,” he said.

Enabling Technologies

One reason for the sector’s rapid development is the advancement of technology for wind and solar power. Great strides have also been made in enabling technologies such as smart grids that tap into different energy sources. This has enabled intermittent power sources supply such as wind farms to be integrated into the power grid.

Enabling technologies also help with energy storage, increasing performance at much lower costs. The cost of wind power has fallen by 50% since 2009 while that for solar power has fallen by 80% since 2008.

“In recent times, we have seen record low prices for the construction of renewable energy generation. In May, at the second tender for a solar power plant in Dubai, the winning bid was a record low of 2.6 US cents per kilowatt-hour, much lower than the cost of any fossil fuel generation.
“In Morocco, a wind power plant was recently commissioned for construction at 3 US cents per kilowatt-hour. In Mexico, we saw a large solar power plant commissioned for construction at 3.6 US cents per kilowatt-hour.

“Including subsidies, the price of electricity in Asia can be as low as 3 to 4 US cents per kilowatt-hour. On the other hand, it is as high as 25 US cents in the Philippines. This disparity translates into opportunity for renewable energy investment.

“Renewable energy is often perceived as a costly option. What many people do not realize is that subsidies on the production of fossil fuel and nuclear power have been far greater than on renewable energy.

“Comparing costs on a level playing field that is without subsidy, renewable energy has actually become very competitive when compared with fossil fuels.

“We are building our second solar power plant in the Philippines and competing by undercutting retail power prices. This shows that we can compete without any government subsidy,” he said.

**Return considerations**

Investors in renewable energy projects have ranged from venture capitalists, private equity, infrastructure funds to pension funds, mezzanine debt financiers and senior debt financiers. These diverse players have different investment horizons, expected returns and risk appetites. But they all have the following considerations: Is the electricity tariff at a fixed rate? Can we sell electricity on the spot market? What kind of risk would that entail? What is our cost of capital? What is our exit strategy?

The operational cost for a renewable energy project is much lower than for offshore and marine oil exploration because there is no need to pay for fuel.

On the other hand, the cost of capital investment is usually relatively high, ranging from US$1.5 million to US$4 million per megawatt-hour.

Other costs have varied according to region. In India, for example, where there are many local manufacturers of solar panel modules, solar power equipment does not need to be imported from China and is therefore cheaper. Public land is usually allocated via tender at a very low cost. Labour cost is also quite cheap there.

In Dubai, low tender prices for a solar power plant are possible because sovereign wealth funds may be financing the project at 5% to 6% a year, land is given free and the authorities take care of grid connection.

“The cost of grid connection can be significant. We had a few projects in Thailand where we had to build 15 km of grid lines and that had added significant cost,” said Dr Mariyappan.

Grid connection is a challenge in Asia because the public utility company usually owns the majority of power plants and it is used to connecting to large power plants (500 megawatts) rather than small ones (20 megawatts).

“The utility company is usually not keen to connect to a small power plant that supplies electricity only when the sun shines. Europe faced similar problems until strong government regulation overcame this,” he said.

Some countries, such as Thailand, India and the Philippines, overcame this problem by providing developers of renewable energy projects with a guarantee of grid connection.
Risk considerations

The value of a renewable energy project changes as it goes through the various stages of its life cycle. Like most construction projects in developing nations, there are risks associated with delays to permits and issues with land use rights. After construction is completed, you have less risk, but your off-taker (utility company) may delay payment.

Other risk considerations include the credit worthiness of the sponsor or developer, the technology behind the project, fuel supply and environmental impact. Many investors in clean energy are concerned about local environmental impact and social impact.

“One way to mitigate risk is to transfer certain processes to professionals until you are ready for the risk profile of your investment project.

“We reduced risk for our solar power project in the Philippines by paying an engineering, procurement and construction contractor.

“Few companies invest right from project inception like us. Our business model is to accept the full project risk, which includes constructing the facilities and operating it for its entire life term.

“We usually use local debt financing at the project level. We may bring in mezzanine financing at the company level. We also provide equity,” he said.

Dr Mariyappan has over 15 years of financial, technical and managerial experience in energy investments, operations and emissions trading in Asia, Europe, Africa, North & Latin America. He has held a number of commercial roles including utility planning for a large power/utility company, clean energy investments and carbon finance at a large brokerage house, project development and investment advisory at an engineering consultancy.

He has been with Sindicatum since 2008, where he manages operations and business development in Southeast Asia.

He has also worked in advisory and consulting roles to the public sector and multilaterals including the UK Government, The UK’s Carbon Trust and the World Bank.

Dr Mariyappan’s PhD is in Decentralised Energy Systems from Imperial College, London. He also has an Executive MBA from Kellogg School of Management (Northwestern) and Hong Kong Business School (HKUST).
At the official launch of the CFA Singapore Mentorship Programme, mentors and mentees had their first one-to-one mentoring session. Leadership development coach Joerg Kuehn spoke about focusing on what really matters. This was followed by a one-to-one sharing session facilitated by Programme Director Louise Tagliante.

The event was held at UBS Auditorium on 5 April 2016 and organized by the Society’s Career Development Committee.

Thirty CFA members were matched with senior members who have at least 8 years of senior leadership experience in the financial services industry. These 60 participants began the mentoring programme that evening with a personality test. The 6-month programme included one-to-one mentoring sessions, as well as networking and review sessions.

One challenge that a successful mentoring programme deals with is the building of rapport and trust between mentor and mentee. At the launch of the CFA Singapore Mentorship Programme, leadership development coach Joerg Kuehn set the tone for an evening of openness between mentors and mentees by recounting major turning points in his personal life.

The first was the fall of the Berlin Wall. This historic development took him from a socialist regime in East Germany to a comfortable life in modern Singapore. Then, a 800-km pilgrimage in Spain on the Camino de Santiago inspired him to quit his well-paying job at Procter & Gamble and set up his own business.

Money doesn’t satisfy

Growing up in East Germany during its socialist years, Joerg was spared from the ills and privileges of the hyper consumerism of the capitalist west. He went through the tumultuous period marked by demonstrations that led to Germany’s reunification. His own family members participated in the demonstrations against the government when he was serving compulsory national military service (1989 to 1990).

The reunification of Germany opened the way for Joerg to achieve material wealth the capitalist way. Before the reunification, East Germans had to wait 12 years to get a car. They had the TRABANT which was valued at 10,000 - 12,000 East German Marks. When the Berlin Wall
"I was promoted. I had a great job. I made a lot of money. I bought a house. But something was missing..."

came down, nobody wanted those cars anymore. By then, two East German marks were convertible to one Deutsche Mark. During his four years at the university, Joerg drove a second hand TRABANT that he got for 250 Deutsche Marks when the car was one and a half years old.

After graduating with a degree in mechanical engineering, he got a job as a logistics manager with Air Liquide in East Germany. In 1999, he advertised his search for an overseas job in the newspaper. Wella offered him a post in Bangkok and he left Germany. When Procter and Gamble acquired Wella, Joerg relocated to Singapore. By then, he was heading the Asia Beauty & Grooming supply chain operations of one of the world’s largest fast moving consumer goods companies.

“I was promoted. I had a great job. I made a lot of money. I bought a house. Things were nice. But something was missing. I couldn’t get a finger on it until I stumbled across a book,” said Joerg.

The walk of St James

Inspired by German comedian Hape Kerkeling’s I’m Off Then, Losing and Finding Myself on the Camino de Santiago, Joerg began his pilgrim experience on the epic Camino trail across Spain.

“The pilgrimage broke Kerkeling apart and rebuilt him. That really resonated with me,” said Joerg.

It was a backpack journey far away from home where for 4 weeks, he had to walk more than 25 km per day, about the distance from Tiong Bahru to Tampines. In between lively Spanish cities and picturesque villages, he suffered from blistered feet, exhaustion and the daily monotony of facing endless pastoral farmland. Through these trials, he gleaned 4 lessons for success in life’s journey.

“The walk is more than a thousand years old. There are many pilgrims’ hostels along the way where you can take a shower and sleep in a bed for just 10 Euros a day. These hostels are where you get your Camino
Passport stamped for the record of having walked the trail. You don’t need to carry any food because you’ll have access to cooked restaurant meals every few hours. You need to carry your own water, although there are many supply stations along the way.

LESSON 1: WHAT DO WE REALLY NEED?
When Joerg packed his backpack before the journey it weighted more than 20kg. Fortunately a friend helped him to substantially cut this down, which was the first lesson he learned before even going on the walk: “Working with my friend helped me to cut down my backpack from 20kg to 10kg. It has been amazing how little we really need in our lives to be happy. Those10kg were fully sufficient for me.”

LESSON 2: KNOW YOUR DESTINATION
Joerg started to walk in France in St Jean Pied de Port and the first day took him from 200 m above sea level to 1400 m when crossing the Pyrenees.

“On the second day, I started feeling a little down, but I kept walking. To make matters worse, I shared a room with an elderly Spanish gentleman that night. He didn’t speak English and I hardly spoke any Spanish. But he told me one thing that I understood: He said, I would snore so loud that the lamps would start to sway. After that, I didn’t dare to sleep a wink.

“When I reached the third day, I started having a breakdown because I had not slept and my body was aching. I had blisters on my feet. The shoes I had bought for the walk at S$99 from Novena started to fall apart and stones were sticking through it. “I wanted to stay in bed rather than walk another 20 km. This was when I learnt my second lesson. I knew it was still 720km to go to the Cathedral in Santiago de Compostela, but also knew that every step would take me nearer to my goal.”

“A vision of the future restored my strength as I saw myself sitting in the Cathedral in Santiago and looking back to that third day.” Lesson number two tells us how to make the best of a mentorship programme. Having a mentor is more helpful if you know what you need and where you want to go.”

LESSON 3: SET A GOAL FOR EACH DAY
“A pair of good shoe inserts as well as silicon earplugs against the snoring, became critical investments. “After four or five days, things started becoming very peaceful. I had found my rhythm for the walk, and kept focusing on my goal. I realized things improved because I had a new goal for each day. At the end of each day, I sat down and thought about reaching my goal for the next day, which was 25 km to 35 km away.”

LESSON 4: NOTHING IS GOOD UNLESS YOU DO IT
“I was halfway through the journey when it started to really break me apart. Every day, I hardly saw anything
but a straight path surrounded by monotonous fields. One day in the field 10 minutes before the hostels closed, I discovered that I had lost my phone. Even though my blisters had come back, even though it meant I would have to spend a freezing night outdoors, I ran back to search for it. If I did not, the notes I had taken along the way would have been lost.

“I also got to sleep in the same room with 95 people. I had never felt so lonely with so many people. I didn’t connect with anyone. Many people woke up at 5am to be the first at the next hostel. They would walk in the dark with lamps.

“I met two pilgrims whom I walked with for some days. Then, both had to quit. One of them had an injury. I could feel their sadness when they hugged me and said: You continue. You have to walk your own way. This is when it hit me that what was inside me was the fear of failure. I was afraid that I wouldn’t be able to finish the trail.

“As Kerkeling said in his book: Everyone cries on the Camino. That happened to me as well. I couldn’t stop crying, and it was very liberating to realize that I had always been living to reach the expectations of my father, my school system or the companies I worked for. That was when I decided that I was finished with that. Now, I want to live my own life.

“At the end of a stretch of 25 km without any trees or houses, I passed by a tiny sign that said: You are very very special. When I saw that, I sat down. At that moment, I could have walked all the way back to Singapore. I realized it didn’t matter even if I walked only 2 km or 3 km the next day. I was walking for myself, and not to show anybody that I could walk 20 km to 30 km every day. It no longer mattered even if I didn’t finish the trail.

“From then, I had the trust that things would in fall place. I knew somebody would help me with my
“Every mentor is matched with a mentee from another organisation to broaden their view and to see things from a different perspective.”

blisters. Somebody did. Then, I was fine and I could keep on walking. I had reached Galicia which was in the third and final leg of the trail. The weather became pretty and my shoes held up.

“After 800 km, 26 days of walking, more than 5 meters of plaster, 20 nights in a bunk bed with limited shower facilities and 5 kg lighter, I finally reached the Cathedral. I felt that nothing could harm me anymore.

“When I returned to Singapore, I felt like Jesus. I looked like Jesus. I went back to my job with 150 emails a day. But something deep inside had changed. I now had the courage to do something about what was amiss in my life and move on. I took up a course to be trained as an executive coach and became qualified in 2014.

“Then, I left P&G and started my own company offering executive coaching and corporate training. The fourth lesson is the German saying: Es gibt nichts Gutes ausser man tut es - Nothing is good unless you do it.”

Louise Tagliante
Mentorship Programme Director
At the second public talk held in conjunction with the *Save and Invest* campaign, senior CFA members discussed the investment portfolio of Getty Goh, 38, an entrepreneur who is married with two young children.

Two of the panelists, Praveen Jagwani, CFA and Simon Ng, CFA, had been providing guidance to Mr Goh in his investment decisions. His simulated portfolio went live on 18 January with an investment sum of S$200,000.

Given his age and income profile, Mr Goh aimed for income and capital growth in his investments, and accepted the associated higher risk. He had allocated about 40% in equities, about 40% in ETFs and about 10% in REITs.

When he invested half of his funds in January, the market had just plunged and that gave him an advantage in capital growth. His equity allocation was fully invested one month later, on 18 February.

Even though opportune timing helped, Mr Jagwani emphasized that it was the investment time horizon, rather than timing, that is critical to investing success.

“Typically, a portfolio should have an investment horizon of at least one business cycle, which means 4 to 5 years,” said Mr Jagwani.

He explained: “Hoping to make money from your investments in a shorter time than that comes with a lot of risk. You can’t really time the market. All of us like the comfort of investing in something that has a good track record. However, none of us know what is going to happen to the USD in 3 months, 6 months or one year.”

“None of the investment reports issued just weeks prior to China’s devaluation of the yuan last August had predicted this event. We can get it wrong if we invest for the short term. Therefore, investing for the long term is the right thing to do.

“Our exercise to simulate investment portfolios lasts only for one year. It is a simulation of what an investment portfolio should look like over 4 to 5 years. In reality, investment decisions made are for the long term.”

This article follows on the April 2016 CFA Singapore Quarterly story on public talks by senior CFA members in conjunction with the *Save and Invest* campaign to encourage retail investors to save and invest for the future. The campaign is jointly organized by the Society, SGX and MoneySENSE.

Speakers (L-R) pictured above:
- **Praveen Jagwani, CFA**<br>CEO, UTI International, Singapore
- **Simon Ng, CFA**<br>CEO, CCB International (Singapore)
- **Benjamin Goh, CFA**<br>Senior Lecturer, Singapore Institute of Technology

Moderator
- **Daryl Liew, CFA**<br>Head of Portfolio Management (Singapore), Reyn Singapore and Co-Chair of CFA Singapore Advocacy Committee

The event was organized by the Society’s Advocacy Committee and took place at SGX Auditorium on Saturday, 16 April 2016.
Two decades ago, one business cycle usually lasted 7 to 8 years. But now we find the cycle from boom to bust happening in much shorter periods. Since we don’t know when the market will turn, dollar-cost averaging is the golden rule. We don’t know when each stock, REIT or bond will go through its ups and downs. Therefore, it is advisable to invest on a regular basis whether the market is up or down if your objective is to grow capital over the long term.

Singapore’s economy is slowing down. This region is most affected by China’s slowdown because of our trade relationships. The US economic figures are patchy, up today and down tomorrow. Europe is facing all kinds of problems.

Europe is no longer one entity. Different countries are at trajectories of their own cycles. Some countries like Germany are doing well. Some other European countries are doing poorly. Unemployment is a problem in many European blocs. In Greece and Spain, unemployment is as high as 50% among those at the prime of life (21 to 35 years of age).

The lack of jobs means that children are moving back to live with parents. There is low consumption. If people stop buying toothpaste, jeans and iPhones, overall corporate profits will come down and stock markets will come down.

We are waiting for people to get tired of the pessimism and start spending. When people start spending, companies will start expanding production, there will be more jobs and the economy will kick-start again. Whether this natural business cycle takes 3 months or 6 years is a function of what government policies have been implemented across the world.

“The world is a lot more inter-connected today than it was 10 years ago. Because we are in a global low-growth environment, interest rates are low across the world. In fact, some countries including Japan, Sweden and Switzerland, have negative interest rates.

“In Singapore, the risk-free rate is 1.4% if you invest in fixed deposits. In Europe, you lose money by keeping money in the bank. If I have €20,000 in a Swedish bank today, I wake up the next morning to find my balance has decreased. If you lived in Sweden, you will be very concerned that you are losing money every day by keeping money in the bank.

“So what kind of investment options do I have? It is to invest consistently in a broad and diversified group of assets irrespective of the business cycle. The markets will not wait for you if you are thinking of waiting until the business cycle recovers before investing. The large pension funds will recognize the signs of recovery much ahead of you or me.”
Mr Goh’s cautionary note on transaction costs

“The proportion that each asset should take up in the portfolio, whether it is 5% or 10%, depends on the entire portfolio as a whole, the amount of funds available for allocation and transaction costs for each trade.

“The portfolio simulated by Mr Getty Goh is a sizable one with an initial investment amount of S$200,000. A larger fund allows broader diversification. There are transaction costs for initial investment and for divestment at the end of the investment cycle for each asset.

“Fund size plays a part in determining whether one has 5 assets or 20 to 30 in his portfolio. Investors with a smaller fund need to be cautious about transaction costs.”

Mr Ng’s analysis of the investment rationale for Getty Goh’s portfolio allocation

“We were trying to gain exposure to factors that contribute to Singapore’s growth. We looked at the performance of companies that are a good indicator of Singapore’s economy, such as banks, telcos and industry leaders. Next, we monitored the type of news that tends to affect the market volume and stock prices in the Singapore stock market. We also chose some assets because they were able to contribute regular income to the portfolio, such as stocks with a stable dividend yield. We also considered alternative assets such as gold.

“We gave the portfolio exposure to selected geographic regions that demonstrated growth. For example, it had an exposure of 2% to the US market because corporate earnings there are relatively strong.

“This was increased to 8% when we rebalanced the portfolio by moving our 6% exposure from Europe to the US. There was a favourable turn in the US ISM manufacturing numbers and stable unemployment numbers in the US. US year-on-year retail sales growth improved from 1.9% in 4Q2015 to 2.7% 1Q2016. On the other hand, Europe’s year-on-year retail sales growth decelerated from 2% in January 2016 to 1.4% in February.

“We left the other asset allocations unchanged because there was no related detrimental news.”
“These talks are very good because the public is given an opportunity to talk to professional fund managers.”

Yong Yoon Fei
Attendee at *Save and Invest* talk

“My main portfolio construction goals are capital growth and selection of value stocks.

“I was keen to understand how fund managers think, especially managers of pension and insurance funds, because of the large size of these funds.

“The panelist sharing provided insights into how fund managers think about asset allocation.

I believe knowing how they think is helpful when I try to stay ahead of the market.”

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“The panelists are very well-qualified.”

Leung Ming
Attendee at *Save and Invest* talk

“They answered questions from the floor very well. I found their approach of catering portfolio construction to investors with different risk appetites interesting.

“They showed the public that it is possible to generate decent returns even though the investing environment is difficult.

“One takeaway for me was the importance of staying invested, looking for opportunities, and not to put all your eggs in one basket at the same time. The sharing gave me insight into how to better plan my personal investments.”
PROFESSIONAL DEVELOPMENT

What Could Blow Up in Your Portfolio (16 June)
Talk by Raj Manghani, CFA, Managing Director, Portfolio and Risk Analytics for Asia Pacific, MSCI (right). With him is Victor Ong, CFA, Co-Chair of Professional Development Committee

The Checklist - 10 steps for Advanced Risk and Portfolio Management® (3 May)
Webinar by Attilio Meucci, Founder, Advanced Risk and Portfolio Management

Succession Challenges for Asian Family Businesses (28 April)
Talk by Professor Kasper Nielsen, Academic Director, HKUST-NYU Stern MS in Global Finance

The Science of Motivation (13 April)
Talk by Adrian Chong, Principal Consultant, EREVNA Leadership

Are you a Great Equity Research Analyst? Self-assess with GAMMA PITM (23 June)
Talk by James Valentine, CFA

Multi-Asset Investing presentation by Pranay Gupta, CFA (30 May)
Q&A session with audience

Lipper Alpha Insights - Outlook for Markets in Factor Performance & the Attack on the Active (9 May)
Talk by Dr Stephen Malinak (above) and Robert Jenkins

Professional Development
Advocacy

Blockchain - Mechanics and Potential (26 May)
Talk by Sviatoslav Rosov, PhD, CFA, Capital Markets Analyst, CFA Institute

Career Development

CFA Singapore Mentorship Programme: Mentor Skills Development Programme (5 May)

CFA Singapore Mentorship Programme: Myers-Briggs Type Indicator Workshop (16 May)
Putting Investors First - Non-profit Organisations’ Perspective (25 May)
L-R: Joachim Toh, CFA (Deputy CIO, NUS - Investment Office)
Edna Leong (Deputy Director, People Search, Centre for Non-Profit Leadership)
V Maheantharan (Director, Institute for Financial Literacy)
Dr Tony Tan, DBA, CFA (Head, Standards and Advocacy Division - Asia-Pacific, CFA Institute)

Networking at Boulevard Craftbeer after the JP Morgan Corporate Challenge (28 April)

Runners representing CFA Singapore at the JP Morgan Corporate Challenge (28 April)

Networking Drinks - Cocktail Appreciation (23 May)

The TrackRecord Trend Talk Series @ Paulaner Singapore Clarke Quay (20 June)
L-R: Leng Hoe Lon, CFA, Founder, TrackRecord
David Dredge, CIO, Fortress Investment Group
Seow Hock Hin, CFA, Networking Committee Chair for CFA Singapore
Phan Vee Leung, CFA, Founder, TrackRecord
Francis Er, Executive Director, CFA Singapore
## Upcoming events

<table>
<thead>
<tr>
<th>August 12</th>
<th>Business Valuation Workshop</th>
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<tbody>
<tr>
<td></td>
<td>Trainer: Ong Woon Pheng, CFA</td>
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<tr>
<td></td>
<td>Eligible for FTS &amp; Skills Future Credit</td>
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<td>Eligible for 7 CE hours and 7 CPD hours</td>
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<thead>
<tr>
<th>August 31 &amp; 1 September</th>
<th>Masterclass on Venture Capital &amp; Start-Ups</th>
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<tr>
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<td>Trainer: Arvind P. Mathur, CFA</td>
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<td>Eligible for FTS &amp; Skills Future Credit</td>
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<td>Eligible for 14 CE hours and 14 CPD hours</td>
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<tr>
<th>September 9</th>
<th>Business Finance Mandarin Workshop</th>
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<tr>
<td></td>
<td>Analysis of Finance Report in Mandarin (Intermediate)</td>
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<td></td>
<td>Trainer: Henry Wang Xin Bin, CFA</td>
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<td>Eligible for 7 CE hours</td>
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<tr>
<th>September 15</th>
<th>Systemic Risk and the Investment Professional (live streaming)</th>
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<td>Speaker: Robert W. Jenkins, FSIF</td>
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<tr>
<th>September 21 to 23</th>
<th>Fixed Income Portfolio Management Series</th>
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<tr>
<td></td>
<td>Module 1: Fundamental of Bonds, Yield Curves and Interest Rate Risk</td>
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<td>Module 2: Fixed Income Portfolio Construction and Rebalancing</td>
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<td>Module 3: Credit Risk, Options, Yield Enhancement and other Advanced Topics</td>
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<td>Trainer: Tariq Dennision</td>
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<td>Eligible for FTS &amp; Skills Future Credit</td>
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<td>Eligible for 7 CE hours and 7 CPD hours per module</td>
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<tr>
<th>October 5 &amp; 6</th>
<th>Masterclass: Excellence in Private Equity &amp; Deal Structuring</th>
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<tr>
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<td>Trainer: Arvind P. Mathur, CFA</td>
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<td>Eligible for 14 CE hours</td>
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<tr>
<th>October 6</th>
<th>Fintech disruption in the Financial Industry and its impact on Careers</th>
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<td></td>
<td>Venue: UBS Singapore, Raffles Auditorium</td>
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Eligible for 7 CE hours and 7 CPD hours per module.
# Upcoming events

<table>
<thead>
<tr>
<th>Executive Education Programmes</th>
<th>October</th>
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| **Investment Banking**  
*(IPO, Capital Structure, M&A)* | 17 to 19 |
| Trainer: Prof. Roy Ling  
Eligible for 21 CE hours | |

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<tr>
<th>Professional Development</th>
<th>October</th>
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<tr>
<td><strong>More Money Than Sense</strong></td>
<td>20</td>
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<tr>
<td>Speaker: Professor Russell Napier</td>
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<tr>
<th>Executive Education Programmes</th>
<th>October</th>
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| **Advanced Financial Analysis Series**  
Module 1: Advanced Financial Analysis Series – Core Model  
Module 2: Corporate Valuation Methodologies & Valuation Modelling  
Module 3: VC Investing: Private Company Valuation & Participating Preferred | 24 to 26 |
| Trainer: Hamilton Lin, CFA  
Eligible for FTS & Skills Future Credit  
Eligible for 7 CE hours and 7 CPD hours per module | |

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<tr>
<th>Executive Education Programmes</th>
<th>November</th>
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<tr>
<td><strong>Investment Analytics &amp; Data Visualization with “R”</strong></td>
<td>3 &amp; 4</td>
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| Trainer: Mark C. Hoogendijk, CFA  
Eligible for 14 CE hours | |

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<tr>
<th>Professional Development</th>
<th>November</th>
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| **CFA Singapore Investment Conference**  
Venue: SGX Auditorium | 4 |

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<tr>
<th>Executive Education Programmes</th>
<th>November</th>
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<tr>
<td><strong>Asia Real Estate Investment and Finance Workshop</strong></td>
<td>7 &amp; 8</td>
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| Trainer: Prof. Roy Ling  
Eligible for FTS & Skills Future Credit  
Eligible for 14 CE hours and 14 CD hours | |

*All events listed are subject to change without prior notice. Email us at events@cfasingapore.org for more details or visit our website at www.cfasingapore.org for registration*
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Simon Ng, CFA

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