



LONG ONLY ABSOLUTE RETURN INVESTING IN ASIA

Prusik Asia Fund

Quarterly Investment Report
30 June 2016

FOR PROFESSIONAL INVESTORS ONLY

PAF Quarterly June 2016

Over the quarter the Prusik Asia Fund rose 0.8% versus the index rise of 0.6%.

It was a tumultuous end to the quarter with the Brexit vote coming at the end of June. We have very little exposure to the UK in the portfolio, or even to Europe, as the vast majority of the portfolio is focused on the Asian consumer, international tech trends and regional drivers. One exception is **Treasury Wine Estates**, the Australian based global exporter of wines. **Treasury Wine Estates** derives 13% of its sales from the UK, although less of its profits. More importantly, the company's key future growth driver is China. Post Brexit, we have reduced our weighting in the stock to 2% as a matter of caution, but in reality we would not expect the UK to have a material impact to the company's long term future earnings growth.

2Q Review

What Did Well in 2Q16?

Gold: 5.8% average weighting in 2Q16

- Our gold theme saw very strong performance in the quarter.
- The fund's exposure to gold is via **Newcrest Mining**, the highest quality Australian gold miner.
- The gold price is up nearly 30% YTD as investors look for safe havens, especially post Brexit.
- The stock is also benefitting from an operational turnaround post senior management changes.

Vietnam: 23.5% average weighting in 2Q16

- This long standing theme, held since end 2011, continues to generate superior returns.
- Our investments are diversified across blue chip company's e.g. dairy products, jewellery and financials.
- Strong earnings growth and the rising likelihood of FDI caps being removed is driving share prices up.

Virtual Reality 2.2% average weighting in 2Q16

- Virtual reality trailblazer, **HTC** of Taiwan, performed well recently post positive news for its handsets unit.
- The market opportunity for virtual reality remains hugely underestimated.
- **HTC** is the only pure play stock in Asia on this game-changing theme.

What Did Not Do Well in 2Q16?

Clean Energy/ EVs 8.0% average weighting in 2Q16

- This new theme comprises makers of electric vehicle (EV) batteries, solar and electric buses.
- The long term market opportunities in EV's and solar requires a long term investment horizon and patience.
- Near term concerns regarding China's approved EV battery makers list have been weighing on **LG Chem**.
- Valuations are compelling with the average P/E for theme just 13.1x and the median P/E just 11.7x.

Smart Textiles: 6.0% average weighting in 2Q16

- This key theme for 2015 was fully exited in 2Q16.
- Overall, the theme was a positive contributor to NAV.
- We exited the theme owing to valuations being too rich to withstand profit margin and inventory concerns.

Data: 3.3% average weighting in 2Q16

- This new theme comprises the leading Indian telecoms tower operator, **Bharti Infratel**.
- **Infratel** was weak in the quarter as market digests concerns about contract renewal rates.
- The long term attractions are clear: India's data users are set to increase from 130m to 500m in 5 years.
- Infratel, as #1 tower company with very strong FCF generation, is the best way to play this theme.

Outlook

Looking into the future, there are catalysts coming which we think could turn the fortunes of Asia, especially Hong Kong and China. Firstly, we expect imminently the announcement of the second tranche of the Hong Kong - China Stock Connect programme. The first round, announced in April 2014 and launched in November of the same year, acted as a catalyst for a 25% return for the Hong Kong index between April 2014 and mid June 2015, and a 163% return for the Shanghai index over the same period. Any rebound in the China A-share market would bode very well for our Chinese insurance holdings, particularly in light of their now rock bottom valuations. **China Taiping**, for example, is currently on just 0.45x price to embedded value (more on this below).

Secondly, we notice that some respected quantitative analysis shows very early signs that China's ROE is bottoming. ROEs in China have fallen steadily for the past 5 years, albeit with the occasional rally. The recent few months show a flattening of the trend and the ex-financials, ex-energy ROE has definitely turned. A meaningful improvement in ROEs in China could prove to be a powerful catalyst for the market, particularly as the consensus view is that a turnaround in China is unlikely to materialize any time soon.

Thirdly, we have been on the road a lot since Brexit, which we believe will have a minimal impact on Asia unless Europe deteriorates further. Importantly, with the UK and Europe facing stronger headwinds, Asia is clearly becoming a more attractive prospect to international investors. Asia, at its most broad description, delivers about 60% of the world's growth, half of that from China, and the Asian index is just 9% above historic price to book lows.

Fourthly, it is possible that we will see another quantitative easing programme announced in Europe. In any event, we now expect that interest rates will stay low for longer. Should interest rates, globally, remain low for longer this creates a more supportive environment for interest rate cuts in India and Indonesia, where interest rates are still stubbornly high and have plenty of room to fall.

Finally, whilst it may be an old fashioned concept, technical analysis at present is pointing to a chart breakout for Emerging Markets, which, according to CLSA, points to some 30% upside for Asian indices from here.

Has the Elastic Stretched too Far for the Chinese Insurance Companies?

One of the major reasons that the fund NAV has not recovered from its 1Q16 relative and absolute return dip is the stubborn behaviour of the Chinese insurance companies. When we invested in these stocks these companies were very attractively valued and were seeing tremendous growth in light of the dearth of savings options for the Chinese. Both of these positive factors are still very much in force.

However, a number of other elements have come into play to depress share prices and keep them low so far this year.

Firstly, the China A-share market fell and so did the Chinese bond yields. Not only did this lead to concerns regarding rising re-investment risk and the prospect of lower future yields, this also ushered in the attendant fear that the companies would gear up in order to boost returns.

Secondly, several new players have entered the market, predominantly in the form of 'platform' insurers – notably Anbang Life – and some existing players have lost market share as a result.

Finally, and quite inexplicably to foreigner investors, some of the Chinese insurance companies have acquired Chinese banks. The rationale for this is that the larger asset base after these acquisitions leads to greater political clout and a higher quota for overseas acquisitions, which is a function of a company's asset base. Nevertheless, we think you would be hard pressed to find many institutions, and indeed investors, willing to invest heavily in a Chinese bank, in which case it is little surprise that this seemingly poor capital allocation by some industry players had a negative impact in terms of sentiment for the sector overall.

The result is that valuations are now eye-wateringly low and we are now seeing sector specialists starting to aggressively recommend the sector. For example, life insurer, **China Taiping**, is currently trading on 0.45x price to embedded value. To put this in context, Shinkong Insurance, a dismally low quality Taiwanese insurance company with not only a low growth outlook, but also negative spread issues, is trading on 0.45x price to embedded value, or the same multiple as **China Taiping**. Crucially, the key difference is that **China Taiping** has a tremendous growth opportunity (new premiums are growing at over 40% year on year so far in 2016) and enjoys a healthy positive spread. Elsewhere, blue chip Chinese insurer, **Ping An**, is trading on 0.8x price to embedded value. An appropriate benchmark for **Ping An** is **AIA**, the leading pan-Asia insurer and stock market darling (also a holding in the fund). **AIA** is trading on 1.6x price to embedded value or a 100% premium to **Ping An**. The valuation disconnect between the Chinese insurers and their Asian peers could not be clearer.

In addition, there are further catalysts on the horizon.

Firstly, as mentioned above, we believe that the next round of the China – Hong Kong Stock Connect programme will be announced very shortly and will come into existence in either late 2016 or early 2017. We believe that both the 'Northbound' and 'Southbound' quotas will be doubled for the Shanghai stock exchange and that the Shenzhen stock exchange will be added to the programme with similarly sized quotas. Overall, this means a *quadrupling* of the current quota. This could be a significant boost for the China A-share market as well as the Hong Kong market. We would also highlight the insatiable appetite in China right now to move money into overseas assets.

Secondly, Chinese bond yields have now stabilised, thus reducing the risk of falling reinvestment yields. The Chinese insurance companies' share prices are yet to discount this positive development though.

Finally, it looks as though new entrant, Anbang Life, is growing with an express objective to list in the next 12-18 months. This new company has a shareholder list which includes the great and the good from both sides of the border, including, allegedly, members of Deng Xiao Ping's family! As such we would expect there to be tremendous pressure for Anbang Life to be listed at rich valuations. Should this happen, it is likely that this will drive a re-rating for the sector overall.

A Technology Report from San Francisco

"Microwave-hacked scrambled eggs"

This month we took the opportunity to join a curated trip to see some of the leading names in some of the newest technologies in San Francisco and Los Angeles. The rationale for doing this was several-fold.

Firstly, never before have we seen so many technology trends emerge at once. This sheer number of new and potentially disruptive technology trends requires serious and considerable attention. We met with people on the cutting edge of fintech, Blockchain, Bitcoin, augmented reality (AR), virtual reality (VR), chatbots, artificial intelligence (AI), medical tech, home batteries, electric vehicles, 3D printing, e-Sports, autonomous vehicles, the cloud, neural networks and haptics, although our conversations also strayed into other very important areas such as the 'internet of things', micropayments and wearable devices.

Secondly, we believe that many of these new areas lead to some of the future's most lucrative and exciting themes and investment ideas. To access the best themes and investment ideas in Asia it is important to identify, as early as possible, what is happening. Spending time with some of the creators of these new technologies has given us an incredible insight into what is coming next for us all.

Thirdly, it will be very important to understand these themes from the point of view of disruption. Quite incredibly, in the past 3 years a third of the Philadelphia semiconductor index has vanished through bankruptcy and defensive mergers. If anything, this kind of attrition is likely to increase. If you think your portfolio is too big to fail, then please think again, and perhaps with the example of Kodak and Instagram in mind...

Active Fund Management

Following our trip, we could not be more vehement advocates of active fund management at this point in time. The fashion has been to move towards ETFs because they are cheap and because many 'active' managers in practice have a tendency to hug the index, which further undermines the proposed benefit of paying higher fees. Crucially, ETFs contain many, many companies – whole sectors even – which are doomed to struggle or die in the face of what is coming next in technology disruptions. If you just look at three areas where disruption can be seen most clearly on the horizon and which we have written about many times already – namely, banks, autos and energy – these highly vulnerable index constituents alone comprise nearly 21% of the Asia ex-Japan benchmark.

We have attempted below to share with you the best of what we learned on our trip and, where possible, to put it into the context of the Asian investment sphere. We hope, however, that the benefit of these insights might prove to be useful in a much broader context.

Artificial Intelligence (AI), Machine Learning and Deep Learning

We believe this is the most important trend you need to understand today.

You will have no doubt read about AlphaGo, the artificial intelligence created by Demis Hassabis and his 'deep mind' team, which beat the world GO champion, Lee Sedol from Korea, earlier this year. This was heralded as a breakthrough triumph in artificial intelligence and machine learning. It also happened about 10 years earlier than expected.

If there is one area of technology which is important to focus on now, it is this. Artificial intelligence is at a tipping point.

Machine or deep learning is something that has been aggressively pursued in the past few years in Silicon Valley. In traditional programming the engineer writes specific line by line instructions for the computer to follow. In machine learning coders do not instruct their computers, they *train* them. For example, if you want a computer to recognise a cat, instead of describing a cat, you show the computer thousands of pictures of cats until it can recognise a cat by itself.

While the concept of machine learning is not new, in practice it has only really been a realisable goal in very recent years owing to the new availability of two significant and fundamental 'fuels' for artificial intelligence.

The first artificial intelligence 'fuel' is the processing power required. Getting the processing power to where it needs to be is no small feat. The key is both the scale of the processing power needed as well as the type of processing power. In terms of the scale, in order to beat Sedol at Go the AlphaGO team used 50 super computers to carry out 1.5 million simulated games; on the day of the competition itself, AlphaGO used a staggering 1,500 supercomputers.

In the same vein, Sentient, one of the most advanced private artificial intelligence companies around who we also met with, is looking at deep learning in the context of three commercial potentials – predicting markets, medical changes and online shopping behaviour. Sentient operates by harnessing the computing power it needs by literally renting the background processing power of millions of computers all round the world, which are otherwise being used for low processing power activities such as email and web browsing.

As well as scale, the type of processing power needed for artificial intelligence is different. Graphics chips (GPUs), which to date, are mainly used in graphics applications, particularly gaming, are set up in a way which can carry out 'parallel processing' and thus mimic a neural network. This architecture is exactly what is needed for developing artificial intelligence. As a gross oversimplification, 'parallel processing' acts in a similar way to the brain, which of course is a neural network at its most advanced, allowing for a different kind of processing.

The final artificial intelligence 'fuel' is huge quantities of data to feed to the computer, which, of course, is also now freely available.

The combination today of considerable GPU availability in the cloud and massive quantities of data means that machine learning is now exploding. Moreover, crucially, in a very recent development, open source software, such as Google's Tensorflow, means anyone with access to a computer and the internet can download and start to harness the processing capabilities necessary for artificial intelligence; that is every child, university research lab, tech start up and even your grandma could start experimenting with artificial intelligence applications right this very instant. Looking at it

another way, the artificial intelligence solutions which were impossible 5 years ago or you would have had to work for Google or similar to access 2 years ago, are now accessible to anybody at anytime, anywhere. The results of this paradigm shift are already visible. A great example which neatly illustrates this point is the usual stuff of Silicon Valley legends: this year, an entire and fully working autonomous vehicle, which requires considerable artificial intelligence, was built at home by a bloke called George!

For start-ups and researchers alike this is a game changer. People we met who are using machine learning techniques and harnessing cloud based GPU processing regularly told us how efficient it is. For example, one person we met explained that running a program that used to take 8 hours now takes 8 seconds!

And so there you have it. The building blocks are fully in place for an explosion in artificial intelligence research and, soon, artificial intelligence based solutions.

So what might these solutions look like?

Examples of the solutions we encountered which are already at a mature stage of development included a device which can predict with 85% accuracy whether the wearer is likely to have a heart attack in the next 2 hours.

At the Stamford start-up incubator, Start-X, we also encountered a company called Ownerlistens. Ownerlistens is attempting, via deep learning techniques, to create a universal 'chatbot' that can converse via text with anyone trying to book a table for a restaurant. The challenge is that the 'chatbot' not only needs to learn when requests need to be handed over to a human, but it also needs to be able to cope with the huge number of ways in which people might write such a text request – including abbreviations, 'text-speak' and even emoji's! As you can see from the chart below the machine has an almost infinite number of possible enquiries it needs to manage! Clearly, it takes a village to raise a robot. The upside is fewer calls, more efficient bookings and hopefully happier and more regular customers.

At a more familiar level, Apple's and Amazon's personal assistants, Siri and Alexa, should see huge leaps forward in functionality in the coming years.

While it is still early days for artificial intelligence, we believe it will be very significant within 5 years and utterly life changing in 15 years.

IN JUST ONE RANDOM WEEK IN APRIL, CONSUMERS USED OUR
PLATFORM TO ASK FOR RESERVATIONS IN 150 DIFFERENT WAYS
(SIMPLE RESERVATIONS, NOT INCLUDING ANY SPECIAL REQUESTS)

IN FACT, ANY MESSAGE CAN BE EXPRESSED IN 150 WAYS OR MORE...

I NEED A SPOT 4 8 PPL TMRW @ 8PM
I NEED A SPOT 4 8 PPL TMRW AT 8PM
I NEED A SPOT FOR 8 PPL TMRW AT 8PM
I NEED A SPOT FOR EIGHT PEOPLE TMRW AT 8PM
CAN I MAKE A RESERVATION FOR TOMMOROW AT 8PM?
DO YOU HAVE A TABLE FOR 8 PPL TOMORROW AT 8PM?
DO YOU HAPPEN TO HAVE A TABLE FOR 8 PEOPLE TMRW AT 8PM?
IS THERE AVAILABILITY FOR A TABLE FOR 8 PPL TMRW AT 8PM?
8 GUESTS 4 TOMORROW AT 8. IS THERE ROOM?
TABLE FOR 8 8PM TUES?



Source: IM Power Solutions

GPUs

Given the key role GPUs play in facilitating artificial intelligence, it follows that we are also about to witness an explosion in the use and thus volume demand for GPUs. The gaming market is still growing at 20-25% per annum, whilst GPU sales to data centres to support deep learning are doubling every year at current growth rates. Two other leviathan future trends, autonomous cars and virtual reality, also use GPUs.

The two leading producers of GPUs, globally, are AMD and Nvidia, the latter of which is a 'pure play' company. It is worth taking a moment to consider Nvidia as it illustrates just how nascent a stage we are at for this trend.

In FY15 Nvidia made around US\$5 billion in sales. Out of this, around US\$2.8 billion of sales was to the gaming sector, whilst just \$350 million was to data centres and the automotive sector each. Given that sales to these newer sources of demand are growing at a clip of 80% per annum, sales to data centres and the automotive sector could reach US\$5 billion each should current growth rates continue at a similar pace for the next 4-5 years. As such, it is quite reasonable to expect Nvidia to grow its overall sales at a 20-25% cagr over the next 4-5 years.

In addition to a Nvidia's large growth opportunity, the company also has a huge installed base of GPU chips which it can leverage and a 5 year technology lead on its peers. Nvidia has a US\$28 billion market capitalisation, whilst chip giant, Intel, which is increasingly looking vulnerable, has a market capitalisation of US\$165 billion.

In Asia, **Samsung Electronics** and **TSMC**, both of which we recently added to the portfolio, should benefit from the increase in demand for the hardware and components required for artificial intelligence applications. More specifically, **Samsung's** Nand memory business should be a key beneficiary. In the case of **TSMC**, one of its largest customers is Nvidia. **Samsung's** shares trade on a

P/E of just 10.3x and there is always the possibility that management will finally manage better the \$50 billion of cash which is currently sitting on the company's balance sheet. **TSMC** is on a 14x 2016 P/E multiple.

Fintech

There is a huge buzz at present about 'fintech'. However, our experience after seeing companies in this sector is that once you engage in the 'fin' part of the equation you very quickly end up in regulated territory and quite restricted in terms of what you can actually do. As a result, there are only a few companies which can genuinely live up to the claim of blending finance and technology. That being said, we are observing 'challenger banks' and other mobile centric companies really starting to take hold. As the management of one 'fintech' company we met pointed out, customers receive very poor service from traditional finance companies and a whole new generation of would be bankers is now looking to 'know their customer' in a completely different way.

Our first meeting was with fintech company, Earnest, a new competitor for Sofi.com, which refinances student loans. In the US there are \$1.3 trillion of outstanding student loans and they are a considerable burden. Earnest cleverly uses its technology to analyse its customer data so that one of the services it can offer is for its customers to specify how much they want to pay each month. The 'fin' part of the business is pricing the service at a discount to the banks and accepting a lower absolute margin in the hope that it will earned over a sufficiently large asset base to make the company very profitable. The company also claims to process its customer data not only very quickly, but also in a way that helps reduce delinquency rates, whilst giving faster and more accurate responses.

Another standout company in the fintech sector which we met was Ripple. As well as having utterly beautiful polished concrete floors and breathtaking views, this impressive company is aiming directly at SWIFT, the international bank transfer system. It is doing this by using Blockchain technology. According to Ripple's analysis, somewhere between 4% and 12% of all money transfers fail, and 40% require either the sender or the receiver of the transfer at some point in the process to contact a call centre. In Ripple's brave new world, failure rates are slashed, no unknown call centre is required, there is no need to deposit capital and senders and receivers can view the process with total transparency.

While it is hard to predict the exact timing for when we start to see such services percolate our lives more visibly, what we can say for certain is that the challenges to existing financial services companies from these specialised start ups are very real and they are gathering momentum. These specialist starts ups can dismember the banks segment by segment, likely eating at their most profitable businesses first as well as the most simple or delineated areas such as student loans and SWIFT. They will undercut fees and redefine the information available in a more predictive, intelligent and speedy way, using artificial intelligence. They will assess and price risk more efficiently and improve customers' satisfaction, ease and convenience. This is a future no doubt most people will welcome.

Blockchain: 'Re-Engineering the Bottom of the Stack'

We have written before about both the cryptocurrency, Bitcoin, and its shared ledger software foundation, Blockchain. People can get very emotional about money and Bitcoin, given the multiple controversies it has sparked, is no exception.

One of our key takeaways regarding these cryptocurrencies is that we found more interesting business models being built around Blockchain than Bitcoin. Under Blockchain every payment in the future will have a ledger. The list of what this ledger makes possible is quite extraordinary: it allows for better transparency and control, reduces the need for liquidity provisions, removes the need for third parties, facilitates payments with conditions attached, gives instant confirmation of delivery, serves exotic corridors or unknown counterparties without risk, allows more low value payments and offers up to 30% cost savings in some areas.

One area in particular which we believe could take off as Blockchain becomes more main stream is micropayments.

‘Internet of Things’ and Micropayments

There are currently 9 billion ‘things’ connected to the internet. However, by 2020, estimates suggest this could have risen to 50 billion, spawning an industry worth \$11 trillion by 2025.

The advent of Blockchain and artificial intelligence combined raises the very real possibility this this will also create an entirely new economic area – one of micropayments. A micropayment is not 30 cents, it is more like hundredths of a cent. If the movement of money is effectively free, instant and transparent and can be managed by computer to computer communications then payment of any magnitude can be managed at more or less no incremental cost. So one can envisage a situation, for example, whereby your utility company sends a message to your fridge saying it is nearing peak load and if the fridge turns off for an hour the utility company will pay you, as the owner of the fridge, say 0.1 cent. All of this would happen without any human interaction.

We think both Blockchain and artificial intelligence are massive – we repeat – massive new developments and micropayments could grow to be something really quite ubiquitous over time.

Lenovo: A New Handset Launch and Further Thoughts on Why China Cannot (Yet) Be as Innovative as the Government Rhetoric Would Imply

We spent a happy morning at the launch of some new products by Chinese handset giant, Lenovo. This took place in the centre of San Francisco in front of a large audience and had all the razzmatazz and hallmarks of the famous Apple product launches. Even Ashton Kutcher had been drafted in to drop an unbreakable phone from 15 feet onto concrete!

We also saw prototype ‘wearable’ phones, which bent into a bracelet, and saw some nice new handsets with extra camera features to give depth and additional click on features to give a projector or extra battery life. We also saw intelligent shoes with chips and lights. It was slick. The products were impressive.

The Chinese chairman who hosted the day admitted that he had been told what to wear (beige chinos and matching, box-fresh, trainers in case you were wondering). At one point he invited the Chairman of Intel on stage and they played a live fireball shooting game using virtual reality headsets, during which, mysteriously and slightly hilariously, they haggled about prices.

This was all fun, but, apart from the virtual reality appearance, it all seemed a little old school. The Chinese products were, still, very hardware based. There was no mention of apps and there was certainly no mention of the ‘platformisation’ (using artificial intelligence) which Apple has hinted at in its recent announcements.

This makes for a pause for thought. Asia has some awesome technology companies with global leading edges and operating margins to match, but mostly in hardware. These are based mostly in Taiwan or Korea. China has some big companies for sure, but the margins are paltry and very little of what they do is leading the world. Indeed, China has the second biggest venture capital market in the world, but almost all the funding is sent towards known concepts and follows the 'C2C', or 'copied to China', model. A recent article in the Financial Times by Peter Fuhrmann, which brought forth howls of outrage in China, highlighted a combination of factors which suggest that China remains a long way off being able to compete with the world in new technologies.

Firstly, the patent laws are still terrible, despite recent improvements. They are poorly administered and rarely actually imposed. They can be subject to political influence and they are watered down by the 'patent for use' clause and hence the system rarely ever stops copycats, or even fines them. In addition, non-compete and non-disclosure agreements are barely enforceable.

Secondly, the world often showcases new ideas first on social media, but Facebook, Snapchat, Twitter and Youtube are all banned and kept away by the Great Firewall of China. One factor which comes up again and again in Silicon Valley is the importance of the free flow of information and just how much knowledge is made open source.

Thirdly, in China, university professors rarely do research and neither do the universities foster or fund research-based start ups. Added to this, the opportunity to IPO to raise money for a new tech company is nearly impossible. You have to have been in existence for 3 years to IPO and have government approval. On top of that, the list of companies already looking to IPO is vast.

Marc Andreessen, one of the most famous tech investors in Silicon Valley, is often quoted as saying how important it is to have 'strong opinions, loosely held'. In other words flexibility, the eagerness to hear why you might be wrong, and openness to new information whilst pursuing a project is crucial. This, by definition, means encouraging debate, disagreement and original thought, being able to fail (which, in stark contrast to most other cultures, is fine in Silicon Valley) or make a radical and possibly sudden change to your direction. Culturally, we suspect these things might be harder in China.

An Aside on Meeting Tech Start-Ups

One of the start-ups we discussed earlier, Earnest, was the first company we visited on this trip and for us, as a newcomer to the Valley start-up scene, Earnest fulfilled everything we had heard about start-ups. Despite being less than 2 years old, Earnest has raised more than US\$100 million. Its office was beautiful: a 270 degree view over San Francisco, Uber's headquarters upstairs and more free food and coffee than you could even begin to imagine, with which they were very generous to us and their 170 employees. Everyone was using stand up desks and it also seemed that about half of folk in any internal meeting stayed standing as well (in some organisations, such as Airbnb, there are not actually any desks at all!). We saw a lot of Mac computers and, of course, most people were very casually dressed. The co-founder, English in fact, but straight out of the TV drama Central Casting, was wearing a purple polo shirt, a bright green company logo hoodie and super geeky, yet trendy, bottle bottom glasses.

As well as the aesthetics, culturally, our visit to Earnest was also a very eye opening experience. Like everybody we met in the proceeding days, we could not have found the people at Earnest more open or helpful. Yet co-operation and consideration in the work place did not exist at the expense of corporate objectives – in fact the ambitions of the company and its employees are huge. Moreover, we found this subtly yet powerfully different culture was tangible throughout the city. Capturing the

essence of this in words is not easy but we think San Francisco is perhaps best described as simultaneously hosting an incredible process of creativity as well as destruction. Given San Francisco's roots as the centre of the nineteenth century California gold rush, maybe this should come as no surprise. For us though, it was wonderfully refreshing to be in a place where failure is not only acceptable but often respected, where imagination is so 'out there' it could be seen as borderline insanity, and where most people we met were unbelievably excited about what they were doing.

3D Printing

If you have looked at 3D printing you will probably have an image of an object being built slowly from the ground up in powdered resin, layer by layer. It is time to look again.

California based company, Carbon 3D, is driven by Joseph Desimone, one of the US's most revered scientists. When we met with him he was fresh from the White House where he had received the National Medal for Technology and Innovation, one of the most prestigious prizes in the country. Joseph and his team have completely changed the look of 3D printing and, in addition, have sped up the process. Carbon 3D is already supplying customers with trial 3D printing machines.

So, how is Carbon 3D's process different and how does it work? In short, Carbon 3D's process uses a combination of light, oxygen and liquid resin to solidify a compound, which is then drawn layer by layer out of the liquid. We would encourage you to spend a minute or two watching the video below which we took of the demonstration we saw. What is being made is a replica of the molecule structure of human bones! It is precise and robust and now sitting on our desk as a souvenir! It took just 5 minutes to make.

<https://vimeo.com/175697945>

The benefits of Carbon 3D's process are exactly the same as for other 3D printing techniques: complex structures which could not be made by a plastic injection moulding process can be built in one continuous piece and each piece can be made as efficiently as the maths can allow. The key difference with Carbon 3D's process is that it is possible to change the compound while the item is being printed, thereby allowing the production of structures with varying strength and flexibility.

This company is in its third round of funding and is poised to start generating revenues. From our conversation with management it was clear they have had the chairman of almost every major manufacturing company (Foxconn and Xiaomi were the two Asian giants mentioned) sitting in the chairs we occupied. 3D printing has been slightly forgotten on the basis that it is a bit of a slow horse, but this meeting brought us right up to date and, yet again, we see this as a major disruption in a few years time. It will initially transform the prototype development process but soon we envisage parts being created which cannot be made any other way, allowing 3D printing to go truly commercial. One interesting consequence of commercialised 3D printing would be the reduced need to keep inventory for spare parts. At that point inventory costs for spares and so on will be one area that could be hugely improved. It probably remains several years off, but when 3D printing finally becomes part of commercial manufacturing it will be a huge disruption.

A Statistic You Might Not Want to Know

We saw a couple of very impressive companies in the internet security area. One statistic stood out. I asked the founder what percentage of people out there on the internet were 'bad actors' of one sort or another and his answer was 7%.

E-sports

Did you know that the third most watched sports event last year was an 'e-sports' event? For reference, 1 billion people watched the World Cup, 100 million people watched the Super Bowl and 26 million people watched the Masters golf tournament. The 'e-sport' event in question, which involved watching a bunch of talented internet gamers playing 'Defence of the Ancients II', had a staggering 27 million viewers, making it the biggest 'e-sports' championship to date and, as mentioned, the third most watched sports event last year. Even more staggering is that the total pot of prize money was \$18 million with the winning team of 5 youngsters taking home \$6 million between them. There are few real life sports, globally, where the players are so richly rewarded. It is probably unsurprising to learn that 'e-sports' is most popular in Asia and, in particular, China. The whole segment is growing at 80% per annum.

We are now starting to see game development companies developing games specifically designed for live competition and spectator viewing. Activision, one of the largest gaming companies in the US, has just released Overwatch, a new game designed with exactly this in mind. Equally, we notice that the English Premier League football teams, West Ham and Manchester City, have both recently bought new players, except this time they are teenage Youtube champions of the FIFA computer game!

We also heard how in-game-micropayments are skyrocketing. This is the one area where we feel Asia is ahead of the trend as this has been a big profit driver for the game developers in Asia in the past year. In the past, games were either bought outright or users paid a regular subscription fee and that was how game developers made their money. In-game micro payments, where players spend up to \$100 an item (but usually much much less, say a few dollars or even cents) to further their role in the game and increase their chances of success, rose 44% to \$1.7 billion last year. The developers believe that this could grow to some 50% of their revenues in the coming years. In addition, in 2015 monthly active users rose 25% and time spent per user rose 16%.

Finally, another fascinating observation was the spending comparison between the hardcore gamers in the US and China. There are certainly some differences between the two groups, for example, spending habits differ at different stages of the game. However, overall when you take into account initial purchase, subscription and in game purchases combined, hardcore gamers in both the US and China spend exactly the same amount, despite these countries' vastly different levels of income per capita!

Haptics

Possibly one of the freakiest developments we were shown were 'haptic suits'. Haptics is the science of applying touch related controls to technology, like the satisfying 'click' that you also feel when you touch a screen on your smartphone device.

In this case a small group has designed what is effectively a compression shirt with thousands of tiny electrodes in the fibres. These electrodes can be programmed in a way that makes the muscles and nerve endings in the body respond. If you put on one of these shirts, the person behind the controls

can make you feel like you have been punched in the stomach, hit by a paintball, being given a massage or that you are even standing in a windy place! There is no doubt this technology will take off as virtual reality grows.

Electric Vehicles

Recently our young Marketing Assistant, Jack, and a group of his friends went to watch the horse racing at Ascot, which is about 40 minutes drive outside of London. Being resourceful millennials who are always keen to save money, Jack and his friends researched the cheapest way of getting to Ascot. They discovered that the train, personal cars and Ubers were all trumped by a green taxi service which uses electric vehicles when it came to price. The upshot was that a large group of young adults were taken racing in a fleet of Tesla's! Or to put it differently, it was cheaper to go to Ascot in the world's number one voted car (ranking above a Ferrari or and Aston Martin)! And the reason why? Quite simply, the taxi fleet does not have to factor petrol costs into its pricing. Moreover, as they drove there they were all able to watch the pre-racing commentary and build up on the large display screens Tesla's have on their displays. This is an extraordinary anomaly and gives us encouragement that the electric vehicle story is about to accelerate.

During our trip, we visited the Tesla factory in Fremont, which can perhaps be thought of as the 'electric vehicle mothership'. We found the experience both truly inspiring, but also frustrating. The concept, technology and design underpinning the cars are all gloriously brilliant. The statistics trip off your tongue. For example, it takes 4.5 kwh to refine a gallon of petrol, so a Tesla is green before you even drive it. On the other hand, standing under the conveyor belt watching the cars go by was confusing. Tesla's are made to order and this fact was very visible in the production process. Every car that went by was a different combination of model and colour. With the current lack of automation and efficiency in the production process, it is hard to have complete confidence in the company's ability to scale up and achieve an efficient mass production process. Toyota's 'kaizen' (continuous improvement), 'jikoda' (automation with a human touch) and 'just in time' process, it is not.

For now, Tesla is sticking to its production targets. In any event, on schedule or late, electric vehicles will begin to dominate all new car purchases and Tesla is highly likely to be a leading player in the market. In addition, recently VW has announced that between now and 2025 it will release 30 – yes, 30! – pure EV models, which management expect to equate to 25% of sales. This level of EV penetration is way ahead of analysts' more bullish forecasts and we believe that VW's strategy will push other auto makers to follow suit.

All in all, this is great news for our EV battery makers, **Samsung SDI** and **LG Chemical**.

Home Batteries

This year the Tesla Powerwall home battery pack is also due to start production. We believe this could be an equally important game changer as EVs but, in this case, for household energy consumption and bills. The Korean battery companies stand to benefit from this trend as well.

Autonomous Vehicles

We heard confident predictions everywhere we went that within 2 years there will be autonomous vehicles on the road, be it in many places or still in a more controlled environment. Building autonomous vehicles is not the problem. Indeed, if a bloke called George can manage it single handed, then the technology is here.

The issues seem to arise once the vehicles have been built. For example, what happens if you put the all essential and sophisticated laser camera, Lydar, that sits on top of an autonomous car, through a car wash? More seriously, and genuinely much harder to solve, how do you program for the decision tree that will choose between the car hurting a pedestrian or its own passengers when an accident becomes unavoidable? How do you design and insure for that in advance and how do you legislate and ethically reconcile such an event in the aftermath? With technology ushering changes this dramatic and at this pace, perhaps we need to be asking whether we as mere humans can keep up?

PORTFOLIO PERFORMANCE

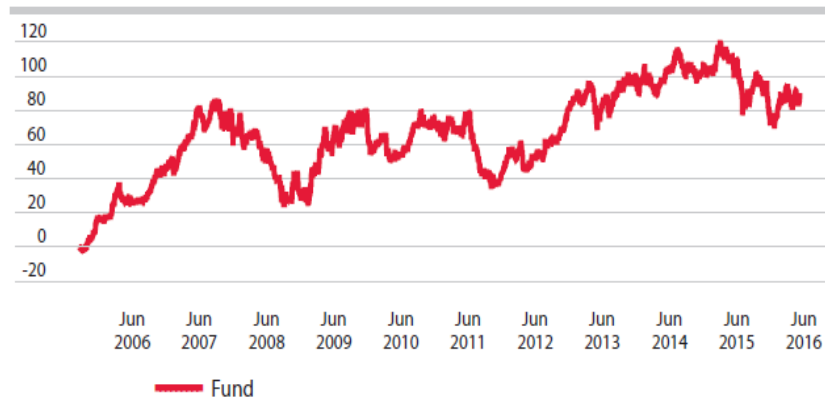
Performance Summary (%)
Period ending 30.06.2016

	USD	GBP	SGD
1 Month	1.16	1.18	1.04
3 Months	0.79	0.71	0.79
YTD	-2.91	-2.98	-2.93
2015	-2.95	-2.10	-1.81
2014	1.08	1.59	1.29
2013	16.63	16.76	16.50
2012	24.68	24.36	23.95
Since Launch+	89.94	51.50	6.16
Annualised 5 years	2.08	2.33	2.17
Annualised 3 years	2.26	2.56	2.67
Annualised Since Inception	6.16	4.25	0.93

Source: Morningstar

+ Launch date: A: 07.10.05, C: 14.07.06, D: 15.01.10

Fund Performance - Class A USD (%)



Source: Morningstar. Total return net of fees.

Monthly Performance Summary (%)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2016	-8.91	-1.24	7.08	1.44	-1.78	1.16							-2.91
2015	1.57	0.07	1.23	4.06	-0.96	-1.83	-3.40	-7.67	-1.41	6.77	-0.60	-0.11	-2.95
2014	-3.15	3.04	-0.56	-3.44	2.15	2.91	2.08	4.20	-4.06	0.95	-1.12	-1.48	1.08
2013	6.68	3.52	-0.45	1.73	0.09	-7.21	3.75	-3.21	4.60	4.19	1.92	0.66	16.63
2012	5.81	6.55	-0.38	3.08	-6.93	0.67	4.33	-2.54	6.47	0.24	2.45	3.39	24.68
2011	-2.27	-0.70	1.19	1.23	-0.86	0.30	4.32	-11.95	-8.24	-0.55	-4.02	-0.52	-20.89
2010	-9.67	-2.62	3.66	1.67	-7.15	-0.54	0.96	2.98	7.80	0.74	-0.38	1.08	-2.66
2009	-6.90	-2.90	11.16	4.46	10.67	-2.69	6.77	-4.94	6.42	-2.45	4.08	2.12	26.59
2008	-6.78	6.91	-8.06	1.81	0.67	-7.69	0.21	-5.34	-5.33	-7.37	0.02	9.75	-20.84

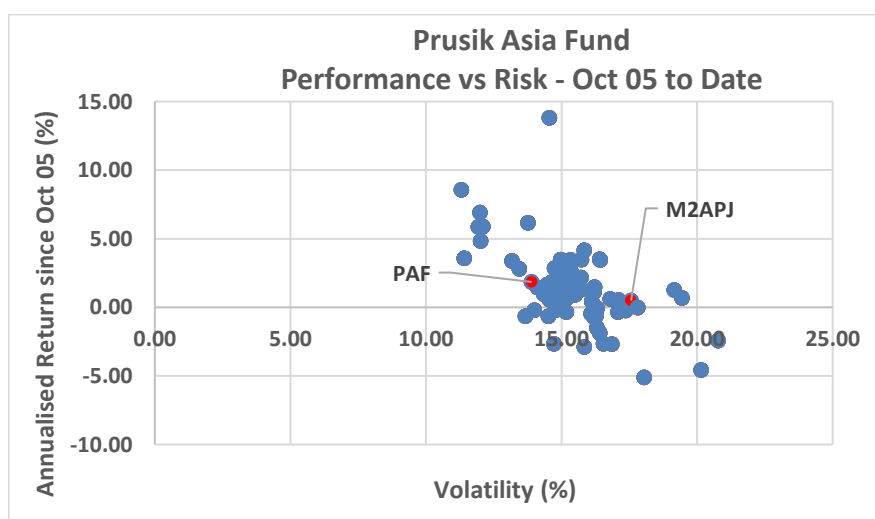
RISK ANALYSIS

Risk Metrics Fund (%)

Beta	0.58
Alpha (%)	1.68
Sharpe Ratio	0.50
Volatility (%)	16.50
% of the portfolio –which could be sold in 2 business days	95.10

Source: Morningstar

Since Inception: A: 07.10.05



THEMATIC & GEOGRAPHICAL BREAKDOWN

Top 5 Holdings (%)

Phu Nhuan Jewellery	5.7
AIA Group Ltd	5.7
Vietnam Dairy Products	5.4
Newcrest Mining Ltd	5.2
Tencent Holdings Ltd	4.6
Total Number of Holdings	27

Portfolio Financial Ratios*

Predicted Price/Earnings Ratio	17.0x
Predicted Return on Equity (%)	15.5

* Fiscal year periods

Thematic Breakdown (%)

Vietnam	24.6	
Clean Energy	13.6	
Financials	11.7	
Local Brands	10.9	
Internet	10.6	
Other	7.8	
Cash	5.7	
Leisure/Tourism	5.2	
Infrastructure/Logistics/Property	3.9	
Data	3.2	
Virtual Reality	2.9	

Geographical Breakdown (%)

Hong Kong/China	39.9	
Vietnam	24.6	
Australia	9.5	
Korea	6.8	
Cash	5.7	
Thailand	3.9	
Philippines	3.6	
India	3.2	
Taiwan	2.9	

All data as at 30.06.16. Source: Prusik Investment Management LLP, unless otherwise stated.

FUND PARTICULARS

Fund Facts

Fund Size (US)	55.3m
Launch Date	7 October 2005
Fund Structure	UCITS III
Domicile	Dublin
Currencies	USD (base), GDP, SGD

Management Fees

Annual Management Fee

1.5% p.a Paid monthly in arrears
 Class U – 1% p.a. Paid monthly in arrears

Performance Fee

All classes except Class U: Provided the fund achieves an overall increase of 6% a yearly performance fee of 10% of total returns will be applied.

Class U: 10% of the net out-performance of the MSCI Asia Pacific ex Japan Index with a high-water mark paid quarterly

Dealing

Dealing Line	+353 1 603 6490
Administrator	Brown Brothers Harriman (Dublin)
Dealing Frequency	Daily
Min. Initial Subscription	USD 10,000
Subscription Notice	1 business day
Redemption Notice	1 business day

Share Class Details

Codes			SEDOL	ISIN	Month end NAV
Class 1					
A USD	Unhedged	Non Distributing	B0MDR72	IE00B0M9LK15	189.94
B USD	Unhedged	Distributing	B0M9LL2	IE00B0M9LL22	190.06
C GBP	Hedged	Distributing	B18RM25	IE00B18RM256	104.61
D SGD	Hedged	Distributing	B3LYLK8	IE00B3LYLK86	264.43

Performance fee based on individual investors' holding.

U GBP	Unhedged	Distributing	BBQ3756	IE00BBQ37560	123.04
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Performance fee based on fund performance as a whole.

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