

## Long Only Absolute Return Investing in Asia

# Prusik Asian Smaller Companies Fund

Quarterly Investment Report 31 December 2015

FOR PROFESSIONAL INVESTORS ONLY

## **PASCF Quarterly Dec 2015**

Over the final quarter of the year the fund returned 1.2% versus the index rise of 5.2%. For 2015 overall the fund saw a negative return of 12.8%, 3.9% behind the index fall of 8.9%. While both these relative and absolute returns in 2015 are disappointing, we believe that it is important to consider these figures in the context of the fund's extremely strong earnings growth. The reported average net profits growth of our portfolio in 1H 2015 was up 35%. In comparison, reported average net profits growth for the index in 1H 2015 was up just 6%. Moreover, having visited a number of our companies in the past 6 months, we expect growth of this order of magnitude to be continued in 2H 2015 once results are reported. Thus, the fund's decline over the year is in direct contrast to the underlying performance of the businesses that we are invested in. We would also like to note that the fund outperformed the index in January, which we hope begins the process of redressing the balance between market sentiment and reported earnings growth. Nonetheless, is it worth noting in more detail what contributed to this relative underperformance and some element is related to specific companies which we review below in more detail.

## **Final Quarter Analysis**

There was a strong rally across the region in October with the index up 7.6%. The Prusik Asia Smaller Companies Fund also generated good absolute returns in the month of 4.8%, although this lagged the index. The chief culprit was **Eros International**, the Indian film producer and operator of Eros Now, the equivalent of Netflix in India.

Eros International corrected sharply owing to news that management are planning to monetise Eros Now from early 2016 rather than mid 2015 as originally stated. A punitive sell side report was also released on the stock in October to which management have issued a strong rebuttal. We have since spent several hours with the company CIO in an effort to understand what is fact and what is exaggerated claim. As a result of this process we have decided to give the company the benefit of the doubt, taking into account that it is also now a reasonably modest sized holding. In the meantime, Eros International is now offering exceptional value for a market leader in film production and online distribution in India, a market where consumer stocks can trade easily trade on P/E multiples of more than 40x. In contrast, Eros International is currently trading on 7.1x March 2017e P/E and has a market capitalisation of US\$506 million. In November the Prusik Asian Smaller Companies Fund fell 2.7%, which was just 27 basis points behind the index. The small underperformance was partly driven by a correction in smartphone case maker, Tongda Group, which continued to correct for the remainder of the year but nevertheless contributed 123bps to annual performance. Another factor behind the slight underperformance was a correction in Vietnam, although most of these losses were regained by a bounce in December. We wish to highlight that we remain very positive on Vietnam in the long term. A great example of why this is is neatly encapsulated by Samsung Electronic's long term manufacturing strategy for smartphones. Out of the 350 million handsets Samsung Electronics currently makes, 150 million are made in China and 150 million are made in Vietnam. However, by 2018 when Samsung Electronics is planning to produce 450 million handsets, the roadmap for the company is to make just 100 million in China and 350 million in Vietnam! In a nutshell this is a clear example of why Vietnam's future remains bright.

In December the fund fell 78 basis points, whilst the index moved up 17 basis points. Two of the key detractors from performance were from our financialisation theme — **Praemium** and **iFAST.** We have since sold Australian fund management business, **Praemium**, on account of its vulnerability to slowing growth in Asia and, whilst we remain positive on the long term investment case for **iFAST**, we have pared back this position on account of it becoming a very large stock in the portfolio as a result of the consolidation carried out in the fund in early 2015. On the positive side, **Cotec Construction** and **Hoa Bin Construction**, recent new buys for the fund, made good ground in December.

## **Portfolio Activity - Purchases**

- Following our recent visit to Taiwan and Korea, we have reduced our exposure to the China infrastructure theme in favour of newer themes ecommerce and intelligent / electric vehicles. New holdings in the ecommerce theme include Taiwan's leading ecommerce company, PChome Online, whilst recent purchases within the intelligent / electric vehicle theme include Woory Industrial in Korea and Hota in Taiwan.
- After a curiously slow start to e-commerce in Taiwan, consumers are finally jumping on the bandwagon. Indeed, anecdotally, everyone we spoke to on our trip to Taiwan in November was talking about internet shopping even though it accounts for just 4.5% of total retail sales, which is still very low compared with other countries in Asia. **PChome Online's** share price has been hurt recently by slowing demand for '3C' products which comprise a large percentage of the company's sales, and more general concerns about the health of the consumer in Taiwan. Although the headline 2016 P/E for the company might seem high at 30.9x, it is still significantly lower than many of its global peers, which are trading on headline P/E multiples of around 71x. For us, the relative attractiveness of **PChome Online's** valuation was one of the key factors behind our decision to add the stock to the portfolio. Other appealing aspects of the investment case for us include the fact that **PChome's** B2C business is one of the most profitable globally because of its consignment model and that management are considering listing the company's C2C business in 2016, which could prove to be a short term catalyst for the stock.
- Woory Industrial, makes climate control units for electric cars. Around 40% of its sales come from Korea, whilst 60% of sales comes from outside of Korea. Its customers include Tesla, Nissan, Toyota and Mazda and management are also looking to penetrate the Chinese auto makers. Unlike traditional cars, the heater in an electric vehicle has to run off the battery, so energy efficiency is key. Safety is also a critical issue. In terms of growth, Woory should benefit in the short term from the fact that Tesla's 'Model X' has 2 heating units compared to 1 heating unit for current models; longer term, management think that volumes for the company's electric car related business could grow 4-5x between now and 2015 as the structural shift towards electric vehicles gathers pace. Woory Industrial is trading on 15.6x 2016 P/E and has a market cap of US\$210 million.
- Hota supplies gears to the global automakers, including Tesla (via BorgWarner) for whom Hota is the exclusive supplier. Hota achieved this position by working jointly with Tesla on researching and developing a new transmission system for Tesla's post-Roadster models. The business with Tesla is particularly valuable as this revenue stream makes significantly higher margins than the company's corporate average. Indeed, Hota's operating margins have increased from low double digits in recent years to >18% in 2014. Low commodity

prices have also helped. The company currently has a market cap of US\$955 million and is trading on a 2016e P/E of 25x.

 Additional new positions in the intelligent/electric car theme include Tung Thih Electronic and Bizlink Holding. We would like to highlight that post these purchases, the intelligent/electric car theme has performed very well in January 2016.

## Portfolio Activity - Sales

• Beijing Urban and Jiangnan Group, which sat within the China part of our infrastructure theme, were sold towards the end of 2015. The primary driver for this decision was that our research and on the ground meetings in Asia on the intelligent/electric car theme led us to the conclusion that the long term growth opportunity for this new theme was far greater. While it is early days to measure the outcome of this decision, as mentioned above, thus far, allocating capital from the infrastructure theme in China to the intelligent/electric car theme has benefitted the fund's performance.

#### Factors which did well in 2015:

## Intelligent / Electric Car: 3.5% average weight in 2015

- Since purchase towards the end of the year, **Tung Thih** is up 42% and **Woory Industrial** is up 16%.
- In mid 2015 we sold Chinese auto parts maker Nexter Automotive as the stock reached our valuation target. Nexteer generated a positive contribution of 47bps towards annual performance.

#### Sensors / Software / Automation: 17.8% average weight in 2015

- Key positive contributors within this theme were Singapore listed sensor company, Innovalues, up 49% and smart phone casing maker, Tongda, up 53% in 2015. Chinese smart meter maker, Wasion, up 14% and Chinese online gaming company, Perfect World, up +21% also performed well in 2015.
- **Silverlake Axis**, long term top contributor and holding, was sold just prior to a sharp correction in the share price as the market digested fraud allegations.
- By the year end we had scaled back the weighting in this theme. Sensors currently accounts for 13% of the portfolio.

## Some themes were detractors, or partial detractors from performance:

## Leisure & Tourism: 15.9% average weight in 2015

- Many stocks in this theme performed well including Thai cinema operator, Major Cineplex, up 20%, Korean online ticketing company, Interpark, up 12% and India cinema operator, PVR, up 9%.
- Unfortunately, gains were offset by a significant fall in **Eros International** following an attack by short sellers as we discussed earlier.

## Vietnam: 15.0% average weight in 2015

- Smaller companies in Vietnam are yet to benefit from changes to foreign investor limits as is the case with large cap stocks. We believe it is only a matter of time before the market starts to award small caps in Vietnam the value which they deserve. Indeed, the valuation gap between large caps and small caps in Vietnam has become stark. The Prusik Asia Fund's Vietnam portfolio which is invested in the large cap universe is on a forward P/E of 13.8x, whilst the Prusik Asia Smaller Companies Fund's Vietnam portfolio is on a forward P/E of just 7.8x, or a 43% discount.
- More recent new additions such as **Cotec Construction** and **Hoa Binh Construction** have returned 58% and 12%, respectively, since purchase.

## Smart Textiles: 5.1% average weight in 2015

- The two holdings in this theme are **Toung Loong Textile** in Taiwan and **Best Pacific** in Hong Kong. Strong performance in our large cap smart textiles stocks in 2015 was also not echoed at the smaller companies level. We believe more patience is needed.
- Toung Loong Textile released weaker than expected results in 3Q15 and sell side analysts have been scaling back estimates. Lulu Lemon accounts for around 20% of Toung Loong sales and Lulu's recent inventory issues might also have led to negative sentiment. However, we remain positive on Toung Loong's capacity expansion plans, recent new client wins and the structural growth opportunity for nylon 66.
- **Best Pacific** has been weak despite positive news flow regarding rapid growth in its high margin lace and webbing business and management's expectations that 2H15 sales growth will be much stronger than 1H15 owing to restocking. The stock is on a forward P/E of 9.3x. We remain positive on the investment case.

## Local Brands: 11.0% average weight in 2015

• The key culprit here was Max's Group, the casual dining chain in the Philippines. Following a thorough restructuring of the business in 2014, Max's had ambitious targets for expansion and profit growth in 2015, not all of which were met. However, we remain positive on Max's portfolio of strong brands and the structural growth story for consumption in the Philippines. We are happy to give management more time to execute their strategy, but continue to monitor developments closely.

#### Themes for 2016

We start 2016 with our key themes still dominating the fund. Most notably these include Vietnam, leisure and tourism, financialisation and sensors. We have some relatively new themes in the fund which we hope will build and become major new themes over time. These include intelligent/electric vehicles, where we now have a 12% weighting, and ecommerce.

Importantly, during the recent market weakness we have witnessed how strong themes can hold up and generate very good returns. For example the intelligent/electric car companies all generated very strong relative returns in January, despite the index fall.

We also expect our stocks to finally begin to reflect the underlying growth we are observing now as it is also backed by, in some cases, extreme valuations. Indeed, we feel the combination of themes, stocks and value in the portfolio is especially attractive at present. It is also worth noting that around

32% of the fund is in export oriented companies which will benefit from any further currency devaluations in Asia.

## **Valuations and Foreigner Capitulation**

Despite widespread negative sentiment a few quantitative analysts are beginning to get excited again about a near term inflection point. We have written in the past about quantitative work on Emerging Markets from Credit Suisse, which in the past has been prescient and helpful in cutting through the psychological gloom to highlight the facts. In our 3Q15 quarterly report we looked at this work in terms of price to book valuations. We believe this is worth revisiting, alongside making some supplementary comments.

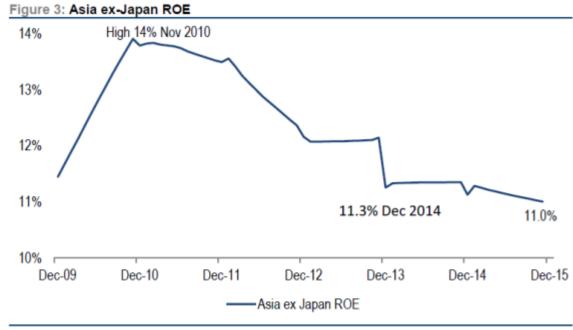
At the time of writing, in recent days the MSCI Asia ex Japan index for the third time since August and September 2015, has touched the price to book ratio lows which were only previously seen in 1998, 2001, and 2008. At the time of writing, the price to book ratio stands at 1.25x. History suggests that buying at these lows results in very significant gains on a 2 year view on all occasions and is very likely to generate good returns on a 1 year view. The table below has more details.

#### Returns From Buying at 1.3x P/B or Below:

	1 month	3 months	1 year	2 years	3 years
Asia Crisis (1997)	-1.8%	+4.62%	-6.5%	+34.1%	+5.0%
<b>'9-11' (2001)</b>	-1.4%	+16.9%	+15.7%	+46.1%	+75.2%
GFC (2008)	+0.9%	-1.2%	+64.9%	+95.0%	+68.3%

Source - Bloomberg/Prusik

The difficulty that some observers have with this is that the declines in return on equity in Asia in the past few years would support this lower price to book ratio, leading some to ask whether we are in a 'new normal' state for valuations. We would agree that this is a risk but would also highlight that return on equity was also low on all the previous occasions when the price to book ratio reached these levels. Moreover, we believe there are many levers which could easily be pulled in Asia to improve return on equity. For example, more efficient capital management, reform and capacity rationalisation would all contribute to higher returns. Importantly, if the rhetoric is to be believed at both the government and company level, there are plans and strategies in place to achieve this. According to Credit Suisse return on equity appears to be bottoming.



Source: Company data, Credit Suisse estimates

We would also note that dividend yields look particularly attractive in Asia, especially in Australia, China and Korea. In the case of Australia and China, dividend yields are now higher than the local bond yields, whilst in Korea this gap is the narrowest it has been for the past 15 years.

Finally, what we are witnessing in terms of foreign investor capitulation also lends support to the quantitative view that Asia could deliver a positive return on a 12 month view. On a rolling 12 month basis this has been highest in ASEAN with net foreign selling of 1.4% in Thailand, 1.3% in Malaysia and 0.8% in Indonesia and the Philippines. Indeed in Emerging Asia ex China and Malaysia in seven out of the past eight months, foreigners have cumulatively sold about US\$30 billion. This is equivalent to around 0.3% of market capitalisation on a rolling 12 month basis. Selling to this extent has only been seen in three past occasions – 2003, 2008, and 2011. Anecdotally, we would add to this that most clients have been speaking to recently are underweight Asia.

In short, we have a lot of sympathy with Credit Suisse's view that historically cheap valuation in Asia, plus recent foreigner capitulation, make for a strong case that Asia equities will deliver positive returns on a 1 year view.

#### China

We cannot argue with the view that risks globally are rising. While we are certainly not macro experts, and we will keep our comments here short and without grand conclusion, there are a number of very interesting issues impacting markets at present which deserve commenting on.

## **China's Currency**

China remains in the midst of a deliberate effort to restructure its economy but investors are clearly very reluctant to give Beijing the benefit of the doubt in terms of successfully managing the transition from an investment-driven to a consumption-led economy, as well as establishing a more

fully market orientated exchange rate. Indeed, some question whether Beijing has lost control of the economy, the exchange rate and the markets altogether.

The development of the offshore renminbi market could be viewed as a policy mistake by Beijing since it has exposed the Chinese currency to hot money flows which are making it harder to execute a smooth transition to the new PBOC policy of targeting the renminbi against a stable trade-weighted exchange rate basket. However, it was no doubt a necessary step in Beijing's gradual process of internationalising the renminbi. This process gained further credibility with the IMF's decision in November last year to add the renminbi to its SDR basket with a 10.92% weighting, effective from 1<sup>st</sup> October 2016. The PRC will therefore remain reluctant to take the extreme step of shutting the offshore market down altogether since the political leadership has invested so much capital in the SDR agenda.

So what does SDR ascension mean? In practice, SDR ascension has limited practical implications in that this is a notional currency used by the IMF for when its member countries want to access its funds. SDR ascension does not equate to an automatic shift in official foreign reserves where the US dollar still dominates (64% weighting as of the end of 2014). However, this 'stamp of approval' which the renminbi has been granted as a result of SDR ascension is expected to lead to the renminbi's weighting in official currency reserves to increase. Certainly, sitting at a 1.1% weighting behind the Canadian dollar, as the renminbi currently does, appears to be at odds with the fact that the renminbi is the second most widely used currency for global trade

Does Beijing want to see a one off sharp devaluation of its currency? While we believe Beijing may see some mild depreciation of its currency as desirable, we think a one off sharp devaluation is unlikely. Quite apart from setting back its ambitions to become a global reserve currency, China has already indicated that it is moving away from an export led economy towards a services oriented and more domestic and higher value added set of dominant industries. Hence its efforts to boost consumption, introduce pensions and deeper financial markets, build a sports industry, file patents in the healthcare sector and so on. In addition, having already carried out a one off devaluation in August last year, with the only parallel in recent history to that being the one off appreciation carried out in August 2005, we think a further devaluation in the near to mid term does not make much sense from a policy perspective.

In short, we believe that China's policy is in fact to try to create the renminbi as a stable unit for central banks and other institutions to add to their portfolio. What is clear, however, is that, by clearly stating that they wish to manage their currency against a basket of currencies they are looking, in the medium term, to reduce exposure to the US dollar.

#### **Capital Outflows**

Aside from the speculative outflows from China that we have witnessed in recent weeks and months, it is worth highlighting the huge demand for dollars created by outbound tourism from China. A Chinese citizen is allowed to convert up to \$50,000 worth of renminbi into dollars each year in order to travel overseas. In 2015 outbound tourists from China numbered some 130 million people. Whilst is it not known whether they all took their full allocation, in theory the potential demand for dollars from this alone amounts to \$650 billion. What we do know, however, is that according to Fung Business Intelligence Chinese tourists' overseas spending on clothes and footwear alone (and so excluding spending on jewellery, food, entertainment and hotels) came to around \$230 billion last year, which suggests that a significant portion of the maximum allocation is being taken up. Quite worryingly, since the beginning of 2016, the speculation and fear in currency markets has meant the daily conversion of \$10,000 per person could has not always been met.

## **Capacity Closures**

Elsewhere, there is evidence that China is slowly starting to close capacity in some of its worst sectors which are most plagued by overexpansion. We are starting to see this in steel and coal. According to CLSA, for the 5 large coal producers they track, 8,000 workers, or around 10% of the aggregate workforce will lose their jobs by March 2016. This follows on from 2015 during which time around 25,000 at these companies lost their jobs. In both absolute and percentage terms this might not seem that dramatic but the direction is clearly established.

There is no question that China's economy is going through a very complex transition. It looks as though the government's intention is to try and tackle this by taking a slow step by step approach in a bid for the economy to only experience a slowdown rather than a full-on recession. If the government achieves its objectives, the outcome should be a more balanced, resilient economy where a collection of companies, notably in the technological, consumer, healthcare and auto industries could have widespread recognition outside of China and strong pricing power. However, whether the Chinese government succeeds on this front remains highly debatable, with some significant execution risk ahead.

## **Deflation and Disruptions**

#### Oil

As Paul Krugman elegantly wrote recently in the New York Times, there is something 'non-linear happening with the impact of falling oil prices.' In the past, falling oil prices used to have an expansionary impact on economies, especially for Asia which is a net importer of oil – lower oil prices would typically lead to lower inflation and in turn scope for interest rate cuts. Perhaps this conventional theory is limited to scenarios where the oil price falls are small and incremental. Quite probably when the oil price declines by 70% the effect on producers and other energy industries which have based their business plans and financial structures on higher oil prices (for example the huge leverage taken on by fracking companies) is so drastic that the effects override what conventional theory has taught us. Indeed, the liquidity constraints in the Middle East are already resulting in huge deleveraging and asset sales. In fund management this is mostly being felt in the form of sovereign wealth funds selling down their investments. The liquidity constraint and forced deleveraging is also being felt in bond markets. Combined, these events could send negative tremors across the global economy which far outweigh the positives of cheaper energy, whilst at the same time magnifying deflationary pressures.

#### **Disruptions**

In previous quarterly reports we have written extensively about the huge technology disruptions that are bearing down on many industries. These include the imminent challenge to all energy sources by the combination of solar panels and battery technology and the subsequent but parallel challenge to the conventional car sector by electric vehicles. The impact will be every bit as disruptive as the crushing effect ecommerce has had on traditional retail. Interestingly, the impact of ecommerce has still not come to an end. This month the iconic US department store company, Macy's, has announced massive store closures amid rumours it is experiencing financial difficulties.

The key point about all these disruptions is the part that technology is playing. As Moore's Law enables a totally different speed and trajectory of change in 'old' industries, the speed and depth of

change is taking most participants by surprise. At the same time, technology disruption is also very deflationary.

This quarter we want to highlight three more important disruptions which we can see coming. All are technology or software based or enabled, open source, asset light and hugely deflationary in that they offer cheaper solutions to conventional models and practices.

#### Blockchain

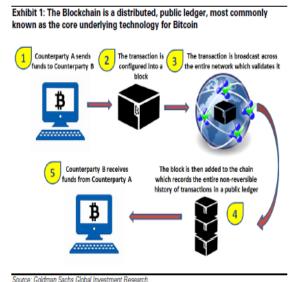
At this very early point is it difficult to convey the importance of blockchain in our future without coming across as overly dramatic or sensationalist. Unhelpfully, widespread evidence is admittedly still to be seen. However, we have read extensively and listened to and participated in hours of conversations and podcasts on the subject with experts who are using or have used this technology.

The consensus is that blockchain is both an enabling technology and a disruptive force and the extent of the future disruption brought about by blockchain is likely to be massive. In addition, many believe that blockchain will be the foundation of another internet world, which will be equal again in size and importance to the whole internet of today! The difference is that today's internet is based on information. Blockchain will enable an entirely different internet, one which is based on value.

#### What is Blockchain?

Blockchain is the open source software behind Bitcoin but do not be mislead or put off by this association. Bitcoin is a distraction here. Blockchain software can be applied in many ways beyond virtual currency.

Blockchain is a clever form of database. Using the internet, cryptography and open source based software, it is a shared, replicated and decentralised ledger. In addition, no single entity has the unilateral authority to change or meddle with the transactions in this distributed ledger, so all transactions need to be approved by the parties involved. The information in a Blockchain based transaction is instantaneously shared with everyone who needs to receive it and is simultaneously stored and, crucially, *constantly* replicated – hence its resilience – in multiple places. A Blockchain ledger has never been successfully hacked. It reduces transactions to an immediate event: I buy, you sell and Blockchain indelibly and immediately records it. No settlement time is needed.



Aggregate size of the Bitcoin Blockchain (MB) since inception (2009)

60,000

40,000

40,000

20,000

10,000

2009

2010

2011

2012

2013

2014

2015

10

Exhibit 2: The size of the Blockchain grows along with the no. of transactions

Source: blockchain.info, Goldman Sachs Global Investment Research.

Hence Blockchain creates a shared infrastructure which will have a monumental impact. For example, it has the potential to transform the financial services sector, which is still quite unbelievably dependent on double entry bookkeeping and a reconciliation processes which often still results in settlement periods of up to 5 or 10 days ('T+5' or 'T+10') for some complex derivatives. With Blockchain, there will initially be 'triple entry accounting' but eventually, owing to the resilience and design of Blockchain, settlement will be instant.

One can imagine many corollaries of just this one change. Banks using a private distributed ledger based on Blockchain could significantly reduce transaction costs owing to not needing settlement staff. Instant settlement also means lower holding costs and lower capital requirements for businesses. On the other hand, it means that anyone making money by holding capital in the middle of a transaction will no longer be able to do so. Using a public ledger, people who do not know or trust each other can transact without a middle market or exchange. For example, companies can issue stock directly to shareholders.

The list will be long, both of beneficiaries and casualties. We suspect that it could also rapidly spawn a whole new generation of online banks, possibly owned by respected internet brands that use the very cost effective and asset-light Blockchain software from the outset. In theory, by using a Blockchain based model they would be able to slash costs and increase banking efficiencies in a way that bricks and mortar banks might not be able to compete with. This should sound familiar and we know how the story ends.

In addition there are many other kinds of transactions which can use Blockchain. Its security could mean that legal letter issuance could use Blockchain, removing the need for Notaries. Even online payment systems could be different going forward.

At present, the evolution of Blockchain is rather reminiscent of the early days of the internet in that, depending on which side of the Atlantic you sit on, you are either surrounded by hundreds of start ups planning to use Blockchain to offer specific services or you are sceptical or have never heard of it. At the same time, all the major banks, for example, know they need a Blockchain based strategy but exactly what or how is still a major discussion.

Overall, many would agree that 2016 will be the year when we begin to see the launch of many Blockchain based services. Indeed, Australia's main stock exchange became the latest backer of Blockchain technology last week with a settlement-system deal and \$10.5 million investment in a Blockchain services start up called Digital Asset Holdings. Investors in Digital Asset Holdings also include Citigroup, ICAP, JP Morgan, ABN Amro, Deutsche Boerse and Santander.

Santander predicts that by 2022 that private Blockchains may save up to \$22 billion in costs for global banks and may even exclude those banks not using the technology. It is still early days but this disruption is imminent and, of course, it is going to be deflationary.

## The Sharing Economy

Just when we thought Uber was the best thing since sliced bread, along comes Via (<a href="www.ridewithvia.com">www.ridewithvia.com</a>), currently operating between 6.30am and 9.00pm on weekdays in New York but soon to be extended, thanks to its success. With a Via app you can call a car to ride anywhere in Manhattan south of 110<sup>th</sup> Street for just \$5! The trick is that you share the ride with others, which New Yorkers and Via drivers are both discovering is rather fun. Morning coffee taking is encouraged, whilst the drivers are paid by the hour, which is proving to be less stressful for them than the Uber model.

We mention this along with many other examples such as AirBnb and Uber as signs that the 'sharing economy' is here to stay. We believe it will increase exponentially this year, causing more deflation and creating the rise of massive new 'virtual' businesses in breathtakingly short periods of time. At the heart of this fundamental and, we believe, generation-driven change in behaviour is the fundamental rule: 'Don't buy; rent or share instead.'

## **Biohacking**

Biohacking is both a trend and a disruption. Contrary to the illicit connotations we might have with the word, hacking in this context is very much a positive activity. In this instance hacking refers to what the word means in its purest sense, namely taking things apart and putting them back together in a new and better way. More specifically, biohacking refers to managing one's own biology using a combination of medical, nutritional, psychological and electronic techniques. The philosophy at the heart of biohacking is that the tools and knowledge of science should belong to everyone; it is about scientific and technological development achieved in a non-institutional context and process. As such, biohacking is a natural next step from the sharing economy and even blockchain. In fact, the people talking about new trends in software are equally interested in biohacking and one aspect of biohacking in particular, nootropics, which we explore in more detail below. We do not think this is a coincidence.

Interest in our own bodies and minds in terms of health and performance has been on the rise for many years now. This trend started to take shape with the widespread usage of supplements, diets and some fitness trends and has since has evolved into Fit-Bits, numerous apps for wellness and an explosion in content seeking to explore and illustrate the interactions between the mind and body. You only have to look at the top 20 most watched TED talks online (<a href="https://www.ted.com/talks">https://www.ted.com/talks</a>) to see biohacking is in the ascendance. Titles such as 'The Science of Happiness', 'The Power of Vulnerability' and 'Your Body Language Shapes Who You Are' cater to our desire to understand better how to be our best.

Under the umbrella of biohacking sits Nootropics or 'smart drugs'. These include drugs, supplements, neutraceuticals or functional foods which are designed to enhance cognitive functions such as memory, motivation or attention span. The prescription versions, such as Ritalin and Modafinil, are most usually prescribed for conditions such as ADHD. Caffeine is in fact also classified as a nootropic.

Crucially, many of the components of nootropic drugs are FDA approved substances but they are either not patented, or they are supplements and herbs, meaning that they are not restricted for use by 'big pharma'. Owing to this, young companies are emerging which are experimenting with and testing different components to get different outcomes. These concoctions or 'stacks' are then sold for particular purposes, for example, 'relaxation', 'restfulness' and 'rejuvenation', or 'energy', 'clarity' and 'flow'. All this is being done on an open source basis with users sharing the recipes for their favourite 'stack'. A further twist is that because everybody's body chemistry is different, eventually these could be tailor made for individuals and their specific needs.

Founders of California based Nootrobox (<a href="https://nootrobox.com/">https://nootrobox.com/</a> "Nutrients for the Brain"), which is one of the few nootropics sellers so far which seems to cater to the average consumer (as opposed to the chemistry expert insiders and those in the know), claim that, in future, using nootropics will be seen as equivalent to using glasses for bad eyesight.

The reason we mention this here, quite apart from it becoming a future big trend in its own right, is that we can see nootropics, plus the ethos behind nootropics, forming a major disruption for the big and well established pharmaceuticals industry. These pioneers in nootropics are young and belong to the generation that likes to share. They are creating these products open source, often with chemical compounds bound in with natural ones, and they are already very cheap. They are also highly customised, a mode of treatment which is likely to be highly beneficial to individuals but not such good news for pharmaceutical companies' profit margins. Watch this space.

#### PORTFOLIO PERFORMANCE

## Performance Summary (%) Period ending 31.12.2015

renou enums 31.12.2013			
	USD	GBP	SGD
1 Month	-0.78	-0.70	-0.68
3 Months	1.20	1.33	1.37
2015	-12.78	-12.15	-12.21
2014	-3.49	-3.49	-3.43
2013	7.51	7.29	7.64
2012	30.80	31.05	30.69
Since Launch+	39.21	42.90	2.86
Annualised 5 years	-0.91	-0.81	-0.95
Annualised 3 years	-3.27	-2.95	-3.00
Annualised Since Inception	4.28	4.62	0.47

## Fund Performance - Class A USD (%)



Source: Bloomberg. Total return net of fees.

Source: Bloomberg

+ Launch date: A:08.02.08, C: 25.03.08, D:

15.01.10

## Monthly Performance Summary (%)

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2015	1.25	-0.11	-2.04	7.23	1.21	-5.33	-1.78	-11.48	-2.63	4.83	-2.71	-0.78	-12.78
2014	0.21	3.58	-2.62	-2.50	0.56	2.45	-1.39	2.86	0.32	-1.85	-1.76	-3.11	-3.49
2013	7.27	3.73	1.32	1.82	3.58	-9.40	0.10	-4.52	3.54	2.84	-1.44	-0.51	7.51
2012	5.05	7.75	-1.04	4.29	-5.53	3.11	2.27	-0.65	5.40	1.27	4.12	1.81	30.80
2011	-2.15	0.43	2.35	3.75	-0.57	-1.22	3.60	-11.67	-8.27	0.37	-5.50	-1.07	-19.28

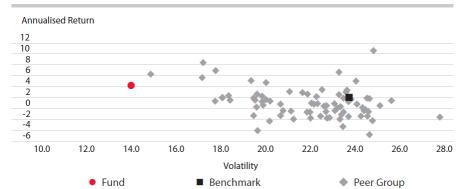
#### **RISK ANALYSIS**

Risk Metrics	Fund
Beta	0.57
Alpha (%)	3.12
Sharpe Ratio	0.31
Volatility (%)	14.01
% of the portfolio –which could be sold in 2 business days	47.44

Source: Bloomberg

Since Inception: A: 08.02.08

## Risk Adjusted Performance - Class A USD (%)



Source: Bloomberg. Annualised return and 1 year volatility versus the peer group (open ended offshore Asia Pacific ex Japan Equity Fund Index), 8.02.08 to 31.12.15

#### THEMATIC & GEOGRAPHICAL BREAKDOWN

Top 5 Holdings (%)	
iFast Corp Ltd	6.1
Toung Loong Textile	4.9
Interpark Corporation	4.7
Jiangnan Group Ltd	4.5
Tongda Group Holdings	4.4
Total Number of Holdings	31

#### **Portfolio Financial Ratios\***

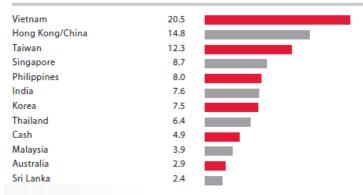
Predicted Price/Earnings Ratio	11.6x		
Predicted Return on Equity (%)	22.3		

<sup>\*</sup>Fiscal year periods

## Thematic Breakdown (%)

Vietnam	20.5	
Leisure/Tourism	17.1	
Financialisation	13.7	
Sensors	13.0	
Intelligent/Electric Car	12.1	
Local Brands	10.4	
Smart Textiles	6.1	
Cash	4.9	
E-Commerce	2.1	

#### Geographical Breakdown (%)



All data as at 31.12.15. Source: Prusik Investment Management LLP, unless otherwise stated.

## **FUND PARTICULARS**

#### **Fund Facts**

Fund Size (USD) 50.1m

Launch Date 8 February 2008

Fund Structure UCITS III

Domicile Dublin

Currencies USD (base), GBP, SGD

#### **Management Fees**

## **Annual Management Fee**

 $1.5\%\ p.a$  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 the total returns will be applied.

**Class U:**Provided the fund achieves an overall increase of 1.5% per quarter, a performance fee of 10% of the total return will be applied.

## Dealing

Dealing Line	+353 1 603 6490
Administrator	Brown Brothers Harriman (Dublin)
Dealing Frequency	Weekly, Friday
Min. Initial Subscription	USD 10,000
Subscription Notice	2 business days
Redemption Notice	2 business days

## **Share Class Details**

Codes			SEDOL	ISIN	Month end
Class 1					
A USD	Unhedged	Non Distributing	B2PKN21	IE00B2PKN210	139.21
B USD	Unhedged	Distributing	B2PKN32	IE00B2PKN327	139.30
C GBP	Hedged	Distributing	B2PKN43	IE00B2PKN434	73.38
D SGD	Hedged	Distributing	B3M3HJ5	IE00B3M3HJ55	192.82
Perform	ance fee based	on individual investor	s holding		
U GBP	Unhedged	Distributing	BBQ37T7	IE00BBQ37T77	85.84

Performance fee based on fund performance as a whole All share classes are closed to new investors as of  $30^{\rm th}$  September 2013.

## **Fund Manager**

**Heather Manners** 

Tel: +44 (0)20 7493 1331

Email: heather.manners@prusikim.com

## Sales & Marketing

#### **Mark Dwerryhouse**

Tel: +44 (0)20 7297 6854 Mob: +44 (0)7831 856 066

Email: mark.dwerryhouse@prusikim.com

#### **Jack Barham**

Tel: +44 (0)20 7297 6858 Fax: +44 (0)20 7493 1770

Email: jack.barham@prusikim.com

### **Prusik Investment Management LLP**

6th Floor 15–16 Brook's Mews London W1K 4DS

Web: www.prusikim.co.uk Email: enquiries@prusikim.com

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