HEDGENORDIC

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Real Estate & Infrastructure

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ALIGNED, INNOVATIVE,





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ROW, ROW, ROW YOUR SHIP,







INTRODUCTION

HedgeNordic is the leading media covering the Nordic alternative investment and hedge fund universe. The website brings daily news, research, analysis and background that is relevant to Nordic hedge fund professionals from the sell and buy side from all tiers.

HEDGENORDIC

HedgeNordic publishes monthly, quarterly and annual reports on recent developments in her core market as well as special, indepth reports on "hot topics".

HedgeNordic also calculates and publishes the Nordic Hedge Index (NHX) and is host to the Nordic Hedge Award and organizes round tables and seminars.



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The Editor...

Of Writer's Block And Musical Chairs

s the publisher of HedgeNordic's special reports, I have often been sitting in front of a blank page, scratching my balding head, while contemplating on what will entice readers to plunge into a fat report like this one. It is only the second time I was called on to do so on the topics of real estate and infrastructure, but I cannot remember having ever had such ambiguous feelings about an asset class.

There are many quotes and analogies about the moments preceding the burst of a bubble, from musical chairs to getting hit by a train everyone has been waiting for. So, what is different this time? Nearly everyone we spoke to, has acknowledged that Nordic real estate is not on the cheap side anymore. No wonder: having had to find alternatives to inexistent bond yields, institutional investors have had to turn to the next most available stable yielding asset class. For the past few years, most institutions have been loading up on real estate, both debt and equity.

In this publication, you will find that, to little surprise, those managers in asset classes adjacent to real estate, have been particularly vehement about the increasing mispricing of real estate. Not only has the illiquidity premium been drawn down, but the risk of the asset class itself may be misunderstood, given how long the current positive trend has been going on for. Let us not forget that the Nordics are still experiencing a strong urbanization phenomenon, and that it is supporting the demand for residential, but also commercial constructions.

Infrastructure seems to be an obvious alternative: it is stable and less affected by consumer behavior. Unfortunately, infrastructure is not so readily available. Small and shorterterm projects are already expensive, and larger projects are difficult to handle for most investors. Also, countries like Sweden have had a culture of state or municipality ownership for assets that the society depends upon. They have started divesting these projects but it will take time until there is enough availability. Having very large pockets is a must to find good deals in this area, as well as a very long time-horizon.

We went out of our way to find some other alternatives you may be curious about. If you are looking for liquid real estate you can dump when trouble hits, perhaps REITs are an option. Or do you fancy yourself a forest owner? Maybe more extravagantly: what about owning a ship and putting that picture on the wall? Whatever the asset you choose, do not forget that ownership comes with responsibilities. While it may be easier to fulfill those in some areas than in others, good owners with a strong moral compass are needed even more where being ethical is not an obvious choice. Just like prices, sustainability is becoming hotter in most of the real assets space. If you have a moment to spare, we hope that you will chose to read this report, then pause and reflect. No one knows when the music will stop playing, but you can always decide where you would rather be dancing, and mostly, what your next groovy move will be.

Hope you enjoy this edition of HedgeNordic's special report on Real Estate and Infrstructure!



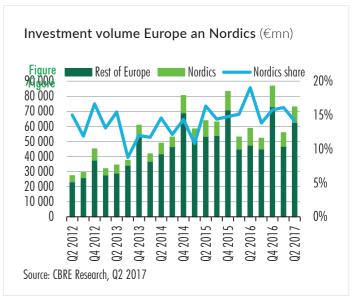
Kamran G. Ghalitschi CEO / Publisher HedgeNordic





2017 MARKET REVIEW NORDIC INVESTMENT





NORDIC TRANSACTION MARKET

From an investment perspective, the Nordic real estate market proved to be active, strong and confident during Q2 2017.

The investment volume for Q2 ended up at €10.4 billion and the H1 2017 volume totalled €19.7 billion. When compared to H1 2016, a record year for the Nordic region, it's a slight decrease of less than 0.5%.

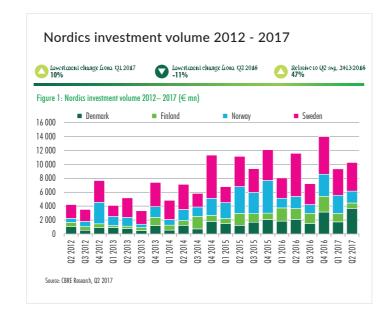


For Q2 2017 the Nordics share of the total European investment volume represented 14%, which is in line with the average of the previous five years. When compared to Q1 it's a slight decrease by 22% investment perspective, the

real estate market proved to be active,

Denmark and Swedewndawnlinkenthreits@2005 increase when compared to Q1 2017.

The investment volume for Q2 ended up Historically Sweden has been tilligargest contributed to the Nordic transaction volume, and \$7.0 billion has been tilligated contributed to the Nordic water for the Nordic water compared to Q1 2017 behinders with essed the largest increase which was 109% representing approximately €3.8 billion. For Q2 2017 the transaction volume in Norway ended up at approximately €1.7 billion, representing





16.4% of the total volume, and Finland reported a volume of around €0.8 billion corresponding to 7.5%.

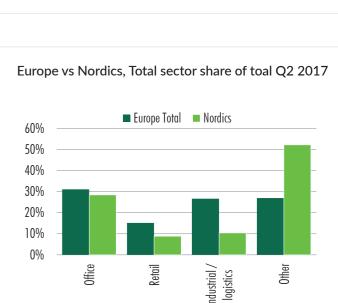
RESIDENTIAL SECTOR CONTINUES TO DOMINATE

Driven by large portfolio deals in mainly Sweden and Denmark, the residential transactions dominated the market, ending up at €3.4 billion, representing 33%, of the total investment volume for Q2 2017. The office sector ended up at approximately €2.9 billion representing 28% of the total investment turnover.

Comparing the Nordics to the rest of Europe, it's the "Other" sector that shows the largest variance, representing 25%, it's mainly thanks to the previously mentioned large residential deals in Sweden and Denmark.

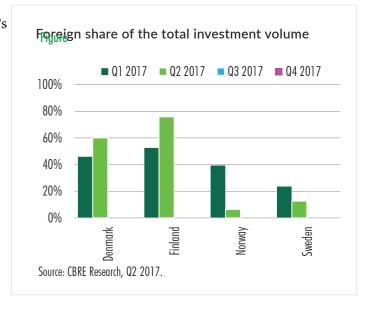
A CONTINUED STRONG INTEREST FROM FOREIGN INVESTORS

International investors are still very active in the Nordic region. On average, the foreign share of the total Nordic transaction volume represented 39% for Q2 and 41% for H1 2017.



Other includes residential, hotel, mixed use and community properties

Source: CBRE Research, Q2 2017



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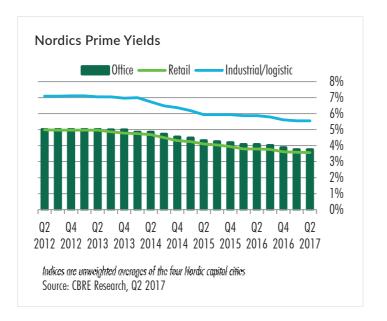
LOW AND STABLE PRIME YIELDS ACROSS THE REGION

After a substantial prime yield compression in across the region in 2016, prime yields have remained relatively stable in 2017.

OUTLOOK

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Promoted by the relatively favorable economic conditions and a continued positive market sentiment, CBRE predicts that the remainder of 2017 will continue as a strong transaction year across the Nordic region, supported by strong demand from both local and international capital.



The Nordic real estate market proved to be active, strong and confident during H1 2017

Prime Yield and Rent per market and segment Q2 2017

Prime Yield (%)	Office	change Q † Q	Retail — High Street	change Q † Q	Industrial/ Logistics	change Q † Q
Denmark	4.00	→	3.00	↓	5.50	→
Finland	3.75	→	3.75	→	5.70	→
Norway	3.75	→	3.75	→	5.50	→
Sweden	3.50	→	3.75	→	5.50	→
Nordics, average	3.75	→	3.60	→	5.60	→

Prime Rent (€/sq m/pa)	Office	change Q t Q	Retail - High Street	change Q † Q	Industrial/ Logistics	change Q t Q		
Denmark	242	→	2,691	→	81	→		
Finland	465	→	1,940	→	137	→		
Norway	451	→	2,625	→	126	→		
Sweden	676	†	2,183	†	96	→		

DENMARK, SUMMARY

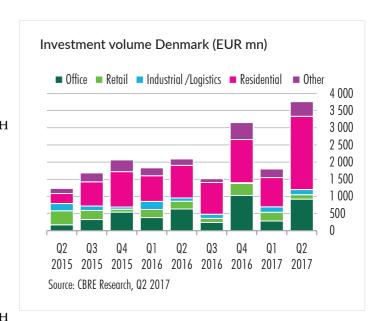
According to preliminary figures, the investment volume in Denmark totalled approximately DKK 28 billion (€3.8 billion) in Q2 2017, which represents a 109% q-o-q growth H and a 81% y-o-y growth. The estimated investment volume in H1 2017 reached DKK 41 billion, marking a 38% growth compared to H1 2016.

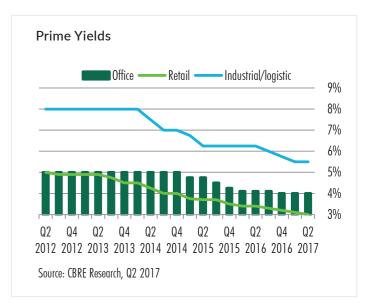
Greater Copenhagen attracted some 56% of the total Danish H1 2017 investment volume.

On a country level, the most traded property type was residential properties in both Q2 and H1 as a whole, with 57% and 54% shares of the total volume respectively. The share of offices in H1 2017 as a whole lies at 22%. $\rm H$

The H1 2017 investment volume was particularly boosted by a number of large nationwide portfolio deals. The DKK +1 billion deals account for 35% of the total half-year investment volume. The share of cross-border investors in the total H1 2017 volume is estimated at some 60%, boosted by large portfolio deals. The share of deals with both buyer and seller being cross-border investors remains strong.

The prime office and industrial yield remained stable while the prime retail yield contracted further in Q2 2017, landing at 3.00%. The trend for all market segments is stable.

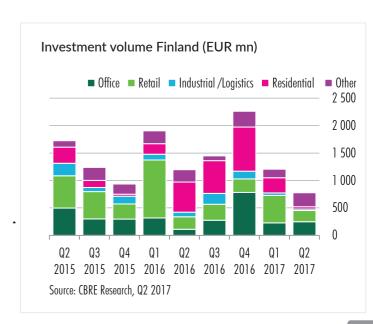




FINLAND, SUMMARY

Finnish transaction markets remained active at the beginning of 2017 although the volumes slowed down from last year's record breaking transaction volumes. During the first half of the year volumes reached almost €2 billion whilst last year's first half of the year was almost €4 billion.

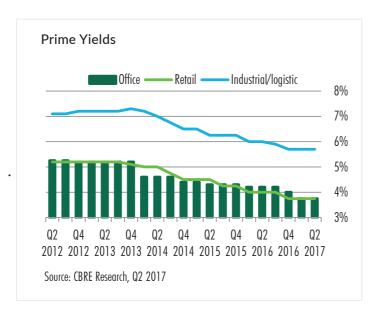
The large volume in 2016 was mainly driven by the investments in rental residential sector. Almost 40% of the total investment volume measured with EUR came from residential investments in 2016. During 2017 residential rental transactions have not been as active as expected.



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Excluding transaction volumes in 2016 the markets have stayed very active.

Properties in the Helsinki city centre remain very attractive investments and the yield level of the best properties is estimated at approximately 3.75%. Helsinki city centre continues to attract both domestic and international investors. Investors are increasingly more willing to take investment development risks, especially when there is a limited number of completed core cash flow property available.



NORWAY, SUMMARY

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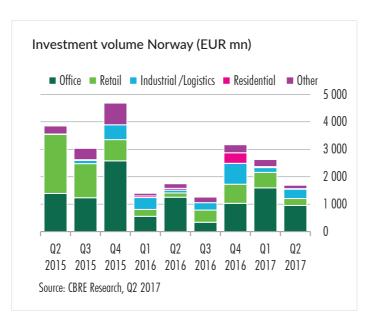
The activity in the Norwegian investment market remained strong in Q2 with a total volume of NOK 16 billion. This represents a slight decrease of c. 5% year-on-year. Total investment volume in the first half of 2017 equated to NOK 40 billion, second only to the historically strong first half of 2015, due to exceptionally strong activity in Q1.

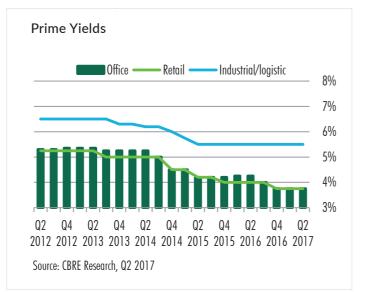
Oslo remained the most active market totalling some 70% of the quarterly volume. This is due to several large office transactions, including Eufemia at NOK 1.74 billion and Lilleakervein 2 at Lysaker for NOK 1.24 billion. The office sector contributed to roughly half of the total volume in Q2, down from c. 61% in Q1.

International investors remained very much active in the market and their share of the investment volume accounted for 27% in the first half of the year. This is an increase of 7% on 2016.

After a substantial prime yield compression in 2016, prime yields have predominantly remained stable in 2017.

Looking into the second half of 2017 we expect the investment demand to remain high from both local and overseas investors.





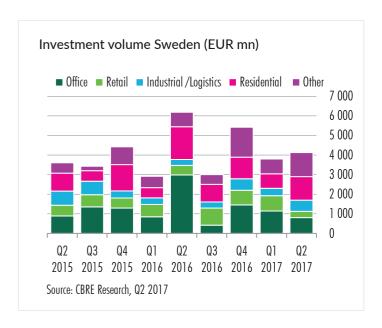
SWEDEN, SUMMARY

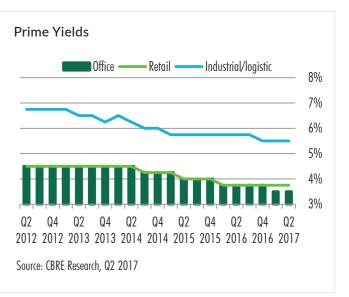
The Swedish investment transaction market witnessed a strong and confident Q2 2017, with continued high activity across most markets and segments. The investment volume for Q2 ended up at SEK 39.7 bn (€4.2 billion) and the H1 2017 volume totalled SEK 75.7 bn (€7.9 billion).

The global political and economic uncertainty has not yet had a negative impact on the Swedish investment transaction market, and the effects of Brexit so far have possibly even benefited the Swedish real estate market as there is a continued strong interest from international capital sources. The non-Swedish investors are active in, or considering, most segments with a focus in the more established geographic markets. For H1 2017, the foreign share of the transaction volume represented 17%.

For H1 2017 portfolio deals ended up at SEK 36.4 bn, representing 48% of the total transaction volume.

Promoted by the relatively favorable economic conditions and a continued positive market sentiment, CBRE predicts that the remainder of 2017 will continue as a strong transaction year, with high activity among domestic and international investors/capital.











BACK TO BASICS: investing when everything looks expensive



By Mikko Syrjänen, Co-Head of Real Assets, Man GPM



Water and the second se

"Walkie Talkie building" in 20 Fenchurch Street, sold for 1.28bn GBP, a new record high price for any office building in Londor

hen it comes to valuations across asset classes, many investors are experiencing a sense of déjà vu. Asset prices have risen substantially, back to the levels we saw in the middle of the 2000s in some areas, against a backdrop of accommodative monetary policy. At the same time, yields are at historical lows and risk-taking has become widespread across markets. As we look back on a decade since the peak of the previous market cycle - and the global financial crisis - it is clear to us that the investment landscape is exhibiting some distinctive characteristics. This article examines some examples of current market conditions, which we believe support the case for allocation to real assets. We argue that investment in private markets-related strategies (including private debt and direct real estate) can potentially add an important stream of income and return potential to a portfolio, which is largely uncorrelated historically to traditional asset classes. But as the current cycle looks set to potentially reach its

peak at some point over the coming months or years, and market behaviour is harder to predict than ever, we believe that the most successful investment approaches may be those which go 'back to basics'. To us, this means focusing on direct origination of opportunities or in some cases 'creating' our own assets and seeking to create value by deep operational involvement. Conversely, this means that potential returns are not driven by adding leverage, beta exposure, complex structuring or seeking longer duration.

"This current landscape presents a number of challenges for investors – perhaps most significantly, many are being pushed up the risk spectrum in search of yield and return."

Buyers for everything - demand and prices have risen across asset classes, but yields remain low

It's no secret by now that valuations are at historically higher levels across markets. Traditional asset classes like equities and bonds have seen sustained positive performance, and so have prices in real assets. As an example in the context of commercial property, an office building in the City of London affectionately known as the 'Walkie Talkie' was sold to a Hong Kong based herbal health products company this year for 1.28bn GBP, creating a new record high price for any office building in London. But putting the yield and price aside, the most striking thing about this is that the Walkie Talkie was built only recently – completed merely three years ago in the summer of 2014 at a total build cost of 473m GBP – so it was sold for nearly treble the cost of

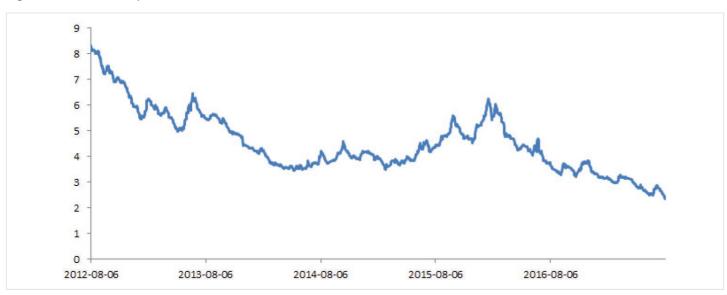
construction, something that was 'virtually unprecedented' in the words of the seller of the asset. ¹

But it's not just London's traditional 'safe haven' property market that is seeing extreme demand. In June this year, the Argentinian government sold a \$3bn bond with a maturity in 100 years, where the offering received nearly 10bn USD of orders and was thus 3.5 times oversubscribed. Remember that since 2002, all the way until last year, Argentina was consistently either in default or restructuring its debt – perhaps unsurprising for a country which has defaulted eight times since its independence. At this point in the cycle, it seems to us like there really is a buyer for just about everything. In parallel, yields are at historic lows, where the European high yield bond market (which includes junk-rated companies from 'BB+' all the way to 'C') is yielding 2.4%² – 'high yield' feels like a total misnomer.

¹ Rob Noel, CEO of Land Securities, as quoted in the Daily Telegraph, 27 July 2017.

² BofA Merrill Lynch Euro High Yield Index Effective Yield, as at 3 August 2017.

Figure 1: Yield on European HY bonds



Source: BofA Merrill Lynch Euro High Yield Index Effective Yield, 4 August 2017.

In this context, increasing numbers of investors are looking to real assets to help diversify their portfolios and provide potentially complementary income streams. One area here is residential real estate, but even here there are significant divergences in the value offered between geographical areas. Compare house prices in Sweden to those in the US, for example. In Sweden, house prices have had a nearly 25-year bull market since the early 1990s. As a result, in Sollentuna, a normal northern Stockholm suburb, a typical middle class family could spend 9m SEK (over 900k EUR or 1m USD) on a 30-year old, 200 square metre single family home.³ In the US market, on the other hand, which experienced the deepest housing crisis in history between 2006 and 2012, in many sub markets house values are only now back to pre-crisis levels - so that same 200 square metre single family home, but brand new, might sell for 200k USD (170k EUR) in cities like Atlanta or Charlotte.4 But strikingly, the average household income between these American cities and Stockholm are in the same ball park⁵ - highlighting a substantial affordability gap, where a comparable US single family home could cost a fifth of that in the Stockholm metropolitan area.

How can investors capture opportunities in this context?

This current landscape presents a number of challenges for investors – perhaps most significantly, many are being pushed up the risk spectrum in search of yield and return. There is no 'magic' solution to this dilemma, but in an environment like this one, we believe it may be wise for investment strategies to be positioned conservatively and proceeded with caution.

In recent years, where markets have continued to generally perform positively (valuations have risen), we have adopted a conservative position, and believe that it is important to seek assets which provide a margin of safety. In practice, this means that on the private credit side, we favour a focus on senior secured loans, backed by quality real estate assets and with lower 'loan to value'. In this way, we believe that investment can potentially generate a stable but modest set of returns within a low-risk framework over time – rather than chasing returns further up the risk spectrum. In addition, we prefer shorter duration private debt investments, which offer the potential to rebalance or reinvest capital in new opportunities as appropriate as the cycle turns.

"It's no secret by now that valuations are at historically higher levels across markets."

When it comes to investing in direct real estate, in recent years we have focused on US residential markets, which we believe remain more affordable to homeowners in contrast to many other developed markets. Again, we feel this approach goes back to basics, taking a defensive approach using detailed due diligence and operational efficiency, rather than financial leverage as primary source of potential return. Indeed, we see a range of potential opportunities in this space which we believe may offer an attractive mix of risk and return over the medium term. Examples of these

would be in cities such as Atlanta, Dallas or Charlotte – where there have been opportunities to acquire and build individual single family homes. Many of these properties are situated in middle class neighbourhoods with well-regarded schools nearby. From an investment perspective, they present opportunities for renting, especially where tenant incomes are relatively strong. Given that mortgage availability remains constrained following the sub-prime crisis ten years ago, while many people are still repairing their credit scores (it tends to take around 7-9 years following a default to re-qualify as 'prime'6), these families have the option of renting a home before buying back into the market.

Conclusion - avoiding the race up the risk spectrum

Undoubtedly, the decision about how to invest today will be driven for many investors by their view of when the cycle will turn. With valuations high across a range of asset classes, increasing numbers of investors are starting to become more cautious. In this environment, we believe patience is a virtue and the most successful investment strategies may be those which can hold their conservative positions while the cycle matures. When the market turns, we may see a larger and more diverse opportunity set – across geographies, markets and asset classes – but until then, it's back to basics.



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Property is specialist sector that may be less liquid and produce more volatile performance than an investment in other investment sectors. The value of capital and income will fluctuate as property values and rental income rise and fall. The valuation of property is generally a matter of valuers' opinion rather than fact. The amount raised when a property is sold may be less than the valuation. The value of an investment and any income derived from it can go down as well as up and investors may not get back their original amount invested. Alternative investments can involve significant additional risks.

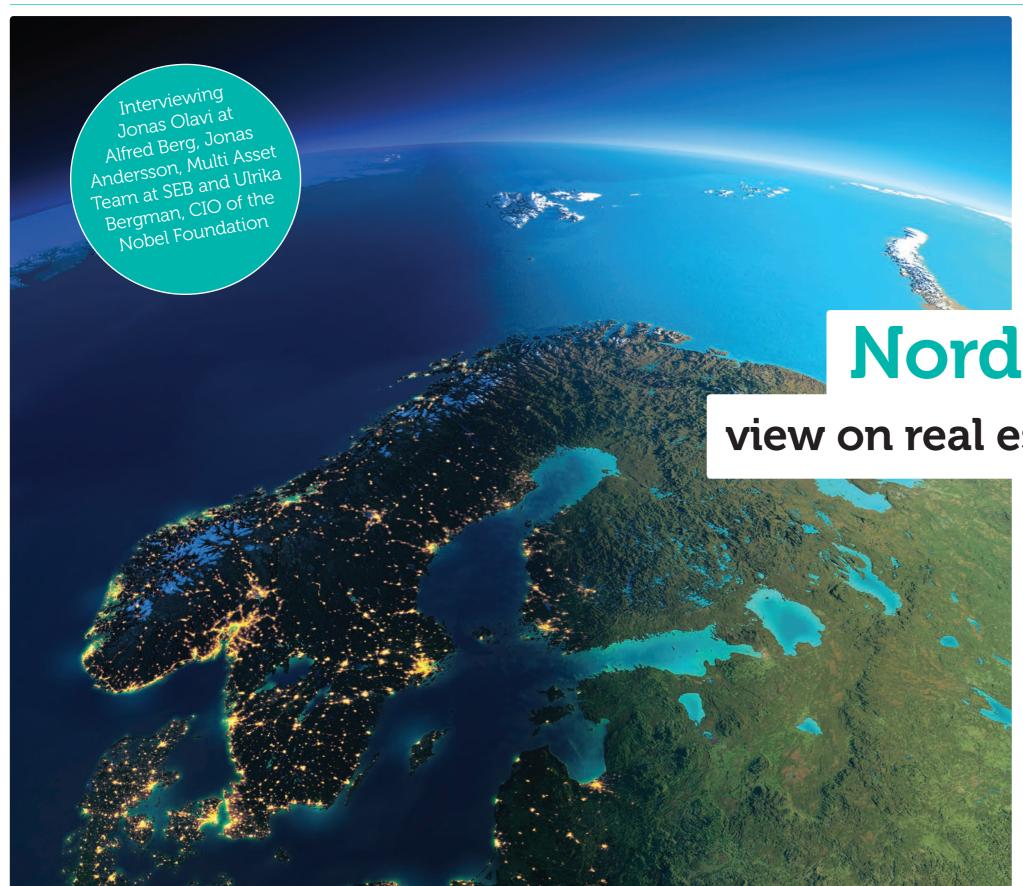


³ Source: Hemnet, 2017.

⁴ Source: Zillow, 2017

⁵ Source: Salary Explorer, accessed August 2017, showing average monthly salaries. Stockholm: 39,192 SEK, Atlanta: 7,059 USD, Charlotte 6,746USD.

⁶ Source: MyFICO, 2017.



by Jonathan Furelid – HedgeNordic

Nordic allocators'

view on real estate and infrastructure

eal estate and infrastructure investments have been on the rise among institutions in the Nordics and elsewhere in recent years. The hunt for income producing assets and an attractive yield gap on real estate investments given ultra-low interest rates are factors playing into the demand picture. But how are Nordic allocators viewing this exposure currently, HedgeNordic took the pulse on three Swedish institutional investors.

Talking to Jonas Olavi, Nordic Head of Tactical Allocation at Alfred Berg, Jonas Andersson, Portfolio Manager, Multi Asset Team at SEB and Ulrika Bergman, CIO of the Nobel Foundation, we wanted to

find out how they view real estate and infrastructure from a portfolio perspective, if and in what way allocations have changed over time and how they look upon the risk of significantly rising interest rates for the asset class.

HedgeNordic: How do you look upon real estate and infrastructure in your asset allocations. Do you view it as a separate asset class or as part of the alternatives bucket?

Jonas Olavi: We view real estate investments as part of the alternative investment bucket, both via the exchange and as direct investments.

Jonas Andersson: When discussing this I will refer to listed companies in the infrastructure sector. We do not currently have real estate as part of our model portfolio. As we defined

they show little correlation to other asset classes and are not so sensitive to changes in economic conditions. If you invest in real estate investment funds you will be affected by market sentiment

perspective. The asset class has a low downside correlation to bonds. There is also an interesting diversification within the asset class where some assets are more sensitive to GDP changes than others. Even though we refer to listed companies within this context, the sector displays lower volatility than the overall market.

www.hedgenordic.com - October 2017

Ulrika Bergman: We hold real estate and infrastructure as diversifying components to other traditional asset classes in our

portfolio, ideally it will provide us

with good risk adjusted returns.

HedgeNordic: What do you see as an appropriate portfolio weight for the asset class over

Jonas Olavi: In our model portfolios, alternative investments have an allocation of around 5 percent allocating between

commodities, hedge funds and real estate. The weighting of real estate and infrastructure typically comes in the range of 2,5-5 percent in a broadly allocated portfolio, this is however depending on risk preference and size of investments as well as type of investor.

Jonas Andersson: We have decided to allocate 10-17 percent of the equity portion of the portfolio to the asset class in our low-risk mandates. In other

mandates we have not included

the asset class.

Ulrika Bergman: We currently have no target allocation for infrastructure as a separate

asset class, but we do have a strategic allocation of 10 percent to infrastructure and real estate combined. The strategic allocation is aligned with the Nobel Foundation's long-term return and risk profile.

HedgeNordic: Have you changed the allocation to the asset class in your investment mandates recently, in what way?

Jonas Olavi: We currently hold a neutral stance to the asset class and this has been our positioning so far this year.

Jonas Andersson: We added the asset class during the summer and have not owned it in recent years.

Ulrika Bergman: We have added to infrastructure during the year.

HedgeNordic: How do you look upon valuations in the real estate and infrastructure sector currently?

Jonas Olavi: We see potential in listed real estate, at least in Sweden and the Nordics, as many companies are traded to a

"We currently have no target allocation for infrastructure as a separate asset class, but we do have a strategic allocation of 10 percent to infrastructure and real estate combined."

"We see potential in listed real estate, at least in Sweden and the Nordics, as many companies are traded to a discount."

Jonas Olavi, Nordic Head of Tactical Allocation, Alfred Berg

discount. As such you get better value for money compared to a professional investor investing into physical real estate.

Jonas Andersson: Certain parts of the asset class we are well aware are considered expensive, such as bond proxies. Talking about infrastructure, these are for example to be found among pipeliners. The entire asset class is also quite expensive right now looking at it from an historical perspective. We hold a concentrated portfolio of around 30 companies with regards to the asset class.

Ulrika Bergman: As for most asset classes today, we see them as relatively expensive, meaning

that we hold a careful stance with regards to our allocations.

HedgeNordic: What is your view on the asset class looking forward given potentially rising interest rates?

Jonas Olavi: We think that interest rates will rise going forward but included in that view is that we also see rising inflation which commercial properties are protected against as rents will be adjusted for that. In our outlook for the coming 1-2 years we see moderately rising interest rates which means that we are not particularly concerned given how stable real estate companies are today. The risk is of course that we under estimate the rise in interest rates and its effect on the investor interest for the sector.

Jonas Andersson: If increased interest rates is a result of high growth figures we can live with that, we are however aware that the asset class comes with a certain real interest rate risk.

Ulrika Bergman: We remain cautious given that we see the asset class as relatively expensive.



"The asset class has a built-in inflation hedge mechanism which we particularly favour in our low risk mandates that are more interest rate sensitive."

Jonas Andersson, Portfolio Manager, Multi Asset Team, SEB

our portfolio classifications listed infrastructure eventually arrived in the equities risk bucket although we know that it is a separate asset class with specific characteristics. From a risk management standpoint, we could finance infrastructure with 34 equities and 44 fixed income given a risk neutral approach.

Ulrika Bergman: We view infrastructure and real estate as a separate asset class.

HedgeNordic: What added value do you see with the asset class?

Jonas Olavi: These investments lower the risk and adds to the risk adjusted returns of a well diversified portolio. Real estate and infrastructure investments share some common traits that makes them valuable from a portfolio perspective. They enjoy a stable return profile over time,

but still own an asset that shows low correlation to the equity market, the reason being that the asset class has steady cash flows and are viewed as a defensive investment.

For an institutional investor, there is normally additional added value using direct investments in real estate and infrastructure given that it gives you a higher expected return to compensate for the fact that these investments are illiquid. As the Swedish real estate companies are valued today you actually get a discount instead buying them on the exchange.

Jonas Andersson: The asset class has a built-in inflation hedge mechanism which we particularly favour in our low risk mandates that are more interest rate sensitive. On top of this, the asset class offers high dividends and growth in a longer-term

Ulrika Bergman, CIO, Nobel Foundation



ordic people have always been known for being great sailors, but Sweden is no longer on the map when it comes to ship ownership. How come? Should we care? And if so, what can we do about it? HedgeNordic sat down with Stefan Gattberg, Head of corporate finance at Pareto in Stockholm, to answer these questions and more.

"I am biased, of course," confesses Gattberg, "I'm the fifth generation in a Swedish shipping family! But I really think that this is the right time for ship ownership to come back to Sweden. If not now, then I am not sure when." There are indeed a couple of reasons to be looking at this asset class a little closer. First, there are not many other opportunities for fixed asset investments with any attractive return. Second, the Swedish tax code has been updated to make it possible for Swedish ship owners to compete on an equal footing with those based in the rest of the world. Another possible reason could be the need for more responsible ship ownership.

"Four years ago, when Pareto came to Sweden" started Gattberg, "we saw large institutional investors starting to consider alternatives to their traditional fixed income investments. All turned to real estate first. What has happened of course is that real estate has become fairly expensive. Now the question is what is the new alternative, given that the valuation of traditional asset classes has become even more stretched than it was four years ago?" There is a certain interest from large pension funds for infrastructure investments, but in Sweden most of these assets are still state or municipality-owned. "This will change, but it will take some time," Gattberg continues.

"I would argue that shipping should be considered similar to infrastructure. We are talking about assets that move on the water, but they are still physical assets, a lot like real estate. Historically in fact, large ship owners have also been large real estate owners." For Gattberg, there is an opportunity to grasp given the discrepancy between real estate prices and ship prices.



"The market for ships is much more liquid than local infrastructure or real estate because it is global and you can always move a ship across the world."

Shipping also provides more flexibility than infrastructure. The investment size can be small (when co-owning a vessel) or large (when owning of a portfolio of vessels). They are also more liquid: "The market for ships is much more liquid than local infrastructure or real estate because it is global and you can always move a ship across the world." On the other hand, a ship owner can hold on to each investment until it is time to scrap it, which can be between 15 and 30 years, depending on the type of vessel. But liquid has a price: shipping is also much more volatile than infrastructure.

"While this has been true historically," Gattberg admits, "asset values today are at historical low today, so there could be a huge opportunity on the upside." The shipping market peaked in 2008 and collapsed during the financial crisis. The recovery was particularly slow due to oversupply. Gattberg explains: "Many ships were ordered before the crisis hit, and it took two years for some of those ships to hit the market. There was an overhang, but this supply has now largely been absorbed."

This sector can also be a good hedge against oil-correlated investments. "Oil is fuel for shipping, so cost-wise some segments in shipping benefits from a slump in oil prices,"

Gattberg comments. In addition, investors buy oil and store it in tankers when the price is low, keeping supply off the market. Therefore, the shipping rates are not necessarily affected negatively in these instances. For the rest of the segments, like bulkers transporting coal and other raw materials, or containers transporting any types of manufactured goods, the drivers can be very different, like seasonal weather or end-consumer demand.



"In the Baltics and in the North Sea, low emission areas have been defined."

In the context of oil and coal, it seems quite obvious that investing in shipping does not look very green or sustainable. "Big steps are being taken towards more sustainable shipping in Northern Europe," argues Gattberg. "In the Baltics and in the North Sea, low emission areas have been defined (ECA), where ships have to comply with some standards. However, in the middle of the oceans, there is no jurisdiction. There is a lot more work to be



"Big steps are being taken towards more sustainable shipping in Northern Europe."

Another aspect of sustainability lies in the scrapping of vessels. After their useful life is over, these large vessels need to be dismantled and disposed of or recycled. "Responsible owners can make sure that the job doesn't get done by children on the beaches of an emerging country, like it is often the case," states Gattberg. These are important considerations people tend to ignore because they do not happen in front of their eyes, but due to Sweden's dependency on shipping, society also has an intrinsic responsibility in this industry.

From a consumer perspective, Sweden has always heavily relied on shipping, given the needs for importing and exporting goods, be it food or manufactured goods like electronics or clothing. As such, it is odd that Sweden's ship ownership is not higher, from Gattberg's point of view. In the past, one of the issues might have been a fiscal obstacle that has now been remediated. "As the vessels move around the world, a ship owner can choose any fiscally friendly domicile. This is why, across the world, shipping companies largely are exempt from corporate taxes. But until recently, this was not the case here. Now Sweden has a fixed tonnage tax system where a ship owner pays a fixed fee that is aligned with the rest of the world. Before, you had a competitive disadvantage running a shipping company here, but it is no longer the case." Investing in local companies can also be an important aspect for local institutional investors.

For Gattberg the tide is high: "It is time for shipping to come back to Sweden. This is a great investment to supplement



inexistent fixed income returns, and an opportunity to add consciousness and sustainability to this industry." An investor has to remember however that ship ownership is not to be taken lightly especially in such a competitive environment. Being able to count on the expertise of established players can be invaluable. Investment in shipping can be done on the equity side or on the debt side.

It can be linked directly to a standalone investment, i.e. a vessel, to a portfolio, or be a co-investment in either a vessel or a portfolio. The management of the assets can be delegated, in the same way as in real estate or infrastructure. "All major decisions, such as the building, purchase or sale of a vessel, are made by the investor. Everything else, like chartering and servicing, is taken care of," explains Gattberg. "Being a passive investor is relatively easy. You still get to own a ship and hang the picture of that ship on the wall."





by Hamlin Lovell – HedgeNordic

The global economy in late 2017 is in the throes of the strongest, synchronised economic upswing since 2010. Inflation is starting to creep up, which is one reason for investors focusing more attention on "real assets".

RESOURCES

Yet First State Investments constructive stance on selected commodities is somewhat contrarian amongst asset managers. Despite the strong recovery in many resource prices, investor positioning remains underweight energy and commodities, (according to the Bank of America Merrill Lynch Investor Survey, as of July 2017).

First State views resources overall as being around '4pm' - '5pm' on the resources cycle clock', which implies the early stages of a bull market. However the team doesn't necessarily foresee a synchronised commodity boom. For instance, there is an upward trend in iron ore supply but a supply deficit in zinc and copper is viewed as a beneficiary of electric vehicles. In the energy space, there is an expectation that oil prices will be range-bound. But, energy also includes alternatives and renewables such as wind and solar power, which tend to benefit from government initiatives

These fundamental forecasts for individual commodities are one input the team at First State utilise for stockpicking, who seek out "resource companies with world "With property valuations at historic highs in most regions — and already off peaks in some regions such as Norway — careful selection of geographies and sub-sectors is key."

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class assets, low production costs, organic earnings growth, robust financials, strong management and ESG leadership". The investment team is made up of seven professionals who travel extensively to carry out grassroots research on companies. With over 20 years of resource equity investing, visiting 1,376 mines and sites, in 76 countries, the team travel far and wide for companies meeting the exacting criteria. For instance, palladium prices have just surpassed platinum prices which led to a visit to Stillwater's operations in Montana, in the United States, which offers "lower political risk, a cleaner environment and better corporate governance" than the other PGM mining centres - Russia and South Africa. This is a good example of ESG policy in action, which is integral in First State's approach since they were among the first asset managers to sign up to the UN PRI in 2007.

The top ten holdings of the First State Global Resources Fund have operations in dozens of countries, but are nearly all listed in Australia, the UK, Canada and the US, all of which operate under strong corporate governance.

GLOBAL PROPERTY

The benefits of listed real estate in terms of inflation-linked income and capital growth – often wrapped in tax-efficient structures – are generally well understood by the market. The asset class can perform well in a rising rate climate. But with property valuations at historic highs in most regions – and already off peaks in some regions such as Norway - careful selection of geographies and sub-sectors (retail, office, residential, industrial, residential development, hotels) is key. Listed property companies display significant performance dispersion.

North America is the largest geographic exposure in the First State Global Property Securities Fund's at nearly 50%. The team views US commercial property valuations as being near cyclical peaks, citing an unchanged Green Street CPPI, and private mall, shopping centre and

apartment valuations down by single digit percentages. REITs focused on shopping centres and malls are down over 20%, yet First State finds value selected quality US retail assets, which now stand at historically high discounts to Net Asset Value (NAV), as well as relatively defensive assets such as data centres and Central Business District offices. In Canada, it has been important to avoid energy-centric Edmonton and Calgary.

The Fund has an investment team of 12 spanning the US, Europe and Asia. The process is mainly bottom up but keeps abreast of economic cycles. While central banks in the US and Canada have already started raising interest rates – and Mexico has upped rates from 3% to 7% since December 2015 - Brazil is moving in the opposite direction. This is not unusual as Brazil has seen two full interest rate cycles over the past nine years when most developed economies have had virtually unchanged interest rates. Notwithstanding Brazil's still weak economy, the magnitude of rate cuts – from 14% to 8% - bodes well for property values.

In Europe, there is a perception of strong fundamentals in markets such as German residential property, but is generally deterred by high valuations. Brexit has not scared the team away from the UK as selected assets trade on attractive discounts. There is a strong focus on The approach is very much active. Between 35 and 80 stocks are selected from its universe of 650. Three of the top ten holdings are not even constituents of its benchmark, the FTSE EPRA/NAREIT Developed Index and the other top ten holdings are sized at multiples of their benchmark weights.

INFRASTRUCTURE

Global Listed Infrastructure is traditionally more liquid and has lower fees than its unlisted infrastructure counterpart. It is now an asset class in its own right, with USD 100 billion invested in dedicated vehicles while the investment universe exceeds USD 3,000 billion (USD 3t trillion). The opportunity set is growing due to equity issuance, corporate spin offs and government privatisations worldwide. Sub-sectors such as airports, renewable energy and mobile towers are structural growth stories, growing faster than GDP; yet infrastructure equities show below average volatility while participating in more market upside than downside. Little wonder, then, that valuations on average are seen as full. However, valuations are at the low end of the historical range in some sub-sectors including pipelines, toll roads, and railroads, which First State's flagship infrastructure fund is over-weight. The most highly valued sector versus its history - airports - is amongst the Fund's biggest under-weight.



student accommodation and prime retail but the team have to date avoided UK residential. In Asia, Hong Kong assets are viewed as fairly priced and Singapore assets as conservatively priced. However, Japan is the largest Asian allocation in the Fund as selected Japanese REITs offer good value including high yields.

Many of First State's nine listed infrastructure investment professionals, led by Peter Meany, make more than 500 company visits per year. They each specialise in particular sub-sectors (airports, utilities, ports, railroads, pipelines, water, towers, satellites, railroads and waste). The investment process is 80% bottom up and combines

proprietary valuations with qualitative assessments that include a 20% ESG weighting.

The Fund has over 50% in North America, but the team searches for opportunities worldwide. If the US had its Great Recession 2008, Brazil, which ploughs its own economic cycle, has just emerged from its worst economic contraction since 1901. The portfolio managers have travelled 13,500 kilometres from Sydney to Brazil for in depth field research, which indicative of the rigorous investment process. They visited infrastructure companies,

"Valuations are at the low end of the historical range in some subsectors including pipelines, toll roads, and railroads, which First State's flagship infrastructure fund is over-weight."

assets, regulators, and governments in Curitiba, Brasilia, and Sao Paolo. Despite being fully cognisant of regulatory, political and legal risks in Brazil (and report very candid remarks from frank and open conversations with some in the industry) the team remain optimistic on for the region and see huge potential. Brazil has enormous room for improvement in roads, airports, ports and railways. Toll road concessions last for 30 years, offer inflation protection and have historically seen strong, but volatile, volume growth. Airport traffic is growing even faster, at about three times the rate of economic growth, but again with gyrations. Freight railways have sometimes been phenomenal investments in the US and Canada, and the team sees potential for operational leverage to kick in and expand returns in Brazil too. Privatisation in Brazil only started in 2012 and a strong pipeline of sales appeal to both locally listed firms and global infrastructure players that are often winning concessions in Brazil.

For 10 years to May 2017, Global Listed Infrastructure (GLIS), as defined by the FTSE Global Core Infrastructure 50/50 Total Return Index in USD, has outpaced inflation (as measured by the US CPI Urban Consumers SA) by 5% per annum. The First State Global Listed Infrastructure Fund strategy has beaten the FTSE index by no less than 4% per year. The \$6.3 billion portfolio is drawn from retail and institutional investors globally, in EMEA, Asia-Pacific and the Americas.







THE FINNISH REAL ESTATE MARKET

By Kamran Ghalitschi - HedgeNordic

Why is Finland one of the most attractive markets for real estate investors?

The Finnish real estate market is booming once again. In 2016 and 2017, for the first time in almost a decade, the production of new units topped the demand in the Finnish capital's metropolitan region. Although Helsinki and its surrounding region represent the biggest real estate market in Finland, there are a hand full of other municipalities and cities where a few larger scale projects are kicking off, and are thus showing great potential for returns. These projects are typically located along the major highways and long-distance rail network but also close to the regional train routes.

One great example of this is the city of Tampere with its Kansi Arena project and the adjoined projects worth €500 million. This is only the first phase of a re-development project that spans over the whole rail yard in the center of Tampere, a city of around 230.000 inhabitants. An even bigger project is now ongoing in Helsinki's Pasila district. The re-development of the Pasila railway station is part of a large project named TRIPLA, which also includes a hotel, a shopping centre and residential units. On the south side of TRIPLA lies the Helsinki High Rise project, as part of the re-development of the area.

The Finnish market at a glance...

Finland has a population of roughly 5.5 million of which 1.5 million live in the Helsinki metropolitan area. Urbanization adds around 17,000 people a year to this region's population. This corresponds to approximately a bus load each day. The equivalent of a medium-sized apartment building must be completed every day, to house all the new inhabitants. The rate of urbanization is comparable to other capitals such as Dublin, Stockholm and Oslo. The yearly demand of new housing units in the Helsinki metropolitan area is about 13,000. For almost a decade the rate of completion has hovered around the 10,000-units



mark, thus creating a structural deficit of about 3,000 units a year, accumulating to 30,000 units until today.

This has in turn created a soaring demand for apartments and an increase in the size of the overall market by boosting the price of new developments and old apartments. This is particularly true in Helsinki city centre. Because of this trend a few developers have focused on re-development of old offices into apartments, in part due to the fact that there is a limited amount of buildable land in Helsinki city centre. Although buildable land is scarce, there are a few massive re-zoning projects ongoing where old ports and industrial areas are turned into urban areas such as Kalasatama, Jätkäsaari and Hernesaari.

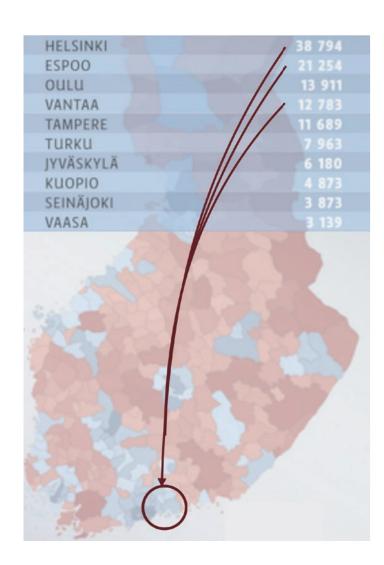


Factors behind increases in housing demand

Urbanization is the obvious culprit behind this development. But a more detailed look at what is going on paints a clearer picture. The majority of those who are moving to the cities are young single households, usually in search of education or work. As the national demographical statistics show, Finns are one of the oldest people on the planet - the same problem can be observed in Japan and is going to spread across the Nordic countries in the years to come. This creates a commonly accepted reality of desertification of rural areas, with plummeting prices of real estate and







vanishing services which in turn pushes the demand in cities and surrounding areas up, along with prices.

A change in people's attitudes towards ownership and flexibility represents another factor driving demand. As regulations on the banking sector has made it ever more difficult for individuals to acquire mortgages, this in turn has shifted the housing market towards rentals.

The future of employment remains in constant change due to globalization, digitalization and the overall shift in the value base of the workers. This tends to favor the worker with a more flexible life situation thus making people gravitate toward alternatives to ownership. As a side note this has increased the amount of small private real estate investor who own a couple to a few dozen apartments. This is also a growing market and as it grows, different service providers and tailored products are emerging to fit the needs as the private investors become more professional. However, institutional investors still hold the largest market share of rental in Finland and this is unlikely to change in the near future.

How is ICON Real Estate Funds positioned in this market?

ICON Real Estate Funds is a property development company that invests primarily in the residential market. Founded in 2010, the current project portfolio is valued at €250 million. ICON finances activities through private equity funds managed by the firm as well as through SPVs. As of Q3/ 2017 the firm counts close to 1,100 investors divided between 3 capital investment funds and 5 different SPVs.

"Our focus is to build environmentally friendly, sustainable buildings that are architecturally beautiful, a joy to live in, smart and easy to use and maintain." Markus Havulehto, ICON's CEO tells HedgeNordic. In Havulehto's opinion, the construction industry is seriously lagging behind other industries in terms of automation, pre-fabrication and productivity. "We think that it's time to re-think and reorganize the industry with a rattle-the-cages approach", he says. "Challenging the age-old views and ways of doing things is highly appreciated and we tell our partners that this is the way we think and act to fulfill our vision and values. Gains in productivity and quality translate to better return of investment."

In practice ICON preconizes to prefabricate all the components of a building on an industrial level in order to increase productivity, efficiency and especially quality. Energy production with hybrid systems, combining the best possible available sources, is key for driving this shift. "We are also aiming to re-use wasted heat and the use of alternative energy sources in order to keep the running costs of the property as low as possible," says Havulehto. In some of the firm's projects, sensors monitor the buildings and the environment. Once collected, the data is computed and feeds back into the building maintenance software, which keeps the building at optimum levels.

The firm's R&D is currently perfecting this concept, which is a top priority investment. The ICON Plaza in Suurpelto project in the region of Espoo is a good example. The property uses digitalization to improve the way it functions while making it a pleasure to use and easy to maintain. As a mixed-use project with a high proportion of residential units, with a value of €115 million, this project may land at the forefront of digital services used in property maintenance and management, once completed in 2021.



Parking facilities in Europe – a market with space for investors

By Dr. Thomas Beyerle, Managing Director, Catella Property Valuation GmbH

Until now, multi-storey car parks have barely been on investors' radars. Ongoing yield compression of traditional property investments is changing all that. Catella carried out a study of the market, analysing the market structures that are currently in place.

DEFINITION AND QUANTIFICATION

People working closely with market concepts for parking facilities will sooner or later come across the terms "onstreet" and "off-street" parking. Multi-storey car parks are classed as off-street parking.



TAB. I: DEFINITIONS AND DISTINCTIONS

- A parking facility (PF) describes a self-contained unit used for public parking, regardless of the form it takes.
- Distinctions in construction types: car park (CP), multi-storey car park (MCP), underground car park (UCP)
- Stand-alone car park: parking as the main function, e.g. underground car park below a market square.
- Integrated car park: parking as a secondary function, e.g. multi-storey car park in a shopping centre.

Source: Catella Research 2016

The amount of data available on parking facilities is negligible, so it is only possible to partially quantify the size of the multi-storey car park market in Europe. We estimate that there are around 300 million public parking spaces in western Europe (EU-28), of which over 80 % are in public spaces (on-street). Parking charges are levied on around 11 million parking spaces (3.6 %). The low amount of data is indicative of the largely diffusive structure of companies providing parking facilities. We define the total population of the multi-storey car park market in Europe as around 48,000 properties. Around 40 % of these are operated by municipalities and commercial enterprises (shopping centres), 30 % are assigned to the entertainment industry (theatres/cinemas) and around 10 % are located at airports. Around 20 % can be assigned to a diffuse user structure.

With regard to yields from multi-storey car parks (total turnover in Europe in 2015: € 8.58 billion), Germany has the largest share at around 25 %, followed by France (17%), the UK (16%), Italy (15%) and Spain (8%).

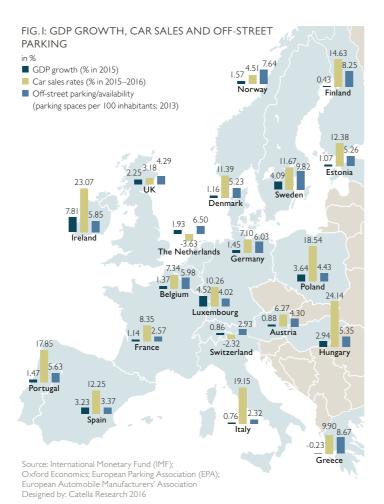
Established national economies such as Germany, France, Italy, Belgium, the Netherlands and the Nordic states could be of particular interest in terms of investments in multistorey car parks. However, southern and eastern Europe could potentially also be attractive markets. The economy in Spain is currently recovering and showed growth of nearly 13 % in new vehicle registrations, which is significantly higher than the growth rate in Germany (+7.1 %). Despite a more challenging economic environment, Italy recorded a 19.5 % increase in registrations. Registration numbers were also boosted in Poland, thanks to the positive economic situation (+18.5 %).

If we consider the number of off-street parking spaces per number of inhabitants, it becomes clear that the Nordic countries in particular have a high proportion of off-street parking. With 9.82 % and 8.25 % respectively, Sweden and Finland are significantly above the European average of 5.4 %. In Germany, this proportion is 6 % and in Italy, just

2.3 %. This variation in the statistics reflects the different parking policies of the countries in question.

PRICE TRENDS SET TO CONTINUE

We expect to see significant growth in prices/parking charges across all European countries. The willingness of car users to pay for parking is increasing significantly while the average duration of use is decreasing. In the past, parking charges have increased at a rate that is well above the rate of inflation. For example, in Germany, parking charges for short-stay car parks increased by an average of 2.9 % in five years. In the UK, they increased by 3.6 %, and in Norway by 4.6 %. When we look at the statistics showing how demand is developing, we can confidently look forward to a continuation of this positive trend. We see multi-storey car parks used by different groups of tenants as particularly attractive properties for investment. A hybrid multi-storey car park, i.e. one used by various companies and private consumers, is better positioned from a structural point of view than a multi-storey with a mono-functional use. Yield-focussed operators can thus

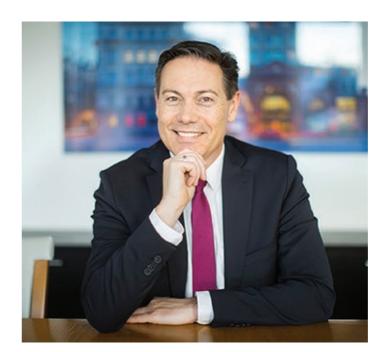


transform a single-tenant property into a multi-tenant one.

INNOVATIONS ARE BOOSTING THE MULTI-STOREY MARKET

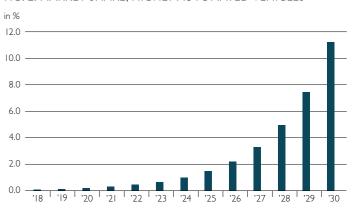
In future, it will be possible to automate the parking process. On the one hand, this will lead to maximum efficiency in the use of floor space. In an ideal situation we would hope to see an increase in area capacity of around 25 %. In other words, reducing traffic areas would make it possible to park a greater number of cars. On the other hand, this development is still countered by problems with networks and interfaces between cars, traffic flow and car parks – for the time being, at least. The car-sharing trend also has an effect on vehicle use. In Germany, brands such as car2go and DriveNow have recently enjoyed considerable growth.

Strong growth is also expected on the European market. While there were 700,000 car-sharing customers in late 2011, this figure has already increased to 2.3 million users in 2016. By 2020, it could be as high as 15 million users. Multi-storey car parks can also make a contribution towards sustainability and are certainly a strategic component in municipalities' efforts to reduce CO2 emissions in cities. The expansion of the e-mobility segment also plays a vital role in this respect. As the "garages of the future", multi-storey car parks offer the basic infrastructure to support this trend.



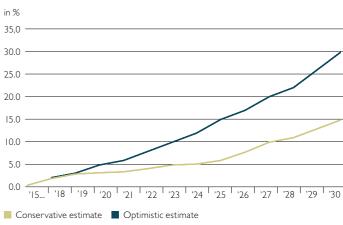
Dr. Thomas Beyerle, Managing Director, Catella Property Valuation GmbH

FIG. 2: MARKET SHARE, HIGHLY AUTOMATED VEHICLES



Source: Center of Automotive Management (CAM); designed by: Catella Research 2016

FIG. 3: GLOBAL SALES OF ELECTRIC CARS



Source: Center of Automotive Management (CAM); designed by: Catella Research 2016

CONCLUSION

With a glance at the initial market structures, it is highly plausible that institutional investors would be able to diversify their portfolio with an investment in multi-storey car parks, achieving significant yields. The trends towards car-sharing, electric vehicles and highly automated driving do not pose any disadvantages in terms of investments in multi-storeys. On the contrary, they will boost demand for paid parking. The clear excess demand strengthens the market power of the operators and will generally enable higher prices. The operating risk of the car park investor can therefore be classed as limited, due to the simple business model. Even in the case of operator insolvency, the cash flow will not necessarily come to a halt. It is important that we make every effort to catch up with regard to market transparency and data availability for in-depth analyses. We can expect that this lack of information will be resolved gradually with the institutionalisation of the market.







ALL ABOARD THE BUBBLE! A CLOSER LOOK AT THE NORDIC ALLOCATION SHIFTS TO REAL ESTATE

By Eugeniu Guzun - HedgeNordic

One distinguishable trend in the institutional investor universe has been the gradual but clear shift toward increased exposure to real assets such as real estate and infrastructure. Real estate experts state that this reallocation of assets represents a significant tendency among many pension funds, sovereign wealth funds, endowments and foundations.

Some even claim that the rediscovery of the potential of real assets represents one of the most noticeable themes of this decade within the institutional investment community. The growing appeal of real estate and infrastructure has been challenging the traditional mix of equities and bonds within pension fund and private investor portfolios. Fixed-income investments offer insufficient yields, while the upside potential of equities remains subdued in many markets due to modest economic growth and fully-priced stock market valuations. As a result, institutional investors are constantly searching for sources of long-term income, simultaneously seeking protection from future increases in market volatility and impending inflation instigated by global quantitative easing programs.

A series of studies conclude that increased exposure to real assets can have a beneficial effect on a traditional portfolio by reducing volatility and increasing returns. For instance, real estate specialist CenterSquare Investment Management studied the effects of a 20%-allocation to real assets on a tradition 60/40 portfolio (with 60% equity and 40% bond allocation) over the period of 1995 to 2015, with their study showing that a portfolio with 10% of investable assets in private real estate, 5% in listed real estate and 5% in listed infrastructure exhibited both an annual return and a volatility of 7%. This compares to the return of less than 6% and volatility of over 9% for the traditional 60/40 portfolio. Given the local nature of real assets, different real asset categories normally exhibit low correlations both with public financial markets and

with one another. In addition, the long-term nature of real estate investing matches up well with the long-term liabilities of many institutional portfolios.

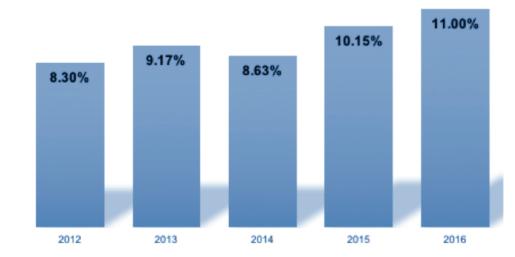
An article published by IPE Real Estate, a leading publication for institutional investment in real asset classes, in late 2014 said: "the flow of capital from Nordic institutional investors into real estate shows no sign of abating." While the phenomena might have been obvious and noticeable to real estate experts and those close to real estate markets, there is little data available showing that Nordic institutional investors have indeed increased

"The flow of capital from Nordic institutional investors into real estate shows no sign of abating."

exposure to real assets in the post-crisis era. In fact, a series of surveys conducted by Pangea Property Research show that the average real estate exposure among the largest 150 institutional investors in the Nordics stood around 8% for the period of 2011 to 2014. Whilst data

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Nordic Institutional Investors exposure to real estate



collected by Pangea shows that the Nordic institutional real estate portfolio accounts for 9% of total assets under management as of the end of 2016, the real estate exposure of institutional investors continues to be noticeably below their targeted allocation level of 11-12%. "There are some differences between the countries, but Nordic institutions are generally underweighted in real estate and want to increase their exposure going forward," Mikael Söderlundh, Head of Research and Partner at Pangea Property Research told HedgeNordic.

Data collected by HedgeNordic shows that the Nordic institutional investor universe has boosted its exposure to real assets in recent years. The 15 largest pension funds in the Nordics, which collectively amassed €1.521

trillion in investable assets in 2016, increased their average exposure to real estate and infrastructure from a mere 8.3% in 2012 to 11.0% at the end of 2016. The graph below displays this development.

Real assets have cemented their place in the strategic asset allocation mix of most Nordic institutional investors in recent years. In fact, Pangea's Söderlundh expects the Nordic property market to continue performing well, thus, "attracting significant capital from international core investors as well as Nordic institutions."

Looking closer at Norway, large institutions have increase exposures but it remains below average. Norway's immense Government Pension Fund Global, the largest sovereign wealth fund in Europe with €814 billion in investable assets as of the end of 2016, increased its exposure to real assets from 0.70% in 2012 to 3.20% in 2016. The fund managed by Norges Bank Investment Management started deploying capital into real estate investments in early 2010, when the fund was given permission by the Norwegian government to tap into the real assets class. The fund has yet to reach the target allocation of 5%, which is markedly below the real estate exposure of most Nordic pension funds.

The fund's real estate investments comprise both listed and unlisted investments, with the latter accounting for 2.5% of the fund's portfolio at the end of 2016. The unlisted real estate portfolio comprises office and retail properties in a select number of major cities, as well as properties in the global logistics market. Norway Government Pension Fund Global made fewer real estate investments in 2016 than in the previous years, mainly due to increased uncertainty in the markets in the first half of the year caused by ultra-low interest rates and volatility in the listed real estate market.

Meanwhile in Sweden, appetite has been rather strong. Swedish occupational pensions provider AMF has more than doubled its exposure to real estate and infrastructure over the past couple of years, with real estate investments accounting for 20% of the fund's assets at the end of 2016. AMF's exposure to real estate stood at a mere 7% at the end of 2010, with the allocation to real assets steadily increasing over the years.

The pension fund has increased investments in various forms of real assets such as real estate and infrastructure to lay the foundations for stable long-term returns. Nearly two-thirds of AMF's real estate and infrastructure investments comprise the fund's the core commercial portfolio, managed by the fund's wholly-owned subsidiary AMF Fastigheter, of the largest property investment and development companies in Sweden with a portfolio worth SFK 55.7 billion at the end of 2016.

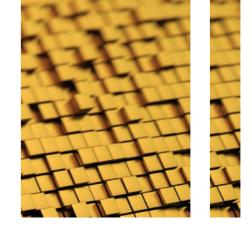
The expansion of both private and public real estate equity markets has been fueled by the increase of capital flows into the asset class, the widening of the spectrum of investment vehicles within the space, and the increased recognition among institutional investors of the potential for real estate within their long-term portfolios. The private

"The 15 largest pension funds in the Nordics, which collectively amassed €1.521 trillion in investible assets in 2016, increased their average exposure to real estate and infrastructure from a mere 8.3% in 2012 to 11% at the end of 2016."

side however seems to have overtaken the public side for some investors. Pangea Property Research recognizes this tendency: "The long-term trend is that Nordic institutions turn away from traditional property funds and prefer building up their own structures, often targeting specific sectors such as residential or public-sector assets," Söderlundh told HedgeNordic.







THE CASE FOR REAL ESTATE INVESTMENT TRUSTS

BY JONATHAN FURELID - HEDGENORDIC

																2002-	-2016
2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	YTD	Ann.	Vol.
Comdty	EM	REITs	EM	REITs	EM	Fixed	EM	REITs	REITs	REITs	Small	REITs	REITs	Small	EM	REITs	EM
	Equity		Equity		Equity	Income	Equity				Сар			Сар	Equity		Equity
25.9%	56.3%	31.6%		35.1%	39.8%	5.2%	79.0%	27.9%	8.3%	19.7%	38.8%	28.0%	2.8%	21.3%	28.1%	10.8%	23.8%
Fixed	Small	EM	Comdty	EM	Comdty	Cash	High	Small	Fixed	High	Large	Large	Large	High	DM	EM	REITs
Income	Cap	Equity		Equity			Yield	Сар	Income	Yield	Cap	Сар	Сар	Yield	Equity	Equity	
10.3%	47.3%	26.0%	21.4%	32.6%	16.2%	1.8%	59.4%	26.9%	7.8%	19.6%	32.4%	13.7%	1.4%	14.3%	20.5%	9.8%	22.6%
High	DM	DM	DM	DM	DM	High	DM	EM	High	EM	DM	Fixed	Fixed	Large	Large	High	Small
Yield	Equity	Equity	Equity	Equity	Equity	Yield	Equity	Equity	Yield	Equity	Equity	Income	Income	Сар	Сар	Yield	Сар
4.1%	39.2%	20.7%	14.0%	26.9%	11.6%	-25.4%	32.5%	19.2%	3.1%	18.6%	23.3%	6.0%	0.5%	12.0%	14.2%	9.2%	20.1%
REITs	REITs	Small	REITs	Small	Fixed	Small	REITs	Comdty	Large	DM	High	Small	Cash	Comdty	Small	Small	DM
		Сар		Сар	Income	Сар			Сар	Equity	Yield	Сар			Сар	Сар	Equity
3.8%	37.1%	18.3%	12.2%	18.4%	7.0%	-33.8%	28.0%	16.8%	2.1%	17.9%	7.3%	4.9%	0.0%	11.8%	10.9%	8.5%	19.2%
Cash	High	High	Large	Large	Large	Comdty	Small	Large	Cash	Small	REITs	Cash	DM	EM	High	Large	Comdty
	Yield	Yield	Сар	Сар	Сар		Сар	Сар		Сар			Equity	Equity	Yield	Сар	
1.7%	32.4%	13.2%	4.9%	15.8%	5.5%	-35.6%	27.2%	15.1%	0.1%	16.3%	2.9%	0.0%	-0.4%	11.6%	9.5%	6.7%	19.0%
EM	Large	Large	Small	High	Cash	Large	Large	High	Small	Large	Cash	High	High	REITs	REITs	DM	Large
Equity	Сар	Сар	Сар	Yield		Сар	Сар	Yield	Сар	Сар		Yield	Yield			Equity	Сар
-6.0%	28.7%	10.9%	4.6%	13.7%	4.8%	-37.0%	26.5%	14.8%	-4.2%	16.0%	0.0%	0.0%	-2.7%	8.6%	6.0%	5.7%	15.9%
DM	Comdty	Comdty	High	Cash	High	REITs	Comdty	DM	DM	Fixed	Fixed	EM	Small	Fixed	Fixed	Fixed	High
Equity			Yield		Yield			Equity	Equity	Income	Income	Equity	Сар	Income	Income	Income	Yield
-15.7%	23.9%	9.1%	3.6%	4.8%	3.2%	-37.7%	18.9%	8.2%	-11.7%	4.2%	-2.0%	-1.8%	-4.4%	2.6%	3.1%	4.6%	11.7%
Small	Fixed	Fixed	Cash	Fixed	Small	DM	Fixed	Fixed	Comdty	Cash	EM	DM	EM	DM	Cash	Cash	Fixed
Сар	Income	Income		Income	Сар	Equity	Income	Income			Equity	Equity	Equity	Equity			Income
-20.5%	4.1%	4.3%	3.0%	4.3%	-1.6%	-43.1%	5.9%	6.5%	-13.3%	0.1%	-2.3%	-4.5%	-14.6%	1.5%	0.6%	1.3%	3.5%
Large	Cash	Cash	Fixed	Comdty	REITs	EM	Cash	Cash	EM	Comdty	Comdty	Comdty	Comdty	Cash	Comdty	Comdty	Cash
Cap	4.00/	4.00/	Income	2.40/	45.70	Equity		0.40/	Equity	4 40/	0.50/	47.00	24.70	0.00/	2 00/	4.00/	0.00/
-22.1%	1.0%	1.2%	2.4%	2.1%	-15.7%	-53.2%	0.1%	0.1%	-18.2%	-1.1%	-9.5%	-17.0%	-24.7%	0.3%	-2.9%	1.2%	0.8%

Source: Barclays, Bloomberg, FactSet, MSCI, NAREIT, Russell, Standard & Poor's, J.P. Morgan Asset Management. Large cap: S&P 500, Small cap: Russell 2000, EM Equity: MSCI EME, DM Equity: MSCI EAFE, Comdty: Bloomberg Commodity Index, High Yield: Barclays Global HY Index, Fixed Income: Barclays US Aggregate, REITs: NAREIT Equity REIT Index. The "Asset Allocation" portfolio assumes the following weights: 25% in the S&P 500, 10% in the Russell 2000, 15% in the MSCI EAFE, 5% in the MSCI EME, 25% in the Barclays US Aggregate, 5% in the Barclays 1-3m Treasury, 5% in the Barclays Global High Yield Index, 5% in the Bloomberg Commodity Index and 5% in the NAREIT Equity REIT Index. Balanced portfolio assumes annual rebalancing. Annualized (Ann.) return and volatility (Vol.) represents period of 12/31/10. Please see disclosure page at end for index definitions. All data represents total return for stated period. Past performance is not indicative of future returns. Guide to the Markets – U.S. Data are as of September 30, 2017.

Aki Kostiander, head of Real Assets at Finnish asset manager United Bankers, discusses why Real Estate Investment Trusts, also known as REITs, should be part of institutional portfolios looking to diversify into real estate investments.

REITs, an exchange traded investment vehicle for real estate that is tax exempt from corporate tax, has for long existed on the U.S. market. In Europe, the utilization of REITs in institutional investment portfolios is a much more recent phenomenon and is still far from the preferred choice when it comes to real estate investments.

According to statistical observations, as illustrated by JP Morgan Asset Management in its latest quarterly "Guide to the Markets ®" U.S. edition (September 30, 2017), REITs have been the best performing asset class in 7 out of the past 16 years. Missing REITs in an asset allocation

would have been a significant missed opportunity.

In an interview with HedgeNordic, Aki Kostiander, who has been a REIT portfolio manager for over 10 years at Finnish asset manager United Bankers, discusses the benefits of adding REITs to an institutional investment portfolio, why he thinks institutional investors are yet to embrace the REITs concept, and why it makes sense for investors to avoid cheap index trackers and instead focus on quantitatively managed portfolios of REITs.

HedgeNordic: Could you give a brief introduction of the REITs concept and how you at United Bankers work to build investment portfolios of REITs?

Aki Kostiander: REITs is a legal structure that allows real estate companies to invest in real estate without being subject to corporate tax. Instead most of the returns are

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required to be paid out as dividends to investors in the REIT, who in turn pay taxes on these dividends. This way the dreaded double taxation problem is evaded. REITs are exchange traded, meaning that you as an investor typically get daily liquidity on your holdings It is like any other listed stock producing daily net asset values.

The difference of REITs compared to exchange traded real estate stocks is, as a consequence of the differences in taxation, that the REIT has no incentive of applying excessive leverage to its investments. As a result the REIT becomes more of a pure real estate portfolio, rather than a mixture of high debt instruments and real estate development.

Our approach to investing in REITs is through building what we define as smart beta portfolios of REITs based on a quantitative approach. We filter out REITs that are good value rather than look at the market capitalization or index composition. This means that we significantly deviate from the different index solutions available on the market today that are based on market capitalization weightings.

We are very much bottom-up as we look for value in individual REITs, but we also have a macro view on top which decides how the portfolios are tilted given the macroeconomic cycle, i.e. how we position between commercial properties vis-à-vis retail properties, for example.

The dividends paid out from the REITs in our portfolios are always re-invested meaning that as an investor you get a compounding effect from that side as well if we do our job well. The compounded cash flow returns over time in a REIT portfolio is what makes them perform so well against other asset classes and the stock markets.

HedgeNordic: What is the appetite for REITs investments among Nordic institutions today?

Aki Kostiander: The REITs legislation is very much linked to national REIT frameworks, and since there is no such thing as a REITs legislation in the Nordics, this has to some extent made Nordic institutions a bit hesitant to incorporate REITs in their investment portfolios, since they are not so familiar with the theme. Historically, REITs have also been lumped together with financial stocks rather than treated as a separate asset class, which I think has blurred the lines between what category to put REITs in. Mostly investors think of them as being a niche stock market sector and treat them as ordinary double taxed listed property stocks.

REITs should really be considered on their own merits. It has outperformed both equities and real estate private equity looking at it historically. It is also a much more liquid asset compared to the direct real estate investments made by institutions today through private equity deals. One often talks about the so-called illiquidity premium when discussing direct real estate investments, i.e. you should be offered a liquidity premium to be part of an investment with scarce liquidity. Regarding REITs the situation is the opposite. You can get a liquid property investment with a discount when in fact you should be paying a premium for it.

HedgeNordic: What value do you see for REITs in a multiasset portfolio?

Aki Kostiander: Adding REITs to a portfolio of traditional assets such as stocks and bonds greatly enhances the efficient frontier. REITs should be seen as a good diversifier and has added a lot of value compared to both equity and real estate investments over time. The fact that REITs have seen periods of increased volatility in times of equity market distress, such as that experienced in 2008, I believe

has a lot to do with the fact that it has historically been linked to the financial equity category. This relationship is likely to change as REITs now have their own sector in the large equity indices of MSCI, S&P and Dow Jones, since September 2016.

HedgeNordic: What are reasons to use an active strategy in the REITs space rather than go the index tracker path?

Aki Kostiander: We believe a smart beta strategy makes a lot of sense in the REITs space, particularly given that the passive money today has pushed valuations to extreme levels for those REITs that make part of market capitalization weighted indices. Would you over the long term want to buy real estate at such a high premium? I wouldn't, especially when we can substitute these expensive index blue chip REITs with clearly cheaper mid cap names.

HedgeNordic: Why do you think it makes sense for an institution to outsource its allocations of REITs to an external asset manager such as yourself, rather than building an in-house portfolio of REITs?

Aki Kostiander: We have a long experience from selecting and constructing portfolios of REITs and our quantitative screening process has proven to add significant value over time. By outsourcing the portfolio management you get access to an alpha source without having to deal with much of the administration associated with corporate actions, re-investment of dividends, re-balancing of portfolios etc.

HedgeNordic: Why do you think it is a good opportunity to invest in REITs now? Is REITs a good option in an environment of rising interest rates?

I view the current macro backdrop as very interesting for REITs investments. We have low interest rates coupled with very low inflation; the only place to look for compelling real returns is more or less within the real estate sector. The current initial yield for real estate is somewhere around 5-6 percent if you exclude very prime assets, which could be geared up to offer a return of up to 10 percent. Real estate also provides you with an inflation hedge, as the sector is indexed to inflation numbers, at the same time the value of properties usually follow the development of consumer prices over the long term.

The way I see it real estate offer the best of two worlds, in a low interest rate environment with deflation you have solid real returns compounding. If interest rates would

rise, they typically do so in conjunction with rising inflation numbers. Historically speaking, REITs have usually done well in environments of rising interest rates and rising inflation. However, if interest rates rise without inflation following, that of course poses a risk to real estate and REITs, but as the leverage ratio in REITs is very low and maturity structure of debt is long, I don't see this as a big risk. In fact, I don't see much risk on the balance sheet side of the REIT's business model.

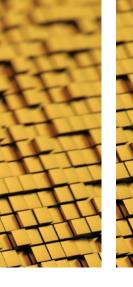
HedgeNordic: You also run a REIT hedge fund. Could you tell us more about it?

Yes, the fund is called UB Real REIT and it is an on shore non-UCITS fund that is a leveraged long-only REITs and property stocks fund. The fund can hedge out a part or all of the equity market risk and sometimes also interest rate risks. So we try to capture some of the property market alpha and minimize the equity market related impact on volatility. We have a core portfolio of best of breed REITs globally that we feel comfortable with over the long term.

We then add thematic positions in any property market related themes we feel could add value, and on top of this we make mean reversion bets on REITs and property stocks that are either event related or in our opinion mispriced by the market. We can for instance leverage up the portfolio to some 100-150% REITs and then short equity market risk so that our delta is e.g. between 0.25-1.00. We have a lot of leeway in the hedging and leveraging so the fund could at some point have a zero hedge and a very high exposure to REITs.











Astarte: Aligned, Innovative, ESG-conscious, Co-investing - in Real Assets

By Hamlin Lovell - HedgeNordic

starte Capital Partners ("Astarte") is among very few private equity firms that have been started by women. Co-founder, Teresa Farmaki, was previously Head of Private Equity for multi-family office and earlier CIO for Private Equity at Piraeus Group. Her vision is to differentiate Astarte from other private equity managers.

"ESG is essential in private investing" says Farmaki. Astarte and their portfolio businesses are all UN PRI signatories, applying ESG principles to their private equity investing. "When directing capital, we do it in the right way, to minimise side effects or complications We address early on the environmental aspects, and do not invest if they do not use the right approach" she explains.

Farmaki also emphasises the 'G' in ESG – Governance – particularly in terms of how Astarte structures its fee model and relationships with investors. "Alignment of interests is very important to us. We want to share in success with our managers, and will become profitable as we expand" she explains.

The private equity industry has been criticised for both the level of fees and costs, and the way in which they are apportioned between managers and investors. Indeed,

there have been a number of public cases in the US suggesting that private equity firms did not allocate certain expenses – such as broken deal costs - in the most equitable way. Consequently, every line item is now being closely scrutinised by those allocating to PE funds.

Astarte charges only success fees, with no management fees per se. Certain operational costs are transparently disclosed and shared with other stakeholders. This is only one facet of Astarte's transparency. "Co-investors also get full access to all data" points out Farmaki. An innovative fee and governance structure has helped Astarte to secure a shortlisting for the award of "most innovative manager of 2017", in the Institutional Management Awards.

Growth niches include US organic farming

The fee structure is not the only innovative aspect of Astarte, which invests in niches that are often neglected by other asset managers. Explains Farmaki "Everyone talks about real assets and understands the benefits of including them in asset allocation. Tangible, hard assets offer downside protection and a low correlation to capital markets". Astarte's

approach is different however. "We focus on less well understood, specialist, below the radar areas that are more operationally complex and therefore face less competition from other investors" she explains.

"Everyone talks about real assets and understands the benefits of including them in asset allocation. Tangible, hard assets offer downside protection and a low correlation to capital markets"

Astarte is looking for real asset opportunities driven by megatrends such as demographics, digitalisation, big data, cloud computing - and organic foods. The world's largest internet retailer, Amazon, has this year shown its conviction in the growth prospects of organic food through buying Whole Foods Market. Astarte has researched the space and found that a shortage of certified organic farmland forces US retailers to import most of their organic corn and soybeans. A more obvious trend is how ageing populations generate a demand for retirement housing. Astarte is evaluating investment in high-end retirement accommodation in the UK, Spain, and Switzerland. Digitalisation may also seem obvious, but industries such as advertising billboards in the UK are only just waking up to it - with a tiny 5% of UK advertising billboards digital. Astarte is also attracted to complex areas, such as acquiring aircraft in order to dismantle them and resell the parts. Sometimes, Astarte will see potential to pick up quality assets at distressed times in super-cyclical industries, such as shipping. Astarte is on the lookout for opportunities in renewable energy, and industrial assets. Astarte associate, Roger Fuchs, was hired from Macquarie Capital, and has strong experience of natural resources.

The target returns from these projects – measured by IRR – range from 10-12% for some agricultural investments, to 20% or more for the shipping strategy.

In all of these areas, "it is critical to find strong operators to partner with" stresses Farmaki. For instance, organic food has barriers to entry in the form of acquiring, converting and certifying the land. Rather than grouping multiple deals into one investment vehicle, the Astarte model is to set up a separate structure for each deal. Astarte, the asset operators, and external investors, all contribute capital, and all share in the economics of each project: both the costs, and the upside.



Astarte's own team experience is also a source of competitive edge. For instance, co-founder, Dr Stavros Siokos, helped to build Sciens Alternative Investments up to \$6.5 billion of assets, and developed real expertise in some of the aviation and shipping areas being looked at now. Senior Associate, Michael Peraticos, also has strong shipping experience, from his time at dry bulk operator, Vantage Shipping Lines.

All team members come from an alternative investments background, where they have close relationships with institutional investors' demands in terms of due diligence, reporting and governance. Astarte has already secured a commitment from the Luxembourg-based European Investment Fund (EIF). The EIF due diligence lasted nearly a year. "The EIF has a very thorough process, stressing transparency and governance. They look at all jurisdictions, investment contracts and capital flows" recalls Farmaki. By 2018, Astarte is targeting assets of \$500 million, including its own multi-strategy vehicle investing across all deals, and co-investments.

Growing team and global footprint

Astarte is growing its geographic reach and team in order to stay close to its partners - investors, and asset operators. The headcount is fourteen as of November

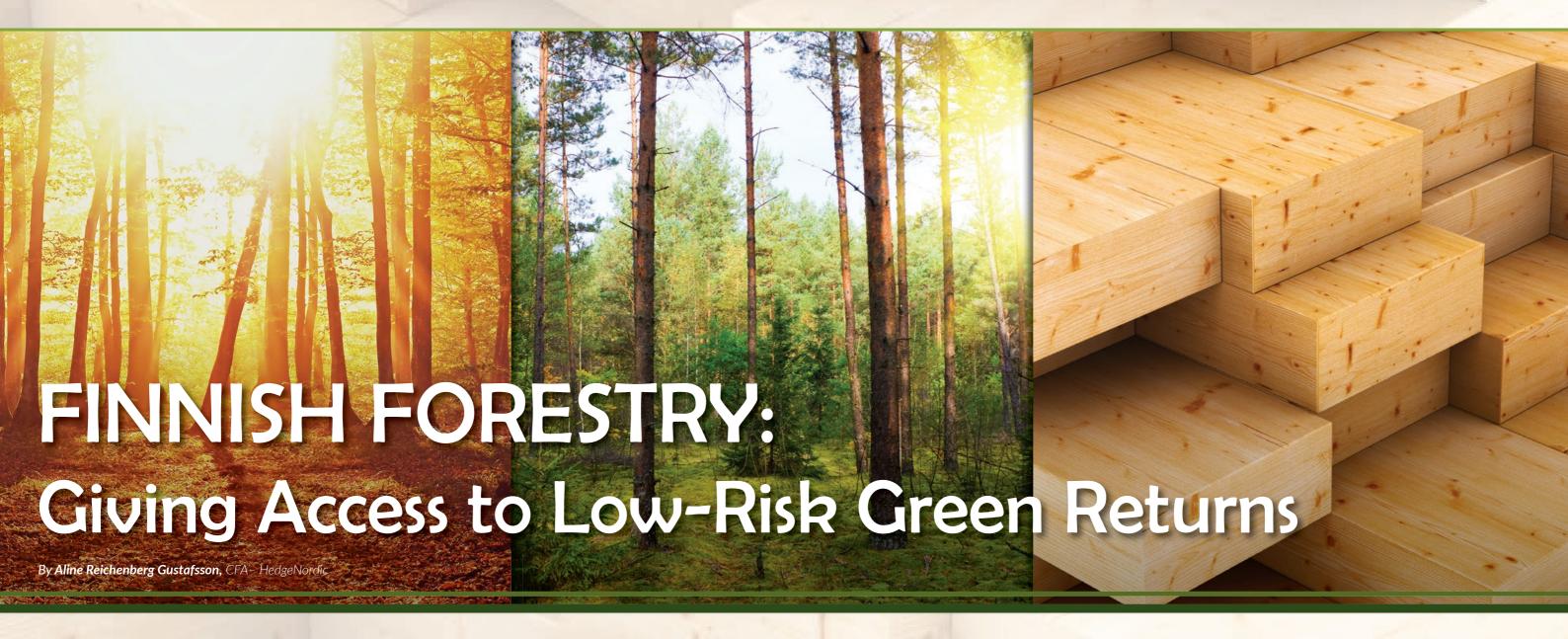
2017. The founding team and main office are in London, where Farmaki and Siokos work alongside partner, Spiros Skordos, who has a background in macro and fixed income trading that is very complementary- particularly where deal structures contain fixed income and credit type instruments. Managing Director for Australasia, Mark Levinson, was as well previously at a global macro hedge fund. The Sydney office has a good rapport with local pension funds (known as superannuation funds), which have strong ESG sensitivities. A Zurich office was similarly driven by the investor base and provides a useful hub for other local markets. Managing Director for the Germanspeaking DACH (Germany, Austria and Switzerland) region, Stavros Pavlidis, has lived in Switzerland for many years. (Nearby in Zug, Astarte has formed a mutually beneficial alliance with investment consultancy and asset allocation specialist, BlueLake Associates). The New York City office lets Astarte research a strong pipeline of deal-flow on the ground. It is run by Investment Manager, Hall O'Donnell, who has 15 years' experience in M&A and private equity, including minority GP acquisitions, and a stint at the Bloomberg family office.

> "Alignment of interests is very important to us. We want to share in success with our managers, and will become profitable as we expand"

The advisory board of three will soon grow to five. Phillippe Costeletos, also an Astarte Investment Committee member, was previously Head of TPG Capital in Europe, and Chairman International of Colony Capital. "He has a tremendous wealth of experience in private equity structuring and negotiations" says Farmaki. Andrew Wynn advises family offices and has spent his career in equities, including at ADIA in Abu Dhabi and SAMBA in London. He has strong connections in the Middle East. Bev Durston (who featured in The Hedge Fund Journal's' 2015 'Leading 50 Women in Hedge Funds' survey, in association with EY) was previously Head of Alternatives for the British Airways pension fund in London, and continues to advise many large pension funds in Australia, as an investment committee member. "She provides great insight and direction in order to structure deals in the right way, identifying and addressing investor concerns early on" explains Farmaki.







n the Nordics, forest ownership has been close to the people for centuries. As a matter of fact, a large majority of forests across the Nordics are owned by private individuals or families. In Finland, this percentage stands at 60% today on average when taking into account the entire country. This proportion is even higher when looking at the more fertile forests of the south, as the state is a large owner of the less fertile shrubbery lands in the north of the country. According to Kari Kangas, manager of UB TImberland Fund (AIF), an open-ended Finnish timberland fund offered by Helsinki-based United Bankers Asset Management, this configuration represents an opportunity for professional investors.

Born in a small village in Finland, Kangas was in close contact with the forest from an early age, as his father was a forester. He later went on to earn a doctorate in forestry economics. Kangas has since then held several expert and executive positions, working with forests across the world, including with the United Nations in New York and Swedish pulp and paper company Stora Enso in Russia. Right now, his main goal is to facilitate access to forest ownership for a larger number of people. "I want to provide an opportunity to be a forest owner trough my fund," he says. "It is very nice when you get positive feedback from your customers that they like this type of asset." By owning property through a fund, end investors gain exposure without having to manage the underlying investments, and especially benefit from the purchasing expertise of specialists.

"We buy about 100 properties per year," says Kangas, "out of a total of 1600 transactions per year in Finland. We therefore have very comprehensive price information."

Being a large actor in the market allows the managers to cultivate a wide acquisition network in the forest property market. This means being at the right place at the right time, but also being able to evaluate a property in a more precise way than less sophisticated buyers. "Without thorough analysis, it is likely to be a mediocre or less than mediocre

"Often buyers overpay for inferior forest properties because they lack the capacity to properly analyze the objects."

investment: Each property has unique characteristics and analysing it on a detailed level improves the chances of delivering a better yield. Often buyers overpay for inferior forest properties because they lack the capacity to properly analyze the objects." After acquisitions are made, professional ownership can also provide improved returns on forest property, through optimizing processes and focusing on the value growth of forest stock.

The income that Kangas and his team expect from their forest properties is around 4%. In addition to that, they believe they can count on another 2% increase per year in the price of timberland (in line with inflation). This brings the total expected return on investment to 6% on average. In the past 10 years, the annual average return has been 4% after subtracting inflation, within an interval of 3 to 6%. "Forest has offered a stable, moderate return in Finland"





even though a large part of the Finnish forest has been managed poorly or not at all." Some of this return however will not compound, as the fund has to pay out at least 75% of its income in dividends to maintain its non-taxable status, being a Finnish domiciled vehicle.

"Forest has offered a stable, moderate return in Finland even though a large part of the Finnish forest has been managed poorly or not at all."

In any case, this makes for an attractive return at the lower end of the risk spectrum. Indeed, the volatility of timber prices in Finland has stabilized at a low level. The demand for timber is such that there is no longer a strong dependency on local construction demand. Part of the timber is used as pulp for staple consumer products, and this demand is rather stable. "The basic needs of human beings tend to remain the same," explains Kangas. "Demand for packaging materials is solid and increasing; the same for tissue paper. More and more products are made from pulp."

To a certain extent, construction remains a driver for log prices but the diversification of product and regional mix will continue to dampen volatility. Kangas gives us some examples: "Algeria and Egypt can be important drivers, especially for the price of pine lumber, which they use to build scaffoldings. Exports to Egypt has been slow for a

while due to the weakness of their currency but they are recovering now. This market has a high correlation with oil prices, but it only represents a small proportion of the market. Timber exports are highly diversified. There are new markets, like China which are importing more and more, especially spruce. As a result, the volatility is low compared to other raw materials."

Most of all, timber compares very favourably against other raw materials when it comes to carbon footprint, which is negative. This means that adding forestry to a portfolio is a good way of neutralizing its overall carbon footprint. "The trees capture the CO2 in the atmosphere," Kangas reminds us, "and they store it in their trunks, branches, roots and leaves. Plant litter stores carbon in the soil. The carbon can be released depending on the use of the timber or when the plant litter decomposes, but often it is stored very durably, for example in wood constructions." Furthermore, forests in the Nordics currently grow more than they are being harvested.

"So, more and more carbon is sequestered in the forest," adds Kangas. Compared to what happens to forests in other latitudes, forests in the Nordics are managed in a very sustainable way. Mandatory replanting as well as guidelines for forest maintenance and felling are important parts of the carbon equation. Last but not least, global warming is having a positive impact on forest growth, accelerating the capture of carbon in the atmosphere. Kangas has encountered a very strong interest from institutional investors looking for the "carbon sink" effect of investing in forestry. "In Sweden," he comments, "it is even more important than in Finland."

Kangas and his team have not been out meeting with

investors very much, however. Their capacity to expand is constrained by the market's liquidity. "The market for timberland is rather small," says Kangas. "The total value of forest property turnover in Finland is €400 million per year. It is a limiting factor. We have to make sure that we don't become a driver in the market." The open-ended fund UB TImberland Fund (AIF) currently has assets under management of €81 million, which combined with the assets of two closed-end, private equity-like funds, takes the firm's forestry assets to more than €200 million.

"Adding forestry to a portfolio is a good way of neutralizing its overall carbon footprint."

Given the current market and potential organisational constraints, Kangas estimates that the capacity of his fund can still grow to a total size of €500 million, albeit not all in one go. Subscriptions are open four times a year, and the fund has the capacity to close the fund momentarily in order to restrict inflows, although it has not yet had to resort to such measures. "One way to reduce the inflow of capital is not to market the fund actively," says Kangas. "There is so much money out there seeking this kind of stable returns. These types of funds have not existed for a long time in Finland. Forest wasn't seen as an active investment. It was something private owners inherited, kept and passed on to the next generation. Now it is increasingly considered a normal instrument like any other financial instrument."



Kari Kangas, Portfolio manager of UB TImberland Fund (AIF)



Ithough spreads keep on grinding tighter, CMBS pays between 0.5% (at 'AAA' ratings) and 2.5% (at 'BBB' ratings) more than corporate debt of the same credit rating and duration, per JP Morgan data. Its correlation to equities and other credit sub-asset classes, such as corporate debt, ranges from 0.41 versus the S&P 500 to 0.66 against high yield corporates. REITs may in some cases be backed by the same or similar assets as CMBS, but even here, the correlation in terms of return patterns is only 0.61. These low to moderate correlations are partly explained by the risk profile, and performance drivers, of CMBS being different from other credit assets.

"Whereas residential mortgage backed securities (RMBS) yields are partly a reward for borrowers' optionality in terms of prepayment risk, CMBS do not face this risk", due to strong call protection provisions on the underlying CMBS loans explains Principal's CMBS CIO, Marc Peterson. So RMBS yields are presented as an Option Adjusted Spread (OAS) while CMBS yields are better defined as a creditadjusted spread. These more predictable cash flows make CMBS particularly attractive for insurance companies' liability matching, and insurers, including its own life insurance arm, which are Principal's largest client group.

Another differentiator from RMBS are the levels of security for lenders. RMBS in the US are secured on property values, but have no recourse to other assets or income of borrowers. CMBS are also non-recourse, but are secured by income generating leases, in addition to property values. "This provides an additional level of security" says Scott Carson, Principal Director and Portfolio Manager.

Principal are constructive on both the fundamental outlook for commercial property in the US, and the technical outlook for CMBS.

"The US has generally low levels of new construction. Only 1.5% of the stock of commercial property (including apartments, offices, retail and industrial) is under construction, down from 3.0-4.0% in the 1980s. There may be pockets of over-building in a few markets (such as New York hotel) or stresses in certain cities (such as Houston, Texas) but overall the pace of new build is very manageable" opines Peterson. Out of favour markets and property types (such as some secondary and tertiary shopping outlets) tend not to find their way into new issues, he adds.

Meanwhile, GDP expansion and strong jobs growth helps to drive demand and has contributed to income growth of 4-6%, well ahead of inflation. Are we late in the cycle? "At the end of the cycle you would expect to see exuberance in terms of overbuilding or excessive leverage and we see neither. Average loan to value ratios are in the low 60s and debt service coverage ratios are around 2 times. We think this cycle is still supportive of real estate debt " says Carson. Despite this sanguine outlook, Principal stress-tests for scenarios including the GFC (Great Financial Crisis) and associated Great Recession- when net operating income did contract- but only by a single digit percentage, per NCREIF. Higher yielding CMBS mezzanine tranches can offer significant loss cushioning from the below investment grade tranches below, benefitted by structuring features in addition to current fundamentals.

POST-CRISIS VERSUS PRE-CRISIS CMBS, AND RISK RETENTION

Fresh issuance remains below pre-crisis peaks partly because so many maturing loans have paid-off, defeased or extended. Re-financings have been highly successful in light of market expectations. The supply of CMBS is shrinking but demand is naturally robust given the general search for yield – and the investor-friendly character of post-crisis CMBS, which now makes up most of the market.





Of circa \$330 billion, only \$40 billion now dates back to pre-crisis deals with the remainder being loans and bonds issued between 2010 and 2017.

"CMBS 2.0 has three primary differences from pre-crisis issuances. The fundamental landscape is healthier and leases are generating strong cash-flows, which is what is really being underwritten. Underwriting is better with much less leverage. The bond structures also have more credit enhancement, providing more protection from principal loss". And underwriting is still getting stricter. While some investors fret about "covenant lite" deals in corporate loans, for CMBS "loan to value and debt service ratios in 2017 are more conservative than in 2016, 2015, and 2014" according to Carson. The ratings agencies are also naturally more conservative now than pre-crisis. Risk retention rules are the icing on the cake in terms of making the credit box even stricter.

Issuance is partly influenced by the new Dodd-Frank Risk Retention rules that came into force on December 24 2016. There had been fears that issuance could be choked off but in fact the flexibility of the rules means that different parts of the capital structure are appealing to different - and sometimes new - investor groups. "Where the "horizontal" risk retention rules apply, investors must

take 5% of the lowest rated tranches which includes the BBB tranche. Having to buy 'BBB' results in a yield dilution compared to just buying the BB, B and equity which has taken some traditional 'B' piece buyers out of the market - but a new pool of buyers are now filling this niche" explains Peterson.

The other two options – "vertical" involving issuers taking 5% of the all tranches, and the "'L' shaped" mixture of vertical and horizontal exposure adding up to 5%-, are also popular with some buyers. "So far new issues have been split roughly evenly between the three types of risk retention. If one option disappears, the market may run into supply constraints". Still, the base case now is that Principal expects 2017 could see as much as \$75-85 billion of issuance, with the higher investment grade tranches particularly sought after by banks and insurance companies that are constrained by capital and solvency regulations as well as money managers seeking relative value in the space.

Principal finds secondary market liquidity is adequate. While "broker dealers are more trade facilitators than market makers, around \$4-5 billion a week trades, and we can shift product rated between AAA and BBB" says Peterson.

PRINCIPAL'S CMBS STRATEGIES

Principal's commercial real estate assets of \$74.9 billion make it is one of the top ten real estate asset managers, per Pensions and Investments. Principal Real Estate Investors has four divisions: private equity, private debt, public equity and public debt. Of \$8.5 billion managed in CMBS, around 40% is Principal's "affiliated assets", which relate to its general life insurance business, which pursues asset/liability matching strategies.

Principal lives and breathes CMBS, having modelled every CMBS conduit since 1999. This quantitative analysis from Principal's proprietary CMBS Model is complemented by qualitative analysis from grassroots research and investment activity all over the US. Synergies can arise from information sharing across the organization. "This gives us insight into real estate trends across the US and also in specific markets. We have acquisition/disposition professionals closely following real time market trends and asset managers signing leases. Our private debt team actively underwrites and originates mortgages throughout the US, providing credit insights on location, property quality, tenancy, borrower reputation, and loan structuring. We can ask our private equity colleagues for an opinion on valuations and a property's competitive position. Some

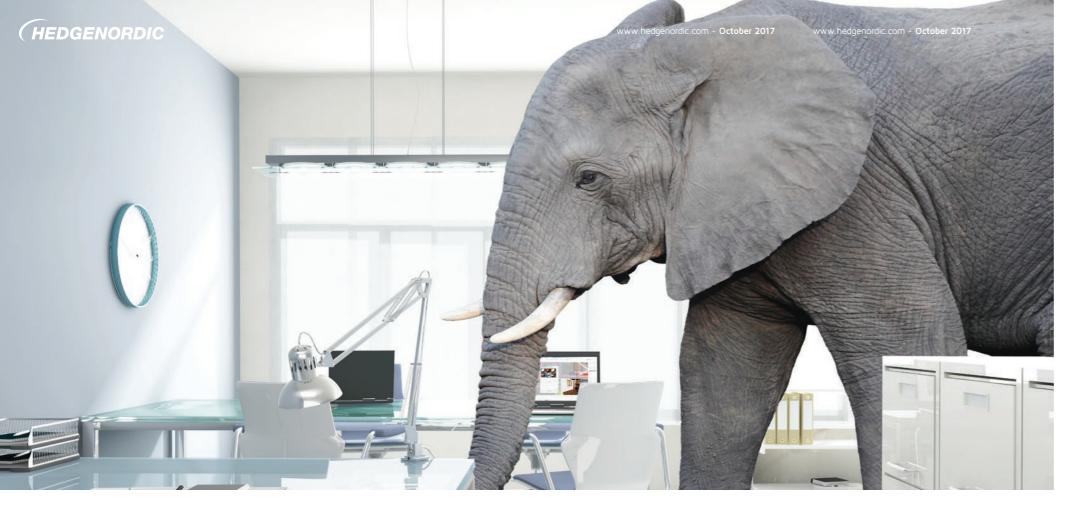
publicly listed REITs are CMBS borrowers so our public equity analysts can offer their perspective" says Carson. There are also appropriate "Chinese walls" and some segregation of information and investment flows between divisions. For instance, Principal would not invest in any CMBS originated by its affiliates or where Principal is a borrower or lender.

Principal manages long only strategies in CMBS, ranging from benchmark-conscious and benchmark-aware to unconstrained. The strategies can be accessed through liquid alternatives such as UCITS. CMBS do not entail the additional tax complications that non-US investors can face with investments in private debt or equity associated with US property.

Many CMBS structures contain a diversified pool of exposures, including offices, retail, lodging and multifamily. Principal currently has a preference for "selected industrial assets; distribution warehouse space that is used by Amazon; and "multi-family" apartment blocks are the most recession proof" says Peterson. Principal feels that it is the diversification benefits of CMBS along with enhanced yield relative to fixed income alternatives that makes CMBS an attractive asset class to consider within a broader fixed income allocation.







AN ELEPHANT IN THE INFRASTRUCTURE ROOM

BY ALINE REICHENBERG GUSTAFSSON - HEDGENORDIC

During a recent trip to the Nordics, Allianz Global Investors' Portfolio Manager, Adrian Jones spoke to HedgeNordic about the attractiveness of Infrastructure Credit, and explained how a large investor can attract more interesting deals.

Hedging liabilities with long-term assets has become a struggle for any institutional investor. Especially the very long-dated hedging is no longer suitable. This is where infrastructure debt comes in, with an attractive proposition. Debt can be linked to a specific infrastructure project and the risk of violent changes is limited. Projects typically involve energy distribution, renewable energy or water. In many cases, especially in the past, the projects were financed by banks, but their challenge is to match shorter-term liabilities.

The competition for smaller deals is intense, but this is

mostly an issue for smaller funds. In Europe, Allianz Global Investors has the largest platform and does not face many competitors. "Being a large investor is an advantage," comments Jones, "the borrowers prefer not to have many counterparts, as it may complicate the start of the project. In case of refinancing, it may also be more difficult to deal with several relationships."

From the investor's perspective also, Jones believes that the best opportunities are found when a direct relationship can be established with the borrower. "You can write terms & conditions that are specific to the project and tailored to the investors' needs," Jones explains.

Environment, Social and Governance (ESG) considerations are also an important component that can be more easily raised within a close relationship. "ESG is important in its

own right, but also as a criteria for credit," says Jones. As a standard, the goal is to reduce coal as a source of power and to increase renewable energy, but there are some cases that are borderline, like gas for example. "You have to be able to look at your investment in context," adds Jones. The Social and Governance aspects are also important. "If the projects are connected to governments, we have to ensure that the tendering process is transparent. We also score favorably projects that employ local people for instance. With a private direct relationship to the borrower, we can ensure a sustainable dividend policy and avoid situations where inappropriate distributions are made. This permeates good credit practice."

Of course, the asset class comes with a certain illiquidity and investors need to come prepared. "You are rewarded with an illiquidity premium," says Jones, "but what does it mean? As an investor, you need to behave with this in mind: how you acquire

the deal, what rights you have, and how you would remediate if things went wrong." In addition, Jones points out that good practices in listed debt are different than with private debt. "With listed debt, you can rely more on ratings. With private debt, it makes sense to have a special relationship with the borrower; then your voice carries weight. You also need a certain type of experience

Allianz Global Investors offers a platform with both funds and managed accounts to meet external investors' needs. The underlying investments are generally proposed in the format of a bond, which can be bought directly by the client; alternatively, investors can buy units in a pooled vehicle. In either case, the investors are treated equally of course. The portfolio currently

"As an investor, you need to behave with this in mind: how you acquire the deal, what rights you have, and how you would remediate if things went wrong."

when a problem occurs. You have to have the managers who can work things out without panicking."

The illiquidity premium is about 70-100 basis points according to Jones. "It depends on market conditions. We tend to observe that margins are stable; the other assets we measure the margins against are unstable." This premium may not sound like much, but in the current market it represents a large portion of the total yield.

comprises 43 discrete credits of €200 to 300 million. "Perhaps there is not much diversification within the portfolio, but we consider that this investment is a diversification for the investor's very large fixed income portfolio," Jones observes. In addition, the downside risk in these types of investments is lower than for typical bonds, given the covenants and the type of underlying assets. Recoveries are in the 80% range compared to 30% on average for other types of bonds.



Sustainability a no brainer for infrastructure



y definition, infrastructure is a long-term investment and investing with this type of horizon requires more than the usual financial analysis. Consequences must be carefully analysed, and risks that are not immediately apparent must be taken into account. As he is approaching the final close on his first fund with a SEK 4bn target, Sweden-based infrastructure investment manager and founding partner Philip Ajina explains why and how his firm, Infranode, chose to focus on sustainability.

"This was an exciting project," starts Ajina, talking about his firm's ESG policy. "We took it bottom up and had a lot of brainstorming and workshops with the team. We wanted to come up with something that would be completely integrated in our DNA." As an example, Ajina shows how ESG is at the heart of the firm's investment process. "We have a traditional investment process, with an investment committee that we bring each investment case and business plan to." But in addition, investment managers are also required to perform an ESG due diligence with what is internally called the ESG tool, a spreadsheet that identifies an array of potential challenges that each receive a score. Once an investment is approved, this list becomes a to do list. "If we are a majority owner," Ajina adds, "we can impose improvements. If we are a minority owner, which we quite frequently are, we make our voice heard by making recommendations at the board level."

So far, all three transactions the fund has completed with its early commitments already reflect the firm's ESG focus. For two of its first investments, the firm chose district heating projects, in a sector where large inflows of capital are needed to modernize the existing network of municipal heating and transition from fossil- to biomass-based plants.

In the first investment, Infranode invested together with a London-based renewable energy fund in a Swedish district heating company that has bought the district heating systems in some Swedish municipalities. The second district heating investment is in Norway, where Infranode co-owns a district heating company with a municipality in the Oslo region. The third investment is deployed over time with Eneo Solutions, a company who offers a full-service package for geothermal heat pumps and rooftop solar panels. "Infranode is the capital partner that finances each individual project and Eneo, as

"If we are a majority owner, we can impose improvements. If we are a minority owner, which we quite frequently are, we make our voice heard by making recommendations at the board level."

the industrial partner, handles all other business-related matters," Ajina explains. "The planning, the construction and the management are taken care of and the end-client doesn't have to invest."

For Ajina, being conscious and pro-active about sustainability is naturally also part of de-risking investments. "As a 25-year buy-and-hold investor, we need to make our investments resilient for the future and we believe that an asset with ESG short-comings is likely to deteriorate in value over time," he comments. "It is fundamental for us to consider the true longterm perspective in everything we do."

"We need to make our investments resilient for the future and we believe that an asset with ESG short-comings is likely to deteriorate in value over time."

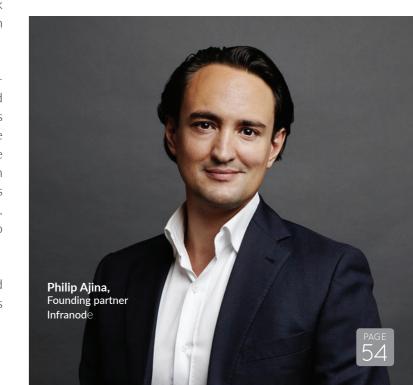
In doing so, Infranode is not alone. The firm found inspiration amongst the largest players in the field. One of the resources available is the Long Term Infrastructure Investors Association (LTIIA), which was founded in 2014 and provides recommendations when it comes to ESG and sustainability. Large worldwide funds such as Meridiam, Callsters and Allianz, just to name a few, are part of this association. Infranode is a member of the Swedish Sustainable Investment Forum (SWESIF), but this association composed mostly of traditional liquid asset managers has not yet been able to provide strong guidance to unlisted asset managers. Infranode is also a signatory of the UN Principles for Responsible Investing (PRI). "We don't know how far we have pushed the boundaries with our internal policy, but we have received positive feedback from our investors," says Ajina. "In general, people have a high standard across the board in this sector."

In fact, sustainability in this asset class is most likely a musthave. "To be honest," Ajina says, "I don't think we would have convinced all of our current investors without this work and commitment. Some of them really cared and were very focused on sustainability during their due diligence process." One of the fund's anchor investors is the European Investment Bank (EIB) who puts ESG topics at the top of its priority list when it comes to choosing the funds it invests in. The fund's other investors are mainly local institutions who share Infranode's long-term time horizon.

According to Ajina, institutions in the Nordics are bound to increase their allocation to infrastructure. "Across Sweden, Norway and Finland there is a sub-allocation to infrastructure." In pension funds across Europe, the average allocation is about 4-5%, whereas in the Nordics only a limited number of institutions have an allocation of more than 2%. This gap has two complementary explanations. Historically, infrastructure has been owned and operated by the public sectors. In addition, a number of institutional investors have been restricted from investing in this area due to regulatory reasons. For example, the Swedish "APs", the national buffer pension funds are forced to hold a very large allocation to fixed income, listed equities and real estate. Only 5% can be invested in alternatives, which are usually allocated to higherrisk opportunities to compensate for the lack of return in the traditional asset classes. These rules are likely to change in the near future. "This is an opportunity for us," says Ajina. Infranode is offering an investment strategy focused on the Nordics, and this should fit well within the local pensions' portfolio. "Swedish institutions have a lot of real estate," Ajina explains. "What's next? They prefer to invest in Nordic infrastructure, because they want to start where they are the most comfortable." In addition, the very structure of the fund, a Swedish "AB" onshore structure with a 25-year investment period, should be aligned with the Nordic public sector's needs.

(HEDGENORDIC

The positive trend on the allocation side coincides well with the increasing need for capital in the Nordic public sector. Typically, municipalities have started divesting assets to raise funds by selling their residential real estate portfolio. Now they are looking at social infrastructure. The next step will increasingly be infrastructure, such as energy, telecom and transport assets. An advantage for a local player such as Infranode is being the connection between local investors and local sellers and projects. Seeing familiar names on both sides of the table is reassuring, and trust is key when signing for a 25-year commitment.





n early June, private equity firm Blackstone bought Finnish real estate company Sponda for 1.8 billion euro to expand its presence in the Nordics. This was the largest real estate transaction and one of the largest corporate transactions ever made in Finland. What effect will the deal have on valuations of property and real estate companies in the Nordics?

It has been a strong first half of the year for real estate transactions in the Nordics. According to numbers from Pangea Property the Nordic real estate market is on track for a record year in terms of deal volume. Transaction volumes are reported to have grown by 14 percent compared with the first half of 2016.

The period was crowned by the Blackstone deal for Sponda that was announced in June, a deal that is likely to have a broader impact on real estate valuations in the Nordics according to Jonas Andersson, portfolio manager of Alfred Berg Fastighetsfond Norden, a fund investing into Nordic listed real estate equities.

"Blackstones bid for Sponda shows that the real estate companies listed on the Nordic exchanges continue to be trading at low valuations. The deal indicates that these companies are trading at too big of a discount", Andersson said in a comment to the transaction as it was revealed during the summer.

According to Andersson, Blackstone were able to buy Sponda at a lower price compared to the underlying value of its property holdings despite including a significant premium to the share price in its offer.

"Prior to the bid, the Sponda share traded at significant discount to the net asset value of its holdings. Despite offering a 21 percent premium, Blackstone were able to buy Sponda at a price level that was slightly lower compared to the book value of its assets", the real estate portfolio manager argues.

"The deal indicates that these companies are trading at too big of a discount."

Jonas Andersson, Alfred Berg Fastighetsfond Norden According to Andersson, similar discounts are present among other listed real estate stocks in the Nordics, which indicates that more buyouts are likely to be presented in the not so distant future, at least as long as these perceived favourable valuations last.

"Despite the fact that the share prices of Nordic real estate stocks have gained strongly in recent years, there are quite a few trading at similar discounts as Sponda did prior to the bid", he says.

Andersson further notes that Blackstone has raised 8 billion euros for a new opportunistic European real estate fund which he believes will be translated into more buyouts of listed Nordic real estate companies going forward.

"Blackstone is a potential bidder on Nordic real estate companies, however it is more likely that other listed real estate companies will buy the companies that currently hold low valuations". Andersson says and concludes:

"Other real estate companies trading at relatively higher valuations could use their stock as a means of payment and at the same time realize synergy effects, I believe that is the most likely scenario going forward."

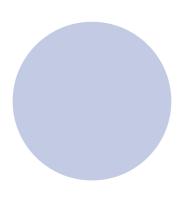
"The Nordic property markets are seen as very strong and are therefore attractive to foreign capital."

Mikael Söderlundh, Pangea Property

As for Blackstone, the investment firm giant has bought Nordic property for more than 4 billion euro, according to Financial Times. The attractiveness of Nordic property markets among foreign investors seemingly remain with more than one in two deals currently involving foreign buyers, which is a new record, according to Pangea Property.

"It's difficult to find stable regions to invest in right now. The Nordic property markets are seen as very strong and are therefore attractive to foreign capital," Mikael Söderlundh, a partner at Pangea Property recently told Swedish financial media Dagens Industri, adding that the deal flow between the Nordic countries has grown too.





by Eugeniu Guzun - HedgeNordic



REAL ESTATE BUBBLES ACROSS THE DECADES

The term "housing bubble" had not been used in the popular press prior to early 2000s, not even in the late 1980s, a time considered to have witnessed a number of severe housing bubbles. Today, however, this combination of words is used liberally to describe the behavior of housing prices. Everyone can recognize economic bubbles after they burst, and so can we. The main aim of this article is to discuss the root causes of some of the most economically-harmful housing bubbles that occurred in recent decades. Although only a handful are able to accurately identify soon-to-burst housing bubbles ahead of time, the article also makes an attempt to find an answer as to whether the Nordic countries are currently experiencing housing bubbles looming to burst.

"Bubbles occur when public expectations of future price increases become exaggerated, thus, pushing up prices to unsustainable levels."

Many thousands of articles and research papers have been written purporting to explain housing bubbles and their root causes. While researchers and economists provide various definitions of the term "bubble," the basic institution behind this word is straightforward. As written by American economist Joseph E. Stiglitz in the early 1990s, "If the reason that the price is high today is only because investors believe that the selling price will be high tomorrow – when "fundamental" factors do not seem to justify such a price – then a bubble exists." One can attempt to determine whether a bubble exists by comparing actual house prices with theoretical house prices calculated based on a model of fundamentals. Bubbles occur when public expectations of future price increases become exaggerated, thus, pushing up prices to unsustainable levels.

When looking at the United States housing bubble leading up to the financial crisis of 2008-2009 and other episodes of housing bubbles, the question arises as to what causes these bubbles? As existing research has not yet reached consensus on what causes housing bubbles, a suitable approach to find an answer to the abovementioned question would be to study several real estate boom-and-bust cycles.

THE 21ST CENTURY HOUSING BUBBLES IN THE UNITED STATES AND EUROPE

The recent crisis has taught many people hard and painful lessons about the consequences of housing bubbles. During 2008 and 2009, the global economy arguably endured the worst economic downturn since the Second World War, as the collapse of the housing bubble in the



United States painfully mutated into a global phenomenon. Housing bubbles in Ireland, Spain, and the United Kingdom burst soon after the financial crisis that began in the U.S. subprime market. In the mid-June of 2005, The Economist shouted to the world that "The worldwide rise in house prices is the biggest bubble in history... never before have real house prices risen so fast, for so long, in so many countries." Unfortunately, few people took notice.

A number of researchers identify the low-interest rate environment as the main cause of the booming housing prices in the United States, whereas others suggest that they played a smaller role in the boom. Instead, the latter group of researchers claims it was predominantly financial market liberalization via relaxed credit constraints and lower housing transactions costs that triggered the boom. Indeed, many researchers and economists have connected easy credit and subprime lending with the U.S. housing bubble. Data suggests that housing prices started to deviate the most from fundamentals after witnessing a significant decline in origination standards for subprime loans between 2005 and 2007. Therefore, poor underwriting standards likely have contributed to the magnitude of the imminent collapse in the U.S. housing market.

Whilst subprime lending was prevalent in the US before the eruption of the financial crisis, these risky mortgages were not broadly available in other countries. Therefore, subprime lending cannot explain the sharp increase in house prices outside of the United States during the early part of the decade. Non-credit housing factors such as immigration, strong wage growth from economic reforms, and a wave of household formation played a massive role in crafting the real estate boom-bust cycle observed in Ireland, Spain and the United Kingdom. Real estate bubbles are like popcorn poppers, with bubbles peaking and bursting at different times in different markets. To sum up, the careless mortgage lending, the excessive packaging and sale of mortgage loans to investors, and risky bets on securities backed by those loans led to an unparalleled global financial crisis.

THE ASIAN FINANCIAL CRISIS OF 1997 AND HOUSING BUBBLES IN THE REGION

The eruption of the Asian financial crisis in 1997 led to a steep decline in property prices in Hong Kong, Indonesia, Malaysia, Philippines, South Korea, and Thailand. Of course, the housing bubbles in the "tiger economies" did not cause the crisis that so devastated these Asian economies, but the bubbles exacerbated the catastrophe indeed.

"...the Asian experience with property price booms and busts seems to have reinforced the critical importance of strong bank regulation..."

Overstated optimism in the so-called "East Asian miracle" in the mid-1990s, which was believed to be capable of delivering huge economic growth over a prolonged period of time, was at the root of the Asian financial crisis. This optimism usually contributes to an underestimation of risk. overextension of credit, unwarranted asset price inflation, and overinvestment in physical capital. Capital account and financial market liberalization contributed to massive capital inflows into the region. The banking system had a dominant role in the financial systems of most East Asian countries, while the techniques for credit assessment by banks were weakly developed and banks relied heavily on property collateral in making loan decisions. The high rates of investment and enormous domestic credit expansion in the aforementioned Asian economies contributed to excessive asset price inflation, particularly in the property market. In fact, the rapid growth of bank lending went hand-in-hand with surging real estate prices.

The performance in the real sector of Asian economies began to deteriorate starting in 1996, as export volume growth started to weaken, particularly in Indonesia, Korea, Malaysia, and Thailand. Declining semi-conductor prices and increasing oil prices also hurt these economies, which spurred investor concerns around the sustainability of their growth rates. With economic growth suffering setbacks, asset prices came under significant pressure, and both financial and corporate balance sheet started to deteriorate. With the heavy exposure of the banking sector to the property market and the increase in non-performing loans, investor sentiment turned around and triggered a cascade of banking and exchange market crises across the region. While the Asian experience with property price

booms and busts seems to have reinforced the critical importance of strong bank regulation, the experience did not serve as a salutary lesson to some developed economies in the subsequent decade.

THE HOUSING BUBBLES IN SWEDEN, NORWAY AND FINLAND IN THE LATE 1980S

Financial deregulation in the 1980s fed a wave of massive real estate lending by Swedish, Norwegian, and Finish banks, unrestrained deregulation that ended up hurting Scandinavian economies in the early 1990s. Banks kicked off a fierce competition for market share by providing loans to households and firms. This lending boom channelled capital into asset markets, predominantly into the housing market. With asset prices on the rise, the subsequent increase in collateral values and increasing net wealth of households fuelled further credit expansion. The cycle of ever-increasing asset prices and credit expansion created speculative bubbles. These financial developments had a beneficial impact on the real economies of the three Nordic countries at first. Full-employment, rising consumption and falling savings ratios accompanied the economic boom in these countries, which ultimately came to a halt and turned into a bust due to a combination of exogenous and endogenous events.

The overheating of the Swedish economy, for instance, was characterized by a higher rate of domestic inflation and lower unemployment rate than in other countries, which resulted in a decrease of economic competitiveness. As competitiveness was eroded by high inflation in the late 1980s, the Swedish Kronor became overvalued, exports weakened and the fixed exchange rate policy started to be questioned. The central banks of both Sweden and Finland eventually raised their nominal interest rates in an attempt to defend their pegged rate policy against a series of speculative attacks in 1989-1992.

A number of other policy measures also led to an increase in post-tax interest rates. For instance, the Swedish tax reform in 1990-91 lowered marginal taxes and reduced tax deductibility of mortgage rates, thus, raising real after-tax interest rates. Gradual limitations in the tax deductibility of mortgage rates in Finland in the early 1990s led to an increase in the cost of servicing debt as well. The sharp increase in real interest rates kicked off a wave of asset

price deflation. The boom turned into a bust in the early 1990s, with capital outflows, widespread bankruptcies, declining investments, bank crises, currency crises and depression hitting the Scandinavian economies.

ARE NORDIC COUNTRIES CURRENTLY EXPERIENCING HOUSING BUBBLES?

The state of the housing market is an economic topic most individuals are keeping a close eye on.. A recurring topic in the media in recent years has been whether Nordic countries experience housing bubbles or not. For instance, a Reuters article posted in the late February of this year suggested Nordic countries experience housing bubbles.

A research piece on Nordic housing bubbles released by Nordea in March of 2017 says that national average prices have increased by 71% in Norway, 59% in Sweden, 17% in Finland, and 3% in Denmark in the past ten years. Indeed, price increases have accelerated in recent years, predominantly due to the low interest-rate environment. A string of other factors such as population growth, partly due to increased immigration, and growing disposable income for households are supporting housing demand.

A 2016 research paper conducted by Sweden's central bank concludes that fundamental factors seem to be able to explain the high valuation of the Swedish property market. The authors emphasize that Sweden has enjoyed a strong increase in disposable income and financial net wealth (accompanied by a low level of housing investment), which together with the substantial population growth and ultra-low real interest rates, have contributed to the sharp increase in house prices during the period of 1995-2015.

Nonetheless, financial regulators and central banks in the Nordics have been busy pouring cold water on the hot housing markets and banks have become more disciplined with regard to lending standards. While there are mounting concerns that Nordic housing markets have ballooned into a housing bubble thanks to the low interest rates, Nordea states that most Nordic mortgages involve households with low leverage. Therefore, lenders are unlikely to suffer significantly even from a sharp interest rate hike caused by an unlikely major event triggering fear and risk aversion, which could result in a decrease of property prices.



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