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KTI | PROPERTY INFORMATION
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KTI Market Review

Autumn 2018

Property transaction activity remains high

Commercial property yields bottoming out?

Office rents continue increasing in the Helsinki CBD

Residential rents continue increasing despite the rapid growth in supply



KTI Market Review

Autumn 2018

The Finnish property investment market continues to develop strongly, although some weak signs of an expected turn are starting to arise. Uncertainty is increasing due to slowing economic growth as well as developments in the financial markets, where the turbulence in the stock markets and an expected increase in interest rates impact the attractiveness of real estate in the investment markets. Yields of commercial properties finally seem to be reaching their bottom level. Transaction volumes are, however, expected to remain high in the near future.

Transaction volumes have increased mainly because of several large transactions, and 2018 will become one of the most active years ever in the transaction market. International investors' interest in the Finnish property market remains high, and the majority of the largest transactions have been carried out by non-domestic players. Several new investors have entered the Finnish market, and foreign investors have increased their weight in the market.

The strong economic development supports the rental markets, and in the Helsinki CBD office markets in particular, new records in rents have been reached. Occupancy rates of offices have now improved for two years in the Helsinki metropolitan area, although the amount of vacant space remains high. Also in other major cities outside the Helsinki metropolitan area, office rents and occupancy rates have mostly increased. Despite the active new development of offices, expectations for the development of rents and occupancy rates remain positive.

In the retail property markets, an increase in the supply of shopping centres as well as changing patterns in consumer behavior are weakening expectations for shopping centre investment. The diversity in the supply continues to increase, and the outlook is most positive for the largest centres in the Helsinki metropolitan area. Outside the metropolitan area, occupancy rates of shopping centres are decreasing.

Demand for rental residential dwellings remains high and rents continue to increase in largest cities. Record-high construction volumes are markedly increasing the supply in 2018 and 2019. Nevertheless, increasing supply together with rising construction costs has increased cautiousness, and the number of building permits has now started to decrease. Foreign investors have increased their presence in the Finnish residential property investment market, and are expected to continue their investments also in the near future. Strong demand is also expected to support rental growth going forward.

Market conditions for property investment remain positive

The overall economic conditions remain positive in Finland, although uncertainty is slightly increasing on several fronts. The global economy continues to grow, but trade disputes and expected financial market actions are increasing uncertainty. Stock market turbulence, the approaching tightening of the financial market liquidity and an increased concern over the Italian economy is all reflected in the global property investment markets.

The Finnish GDP growth expected to slow down

The Finnish economy continues to perform well, which supports property investment and rental markets. The Finnish GDP is expected to increase by some 3 per cent in 2018. However, growth in exports is expected to slow down, and global trade disputes increase uncertainty. Growth in investments is also expected to slow down. Improving employment, rising earnings and strong consumer confidence support a positive outlook for private consumption and retail trade. For 2019 and 2020, however, economic growth is expected to slow down to less than 2 per cent.

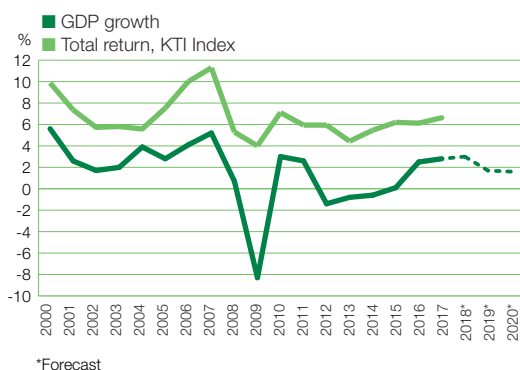
Construction volumes still high but decreasing

Construction remains as one of the growth engines of the Finnish economy; in 2018, construction volumes are expected to increase by some 3-4 per cent. New housing construction starts are expected to reach the high volumes of 2017, amounting to some 44,000 dwellings. Commercial and public property construction volumes

- Strong economy supports property markets
- The development of financial markets impacts property market liquidity
- Construction volumes remain high, but the number of permits decreases

are expected to remain stable. In the first half of 2018, however, the volume of building permits decreased by some 10 per cent compared to the previous year, and construction volumes are not expected to grow in 2019.

Total return of direct property investments and GDP growth



Source: KTI, Statistics Finland (forecasts Ministry of Finance)

Long-term interest rate and prime office yield



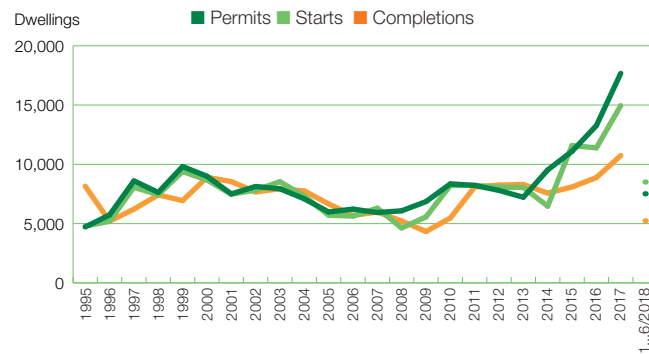
Source: RAKLI-KTI Property Barometer, Bank of Finland

Property investment markets cooling down?

Strong economic development, excess liquidity, low interest rates and high valuations of all asset classes have attracted plenty of capital to the property investment markets. As these drivers are now expected to approach

their turning points, conditions in the property markets will also be affected. An expected increase in interest rates will impact property yields and cool down the transaction markets. With an increase in both property market volumes and the number of players, market liquidity can be expected to remain at a healthy level also in the future.

Residential construction activity in the Helsinki Metropolitan Area



Source: Statistics Finland

Transaction activity remains high

During the first three quarters of 2018, the total property transaction volume amounted to €5.6 billion. Exceptionally large transactions published in October increased the volume to some €7.3 billion, and the year will most probably end up as the second highest in the transaction volume statistics.

New players are entering the market

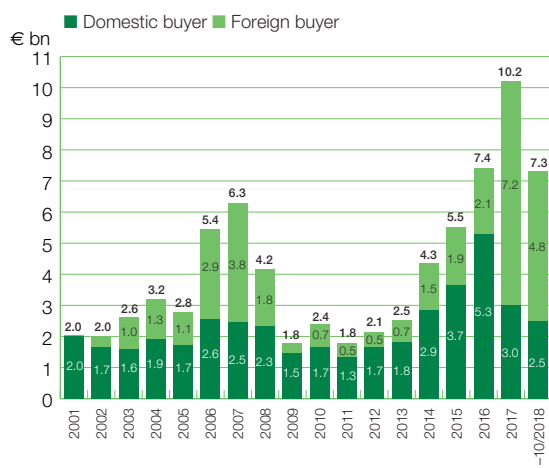
Foreign investor interest remains strong: of the transactions in the first three quarters, some 58 per cent were made by international players. On the sale side, foreign investors have been active only in some €1.4 billion worth of transactions, which means that net investment remains positive by several billion. About ten new players have entered the market this year, coming from the other Nordic countries, the US, the UK and Asia. On the global scale, the largest new player is Morgan Stanley Real Estate Investing, who first invested in some 1,600 residential dwellings from Kojamo in spring, and then increased its portfolio by acquiring the shopping centre Itis in October. New domestic players have emerged in the property fund sector, where, for example Evli, Trevian and Aktia have expanded their operations.

- One of the most active years in the transaction market ever
- New investors enter the market and the market structure evolves
- Commercial property yields increased slightly
- All property sectors remain attractive

All property sectors are attracting investors

Office and retail properties have attracted the most capital in 2018, with shares of 31 and 24 per cent of the total volume during the first three quarters. These shares will be further increased due to the large transactions carried out in October. The transaction volume of

Transaction volume in the Finnish property market



Source: KTI

rental residential property portfolios amounted to €1.2 billion, representing 22 per cent of all transactions and promising the second highest annual volume ever. In the care property sector, the new record has already been reached with the total volume of some €0.5 billion so far. Due to the larger average size of transactions, the Helsinki metropolitan area accounts for some 55 per cent of all transactions, although the number of transactions is significantly higher outside the metropolitan area.

Large transactions increase the total volume

In the first three quarters, the average size of property transactions amounted to some €25 million, which is one of the highest figures ever. The average size is increased by some individual large transactions, such as the sale of the Sirius funds to the Swedish Cibus, the acquisition of Northern Horizon's care property fund by Evli, as well as the exceptionally large single asset transaction carried out by Union Investment and Deka. Some residential property portfolio transactions have also increased the average deal size.

Transactions published in October will further increase the average transaction size. The €516 million transaction of the shopping centre Itis is the largest single asset transaction in Finland ever. Kildare's acquisition of the listed property company Technopolis will also increase the Finnish property transaction volume by more than €900 million.

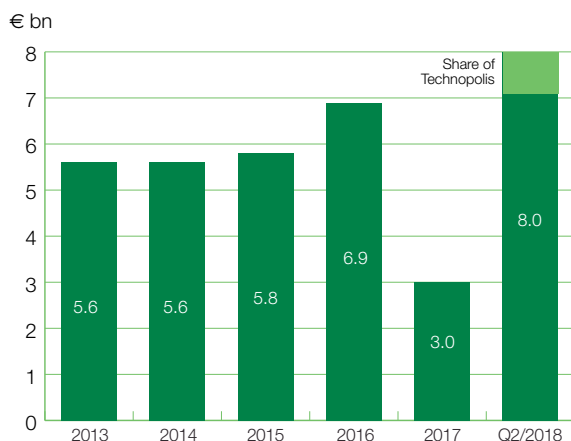
Largest property transactions in Finland during January-October 2018

ASSET / PORTFOLIO	DATE	PRICE (M€)	BUYER	SELLER
Technopolis plc	2018Q4	approx. 950	Kildare Partners	Shareholders of Technopolis plc
123 retail properties	2018Q1	767	Cibus Nordic Real Estate AB	Sirius Fund I Grocery, Sirius Fund II
Itis shopping centre	2018Q4	516	Fund managed by Morgan Stanley Real Estate Investing	Wereldhave
Office property (Töölönlahdenkatu 3)	2018Q1	189	Deka Immobilien Investment GmbH	Ilmarinen
Office property (Urban Environment House)	2018Q3	165	Union Investment Real Estate GmbH	City of Helsinki
30 care properties	2018Q1	141	Evli Healthcare I Ky	Northern Horizon
Office and retail property (Book House)	2018Q2	109	AEW Europe City Retail Fund	Stockmann plc
24 office properties, Helsinki metropolitan area	2018Q2	109	Goldman Sachs, Cromwell Property Group	IVG Polar
1,594 rental apartments	2018Q1	97	Fund managed by Morgan Stanley Real Estate Investing	Kojamo plc
Other significant transactions where the price is not published (in time order)				
981 rental apartments	2018Q1	n/a	Kojamo plc	Property funds of OP Group
3,263 rental apartments	2018Q2	n/a	Round Hill Capital	Avant Capital Partners & U.S. investment partner
824 rental apartments	2018Q3	n/a	Aberdeen Standard Pan-European Residential Property	LocalTapiola Group
Three office properties, Helsinki metropolitan area, 53,000 sqm	2018Q3	n/a	Kielo AB	Niam

Source: KTI

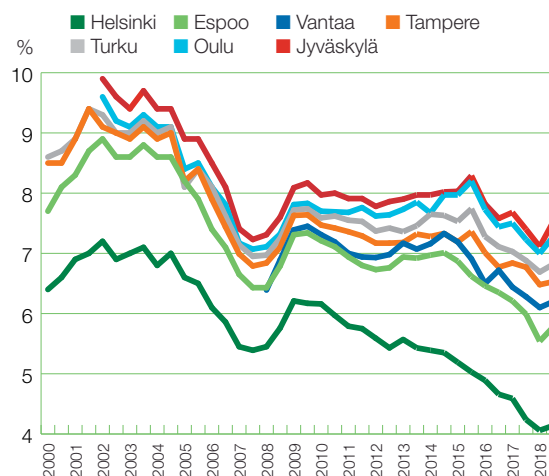
Finnish listed property investment companies

Direct property investments in Finland



Source: KTI (query for investors, annual reports)

Prime office yields in major Finnish cities



Source: RAKLI-KTI Property Barometer

The Finnish listed property sector is becoming smaller again

At the end of 2016, listed property companies' share of all property investments amounted to some 12 per cent. Due to the delisting of Sponda in 2017, the share decreased to less than 5 per cent, and, at the same time, foreign investors became the largest investor group in the market. The successful IPO of Kojamo increased the listed sector markedly in 2018, but, in the autumn, Kildare Nordic Acquisitions S.a.r.l. announced that it will acquire all shares of Technopolis, which will then be delisted. In both Sponda's and Technopolis' cases, the buyers were attracted by the discount in the share price compared to the companies' net asset value, due to which the portfolios are more valuable delisted. From the Finnish property market's point of view, this means a smaller listed market with only two significant players left.

Property yields bottoming out?

In the RAKLI-KTI Property Barometer carried out in October, the yield of prime office properties in the Helsinki CBD was assessed at 4.1 per cent, which is approximately 10 basis points higher than in last spring's survey. Office yields also increased slightly in all other cities, and the premium between for instance Helsinki and Tampere remained stable at 2.4 percentage points. Retail property yields also increased slightly, while yields for residential properties continued to decrease and stood at 3.7 per cent.

Investment demand remains high

Property investment demand is expected to remain high, although the outlook for both domestic and foreign investor demand is now slightly less positive than in the spring. About 50 per cent of the respondents expect that foreign investor demand will continue to grow further, and some 25 per cent expect that domestic demand will also increase. Of the various property sectors, retail properties have the weakest outlook with some 30 per cent of the respondents expecting demand to decrease. Investment demand of office and industrial properties is expected to continue increasing.

Office properties attract investors and occupiers

Investment demand for offices in the Helsinki metropolitan area (HMA) has been high for the past couple of years. The yields have been at record-low levels especially in the Helsinki CBD, and the transactions volume remains high.

New investors are entering the Finnish office property market

Dozens of office properties have been transacted during 2018. The transactions have included both expensive single office assets and large portfolio deals. Investors are interested in large core office properties, such as the KPMG head office and the Urban Environment House. The prices of these kinds of properties are at record-high levels, and they have been mostly acquired by foreign investors. For example, Castellum, Swiss Life Assurance and the AEW Europe City Retail Fund have entered the Finnish property market this year by acquiring core office properties.

Secondary office properties have also started to attract more investors. Many transactions have been completed in this sector this year. For example Goldman Sachs, the Cromwell Property Group, Kielo, Antilooppi, Sirius Capital Partners and the funds of AREIM and Tristan Capital Partners have completed significant acquisitions. The acquisition of all shares of Technopolis Plc by Kildare Partners is the largest office property transaction in 2018 and one of the largest property transactions in Finland ever.

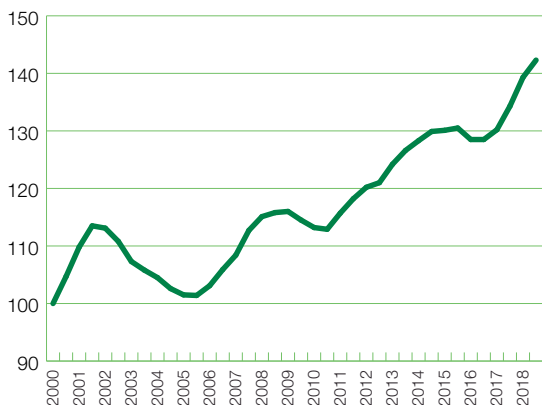
- Several office property transactions in HMA
- Office rents increasing in most areas
- More than 200,000 sqm of new office space under construction in HMA
- Occupancy rate of offices continues to increase

The Helsinki CBD Office Rent Index increased by 6.0%

Office rents have increased rapidly, especially in the Helsinki CBD. The KTI Office Rent Index for new agreements in the Helsinki CBD increased by 6.0 per cent during the past year and by 2.2 per cent during the past six months. The median rent in new agreements started during March-August 2018 amounted to approximately €30 per sqm per month. The highest office rents are in the Kluuvi district in the CBD where the upper quartile of office rents is almost €36 per sqm per month.

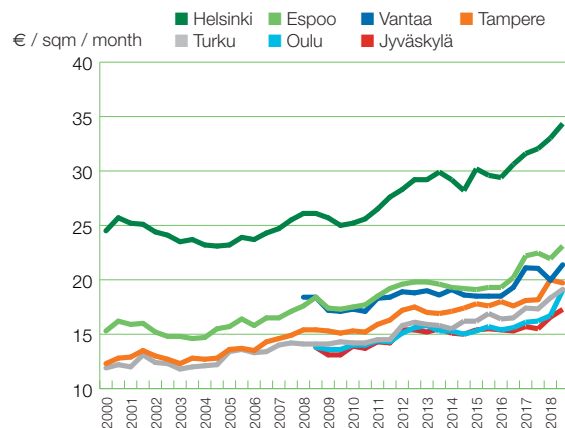
Rents have also mainly increased in other central office markets in the Helsinki metropolitan area in 2018.

KTI Office Rent Index
Helsinki CBD offices, index 2000=100



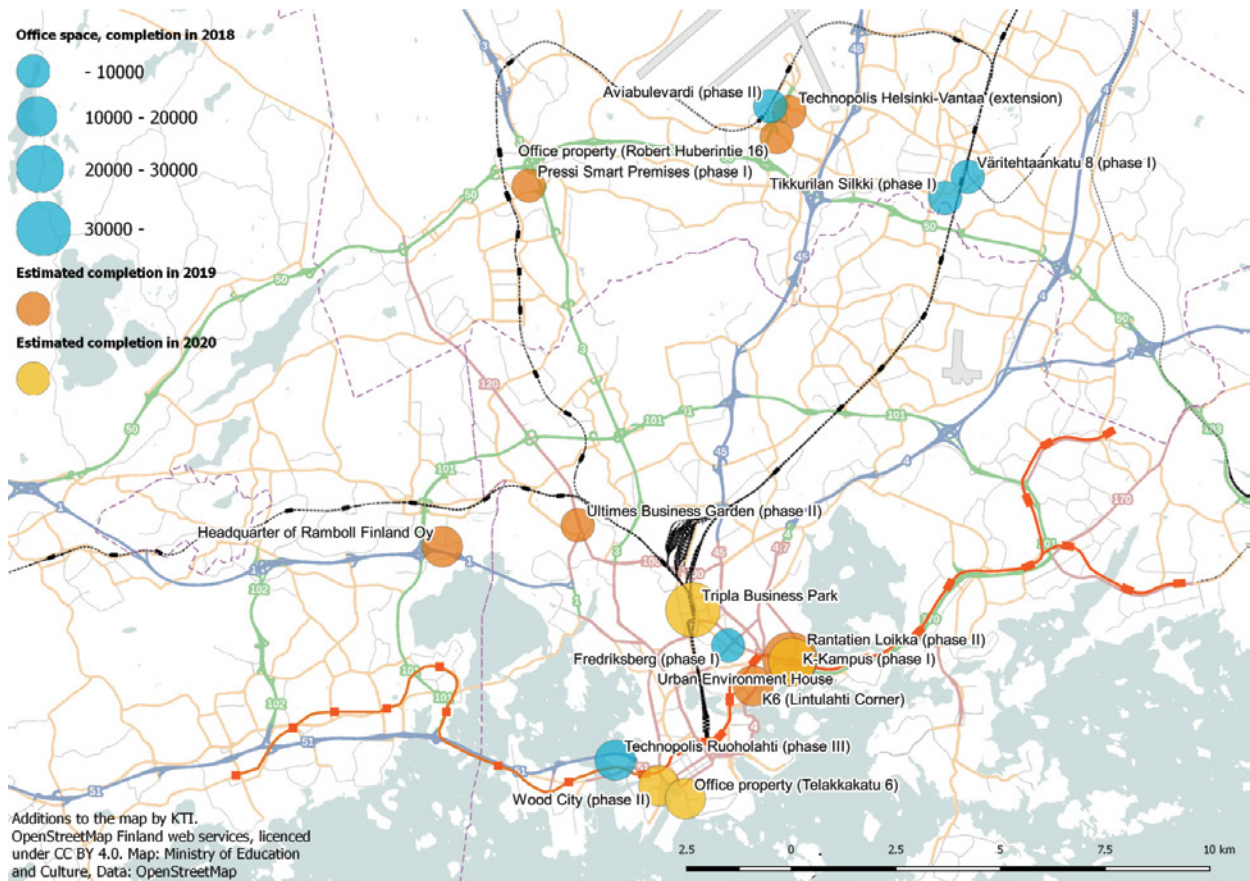
Source: KTI

Prime office rents in city centre areas



Source: RAKLI-KTI Property Barometer

Office development projects under construction and recently completed in the Helsinki metropolitan area



Source: KTI

For example, in the Tikkurila and Veromies districts in Vantaa the median office rent in new agreements has exceeded €20 per sqm. Also in the Pitäjänmäki district in Helsinki, where the vacancy rate has been high for a long time, the median office rent in new agreements increased by €2 per sqm during the past six months.

Office rents are expected to increase

The respondents of the RAKLI-KTI Property Barometer, conducted in October, also estimated that prime office rents have increased in the central areas of all major cities. The assessed average rent in the Helsinki CBD increased by more than one euro from the previous survey in spring, to €34.4 per sqm. Also in Espoo, Vantaa, Turku, Oulu and Jyväskylä the prime office rents have increased, and in Tampere remained stable, according to the Barometer. The increase has been highest in Oulu, where the assessed average rent increased to over €19, almost the same level as in Turku and Tampere.

Almost 80 per cent of the respondents expect office rents to continue increasing in the Helsinki CBD during the next six months. In other areas of the HMA, as well as in Tampere and Turku, office rents are expected to slightly increase or remain stable.

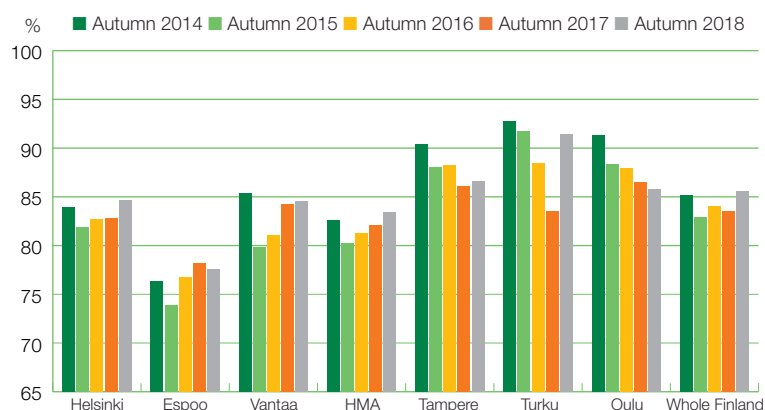
Office construction volumes have still increased in the Helsinki metropolitan area

There is plenty of demand for modern and flexible office space, and the office development volumes have still increased in the Helsinki metropolitan area. According to KTI statistics, some 211,000 sqm of new office space was under construction at the end of September, while six months earlier the figure was 178,000 sqm. New office buildings are being built across the Helsinki region. The construction is most abundant in the Kalasatama district in Helsinki where Union Investment recently acquired the 27,500 sqm Urban Environment House development project from the City of Helsinki. In addition, Varma and Lindström Invest are developing new office space in the area.

Also in the Veromies submarket, located in the Aviapolis district in Vantaa, three new office property projects are currently under construction. The properties are being developed by Skanska, Technopolis and NREP.

In the rest of Finland, office development volumes have slightly increased during the past six months, but the amount of significant office projects is still rather small. In Tampere, there are some 30,000 sqm of new office space under construction since Sponda and Technopolis are developing new office properties in the city centre area. Also in Jyväskylä and Oulu some new office projects have been recently started.

Office occupancy rates in the largest cities



Source: KTI

Office occupancy rates increased in Helsinki and Tampere

In the KTI Rental Database, the office occupancy rate in Helsinki increased by almost two percentage points during the past six months, to 84.7 per cent. In the Helsinki CBD, the occupancy rate increased to over 90 per cent. The amount of vacant office space has also decreased for example in the Pasila and Luttasaari districts in Helsinki.

In Espoo and Vantaa the office occupancy rates have remained rather stable during the past year. In total, the office occupancy rate in the Helsinki metropolitan area amounted to 83.5 per cent at the beginning of September. This is the highest figure in five years. Despite abundant office construction, half of the respondents of the RAKLI-KTI Property Barometer expect the amount of vacant office space to decrease further during the next six months.

In Tampere and Turku, office occupancy rates have increased to 87 and 91 per cent, respectively. In the whole of Finland, the office occupancy rate in the large investors' portfolios amounted to 85.6 per cent, which is over two percentage points higher than last autumn.

Gross take-up has increased from the previous year

Office gross take-up has also increased in the Helsinki metropolitan area. During the past 12 months, the gross take-up was some 20 per cent higher than in the previous year, and the figure was the highest in five years. Net take-up of HMA offices was positive for the third consecutive year.

The market for flexible office space continues to increase

Coworking is one of the most actively discussed terms in the current office markets. The term does not, however, have a commonly accepted definition, and most market professionals talk about flexible office space, a term that more distinctly addresses flexibility with regard to space use as well as agreement terms and services related to office space. Different flexible office concepts are offered by various kinds of players, including international chains (Regus, Spaces, UMA, Epicenter), familiar domestic property investors (Sponda, Varma, Antilooppi), as well as concepts concentrating on a single location or area (A Grid, Maria 01, Werstas). In practice, in most cases, coworking premises with hot desk workstations represent a minority, and 80-90 per cent of the premises are rented as client companies' private spaces.

Benefits created through community are supported by common premises, meeting points, services and events, and clients are attracted by the flexibility and easiness of these concepts. In the Helsinki metropolitan area, some 100,000 sqm of office space is currently in some kind of flexible concept use, and new players and concepts keep entering the market. In the largest cities globally, their share is already some 4-5 per cent of the total office stock, which in the Finnish context would mean some 350,000-400,000 sqm of flexible office space in the Helsinki metropolitan area. The growth potential is significant, although traditional Finnish office leases already provide markedly more flexibility than in most other countries.

Retail rents are rather stable

The current situation and future of the retail property market has been widely discussed during the past months. The supply is increasing, the patterns in consumer behavior are changing and the differences between prime and secondary locations, and also between different cities, are increasing.

Retail property investment market has been active, and many different kinds of properties have been transacted. Both global investor giants and local retail investors have acquired retail properties. Large acquisitions of Sirius funds and the Itis shopping centre are in their own category in this year's statistics. Agore Kiinteistöt has also increased its portfolio by acquiring two shopping centres from Barings. Otherwise, retail property transactions have been mainly rather small during the past months.

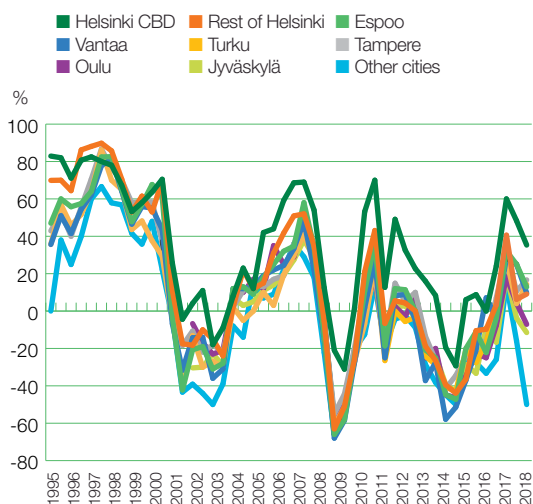
The Helsinki CBD remains an attractive location

In the Helsinki CBD, the median rent for new retail rent agreements during March-August amounted to some €73 per sqm, which is similar to the previous periods. The spread of rental levels has now decreased: the upper quartile of retail rents decreased to €111 per sqm,

- The variety of investors increasing in the retail property market
- Retail rents expected to increase in Helsinki CBD
- Services take up space in shopping centres
- Commercial property construction volumes remain high in the HMA

Outlook for retail rents

Balance figures



Source: RAKLI-KTI Property Barometer

while the lower quartile climbed to €60 per sqm. The average size of the new agreements was higher than in the previous periods.

The respondents of the RAKLI-KTI Property Barometer estimated that prime retail rents have decreased slightly in the Helsinki CBD. The assessed average rent decreased to €123 per sqm. However, the respondents generally estimated that retail rents have increased in the whole Helsinki metropolitan area. During the next six months, 44 per cent of the respondents expect prime retail rents to increase in the CBD. In other major cities, the majority of the respondents expect retail rents to remain stable. The balance figures of rent expectations are slightly positive in Espoo, Vantaa, Tampere and Turku, but in Oulu and Jyväskylä more respondents expected retail rents to decrease than to increase. In the rest of Finland, as many as half of the respondents expect retail rents to decrease.

Occupancy rates slightly decreased in HMA

The occupancy rates of retail premises have remained rather high in the Helsinki metropolitan area although they have slightly decreased, to 94.2 per cent. In the cities of Helsinki and Espoo, occupancy rates decreased by one percentage point during the past six months, and in Vantaa by two percentage points. Also in Tampere the amount of vacant retail space has continued to increase, while in Oulu and Turku retail occupancy rates have improved. In the whole of Finland, the occupancy rate of retail premises in the KTI Rental Database amounted to 91.6 per cent that is slightly higher figure compared to last autumn.

Big regional differences in shopping centre occupancy rates

In shopping centres, the regional differences in occupancy rates are larger. At the end of September the occupancy rate of shopping centres in the Helsinki metropolitan area amounted to 96.3 per cent, while in other major cities and in the rest of Finland the corresponding figures were 91.6 and 88.7 per cent, respectively. In the recent Shopping Center Barometer of the Finnish Council of Shopping Centers, most of the respondents expect that large shopping centres in the HMA will remain competitive and that occupancy rates will remain at a high level. However, outside the Helsinki region, as well as in the smaller centres in the HMA, the outlook for occupancy rates and rents have turned negative.

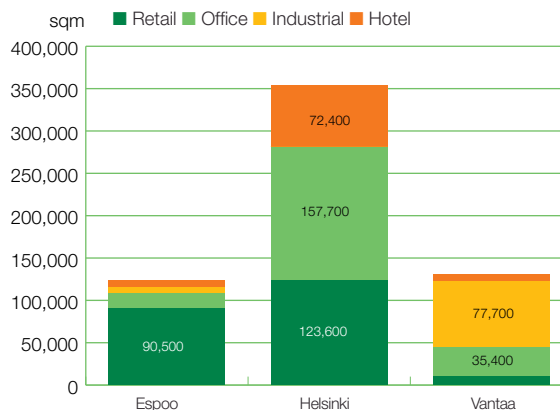
Highest peak surpassed in the retail construction volumes

Retail construction volumes in the Helsinki metropolitan area have started to decrease, as large projects are being completed. According to the statistics of KTI, almost 95,000 sqm of new retail space has been completed in the Helsinki metropolitan area in 2018. The largest completion this year has been the REDI shopping centre, comprising 60,000 sqm of lettable space. Some new projects have also been started: for example, in the Kuninkaala district in Vantaa the construction of 10,000 sqm outlet village was started in Q2. In total, some 224,000 sqm of new retail space was under construction at the end of September. Last winter, the figure was at the highest level, close to 300,000 sqm.

In the Turku region there are a couple of significant retail projects under construction, but in other major city regions the retail property construction is currently at a low level. In mid-sized cities the largest retail property project under construction is the 66,000 sqm Ideapark shopping centre in Seinäjoki.

New development projects under construction in the Helsinki metropolitan area in September 2018

Rentable area



If information on rentable area hasn't been available, rentable area has been estimated based on gross area information.

Source: KTI, RPT Docu Oy

The share of services is increasing in shopping centres

Due to the changing patterns in consumer behavior, the share of services is increasing in shopping centres. The vast majority of the respondents of the Shopping Center Barometer expect that the sales and share of used space of cafés and restaurants, as well as commercial and public services, will increase.

On the other end, the success of the fashion sector has been weakening in shopping centres for many years. In the Barometer, the outlook for the fashion sector has deteriorated significantly during the past year, and the sales and share of used space of fashion are expected to continue decreasing. Also the sales and used space of department stores are expected to continue dropping.

Outlook for retail rents and occupancy rates in shopping centres during the next 3 years Balance figures



Source: Finnish Council of Shopping Centers / Shopping Center Barometer 2017 & 2018

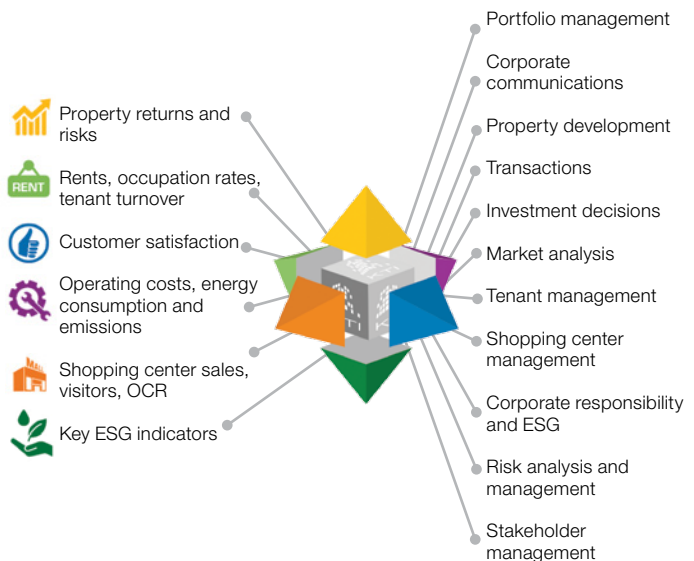
Shopping centre sales increased, the number of visitors remains stable

Despite the challenging outlook, the total retail sales of Finnish shopping centres increased by 0.9 per cent during the third quarter of 2018, compared to the corresponding period last year. Sales grew in the Helsinki metropolitan area and in other major cities, but decreased in the rest of Finland. In like-for-like comparison, the number of visitors remained stable compared to last year.

If the new shopping centre supply is included, the sales and number of visitors increased by 4.4 and 3.5 per cent, respectively. The figures are based on the indices published by Finnish Council of Shopping Centers, in co-operation with KTI. The data is compiled from 41 shopping centers in Finland, covering approximately 80 per cent of the Finnish shopping centre market.

KTI services support knowledge management of property portfolios

We at KTI have had the privilege, together with our clients, to develop property information services for supporting property portfolio and asset management for more than 25 years, and look forward to continue this work in the future. KTI services are based on extensive databases and systematic data compilation and analysis processes. Our databases are based on unique, asset level information gathered from property investors, managers and users, and we put serious effort into validating and analyzing the data, as well as applying established and systematic processes to ensure the confidentiality of this data. As a result, we provide a unique, knowledge-based approach to property markets and property portfolio management. We will continue to develop service concepts based on our databases, and we are happy to discuss all of our clients' service needs, as well as ideas that allow us to further develop and improve our offerings.



The supply of rental residential dwellings continues to increase

Active new construction has increased the rental residential property stock. According to KTI statistics, some 4,000 rental dwellings were completed in 2017, representing some 40 per cent of all dwellings completed in the Helsinki metropolitan area. In addition to these, private investors and property funds acquired individual dwellings in normal owner-occupied residential property stock. The increase in supply is expected to accelerate in 2019 and 2020: at the end of the third quarter of 2018, some 9,000 rental dwellings were under construction in the Helsinki metropolitan area, and some 2,900 in other major cities (Tampere, Turku, Oulu, Jyväskylä, Lahti and Kuopio). These figures only include buildings totally targeted at rental use. The majority of dwellings under construction are rather small: in Turku, Vantaa, Tampere and Espoo the average size varies between 45 and 49 sqm. The City of Helsinki requires also larger apartments to be constructed and the average dwelling size in Helsinki amounts to 52 sqm.

- Foreign investors increase their share in the residential property markets
- Rental growth expected to continue despite the increase in supply
- Increasing construction costs and high prices increase the cautiousness in the market

Residential rents continue to increase slightly

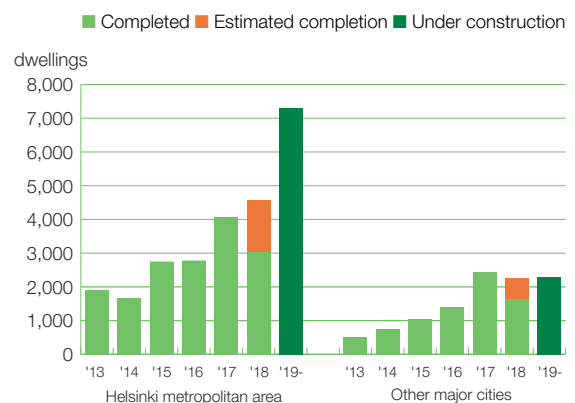
The increase in population in the largest cities has supported rental growth despite the rapid growth in supply. In the Helsinki metropolitan area, rental growth accelerated compared to the previous years, and the KTI Index for new rental agreements increased by 2.5 per cent. Rents increased most in the most expensive areas in Helsinki, and in the whole city, rents increased by 3 per cent. In Espoo, rents increased by 2.5 per cent and in Vantaa by some 1 per cent. In the RAKLI Rental Residential Property Barometer carried out in September, residential property professionals expected rents to continue increasing also in the future.

Rents increased in Tampere but decreased in Jyväskylä and Lahti

Outside the Helsinki metropolitan area, the development of rents is becoming more varied in major cities. On average, rents increased by 0.6 per cent in major cities outside the Helsinki metropolitan area. In Tampere, rents increased by 2.4 per cent. During the past six months, rental growth has been strongest in Oulu, where rents increased by 2.6 per cent per annum. In Turku, rents remained stable, whereas in Jyväskylä they decreased slightly. In Lahti, the rapid increase in supply is now creating pressures on rents.

In all major cities rental growth was now stronger for larger apartments than for studios or one-bedroom flats. In the Helsinki metropolitan area, rents of larger apartments increased by 3.3 per cent, and by 2.8 per cent on average in other major cities. Also in the

Rental apartment development projects



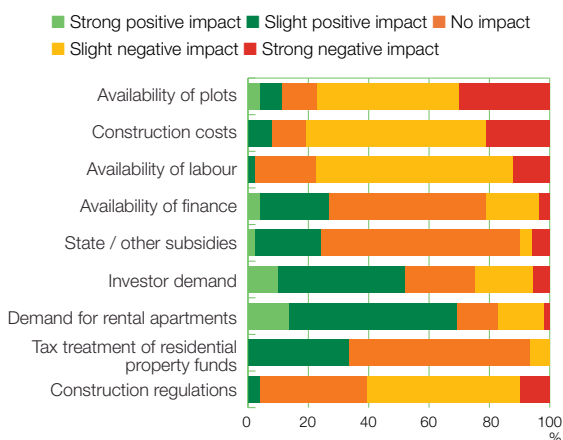
Other major cities: Tampere, Turku, Oulu, Jyväskylä, Lahti and Kuopio regions

Source: KTI, RPT Docu Oy

RAKLI Rental Residential Property Barometer, market professionals expected the rents for large apartments to increase in the Helsinki metropolitan area as well as in Tampere and Turku.

Drivers of residential construction

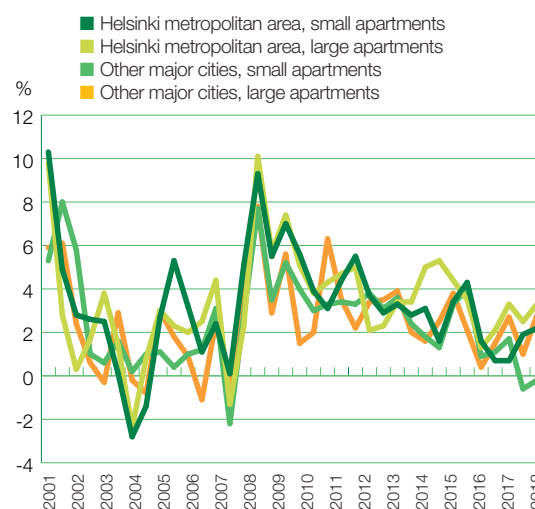
How will the following drivers impact the construction of rental residential properties during the next year?



Source: RAKLI Rental Residential Property Barometer, autumn 2018

KTI Residential Rent Indices

new agreements, annual change



Small apartments: studios and 1-bedroom apartments
Large apartments: 2+ bedroom apartments

Source: KTI

High prices and construction costs increase cautiousness

High demand has increased construction costs and pressured residential property yields. Due to the rapid increase in supply, rental growth expectations are becoming more cautious. Therefore, new development volumes are now expected to slow down slightly. In the RAKLI Rental Residential Property Barometer, all investor groups are expected to continue increasing their investments, although all domestic investors – institutions, investment companies and property funds – are expected to slow down their investments slightly compared to the previous years. In the Barometer, construction costs, availability of workforce and plot prices were seen as the biggest obstacles for new construction.

Foreign investors are expected to increase their portfolios

The role of foreign investors has increased markedly in the Finnish residential property market this year. Round Hill Capital, Morgan Stanley Real Estate Investing and Aberdeen Standard Investments all made their first investments in the Finnish residential properties, and NREP and AXA Investment Managers have continued to grow their portfolios. Altogether, according to the KTI statistics, foreign investors currently own more than 9,000 residential dwellings. In the RAKLI Rental Residential Property Barometer, some 80 per cent of the respondents expected foreign investors to continue increasing their investments.

Biggest foreign investors in the Finnish residential property market

INVESTOR	NUMBER OF RENTAL APARTMENTS IN FINLAND
Round Hill Capital	3,263
Fund managed by Morgan Stanley Real Estate Investing	1,594
NREP	1,350
Funds managed by AXA IM	1,230
Aberdeen Standard Pan-European Residential Property	824
Bayerische Versorgungskammer (BVK)	356
Fund managed by Barings Real Estate Advisers	301

Source: KTI, press releases

News from KTI

CORPORATE RESPONSIBILITY ANALYSIS

In October 2018, KTI published the 5th review on *Responsibility in the Property Business*. In the past five years, Environmental, Social and Governance (ESG) issues have gained an established position in the strategies and corporate values of the major property investors, and they also have a significant role in corporate communications and reporting. ESG issues drive business decision-making in investment processes, management solutions and steering of value chains. As the weight of corporate responsibility issues is increasing, we at KTI also develop services to support our clients in this area.

In 2019, we will launch a renewed benchmarking service for corporate responsibility analysis. The service will gather the core ESG indicators based on the RAKLI-

KTI corporate responsibility reporting guidelines. The service also increases information and awareness of the importance and role of real estate in Finnish society and offers visibility for the clients' own actions and achievements in the ESG area.

As a new component for this service, we will, together with WWF, launch a new tool for assessing the climate impacts of property investments on both asset and portfolio levels. The tool supports the clients' target-setting and management of climate impacts, communication and reporting, risk management as well as development of properties. The tool is still under development, and we invite our clients to collaborate with us in the development work. Olli-Pekka Virkola and Markus Steinby are happy to tell you more.

DIGITALISATION OF PROPERTY DATA PROCESSES ENABLES MORE FREQUENT AND PRECISE INFORMATION SERVICES

KTI has been actively contributing to the Finnish government's KIRA-digi project, which aims at boosting the digitalization of the property and construction sectors and thereby creating an open and interoperable information management ecosystem for the built environment. With the support of KIRA-digi project, we have developed a solution for automated data transfers that enables more effective data transfer processes between organisations. This solution is based on a harmonized data model and technical data specifications, created in close collaboration with our clients. Through this solution, property and rental data can be transferred automatically between various players in the property portfolio management value chain – and also between KTI and our clients.

In the future, this solution will also be extended to cover other areas of property asset management, including, for instance, property return and operational management data. Automated data transfer systems enable us to develop new and improved information services, including more frequent and up-to-date compilation of market and benchmarking data, as well as better quality, more comparable data with fewer errors. Through our KTI API (application programming interface) service, processed market and benchmarking data can also be delivered directly to our clients' portfolio management and reporting systems. Matti Heiskanen, Klaus Vesama and Markus Steinby are happy to tell you more about collaboration in this area.



KTI Finland is an independent research organisation and service company providing information and research services for the Finnish real estate industry. KTI maintains extensive databases on returns, rents, transactions, operating costs and customer satisfaction measures in the Finnish property market. Based on these databases, various kinds of benchmarking and analysis services can be provided. KTI's clients comprise major property investors, managers, occupiers as well as service providers in the Finnish market. KTI is owned by the Finnish Real Estate Federation and RAKLI, the Finnish Association of Building Owners and Construction clients.

KTI Finland
Eerikinkatu 28, 7th floor
00180 Helsinki
FINLAND
Tel. +358 20 7430 130
www.kti.fi