



REAL ESTATE MARKET PROJECTIONS

Commentary on sectorial market trends

November 2022



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Greece Real Estate Outlook

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Strategic assessment

Following the impact of the pandemic in the economy, the real estate market picked up at 2019 levels, even higher in certain segments. The supply chain disruptions caused by the pandemic containment measures are easing and this has a positive effect on construction costs. However, this is counterbalanced by the strong inflationary pressures and high energy costs triggered by the recent geopolitical events. The high inflation environment is expected to impact the economic activity and as a result the local real estate transactional and development activity. We remain optimistic in the long run for the local real estate market as it has untapped development and regeneration potential, and weighted average prices are still lower than precrisis (before 2009) levels.

Strengths

- Relative domestic political stability and positive outlook for the economy
- Continuous economic recovery and strong growth performance above EU averages
- Lessons learnt and resilience shaped in the industry due to the difficulties of previous years of crisis (2009-16)
- Good returns compared to competing Mediterranean and secondary markets
- Privatization and infrastructure upgrades (*airports, ports, public estates*)
- Strong performance from tourism sector increases interest in hospitality assets, golden visa and summer housing

Weaknesses

- Decline in the fragile household disposal income due to high inflationary pressures
- Expected increase in interest rates to curve high inflation might lead to higher cost of mortgage financing and as a result less household buying power
- New NPLs will inevitably be created as a result of the higher construction costs and increasing interest rates
- Selective availability of bank credit
- Less public fiscal space due to the need for increased fiscal discipline
- Less diversification in local buyers and available debt financing

Opportunities

- Government led initiatives to subsidize first time buyers and young families
- Attractive NPL real estate collaterals and REOs (portfolio level)
- Alternative providers of real estate debt, REO acquisition staple financing or development funding
- Repositioning upgrades with mixing of commercial, office and residential uses (incl. student & senior housing)
- New developments in offices, logistics and residential buildings with emphasis on “green” standards
- New urban infrastructure and regeneration projects such as Elliniko & Athens Riviera

Threats

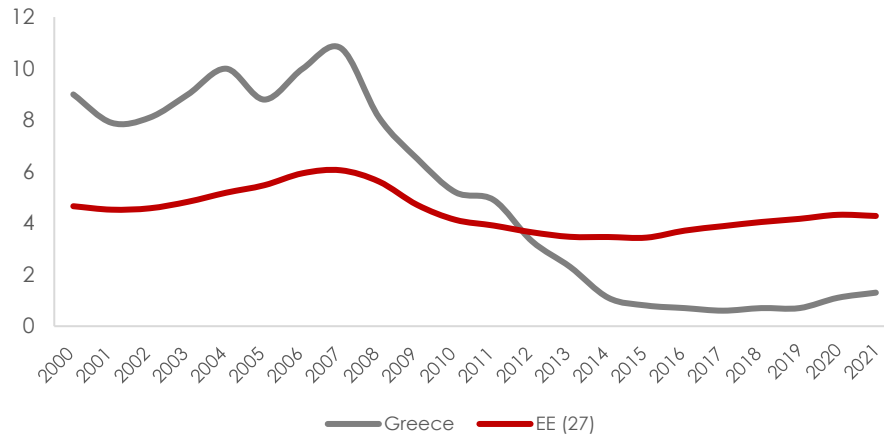
- Potential short-term drop in tourism revenue figures from international visitors due to European and worldwide higher cost of living (e.g. high inflation environment)
- Prolonged geopolitical instability in Europe (e.g. Ukrainian War) and regionally (e.g. Turkey's aggression etc.)
- Prolonged energy crisis might lead to fuel shortages and general rise in commodity and electricity prices and thus higher operating and business costs
- Delay on the modernization of the institutional land use framework and of the national cadastral completion
- Non-tradable (obsolete) property collaterals and REOs (Long Tail) in NPL portfolios

Greece Real Estate Outlook

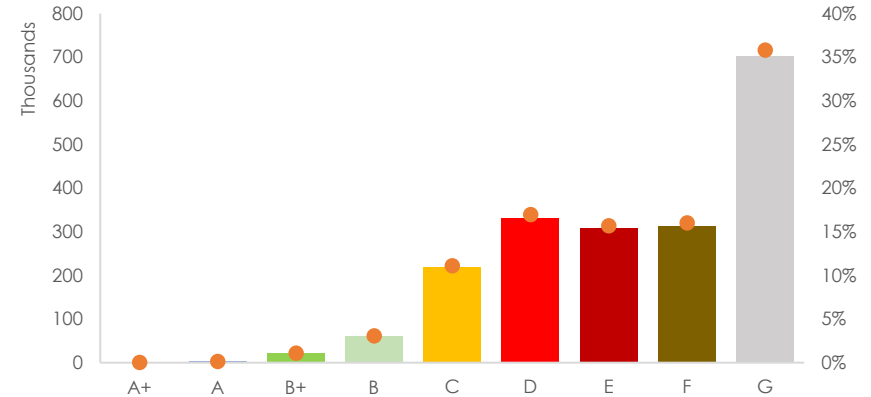
Building stock and activity

The building stock in Greece can be characterised as relatively old and energy inefficient. New investments and regeneration projects are expected to enter the market in the upcoming years.

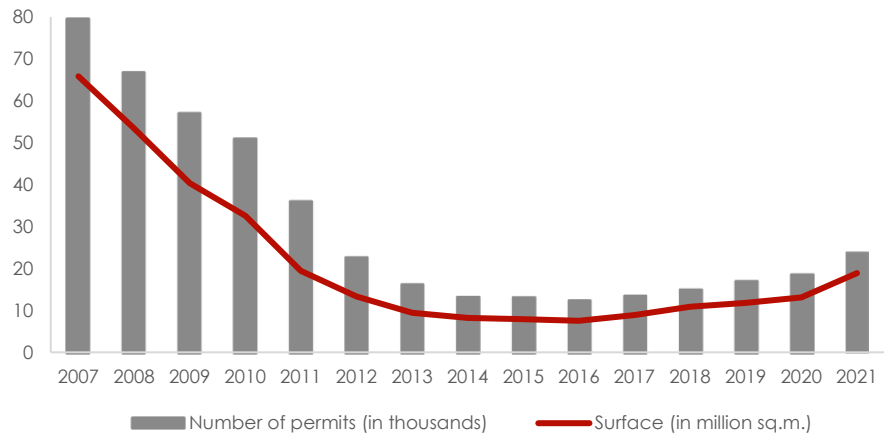
Residential Construction (% of GDP)



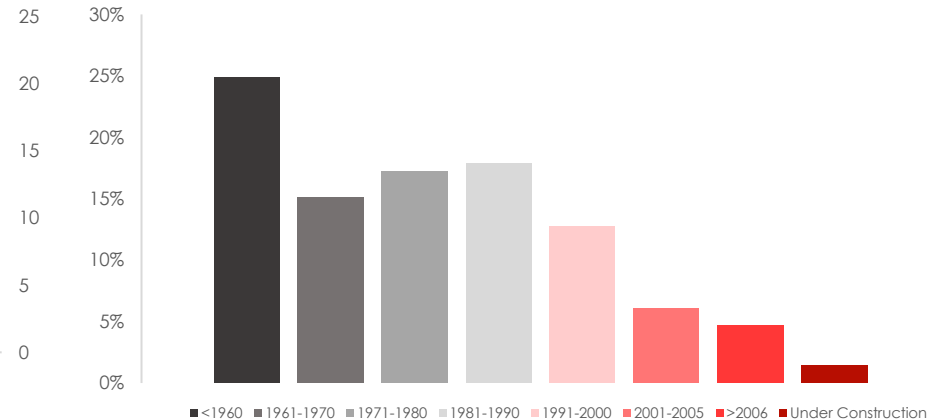
Energy Performance Certificates (EPCs) Issues Per Class



Development Activity per Annum – Private Sector



Building Stock Per Construction Year



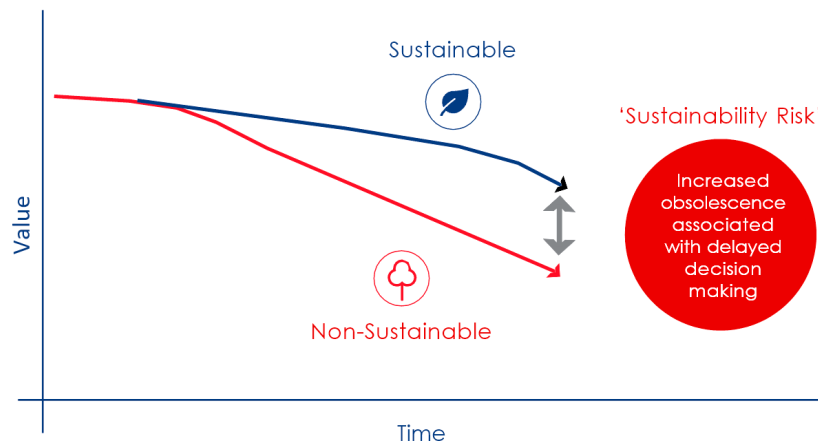
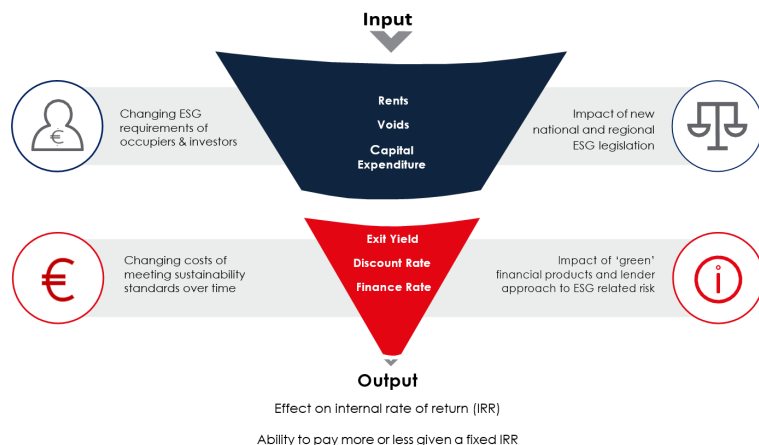
Sources: Hellenic Statistical Authority, Ministry of Energy & Environment, Eurostat, Foundation for Economic & Industrial Research (IOBE) - Edit: Arbitrage RE

Environmental, Social, and Governance (ESG) criteria are increasingly used to assess the impact of the environmental, social and ethical practices of corporate and projects, their operations, financial performance and attractiveness to investors.* Addressing ESG agenda is becoming an important and priority investment parameter in real estate. It is affecting real estate prices and decisions about placemaking.



Social value creation in real estate: development and existing assets

	Planning & Development	Management & Operations
SOCIAL VALUE DERIVES FROM	USE OF LAND	USE OF PROPERTY
FACTORS TO CONSIDER	Location, demographics, local economy, mix of uses, place-making, current and future infrastructure requests, socioeconomic needs	Safety, health and well-being, affordability, quality, tenant engagement, tenant satisfaction
OPPORTUNITIES	Meet local development needs (e.g., housing, office, industrial space, urban development) and enhance the prospects and well-being of places and people	Provide space for living, working, shopping, leisure and enhance the prospects and well-being of places and people
RISKS OF NEGATIVE IMPACT	<ul style="list-style-type: none"> Local residents do not benefit due to wrong mix of uses & affordability Displacement Poor quality design and construction Lack of community cohesion 	<ul style="list-style-type: none"> Lack of use value for local people and places Lack of affordability Lack of maintenance and repairs



*Definition by Alexander Aronsohn and members of the IVSC Tangible Assets Board and IVSC ESG Working Group

Greece Real Estate Outlook

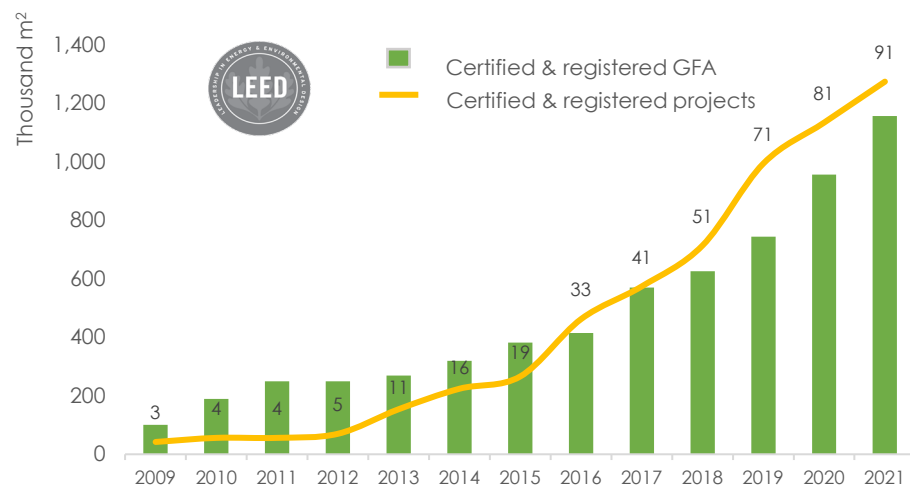
Certified "green" buildings

The trend of bioclimatic or "green" certified buildings has become a key theme in the local real estate market in the past 5-6 years. A growing trend of green retrofitting has also been observed. New office buildings now meet the highest sustainability standards.

This trend relates mostly to REICs and local property funds with large commercial portfolios or multinational corporates with sizeable own-occupied properties. These owners are investing in upgrading their existing buildings or developing new sustainable offices to benefit both financially and operationally. The investment focus has been more on large properties in the main commercial areas of Athens. These buildings are commercially more attractive and branded as environmentally friendly.

The most popular international certification in Greece for sustainable ("green") office buildings is LEED (Leadership in Energy and Environmental Design) created by the American Green Building Council (USGBC). There is a series of other credible certifications that address among other things modern and sustainable operational practices (e.g. WELL etc.).

Registered & Certified Office Buildings Greece



Source: DCarbon - Analysis: Arbitrage



BREEM



fitwel



BEAM



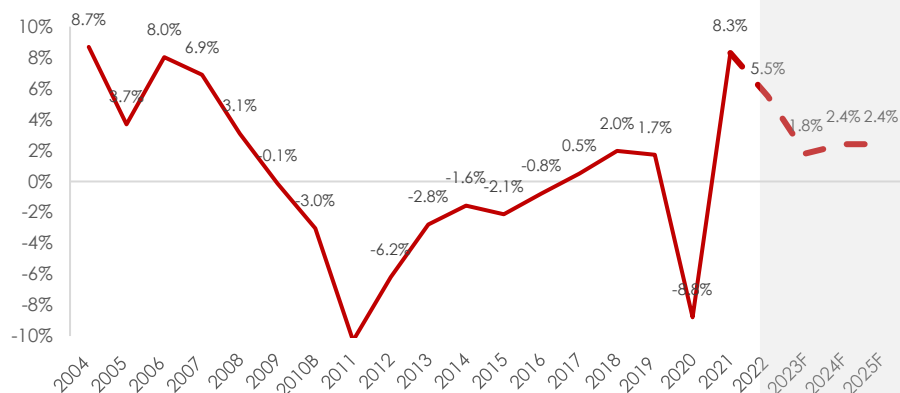
Greece VS EU Economic Outlook

Greece VS EU Economic Outlook

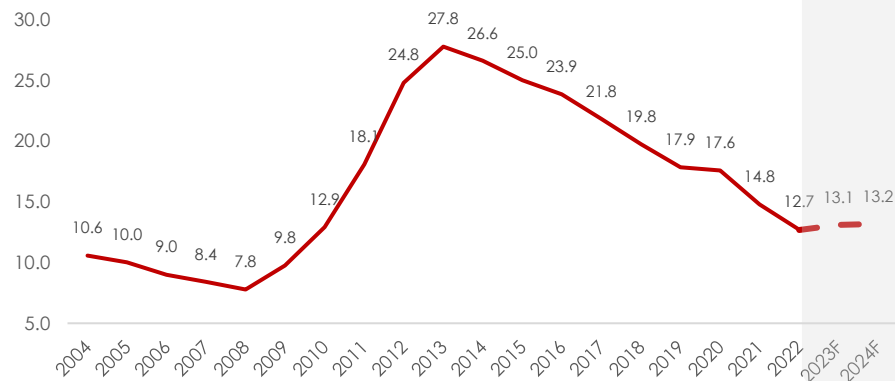
Main Greek economic indices

After the pandemic crisis, the macroeconomic outlook had started to look positive again and the economy demonstrated a robust recovery. However, the impact of the recent geopolitical turmoil that has led to the consequent surge in energy and commodity prices and resulted in a 25-year high inflation rate. This has led to an increase in interest rates (in Euro area) and cost of financing. In combination with the rising cost of living, it is expected to impact the economy. Now, the challenge is to support the real estate sector through a series of value add (re)development and regeneration projects that boost economic activity and counterbalance any inflationary pressures.

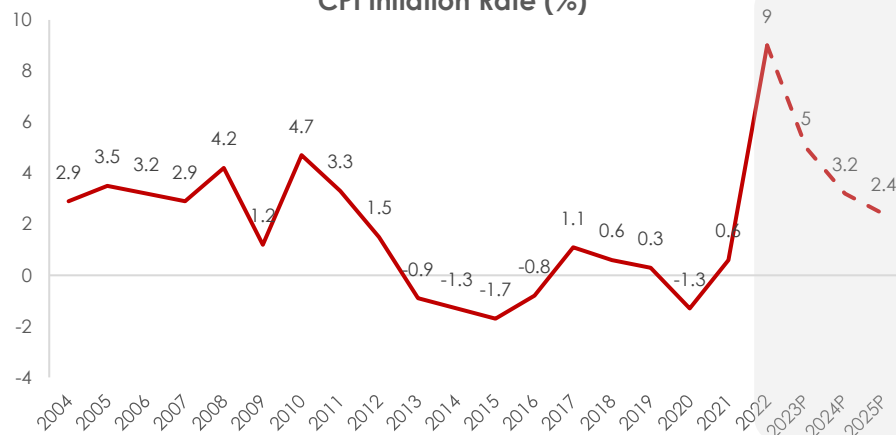
GDP Annual Growth Rate (%)



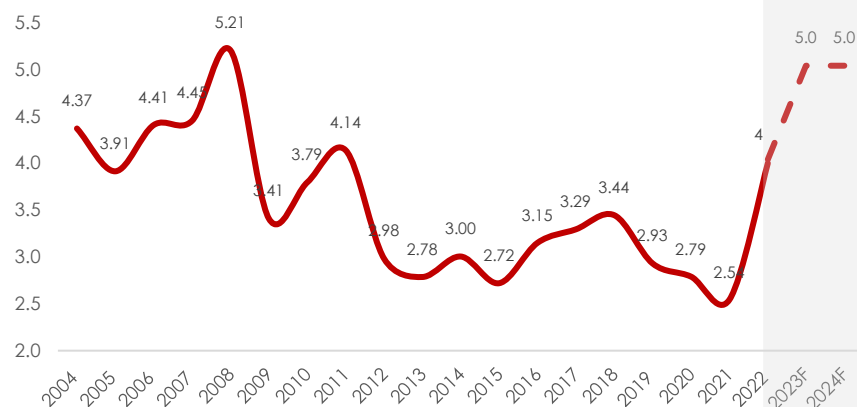
**Unemployment Rate
(% - Active population)**



CPI Inflation Rate (%)



Mortgage Rates (%)



Sources: HelStat, European Commission, BoG, Eurostat - Edit: Arbitrage

Forecast

Greece VS EU Economic Outlook

Greek vs EU economic indices (1/2)

The pandemic crisis in 2020 halted the growth rate of GDP worldwide, triggering serious effects both in European and national level. The European Union (EU) economy showed signs of swift recovery during 2021 and H1 2022. The recovery in the EU which have once again been halted due to the geopolitical uncertainties that have led to an energy cost crisis and record level inflation.

Greece's economy, despite the difficulties has exhibited stronger signs of growth compared to the EU average. In 2022, the country's GDP growth rate in 2022 is expected to reach 5.5%, whilst the European average is estimated at a lower level (3.1%). In addition, according to current data, in 2021 foreign direct investments in Greece recorded the highest performance of the past 20 years, posing optimistic signs for further investments in the country that will boost economic activity and growth overall. In the coming years, GDP growth rate is expected to sustain positive levels, although of some mediocrity.

The unemployment rate in the Euro Area fell to a record low of around 7.7% in 2021, as a result also of stimulus and growth-oriented policies that supported the labor market's recovery from the pandemic and the economy overall. On the other hand, Greece has one of the highest unemployment rates in EU, almost double from the EU average. However, it has demonstrated a notable and steady decline in its unemployment over the past years as a result of its economic recovery.

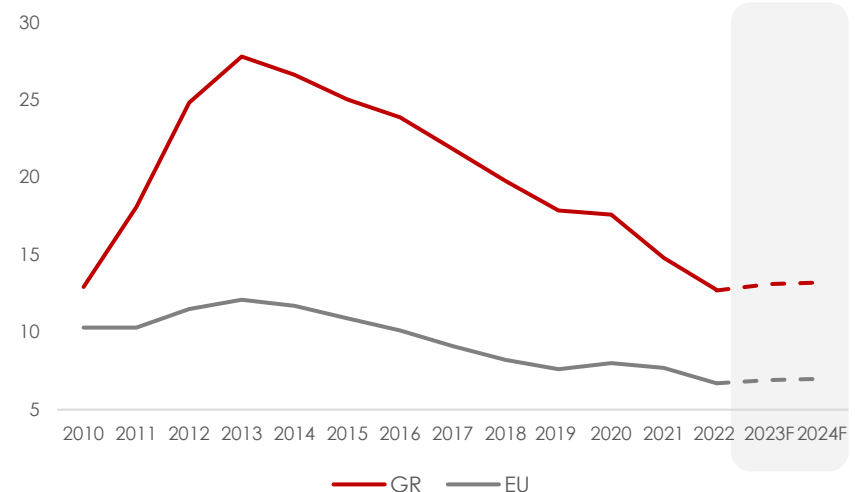
In the medium-term, despite the current economic environment, the employment projections are mostly optimistic in Greece as long as it addresses the core of the problem through the introduction of actions and measures that aim to stimulate growth and create better paid jobs that will benefit the younger population to curve youth unemployment.

Sources: European Commission, ECB, Eurostat
Edit: Arbitrage RE

GDP Growth rate (%)



Unemployment rate (%)



Forecast

Greece VS EU Economic Outlook

Greek vs EU economic indices (2/2)

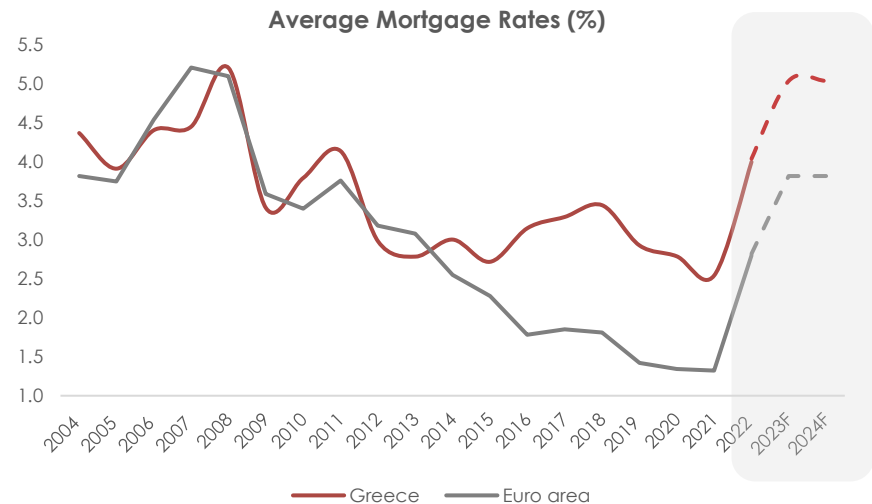
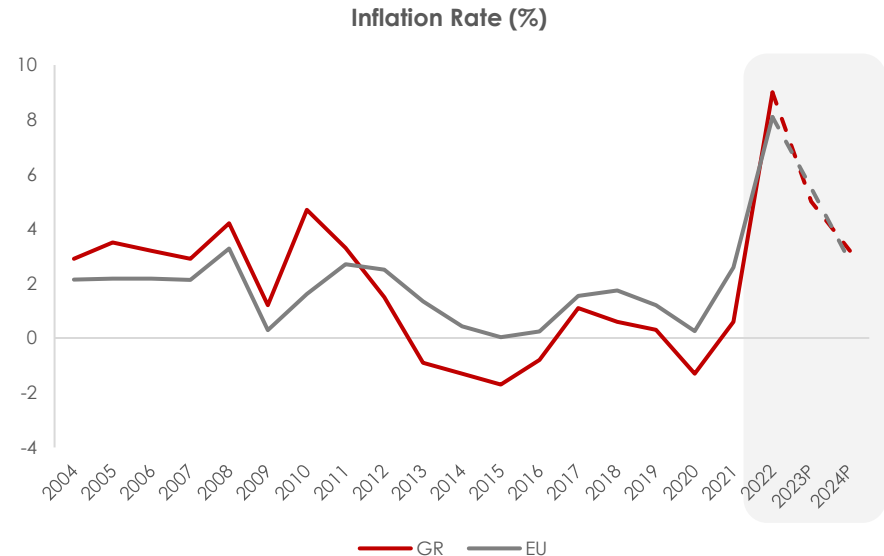
Following the disruption effect of pandemic restriction measures in global supply chains as well as the energy and commodity cost crisis triggered by the War in Ukraine, there has been a rapid increase of inflation at EU level, as Europe is considered as most vulnerable in these economic pressures. As a result, Greece has also shown, during the last months, the highest inflation rates of the past two decades in line with EU average.

Due to the high inflation, the disposal income of households and lots of businesses will start to shrink and as a result this will hinder economic growth. Following the other European countries, the Greek government has been taking measures to restrain the rapid increase in energy prices as well as to support the most vulnerable in order to counterbalance the inflationary effects and continue the path of steady economic recovery.

At the same time, according to data from ECB and following historical lows in 2021, mortgage rates in the Euro Area have significantly risen since the beginning of 2022 as a counter measure to curve the rising inflation. This will obviously increase the cost of financing for commercial and residential real estate. As of H2 2022, new residential loans to Greek households are also rising. It remains to be seen how this increase in interest rates will affect existing mortgages, especially those with variable rates or fixed rates close to expiry. The problem is expected to be more severe in Euro Area countries, in which the mortgage market is more mature. Greece is expected to weather better this problem given that its mortgage lending was weak for years due to the past economic crisis.

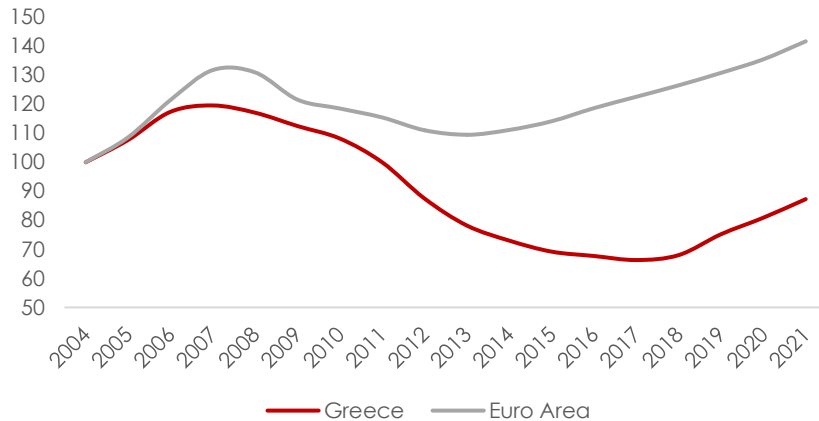
In the near future, the interest rates are expected to remain high until inflation starts to normalize.

Sources: European Commission, ECB, Eurostat
Edit: Arbitrage RE



Forecast

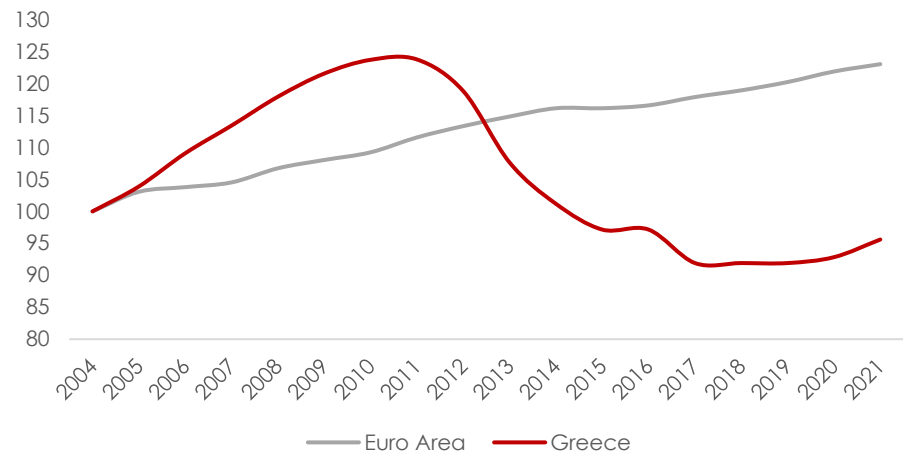
House Prices GR vs Euro Area
(2004=100)



- Following Euro Area recovery from 2008-11 financial crisis with favorable and historically low interest rates, housing prices have shown a rather steady increase over the years and the market has been buoyant.
- The pandemic also fuelled demand for new and better housing and led to further house price increases and as a result in 2021, Euro Area index pricing has reached its highest levels since 2007.
- Although Greece was following similar trends with Euro Area until 2010, albeit with a lowest peak, there has been a notable deviation in index pricing between them.
- In contrast to Euro Area, Greece took longer to recover from its financial crisis, almost a decade, and as a result its housing price has still not reached its pre-crisis levels. Therefore, the housing market has not unleashed its untapped potential and we expect any potential correction in pricing due to the higher interest rates and cost of living to be milder in the short term compared to Euro Area.

- Similarly, the evolution of average house rental prices in Greece has followed a totally different pattern compared with the Euro Area.
- Specifically, Greece displayed a higher rental index increase until 2009-10, when the economic crisis really hit the market and then drove prices to an unprecedented fall. Since 2017 onwards, the rental market has slowly started to recover.
- In contrast, rental index prices in Europe have continued to increase steadily over the last years and reached record levels in 2021. We expect a notable correction in the short term, especially in non-prime rental, as the cost of living rises.
- The index pricing gap between Euro Area and Greece remains significant. We expect rental prices in Greece to stabilize or in certain cases decline. However, we do not foresee a major correction in non-prime areas compared to Euro Area.

Rental Prices GR vs Euro Area
(2004=100)



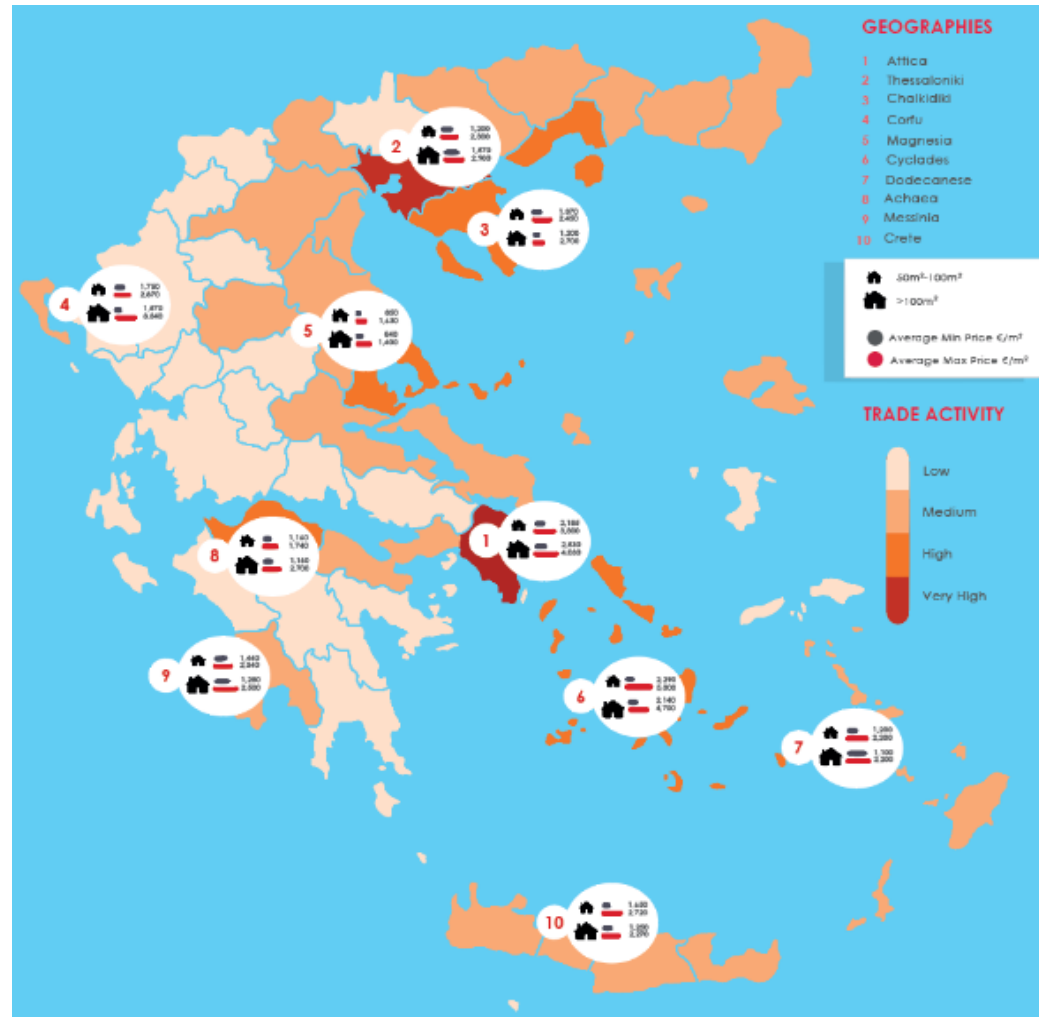
Source: ECB, Bank of Greece - Edit: Arbitrage RE

Sectorial Market Trends

Sectorial Market Trends - Residential Market

Commercial activity

According to data from the Public Registry database, most of the national (registered) transactional activity took place in Attica, Central Macedonia and in major urban centers and touristic destinations.

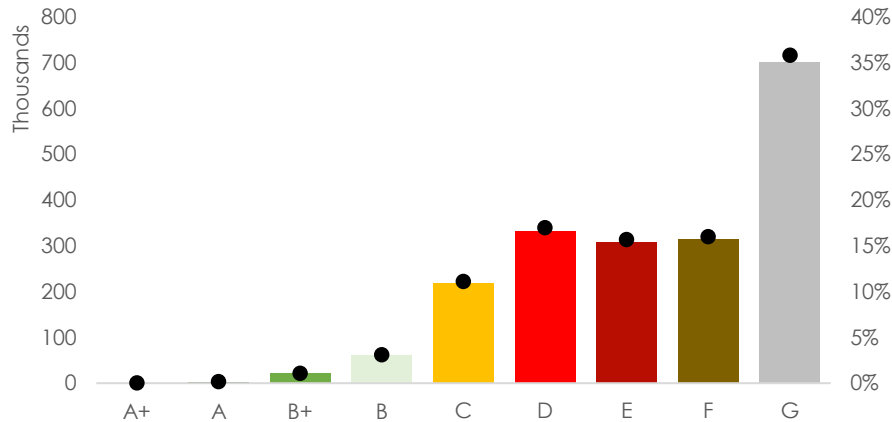


Source: Arbitrage RE, Public Registry – Analysis: Arbitrage RE

Sectorial Market Trends - Residential Market

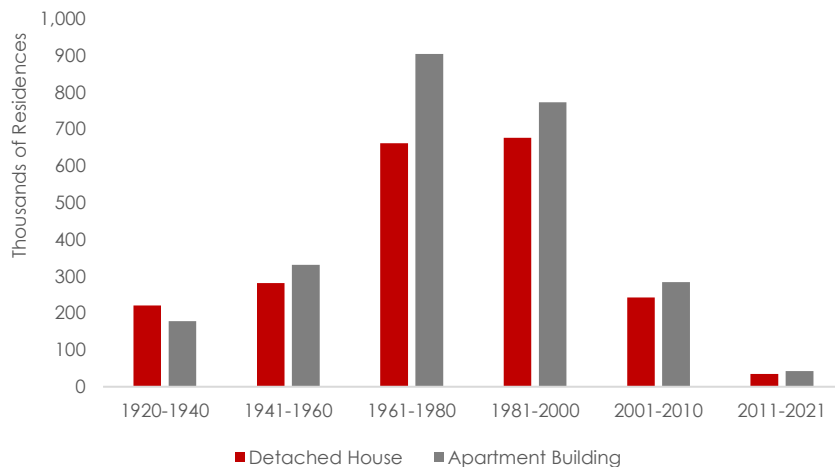
Residential stock analysis

Buildings classification based on EPCs
Residences - 2022

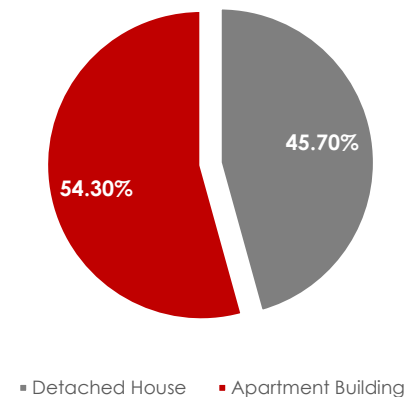


- ✓ In general, the housing stock is old and outdated.
- ✓ More than 85% of EPCs relate to residential units. The majority (~67%) is classified under categories E-H and about one third (~27%) under categories C-D. Only 6,4% of residential stock falls into categories A-B.
- ✓ Apartment buildings outnumber slightly detached houses. As per energy reports for 2019, detached houses are proved to be significantly more energy consuming (average year energy consumption ~490kWh/m²) compared to the apartments (less than 300kWh/m²)

Residences stock per age



Residence Type

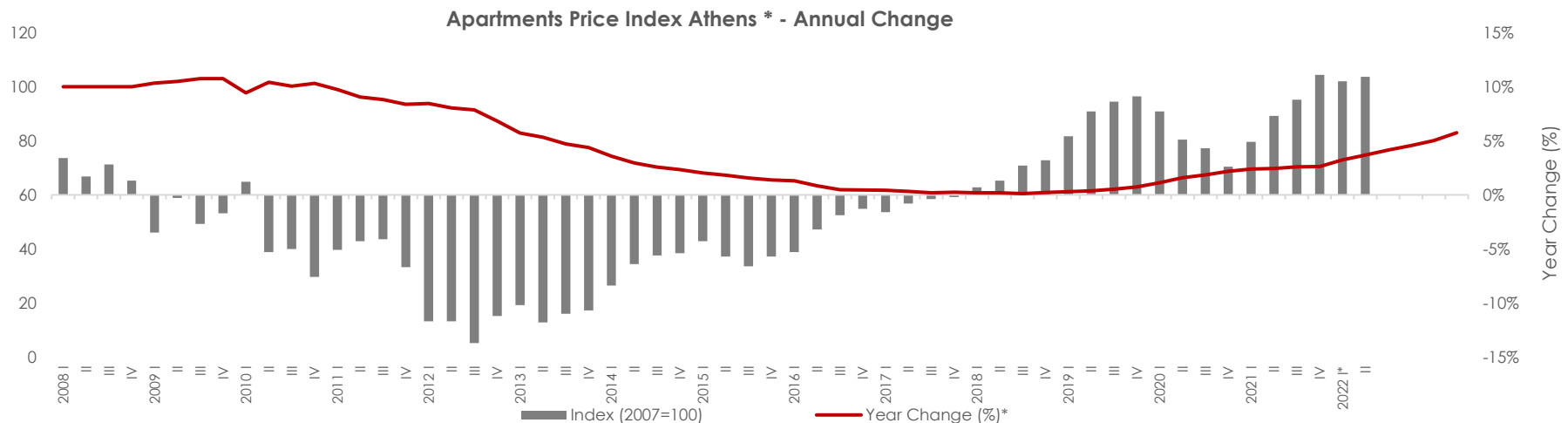
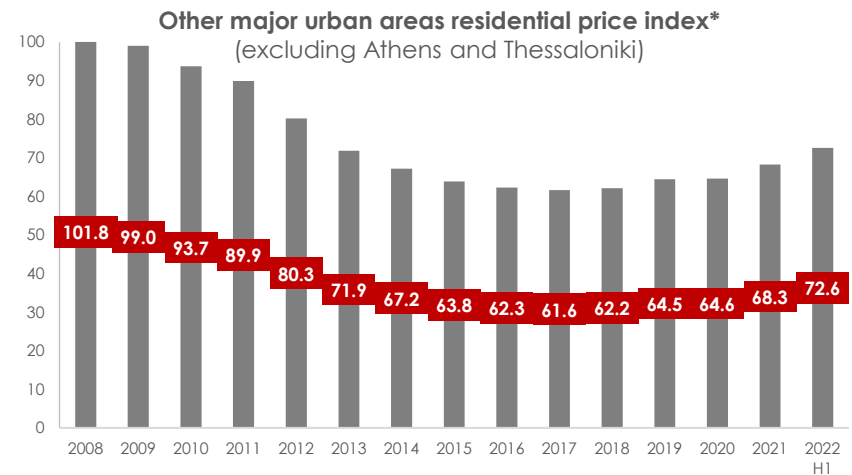
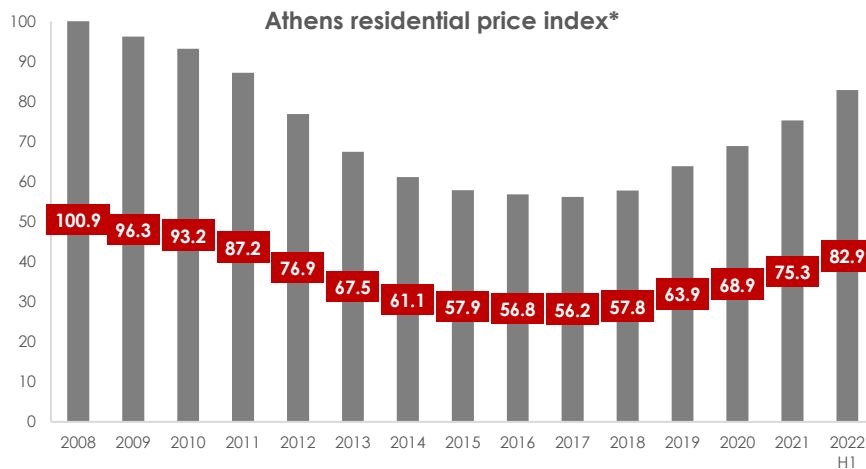


Source: Ministry of Energy and Environment, Hellenic Statistical Authority - Edited by: Arbitrage RE

Sectorial Market Trends - Residential Market

Indicative pricing indicators

As the market has been recovering, housing prices have been growing annually. House pricing has still not reached its pre-crisis levels and the housing market has untapped potential. Therefore, Greece is still expected to remain a relative inexpensive and attractive place for foreign buyers to buy a residential property. We expect any potential correction in pricing due to the higher interest rates and cost of living to be milder in the short term.



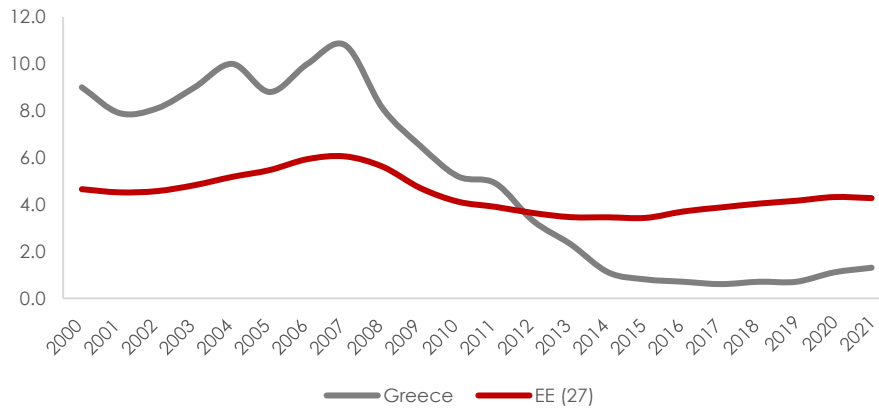
*2007=100

Source: Bank of Greece - Edit: Arbitrage RE

Sectorial Market Trends - Residential Market

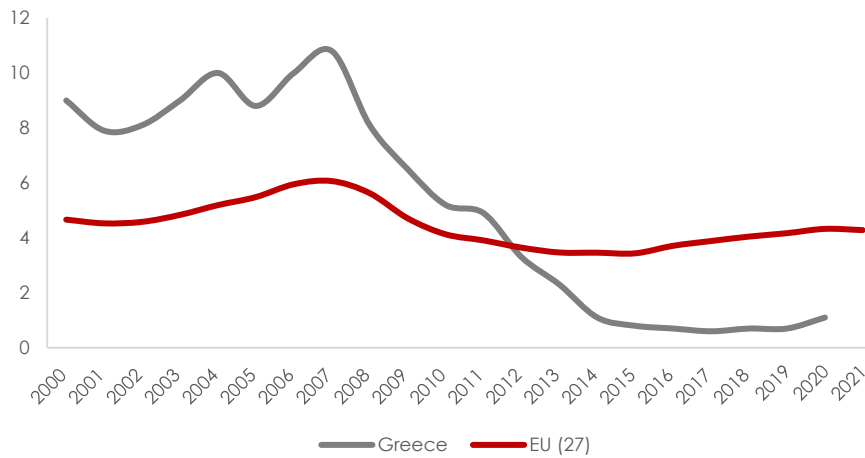
Investment in housing indices

Residential Construction
(% of GDP)

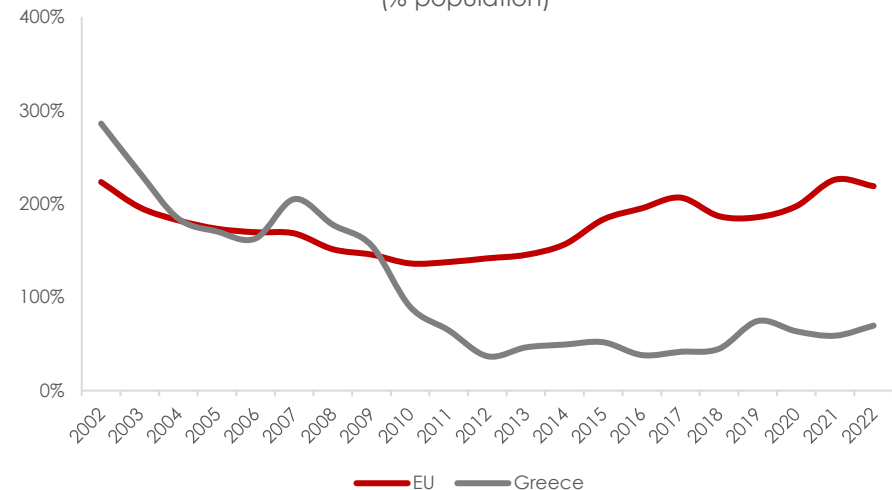


- ✓ Residential construction began to recover slightly since 2017. Private construction activity in 2021 demonstrated a positive outlook compared to the previous years.
- ✓ It is noted that investments in upgrading existing houses were preferred to the construction of new properties.
- ✓ Based on the latest figures, investment in housing is still at very low levels compared to EU figures
- ✓ Residential purchase intention in Greece is generally one of the lowest in EU, it has started to show however some optimistic growth signs.

Investment in Housing
(% GDP)



Home purchase intention within the next 12 months
(% population)



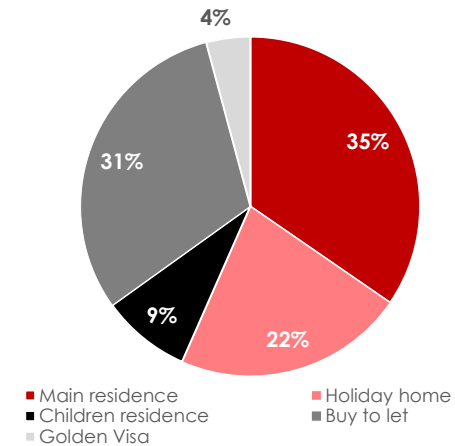
Source: Hellenic Statistical Authority, European Commission, Eurostat - Edited by: Arbitrage RE

Sectorial Market Trends - Residential Market

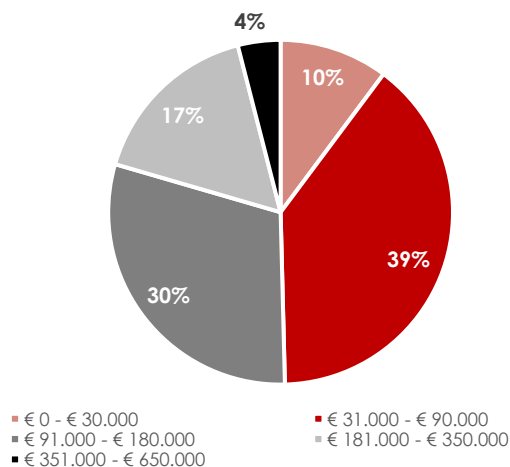
Transactions activity analysis and buyer profile

- ✓ Most purchases are made for the purpose of using the property as the main family home. This intention increased during the first half of 2021 compared to 2020, also as an effect of the pandemic that prioritize the acquisition of better and more modern housing.
- ✓ There is a continuous increase of buyers from foreign countries (incl. a c.5% from expat Greeks).
- ✓ Most transactions relate to properties with market values between € 31,000 - € 180,000. During the recent years, there was also a significant increase in acquisitions of residential properties with market values between € 181,000 - € 350,000, which includes the Golden Visa threshold (€ 250,000), which, according to Hellenic Government announcements, will be doubled (€500,000) by early next year.

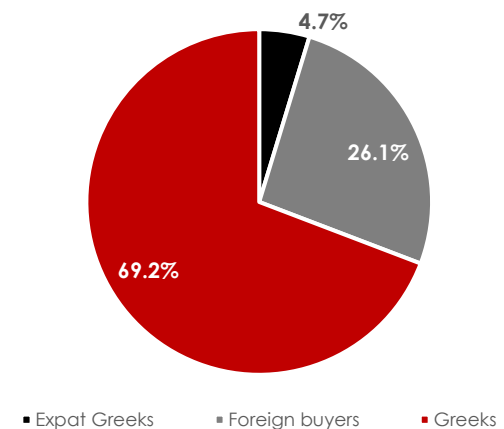
Reason of Buying - 2021



Breakdown By Ticket Size - 2021



Buyers Origin - 2021



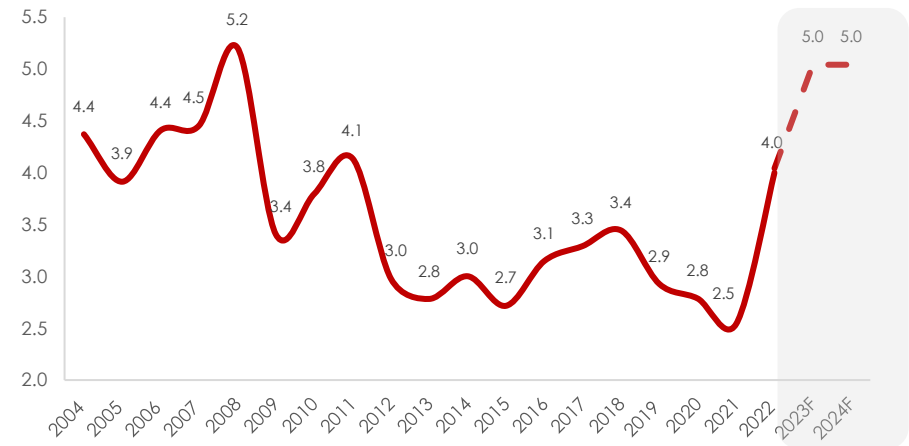
Source: Hellenic Statistical Authority, Bank of Greece, Public listings, Association of Certified Real Estate Brokers – Edit: Arbitrage RE

Sectorial Market Trends - Residential Market

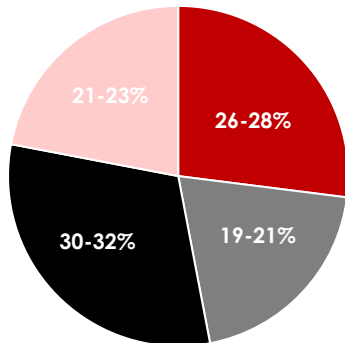
Acquisition finance analysis

- ✓ The mortgage market has remained relatively weak albeit with some signs of selective growing activity, albeit still in non-satisfactory levels.
- ✓ The majority of the buyers is still using cash with almost 30% of foreign buyers. The mortgage market will be hit by the rising interest rates and this will hinder notably the volume of residential sales, especially as mortgage support will become in the near term more costly for domestic buyers.

Mortgage Rates (%)

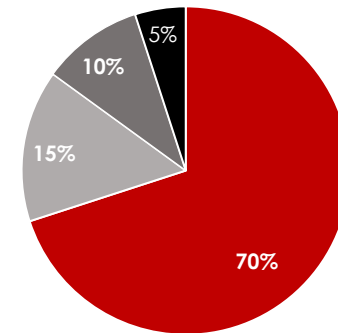


% Debt Financing in Residential Deals



■ 0% Debt (cash) ■ <50% Debt ■ 50-70% Debt ■ >70% Debt

Mortgage financing as part of the deal, (Latest estimate*)



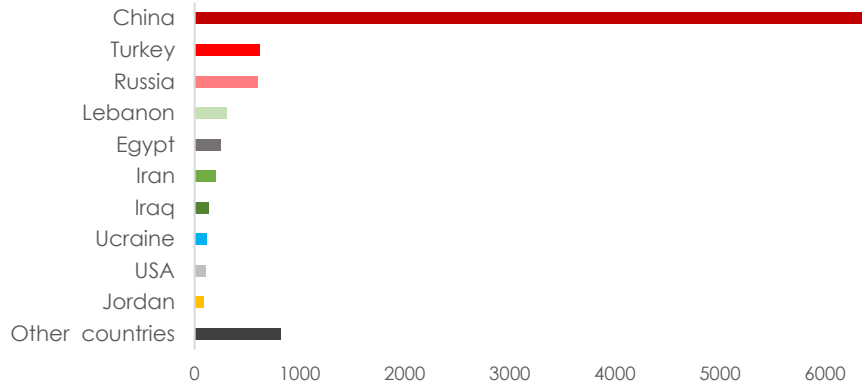
■ 0% Mortgage (cash) ■ <25% Mortgage
■ 25-50% Mortgage ■ >50% Mortgage

* Based on anecdotal evidence from stakeholder engagement
Sources: Association of Certified Real Estate Brokers of Greece, ECBC, Arbitrage RE – Edit: Arbitrage RE

Sectorial Market Trends - Residential Market

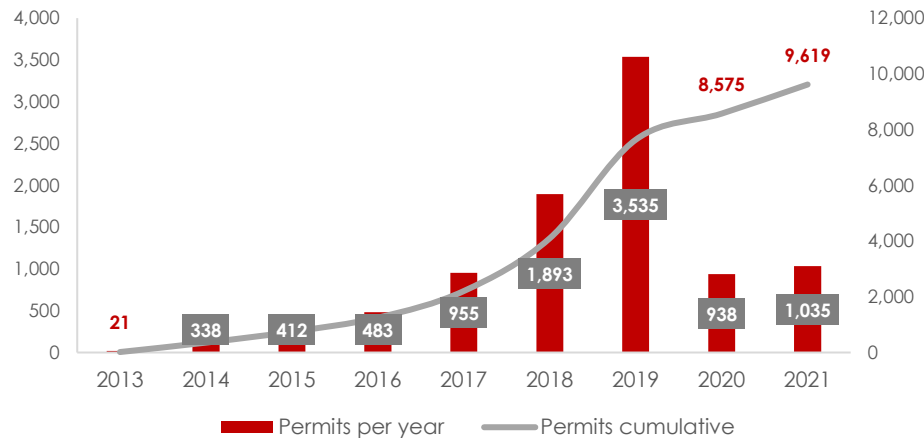
Golden Visa program

Residence Permits to Investors/ Property Owners
(per country of origin)

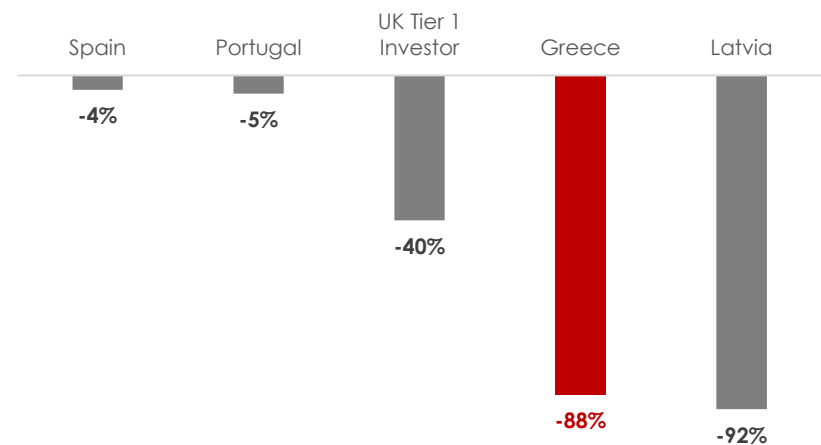


- ✓ The Greek government launched in 2013 the Golden Visa program, whereby investors buying property valued at minimum €250,000 were eligible for a residence permit; according to recent announcements though, the limit will be changed to € 500,000 as of the beginning of 2023.
- ✓ Golden visa program is driving transactions in the best areas of Athens, like the historic center and southern suburbs as well as in popular touristic or affluent areas.
- ✓ Golden Visa program related transactions were severely impacted from the imposed travel restrictions, part of the pandemic containment measures, and as a result significantly reduced as many non-EU buyers, especially from China, had difficulties visiting the country and physically inspecting the properties.

Residence Permits to Investors / Property Owners
(per year & cumulative)



Change in Golden Visas Performance due to Covid-19
(% monthly average approvals from 2019 - 2020)



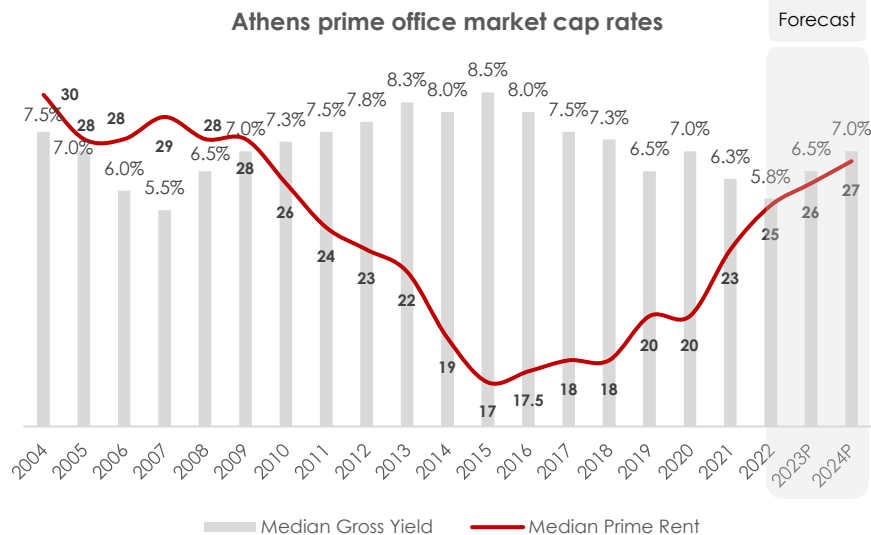
Sources: Ministry for Migration Policy and Enterprise Greece, IMI Research Unit – Editing: Arbitrage RE

Sectorial Market Trends - Office Market

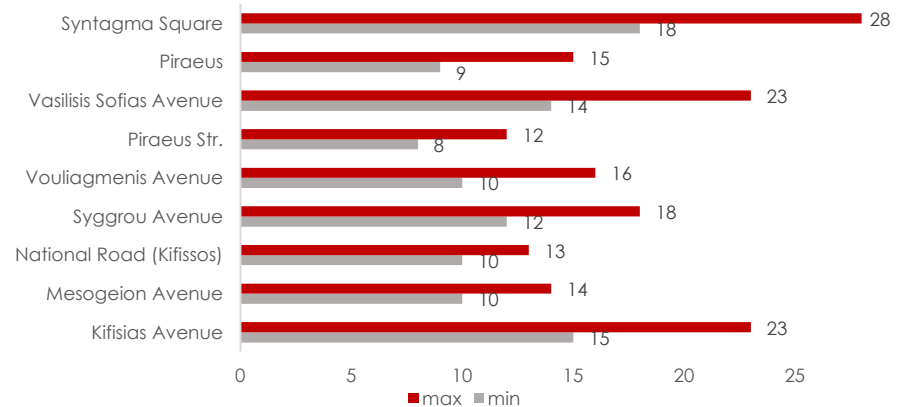
Prime yields and rents

Demand for quality office space in Athens remains high, offering competitive yields and attractive rental levels compared to major European cities. In the short term, prime assets cap rates are expected to slightly soften reflecting the higher cost of financing and post pandemic market fundamentals. The prime rents will remain stable if not slightly increase in the short term.

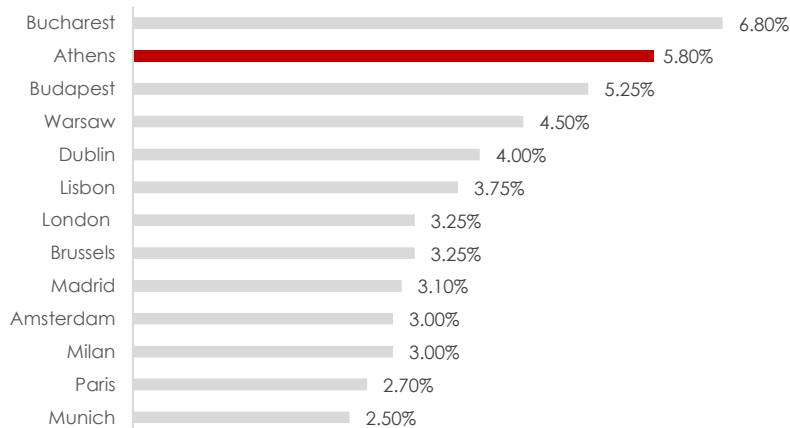
Athens prime office market cap rates



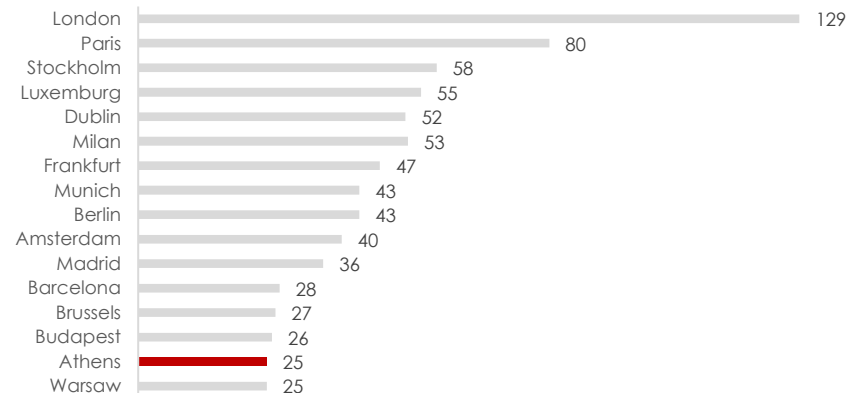
Athens office rents by area – 2022 H1
€/m²/month



Major European cities prime office cap rates % - Q1 2022



Major European cities prime office rents - Q1 2022
€/m²/month

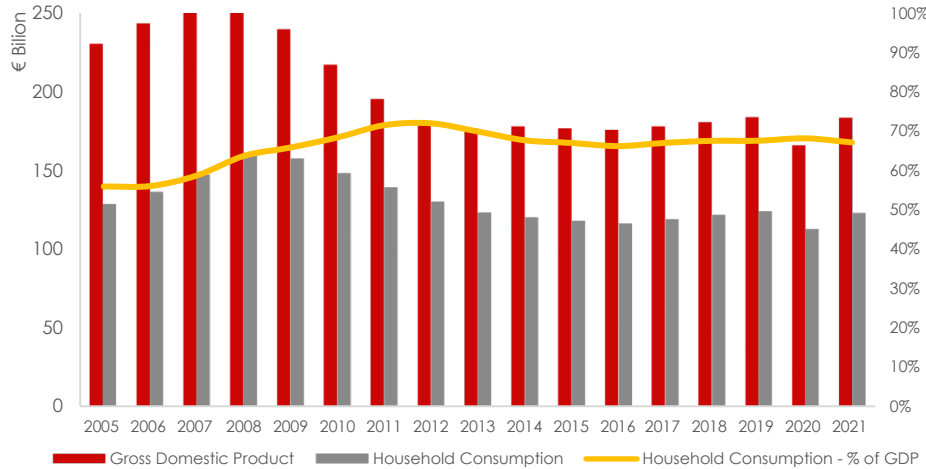


Sources: ELSTAT, BoG, Statista, BNP Paribas, Arbitrage RE

Sectorial Market Trends - Retail Market

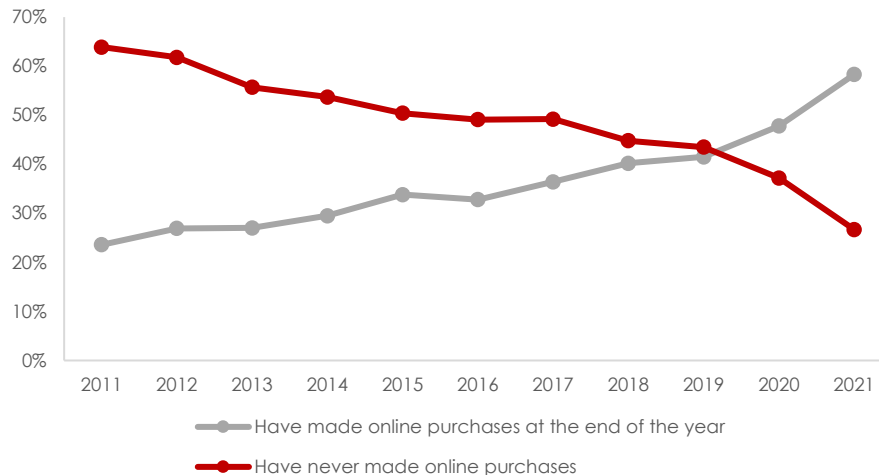
Consumer spending and e-commerce

Household Consumption - % of GDP

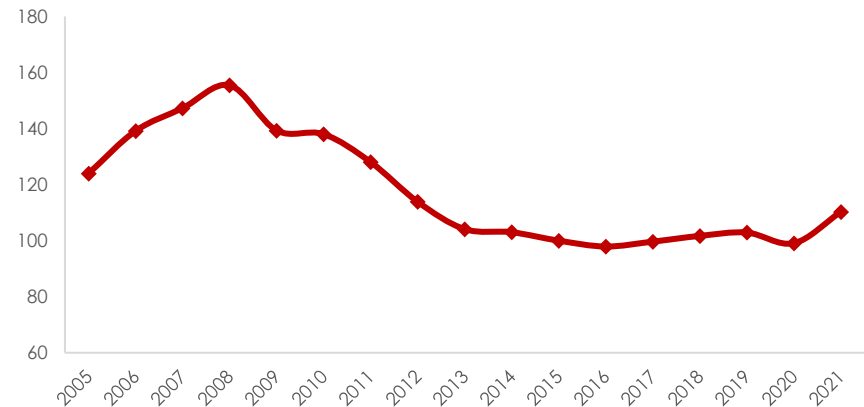


- ✓ Consumer spending has remained consistently close to 70% of GDP throughout the past 10 years, including during the economic crisis period (2008-16).
- ✓ The continuous rise of e-commerce though is expected to impose challenges to street fashion and consumer goods retailers.
- ✓ We expect some retail space to be repurposed for fast delivery uses or as flexible storage space.
- ✓ The recovery in turnover has only very recently started. We expect the higher cost of living and inflation to affect disposal income and hence turnover figures in the short to medium term

E-Commerce



Retail turnover index

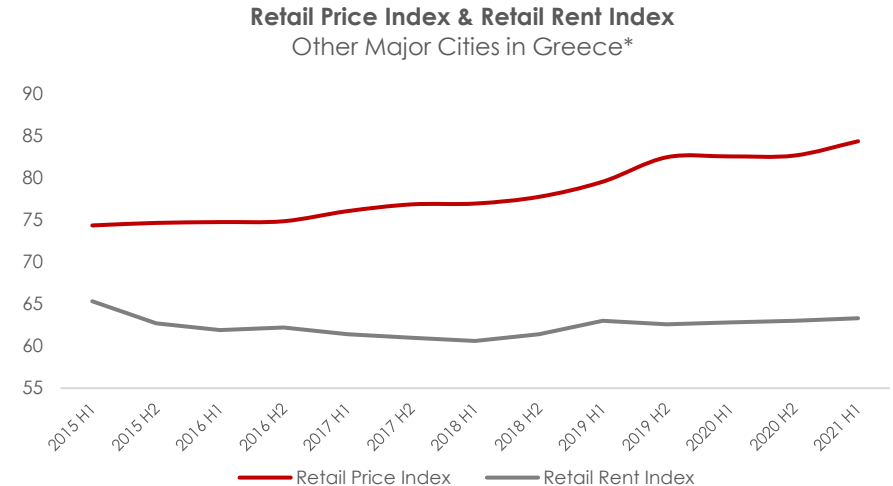
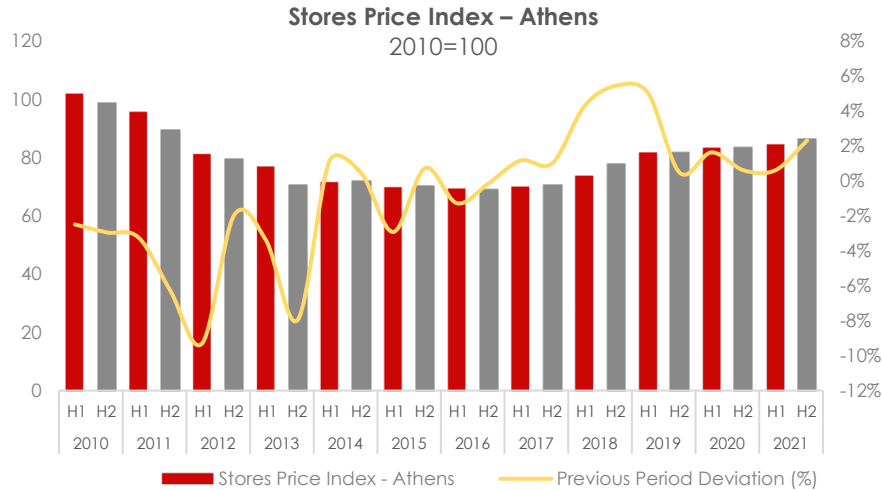


Source: HELSTAT – Edit: Arbitrage RE

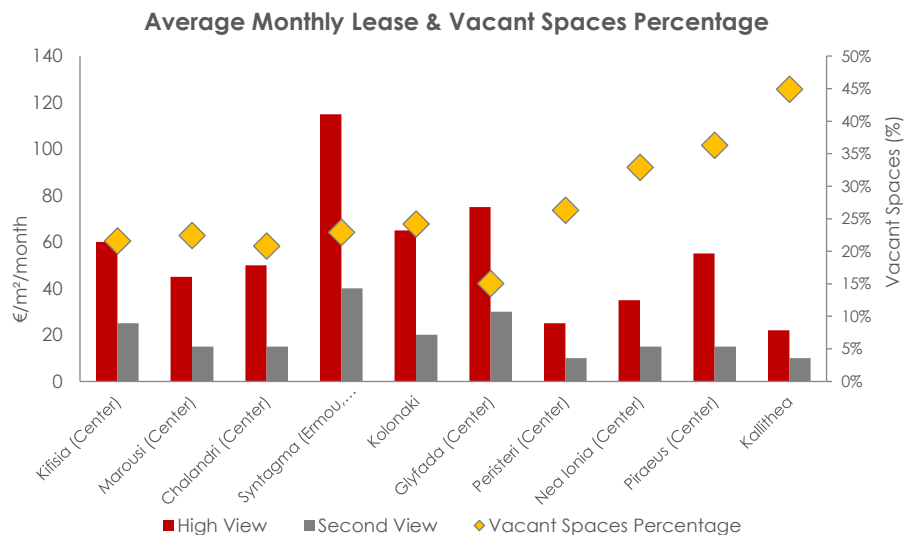
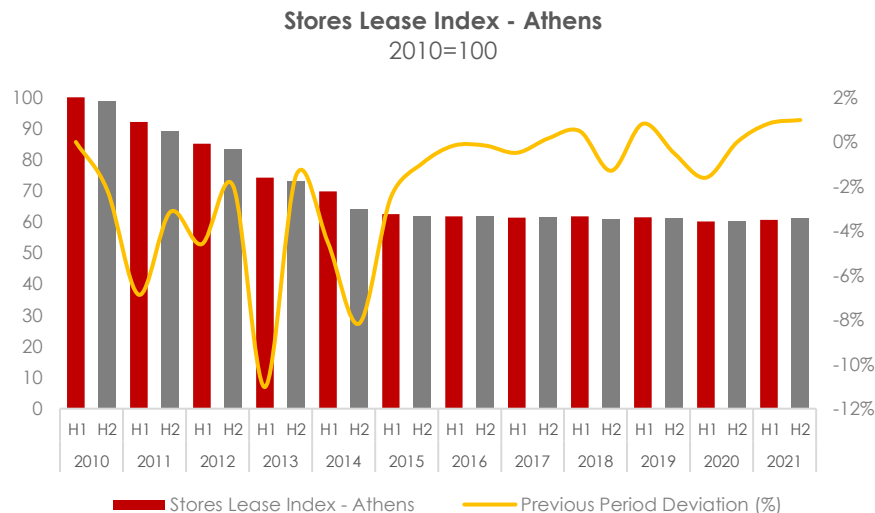
Sectorial Market Trends - Retail Market

Price and leasing indices

The price recovery and leasing activity has only very recently started to recover. We expect the higher cost of living and inflation to affect consumption and hence demand for retail space, especially in non-prime areas in the short to medium term.



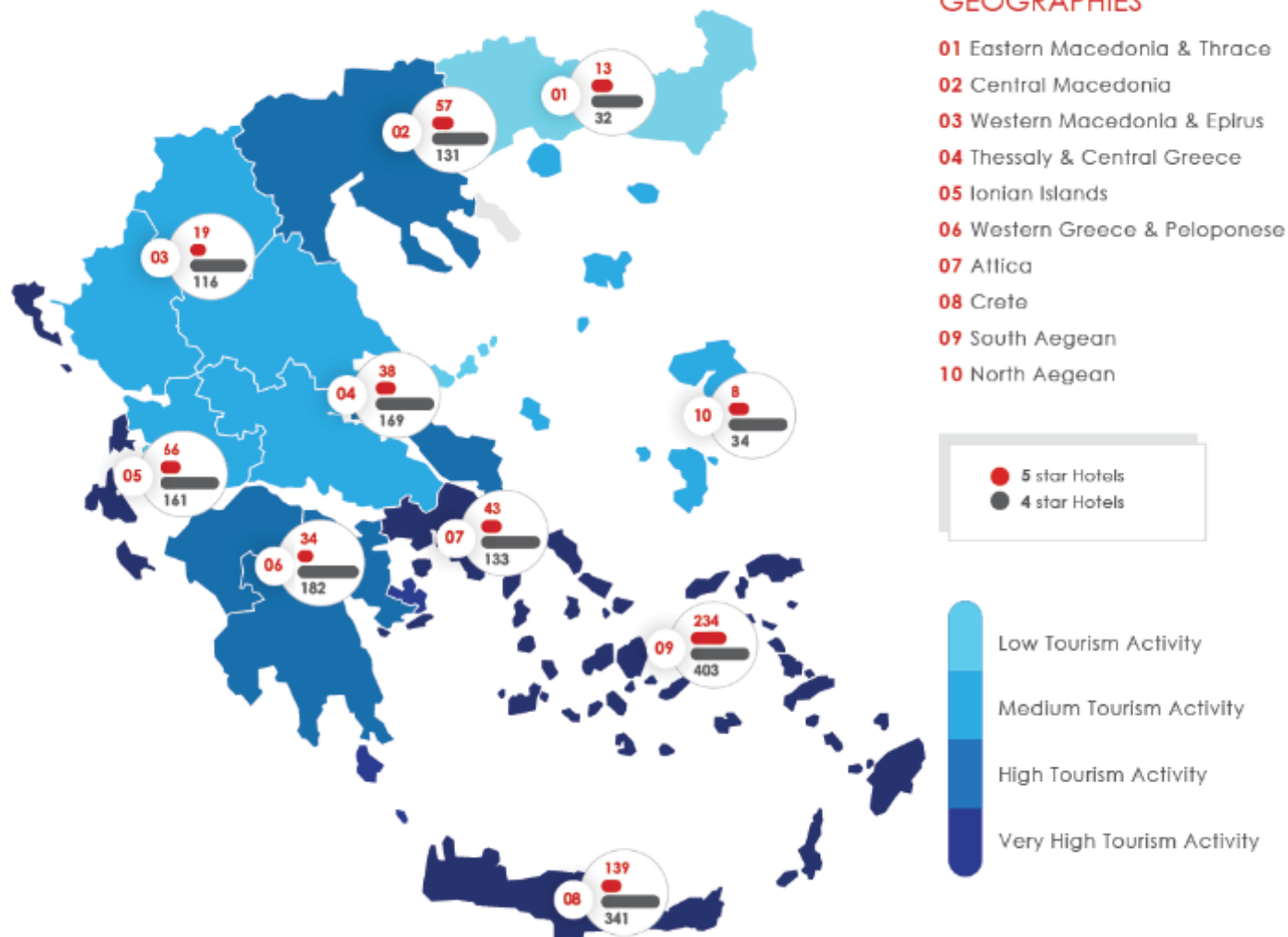
*Excluding Athens & Thessaloniki



Source: Bank of Greece, Hellenic Statistical Authority - Edited by: Arbitrage RE

Sectorial Market Trends - Hospitality Market

Hotel stock



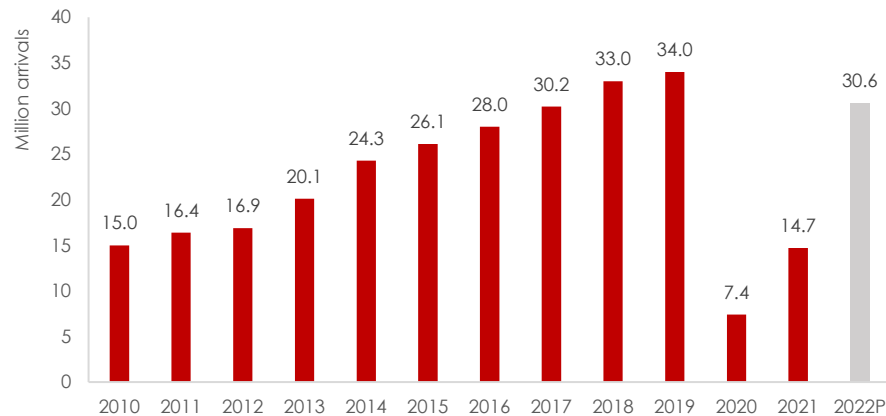
Source: Arbitrage RE

Sectorial Market Trends - Hospitality Market

Tourism activity – Arrivals, length of stay, expenditure

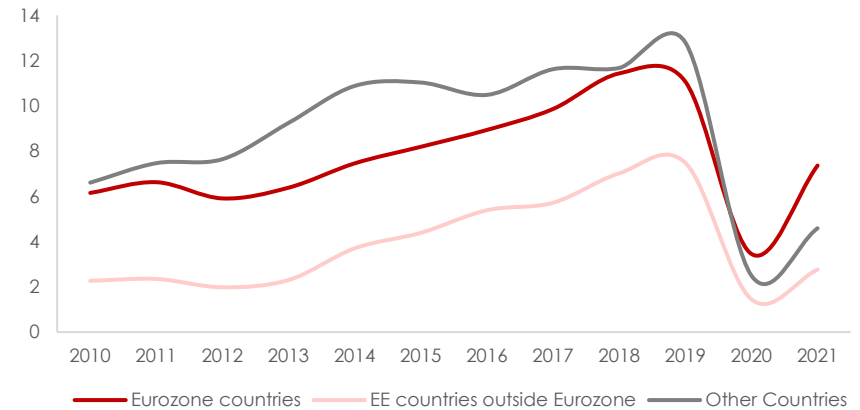
Until the pandemic crisis, there was a strong headwind from tourism sector with hotel values and transactional activity rising. Despite the pandemic impact, hotel assets continue to attract international and major local investors interest, especially if the product is institutional and meets the criteria of global operators.

International arrivals



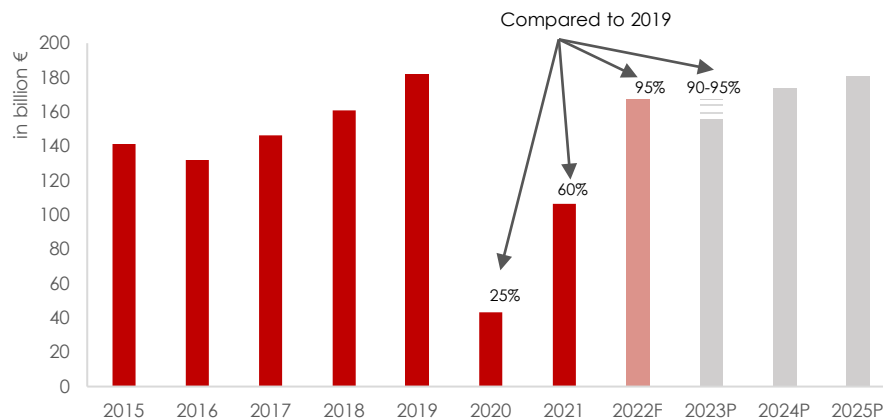
Source: Hellenic Statistical Authority – Analysis: Arbitrage RE

**Arrivals per country
(in millions)**



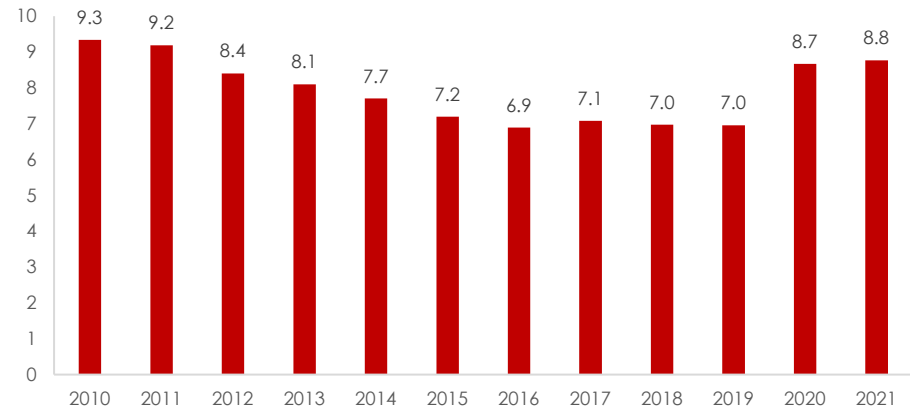
Source: Bank of Greece – Analysis: Arbitrage RE

Annual tourist expenditure



Source: INSET, Recent press articles – Analysis: Arbitrage RE

**Visitors' average length of stay
(number of days)**



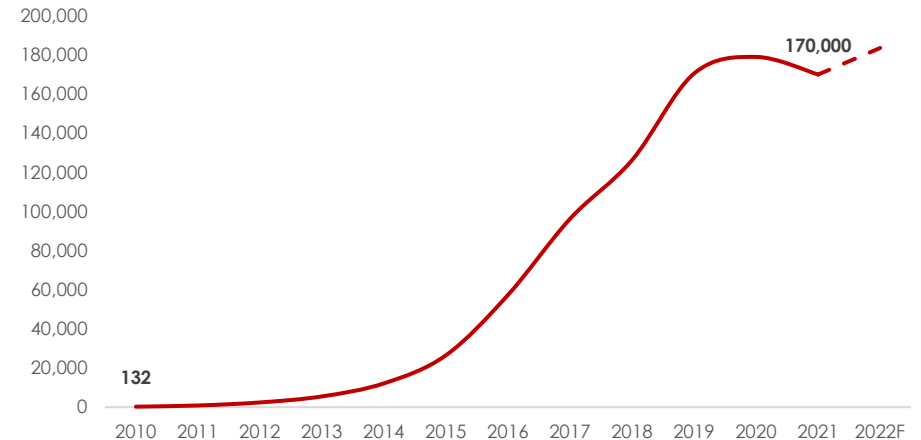
Source: Bank of Greece – Analysis: Arbitrage RE

Sectorial Market Trends - Hospitality Market

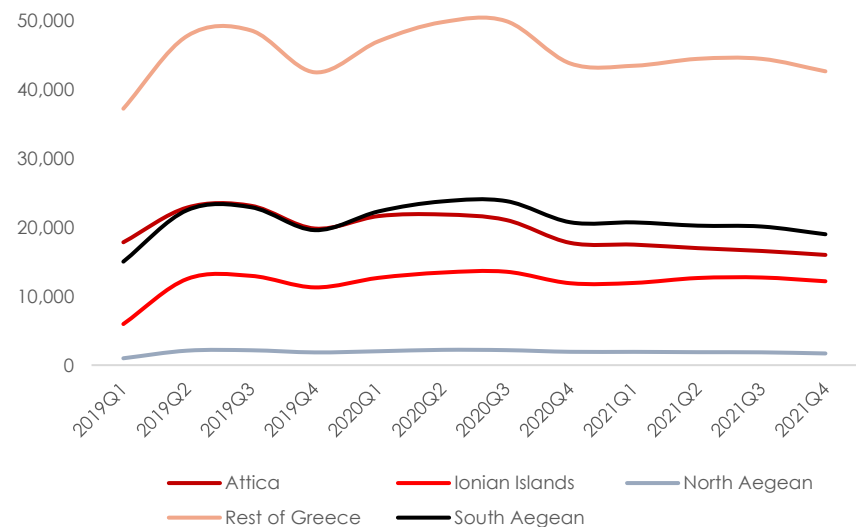
Short term leasing & serviced accommodation

- ✓ Before the start of the pandemic, available short-term rental accommodation was increasing rapidly and, according to public sources, the available beds nationally were almost equal to the hotel beds. In some regions the beds even outnumber those of the hotels.
- ✓ The growth rate of accommodations showed the first signs of saturation in 2019.
- ✓ Starting from Athens, a handful of short stay housing platforms have emerged during the last years, filling a market gap which was established in mature urban centers in Europe and internationally. The apartments are modern, bright, fully equipped and offer the option of housekeeping services. This type of accommodation has become increasingly popular in Greece for expats, frequent business travelers, young professionals and even students.

Evolution of short stay listings in Greece



Short stay listings by region

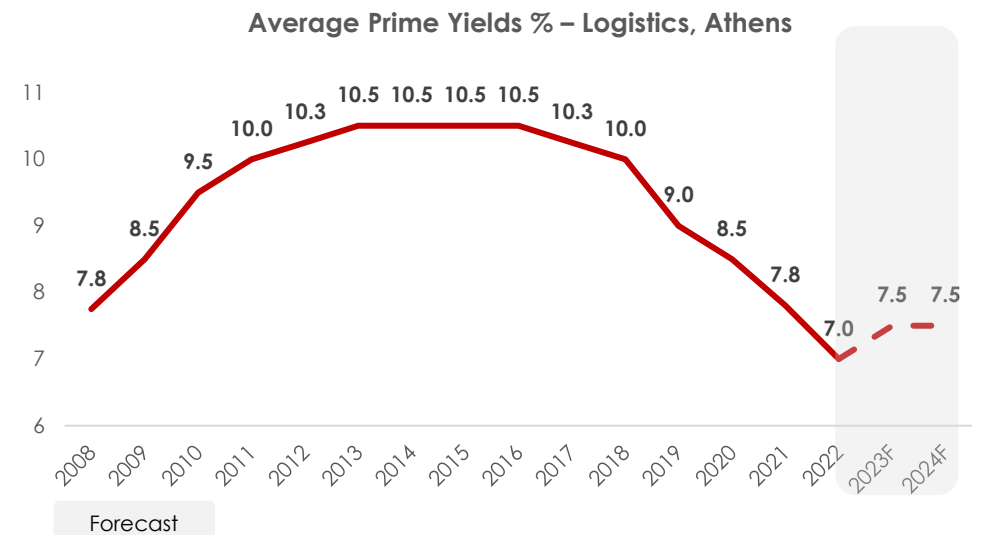
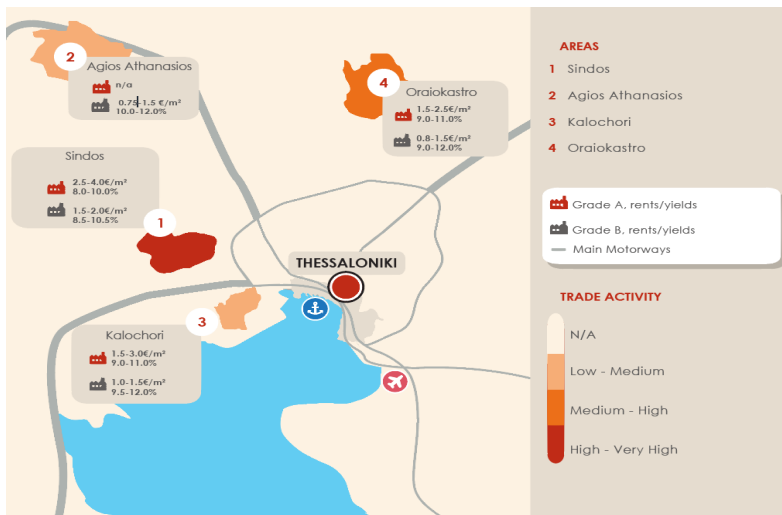
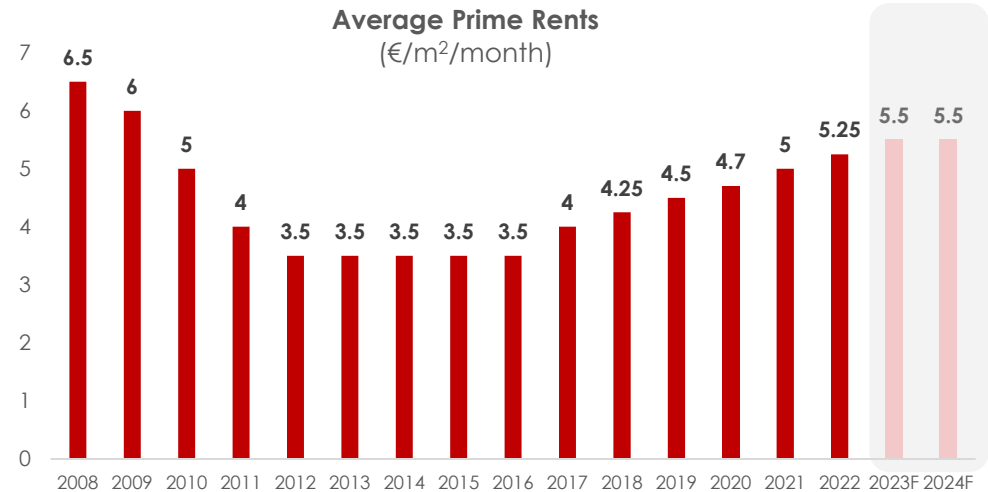
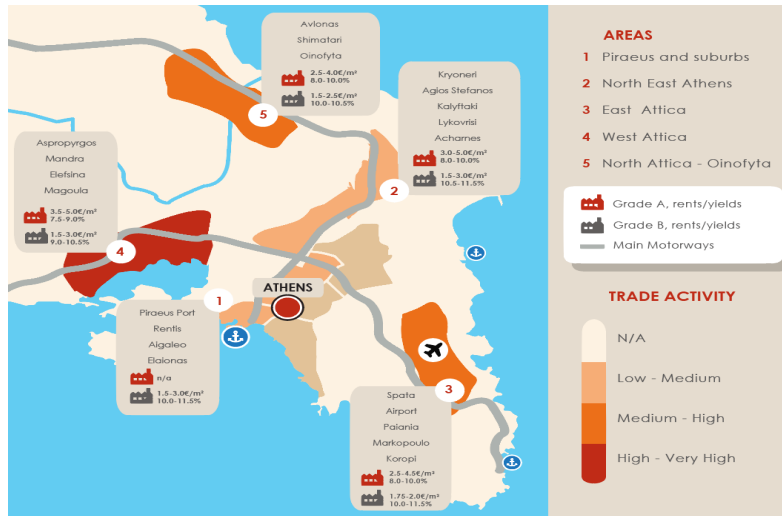


Source: INSETE, KEPE – Edit: Arbitrage RE, Yuvoh Analytics

Sectorial Market Trends - Logistics

Indicative commercial indicators

Demand for quality logistics in Athens and also in Thessaloniki remains high, offering competitive yields and rent leases. In the short term, prime asset yields might slightly increase reflecting the higher cost of financing, however we do expect prime rents to remain stable.



Source: Arbitrage RE

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Disclaimer

This presentation is commercial sensitive, and it is prepared to inform about the Greek real estate market and its current trends. It contains an analysis of public sources and data. It also contains our views and commentary from publicly available information and anecdotal evidence. Focus has been placed on sectorial markets and European comparative outlook.

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