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Greek Residential Real Estate: Deep and Structural Imbalances between Supply and Demand

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GREEK & SECTORAL ECONOMICS - GREC

ECONOMIC RESEARCH & INVESTMENT STRATEGY

Ελληνική Αγορά Ακινήτων: Βαθιές και Δομικές Ανισορροπίες μεταξύ Προσφοράς και Ζήτησης

Έναυσμα για την παρούσα μελέτη της Τράπεζας Πειραιώς αναφορικά με την πορεία της αγοράς κατοικίας αποτέλεσε η συνειδητοποίηση ότι συσσωρευτικά από το 2016 ως το 2022 ο ρυθμός αύξησης των τιμών οικιστικών ακινήτων έχει αυξηθεί κατά 14% περισσότερο σε σχέση με τον ρυθμό αύξησης ο οποίος θα δικαιολογείτο βάσει της εξέλιξης των θεμελιωδών μακροοικονομικών μεγεθών της ελληνικής οικονομίας. Η αναζήτηση των παραγόντων που έχουν οδηγήσει σε αυτή τη σημαντική απόκλιση μας οδηγεί στο συμπέρασμα ότι οι εξελίξεις στην ελληνική οικονομία τα χρόνια της κρίσης και της ύφεσης έχουν δημιουργήσει μια σημαντική ανισορροπία μεταξύ προσφοράς και ζήτησης οικιστικών ακινήτων, η οποία δυστυχώς θα είναι δύσκολο να γεφυρωθεί σε βραχυχρόνιο ορίζοντα.

Παίρνοντας τα δεδομένα από την αρχή βλέπουμε ότι η κατακόρυφη πτώση των τιμών ακινήτων αντανακλά πλήρως τόσο τη μείωση του διαθέσιμου εισοδήματος και της κατανάλωσης των ελληνικών νοικοκυριών όσο και την απότομη και αντικυκλική αύξηση της φορολογίας των ακινήτων (δηλαδή την αύξηση της φορολογίας σε μια περίοδο πτώσης των τιμών και των αγοροπωλησιών). Αποτέλεσμα αυτών είναι ο τομέας των ακινήτων από κινητήρια δύναμη της ελληνικής οικονομίας να μεταβληθεί σε ανασταλτικό παράγοντα οικονομικής δραστηριότητας και στη συνέχεια να περάσει στην πλήρη αφάνεια και ασημαντότητα. Ωστόσο οι δυνάμεις της αγοράς παραμένουν σε λειτουργία και η ανάκαμψη των τιμών, παράλληλα με τη βελτίωση των συνθηκών ζήτησης και την άρση των χρηματοδοτικών περιορισμών, έχουν οδηγήσει τόσο σε αύξηση των οικοδομικών αδειών όσο και στην αύξηση των νέων επενδύσεων αυτών καθαυτών.

Πώς όμως ποσοτικοποιείται η ανισορροπία μεταξύ προσφοράς και ζήτησης; Σύμφωνα με τους υπολογισμούς της μελέτης, η κατασκευαστική δραστηριότητα έφτασε στο απόγειό της το 2005 με την έκδοση 66 χιλιάδων οικοδομικών αδειών, οι οποίες αντιστοιχούσαν σε 195 χιλιάδες κατοικίες. Έκτοτε η πτώση ήταν συνεχής, με αποτέλεσμα να οδηγηθούμε σε ιστορικά χαμηλά επίπεδα κατασκευαστικής δραστηριότητας την περίοδο 2012 και ύστερα, με ετήσια έκδοση αδειών που αντιστοιχεί σε 16 χιλιάδες κατοικίες κατ' έτος. Συνακόλουθα, μεταξύ της απογραφής 2001-2011 καταγράφεται αύξηση του αριθμού των κατοικιών κατά 917 χιλιάδες, ενώ την επόμενη δεκαετία 2012-2022 υπολογίζουμε ότι προστέθηκαν μόνο 155 χιλιάδες. Ταυτόχρονα, από την πλευρά της ζήτησης την περίοδο 2001-2011 καταγράφεται αύξηση του αριθμού των νοικοκυριών κατά 582 χιλιάδες, ενώ από το 2012 έως το 2022 υπολογίζουμε τη δημιουργία μόνο 197 χιλιάδων νοικοκυριών. Επιπρόσθετα όμως ένα νέο χαρακτηριστικό που έχει προκύψει τα τελευταία χρόνια είναι η αύξηση της ζήτησης κατοικιών λόγω βραχυχρόνιας μίσθωσης. Η ζήτηση αυτή, η οποία δρα προσθετικά στη ζήτηση για στέγαση στα εγχώρια νοικοκυριά, ανέρχεται πλέον σε 170 χιλιάδες κατοικίες.

Συμπερασματικά λοιπόν, η ανισορροπία που εντοπίζει η μελέτη δεν είναι παρά προϊόν της απόστασης ανάμεσα στις 155 χιλιάδες νέες κατοικίες που υπολογίζουμε ότι κατασκευάστηκαν τα τελευταία 10 χρόνια από τη μια και της συνολικής ζήτησης για 367 χιλιάδες νέες κατοικίες (197 χιλιάδες νέα νοικοκυριά συν 170 χιλιάδες βραχυχρόνιες μισθώσεις). Αυτό λοιπόν το έλλειμα προσφοράς έναντι ζήτησης κατά περίπου 212 χιλιάδες κατοικίες είναι που έχει δημιουργήσει μια συσσωρευτική αποτίμηση των τιμών κατοικιών 14% πέρα και πάνω από την αύξηση που δικαιολογεί το επίπεδο ανάπτυξης των εισοδημάτων. Δεδομένου δε του μεγέθους του χάσματος μεταξύ προσφοράς και ζήτησης, οι ρυθμοί αύξησης των τιμών των κατοικιών αναμένεται να μετριασθούν αλλά όχι να περάσουν σε αρνητικό πρόσημο.

Συνέπεια όλων αυτών είναι η αγορά ακινήτων να βρίσκεται στο σημείο του οικονομικού κύκλου όπου οι δυνητικοί αγοραστές είναι ακόμα διατεθειμένοι να αποδεχθούν τις ολοένα και αυξανόμενες απαιτήσεις των πωλητών, αλλά με εμφανή σημάδια κόπωσης προετοιμάζοντάς μας για την είσοδο στην επόμενη φάση το κύκλου όπου υψηλότερες τιμές θα συνοδεύονται από πτώση των συναλλαγών/αγοροπωλησιών.

1 **Real Estate is linked to Economic Activity**

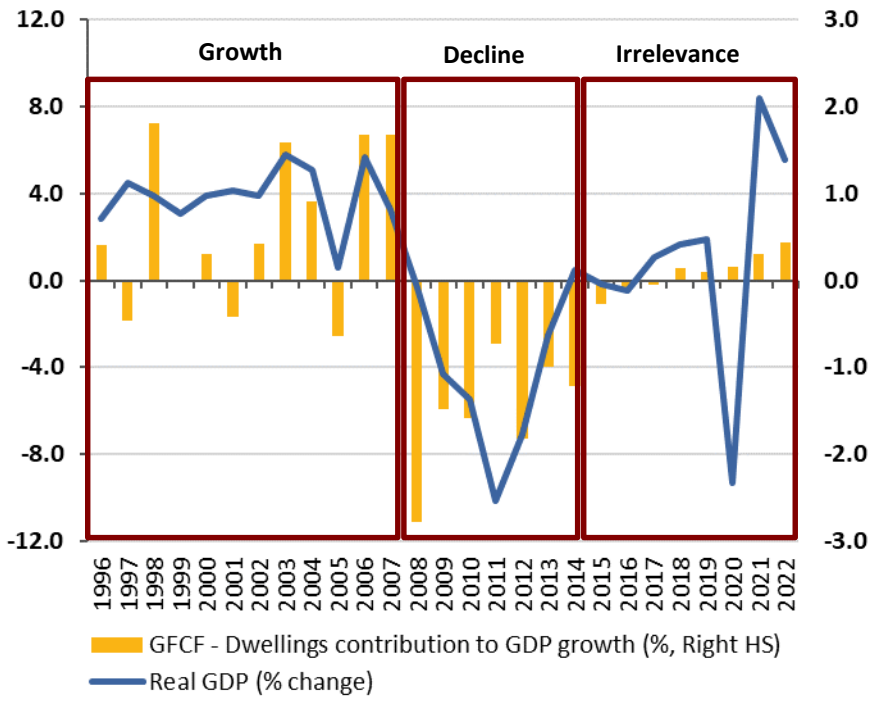
2 Step by Step Analysis of Housing Supply

3 Estimating Housing Demand & The Supply - Demand Equilibrium

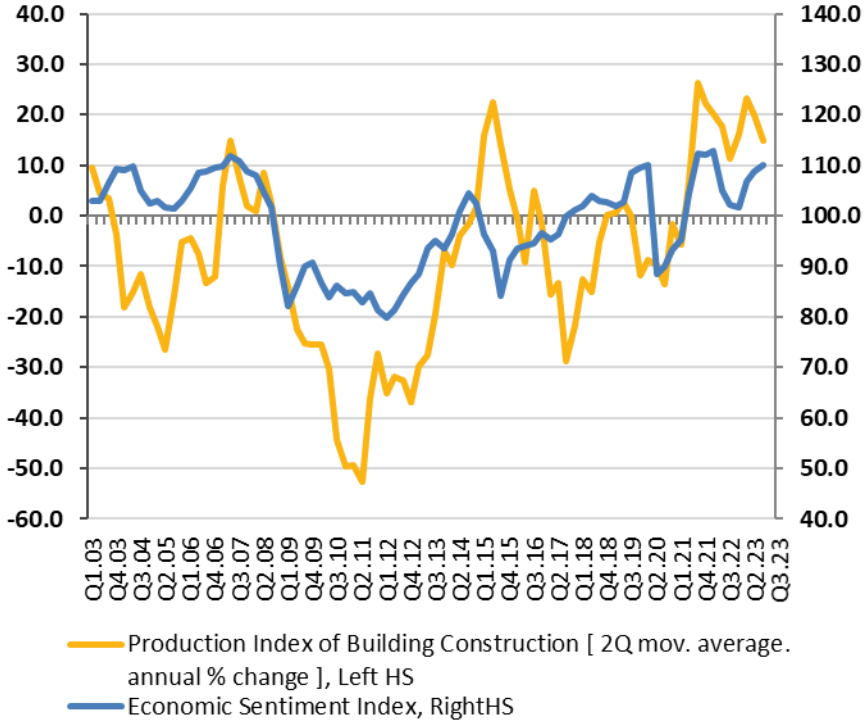
The 3 seasons of real estate activity: Driver – Headwind – Irrelevance

- Real estate activity was a major driver of growth between 1996-2007, a headwind from 2008-2014 and then slided into irrelevance.

Residential Investment and GDP:
Driver – Headwind – Irrelevance



Economic Sentiment and Construction Activity:
A pro-cyclical relationship

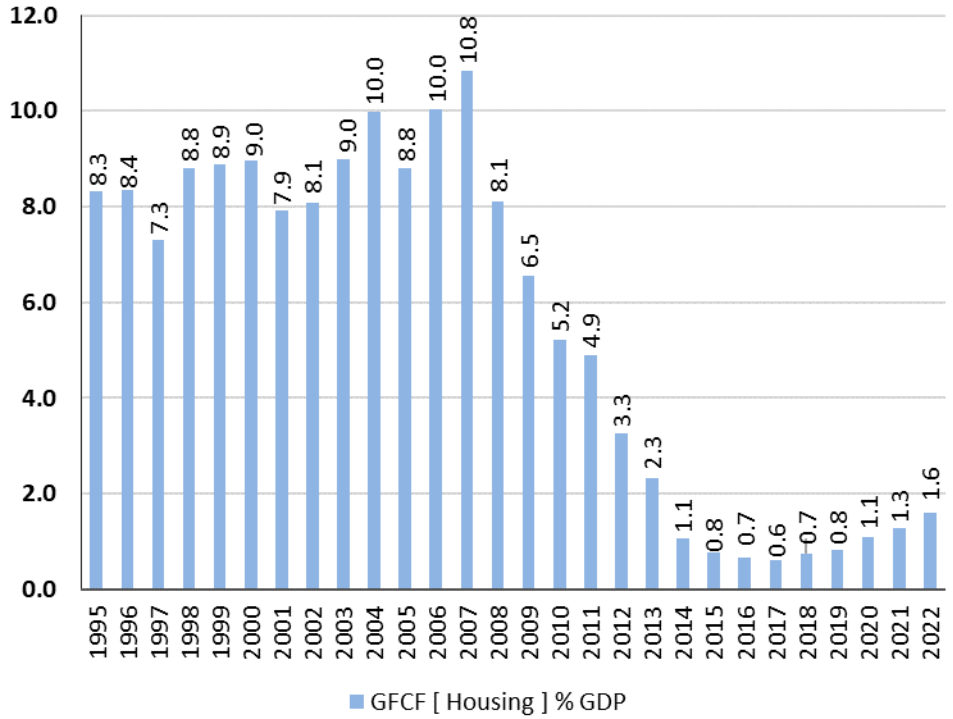


Source: ELSTAT, European Commission – DG ECFIN, Economic Research & Investment Strategy

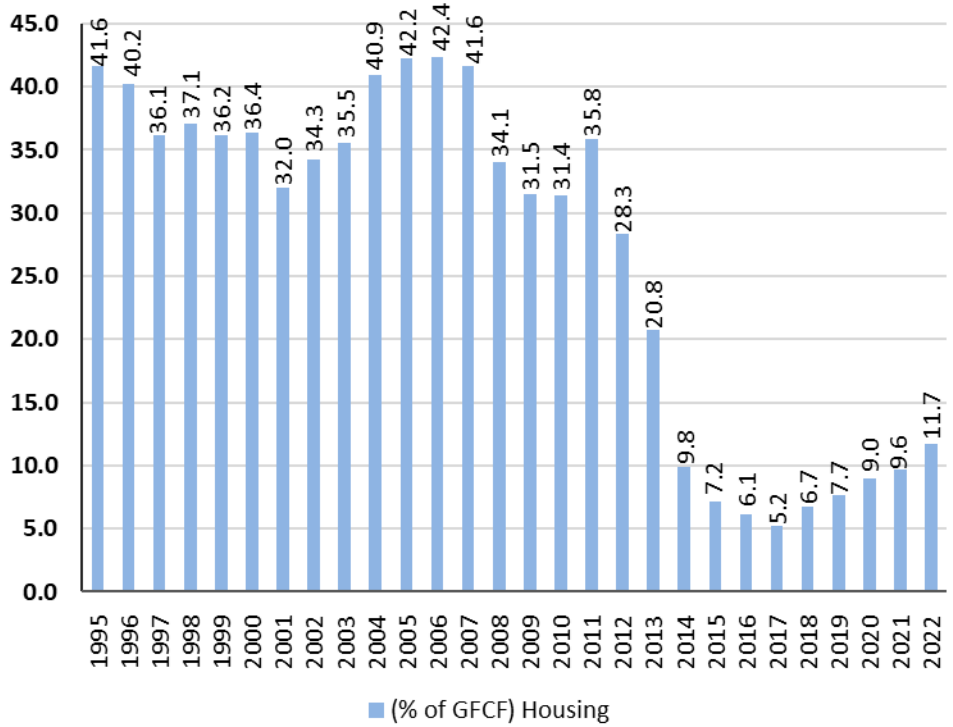
Housing investment: From a peak of 11% of GDP in 2007 to a trough of 0.6% in 2017

- The 3 seasons of real estate are evident once we examine the participation of housing investment to both total investments and Greece's GDP in recent history.

Housing Investment as % of GDP



Housing Investment as % of Total Investment



GFCF: Gross Fixed Capital Formation

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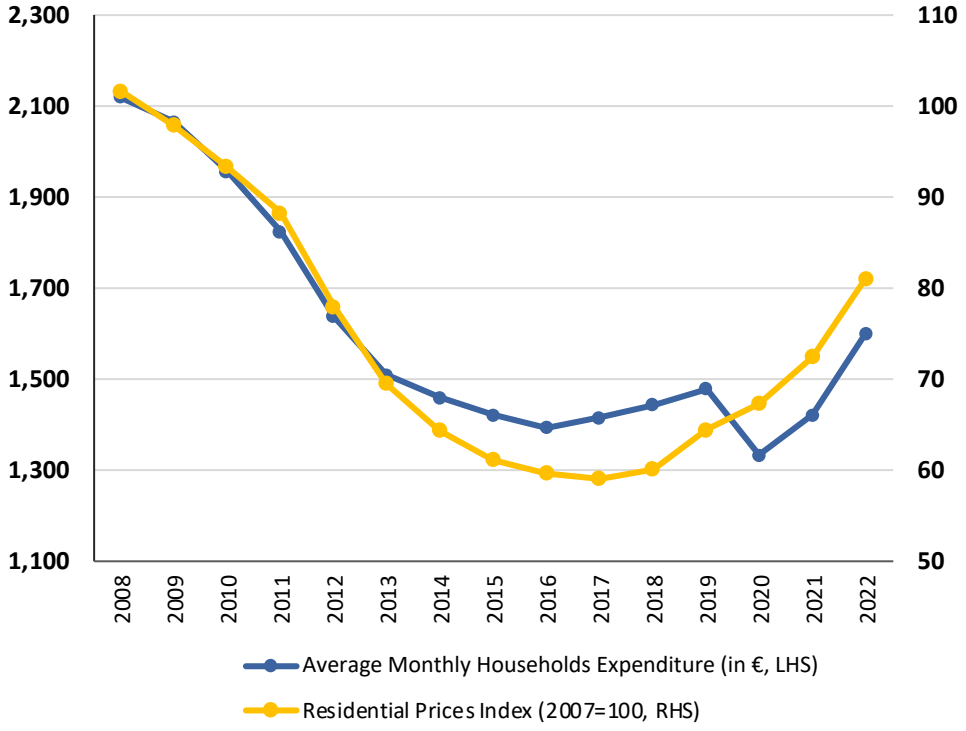
Source: ELSTAT, Economic Research & Investment Strategy

Reasons driving real estate decline I: The collapse of households' disposable income and living standards was one of the reasons for the real estate collapse

Residential Real Estate Prices Index (2007=100)

vs

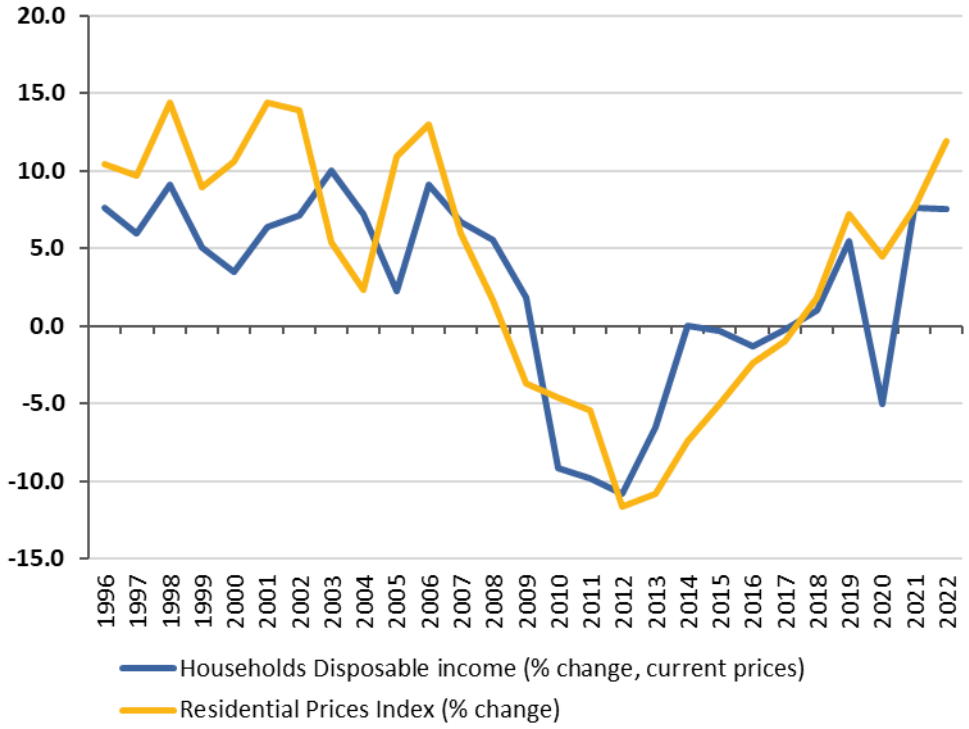
Households Monthly Expenditure (current prices, in euros)



Residential Real Estate Prices Index (% change)

vs

Households Disposable Income (current prices, % change)

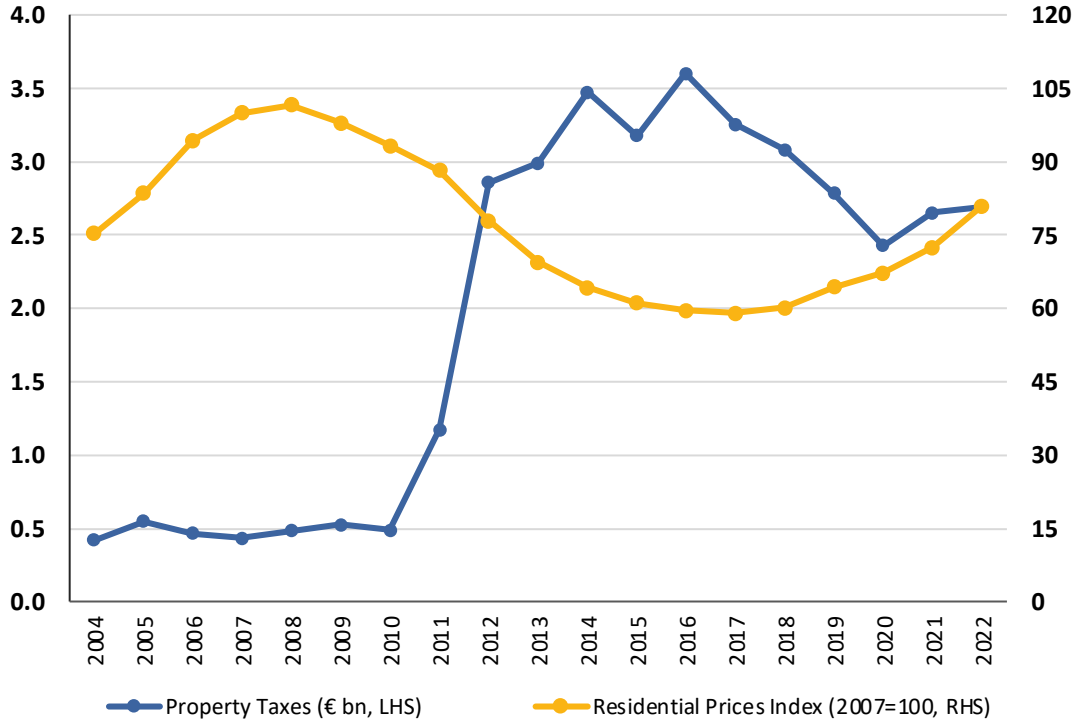


Source: ELSTAT, Bank of Greece, Economic Research & Investment Strategy

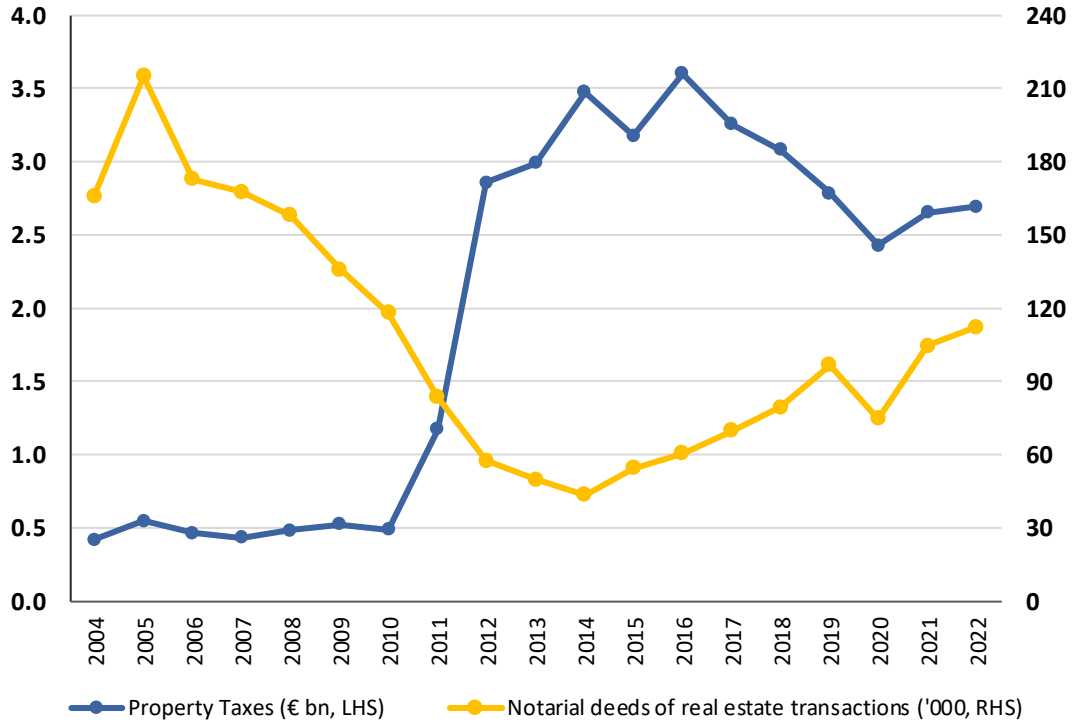
Reasons driving real estate decline II: Countercyclical, price and volume insensitive, taxation was the second main contributor to the Real Estate collapse

- Despite the collapse in real estate valuations and the decline in real estate transactions, tax revenue increased from a pre-crisis norm of €0.5 billion to a new level of €3.5 billion.

Residential Real Estate Prices Index (2007=100)
vs
Property Taxes Revenues (in € bn)



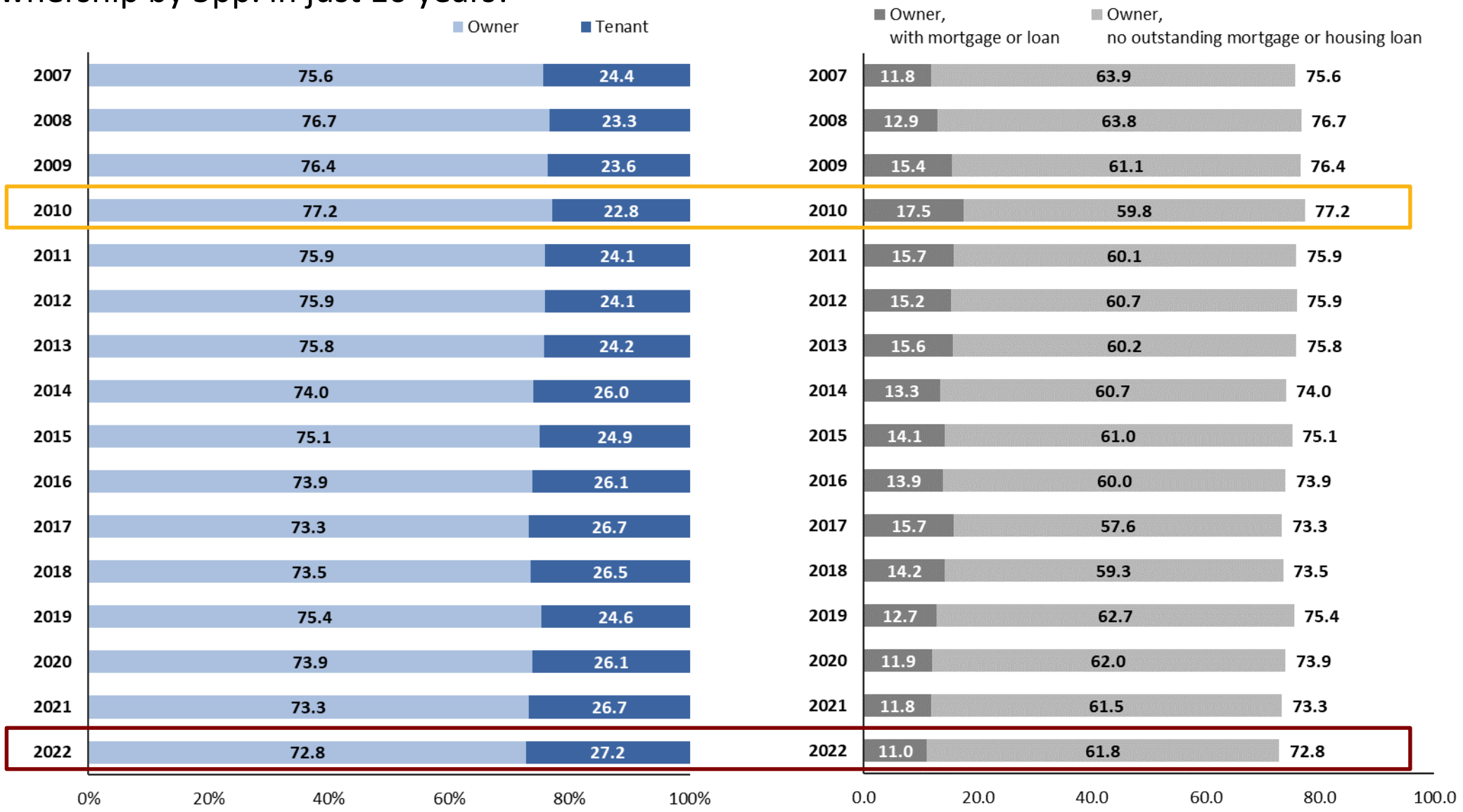
Notarial deeds of Real Estate Transactions ('000)
vs
Property Taxes Revenues (in € bn)



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Source: ELSTAT, Bank of Greece, Ministry of Economy and Finance, Economic Research & Investment Strategy

Home ownership evolution: The combination of recession and taxation resulted in the decline in home-ownership by 5pp. in just 10 years!

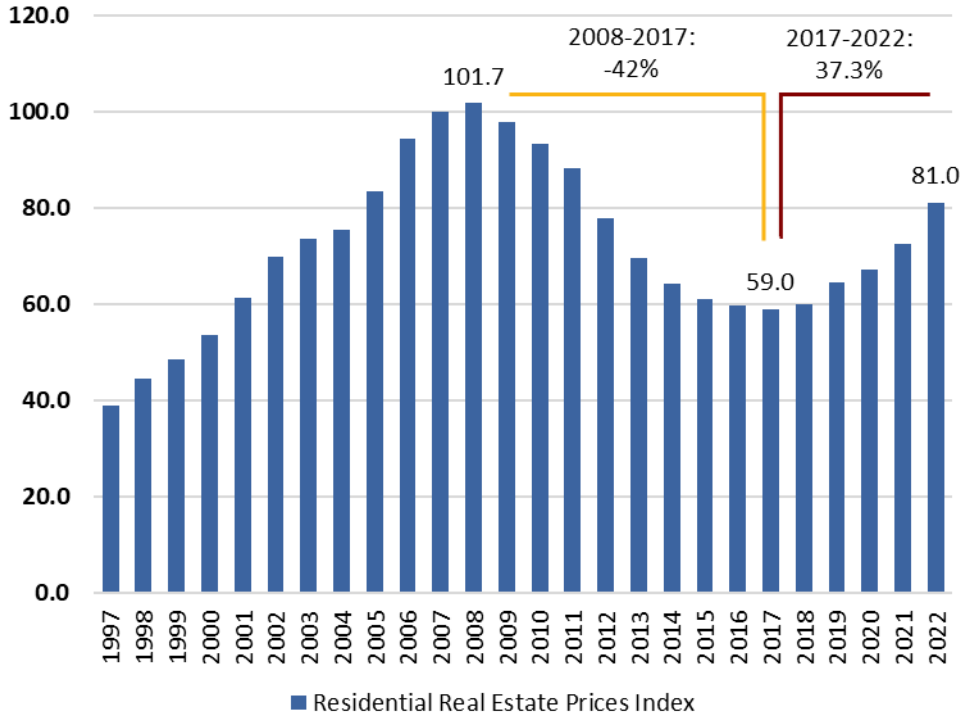


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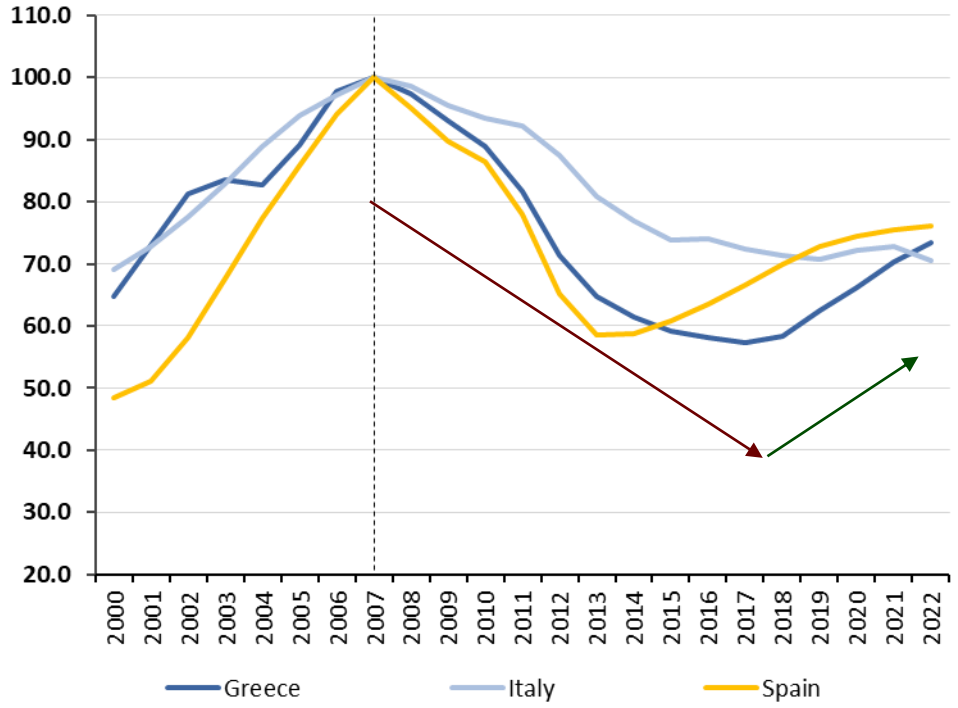
Source: Eurostat, Economic Research & Investment Strategy

Peak to trough – trough to peak: Despite all the headwinds in real terms (inflation adjusted) the 2007-2022 trajectory was similar to other Southern European economies'

Residential Real Estate Prices Index
(2007=100)



Real House Price Indices[1]
(in real terms, 2007=100)



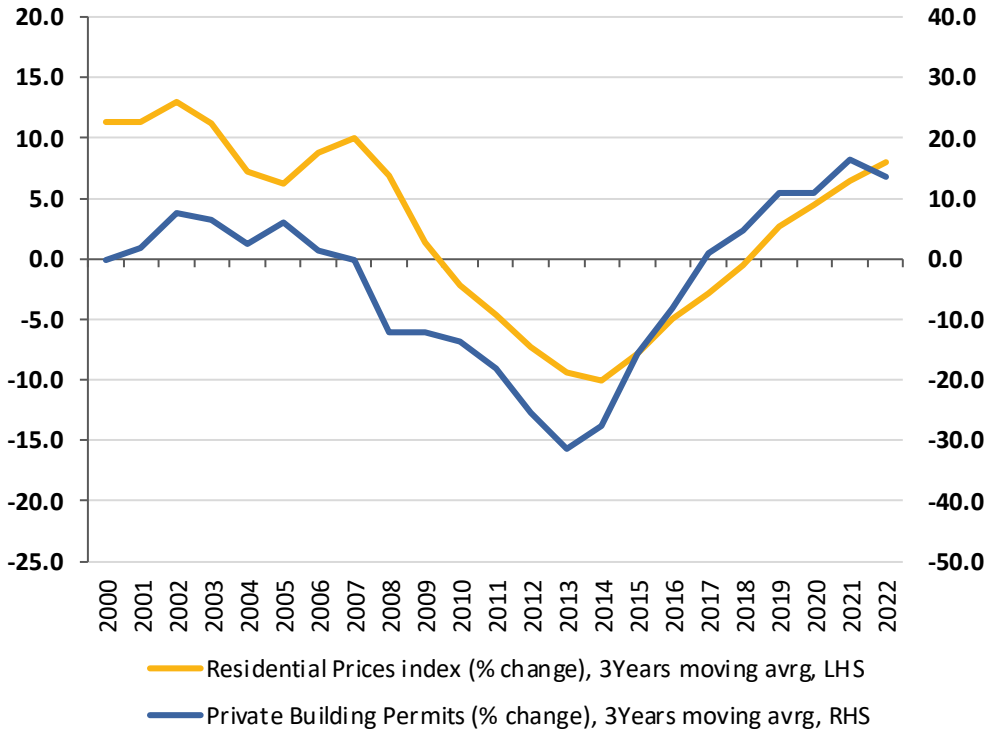
1. The real house price index is given by the ratio of the nominal house price index to the consumers' expenditure deflator in each country from the OECD national accounts database.

Source: Bank of Greece, DataStream, Economic Research & Investment Strategy

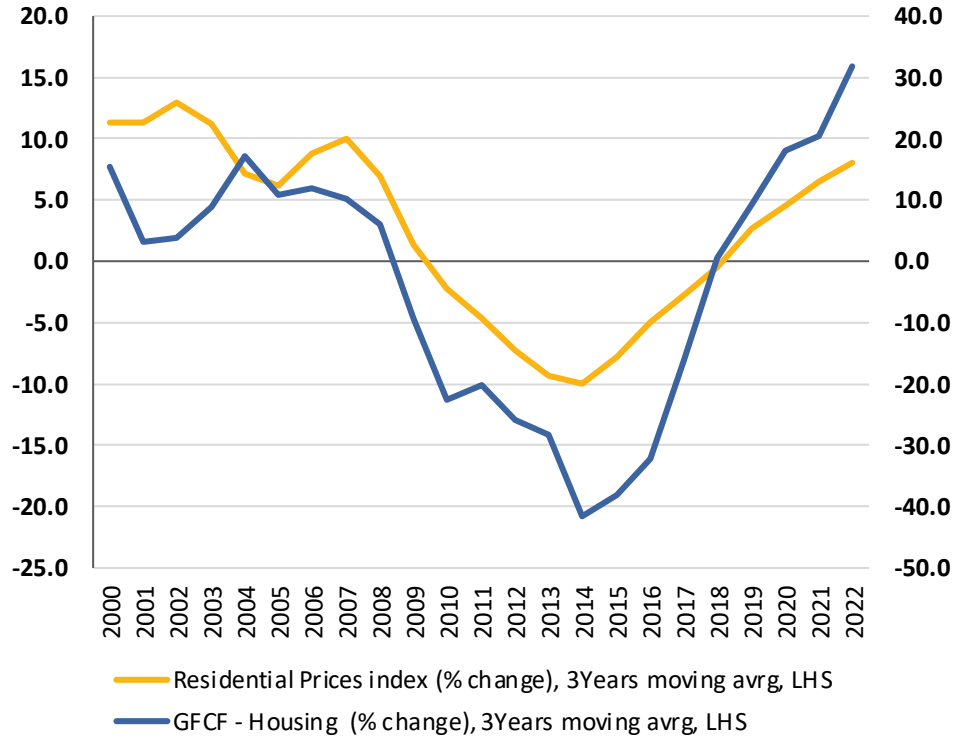
Market Signaling: Despite all this volatility, Market Forces (i.e. pricing) still send the Correct Signals to the economy

- The recovery of prices kick-started a new construction phase in the Greek economy, both in terms of permits and construction activity.

Residential Real Estate Prices index (% change)
vs
Number of issued Private Building Permits (% change)



Residential Real Estate Prices index (% change)
vs
Gross Fixed Capital Formation - Housing (% change, current prices)

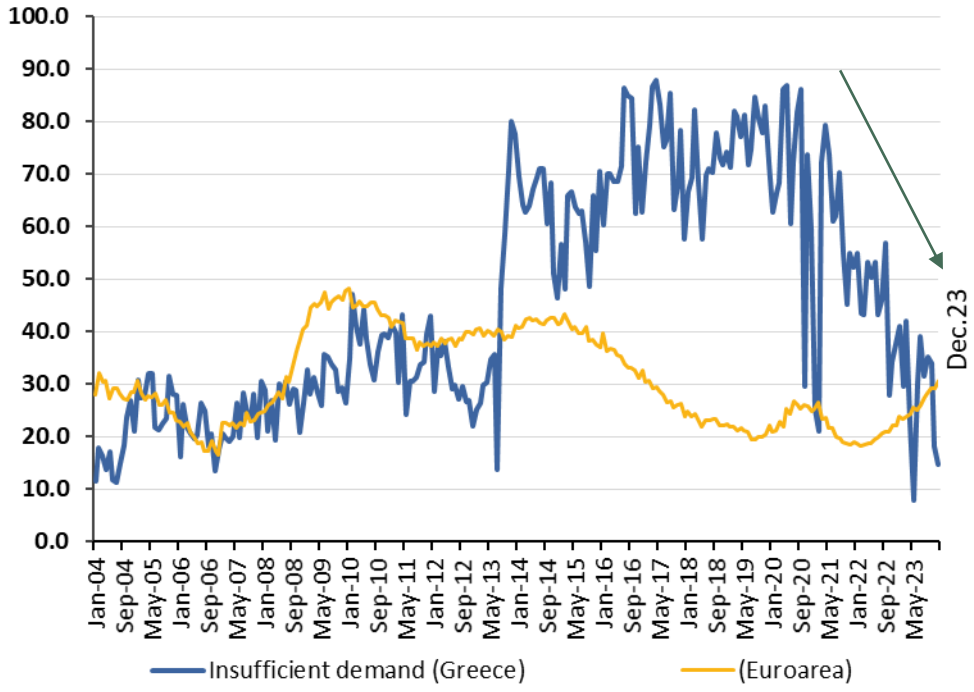


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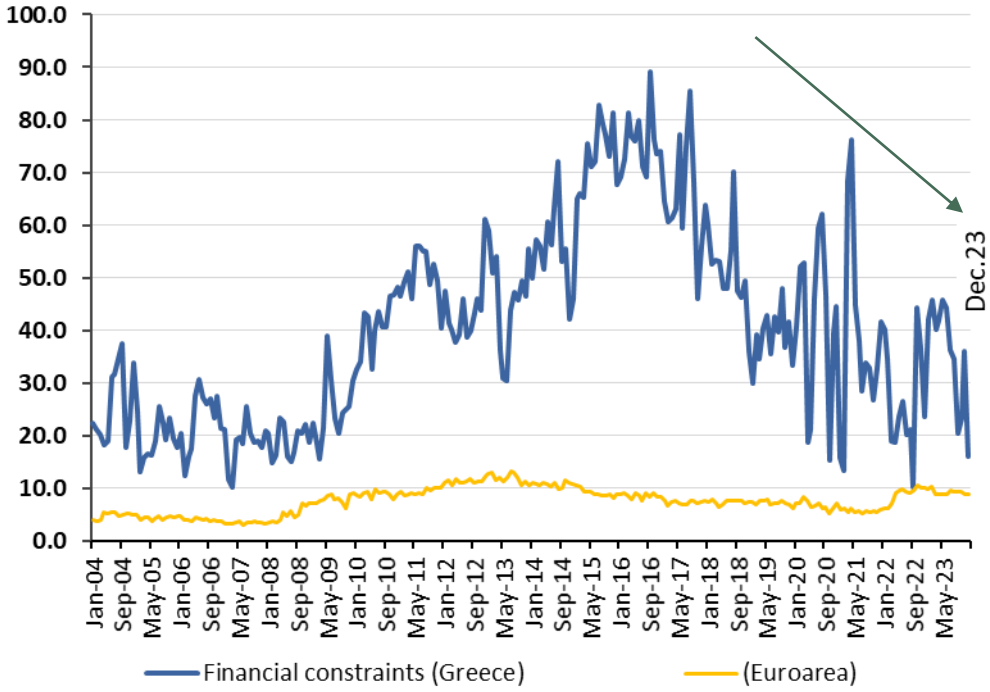
Source: ELSTAT, Bank of Greece, Economic Research & Investment Strategy

Factors limiting activity: The construction recovery is based upon recognition that the main restricting factors – Insufficient Demand and Funding Constraints – are gradually retreating

Insufficient Demand
(% of respondents)



Financial Constraints
(% of respondents)



Q2 What main factors are currently limiting your building activity?

- none
- insufficient demand
- weather conditions
- shortage of labour force
- shortage of material and/or equipment
- financial constraints
- other factors

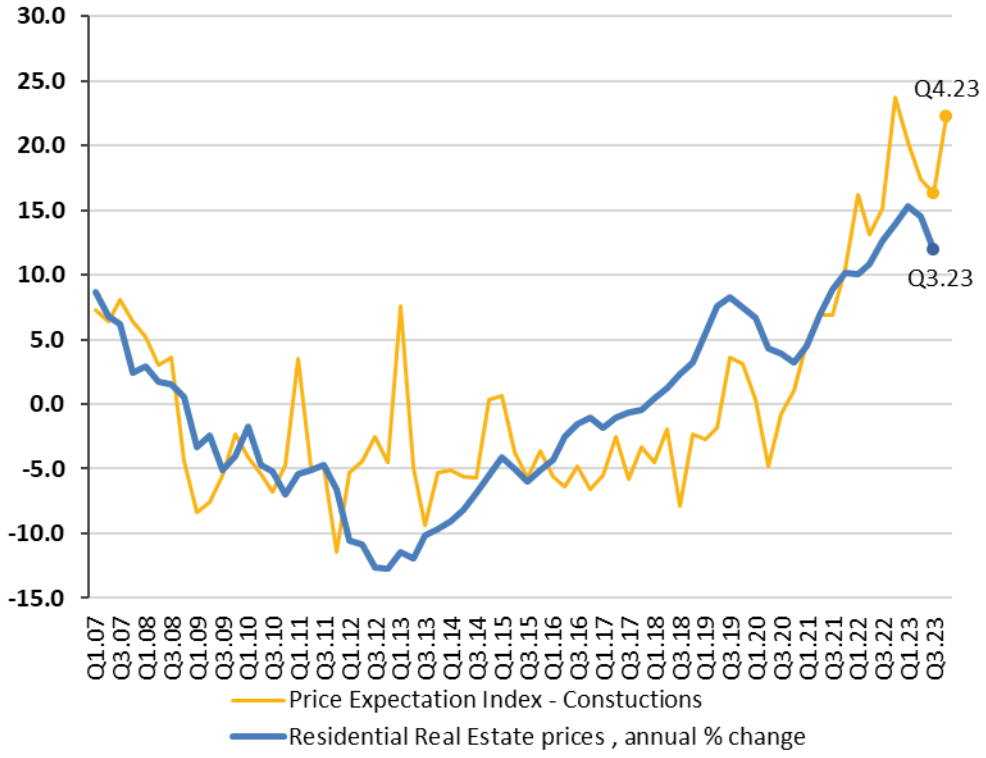
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Source: European Commission- DG Ecfin, Economic Research & Investment Strategy

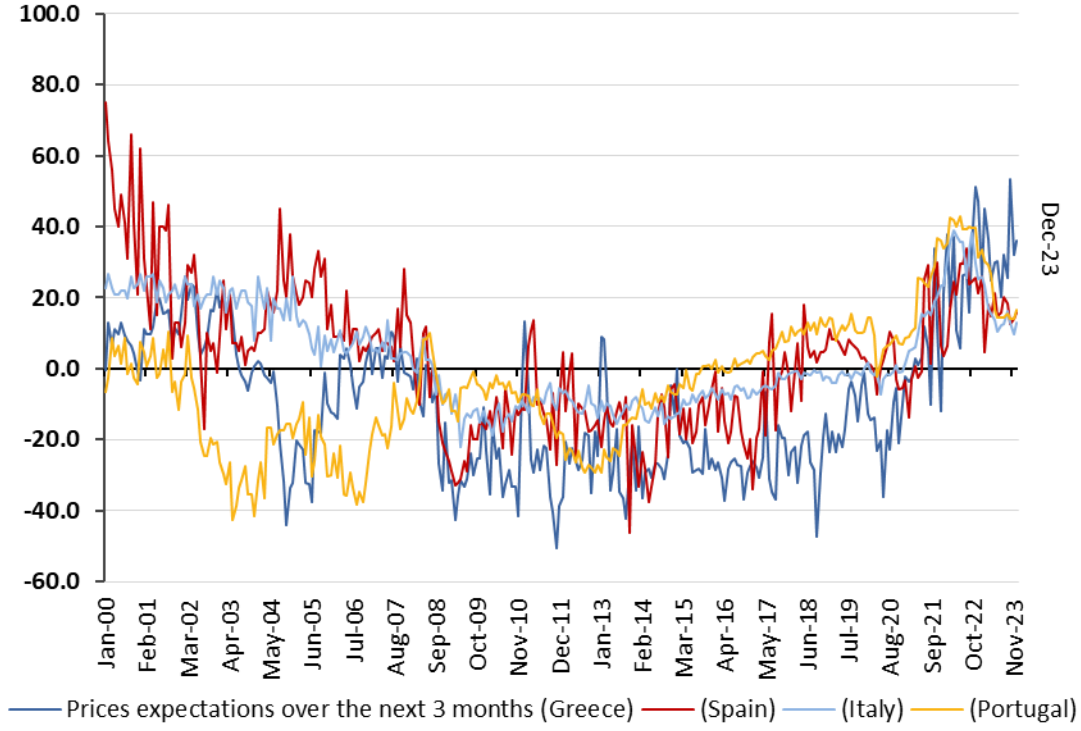
But do we see the first cracks in the Real Estate recovery appearing?

- The recent rally in residential prices in creating the risk of "irrational exuberance" from the side of construction firms. Price expectations over the short-term from the side of construction firms continue to increase, while actual prices begin to moderate.

Residential Real Estate Prices (% change)
vs Price Expectation Index



Prices expectations over the next 3 months
(% of respondents – balance)



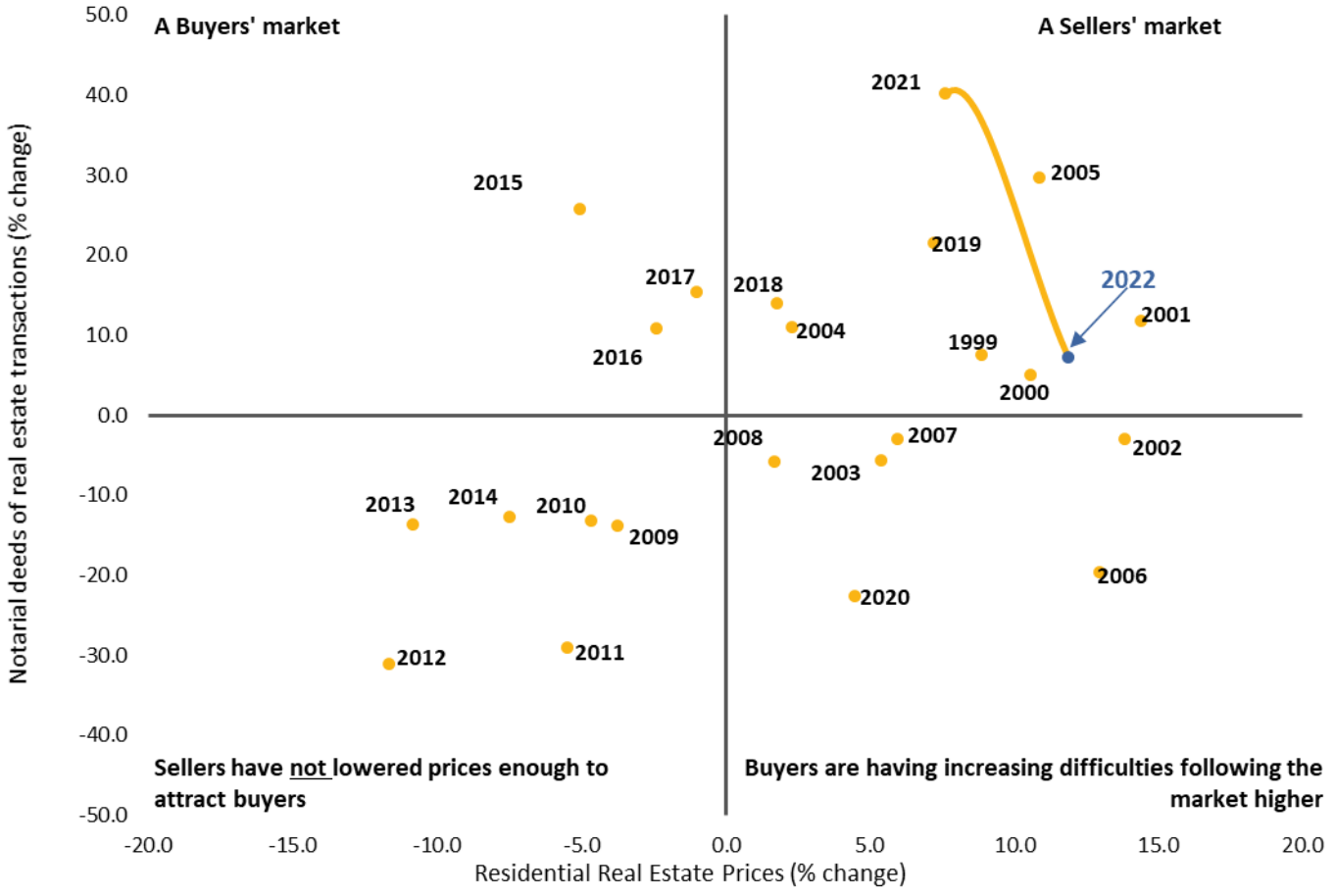
Source: ELSTAT, Bank of Greece, European Commission- DG Ecfin, Economic Research & Investment Strategy

Housing Cycle: Is the market about to enter the cooling-off phase of the cycle in 2023?

- Based on 2022 data, higher prices have led to a slowing down in the growth rate of transactions. That is a first signal that the housing market is about to enter the next phase of the business cycle where further prices increases result in a decline of the number of transactions.

Notarial deeds of real estate Transactions *vs.* **Residential real estate Price Index**

(% change) (% change)



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Source: Bank of Greece, ELSTAT, Piraeus Bank Research

1 Real Estate is linked to Economic Activity

2 Step by Step Analysis of Housing Supply

3 Estimating Housing Demand & The Supply - Demand Equilibrium

Housing Supply - Step I: Only New Permits and Revisions matter!

- The starting point for estimating housing supply is private-sector building permits, i.e. 24.9K in 2022.
- Yet the total figure is misleading because only new permits (9.8K in 2022) and revisions (6.3K in 2022) lead to new construction and new residential units (with a two year lag between permit issuance and completion).
- All other permits are irrelevant, as they relate to alterations in the existing housing stock.

Categories of private building permits (number of permits)

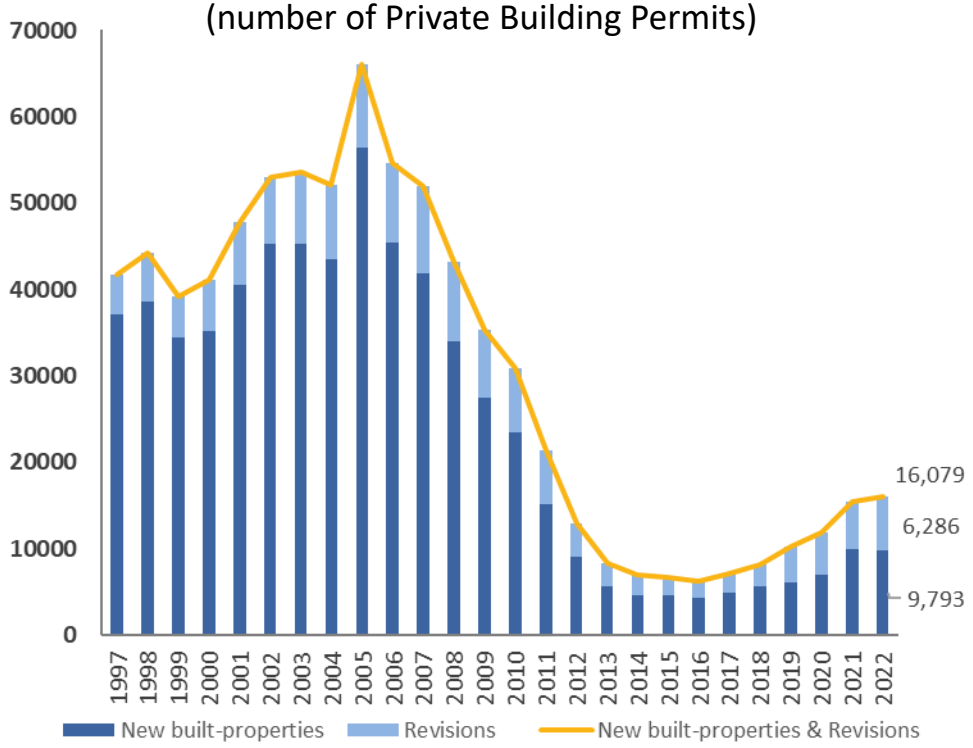
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
New built-properties	**37,047**	**38,619**	**34,494**	**35,196**	**40,446**	**45,195**	**45,249**	**43,446**	**56,342**	**45,406**	**41,790**	**34,021**	**27,447**	**23,380**	**15,114**	**9,066**	**5,675**	**4,620**	**4,618**	**4,305**	**4,930**	**5,685**	**6,044**	**6,915**	**9,888**	**9,793**
Extensions of built-properties	13,453	13,372	12,268	11,625	11,684	11,755	11,434	11,640	11,907	11,708	10,950	8,943	7,833	7,092	4,836	2,983	1,830	1,635	1,757	1,683	1,835	1,905	2,034	2,185	2,857	2,728
Revisions	**4,694**	**5,602**	**4,694**	**5,945**	**7,291**	**7,766**	**8,354**	**8,624**	**9,637**	**9,273**	**10,192**	**9,147**	**7,864**	**7,435**	**6,244**	**3,822**	**2,640**	**2,286**	**2,097**	**1,974**	**2,213**	**2,434**	**4,226**	**4,964**	**5,499**	**6,286**
Repairs, Restorations & Surrounding walls	6,531	7,266	7,903	8,153	7,849	8,440	8,279	7,884	6,452	6,712	6,089	5,740	5,789	5,750	4,550	2,500	2,438	1,596	1,649	1,536	1,727	1,964	1,925	1,646	1,862	2,557
Demolitions	4,305	4,259	4,168	4,770	5,312	6,291	6,067	6,254	9,852	7,085	6,066	4,954	4,088	3,330	2,172	1,238	1,105	937	978	1,003	1,154	1,254	1,439	1,540	2,190	2,286
Legitimizations & Modifications	4,178	4,233	3,883	3,895	4,111	4,215	4,294	4,388	4,379	4,352	4,320	3,935	3,980	3,995	3,159	3,228	2,728	2,360	2,251	2,140	1,926	1,938	1,561	1,518	1,511	1,263
TOTAL	70,208	73,351	67,410	69,584	76,693	83,662	83,677	82,236	98,569	84,536	79,407	66,740	57,001	50,982	36,075	22,837	16,416	13,434	13,350	12,641	13,785	15,180	17,229	18,768	23,807	24,913

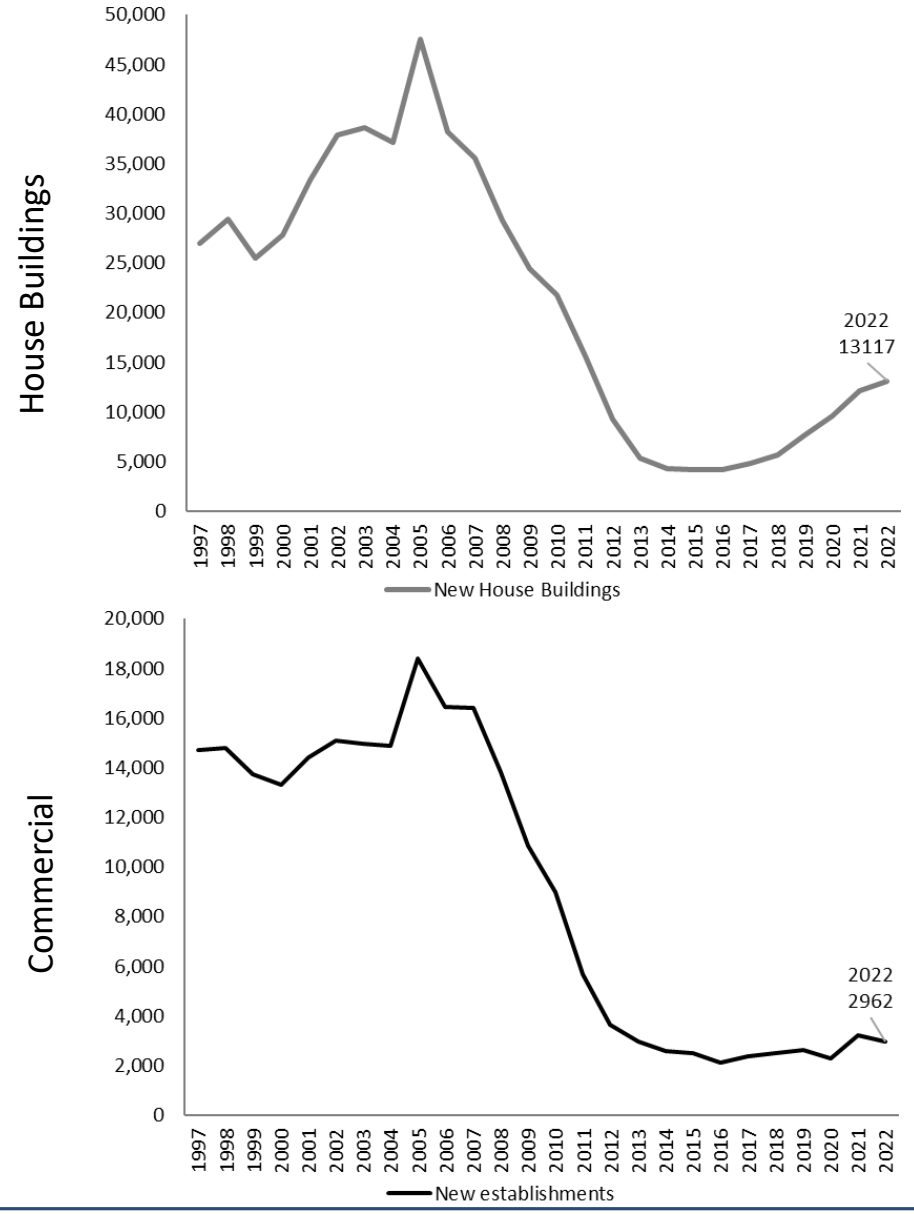
Source: ELSTAT, Piraeus Bank Research

Housing Supply - Step II: Separating residential from commercial developments

- But New - Built and Revision permits include both residential and commercial real estate.
- From the 16K permits only 13K refer to residential construction and 2.9K to commercial.

New Built - properties & Revisions
(number of Private Building Permits)



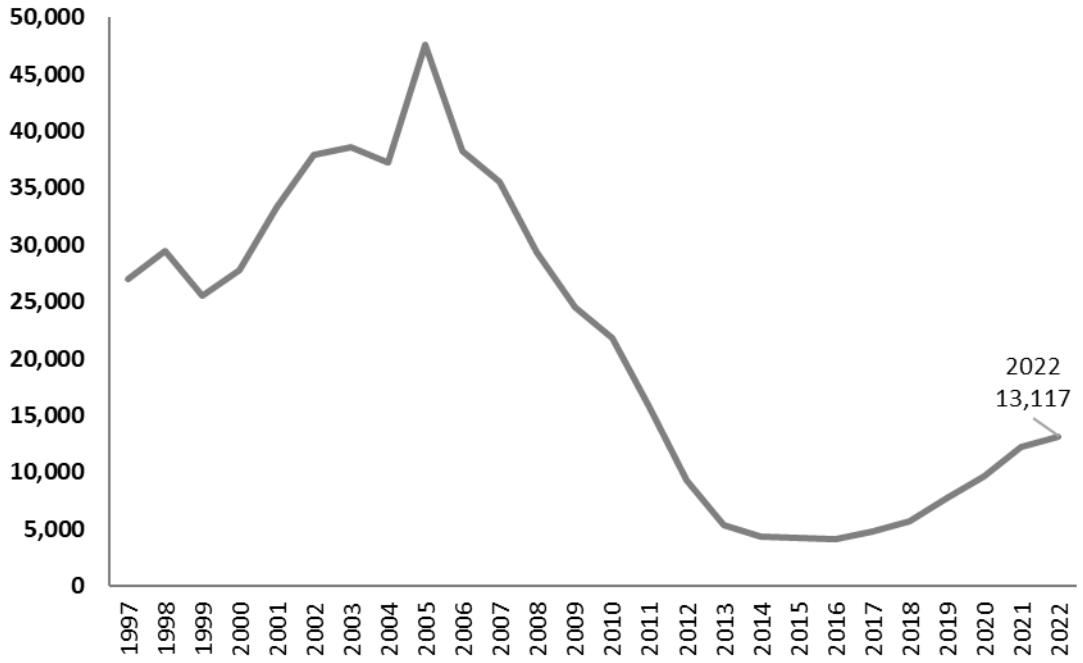


Source: ELSTAT, Economic Research & Investment Strategy

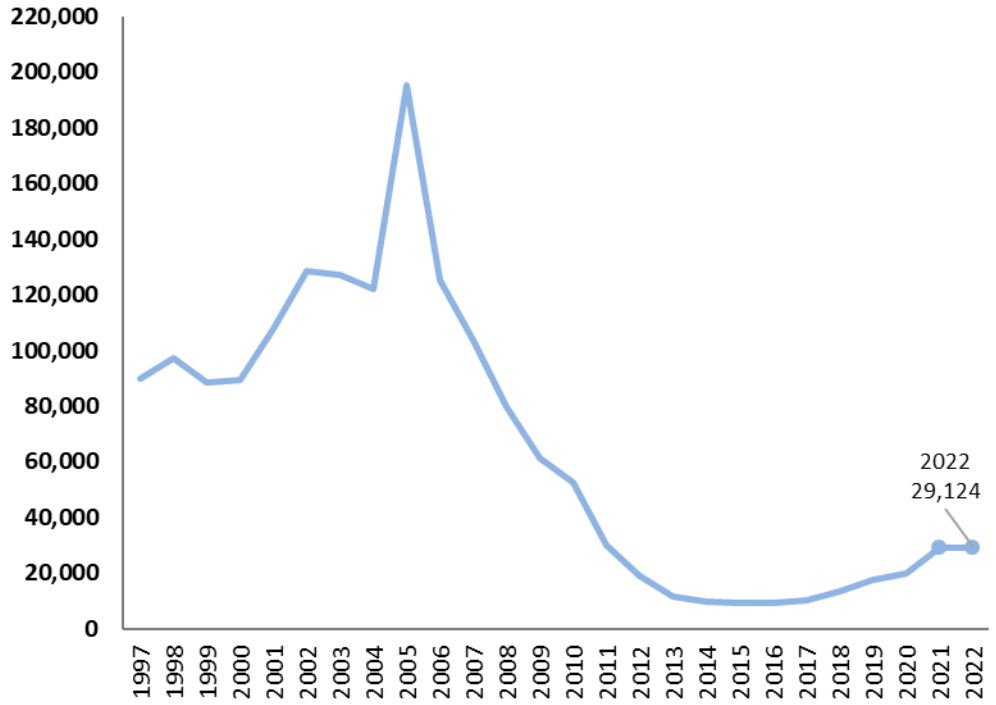
Housing Supply - Step III: From Residential Buildings to Residential Units (Dwellings)

- Each Residential Development (Building) usually corresponds to more than one Residential Unit (i.e. flat or apartment).
- So, in 2022, 13K of permits means that by 2024 approximately 29K of residential units will be available for sale.

House Buildings



New Dwellings

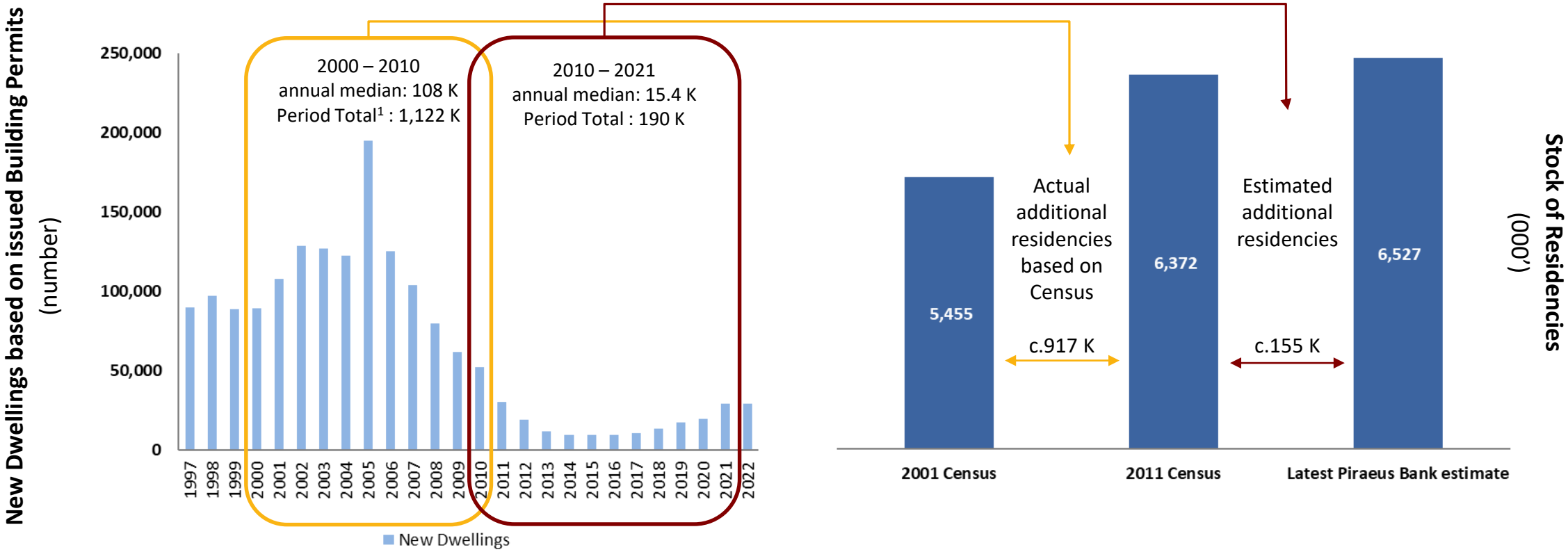


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Source: ELSTAT, Economic Research & Investment Strategy

Housing Supply - Step IV: Putting both Flows and Stocks together

- Based on 2001 Census, in Greece there existed 5.46 mn of residential units (dwellings) for all purposes (owner occupied, rented, summer and secondary homes, available for rent and sale, vacant for other reasons).
- Based on 2011 Census, the housing stock had increased by 917K units to 6.37mn. So 1,122K permits had resulted in 917K units, which means than only 82% of permits where finally utilised.
- Based on our estimates, the current housing stock stands at 6.53mn units up by only 155K (by assuming that the 82% of 190K permits resulted in completed residences).



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1. It is calculated as the sum of the half of the new dwellings based on the building permits issued in 2000 and 2010 and the total between 2001 – 2009.

Source: ELSTAT, Economic Research & Investment Strategy

1 Real Estate is linked to Economic Activity

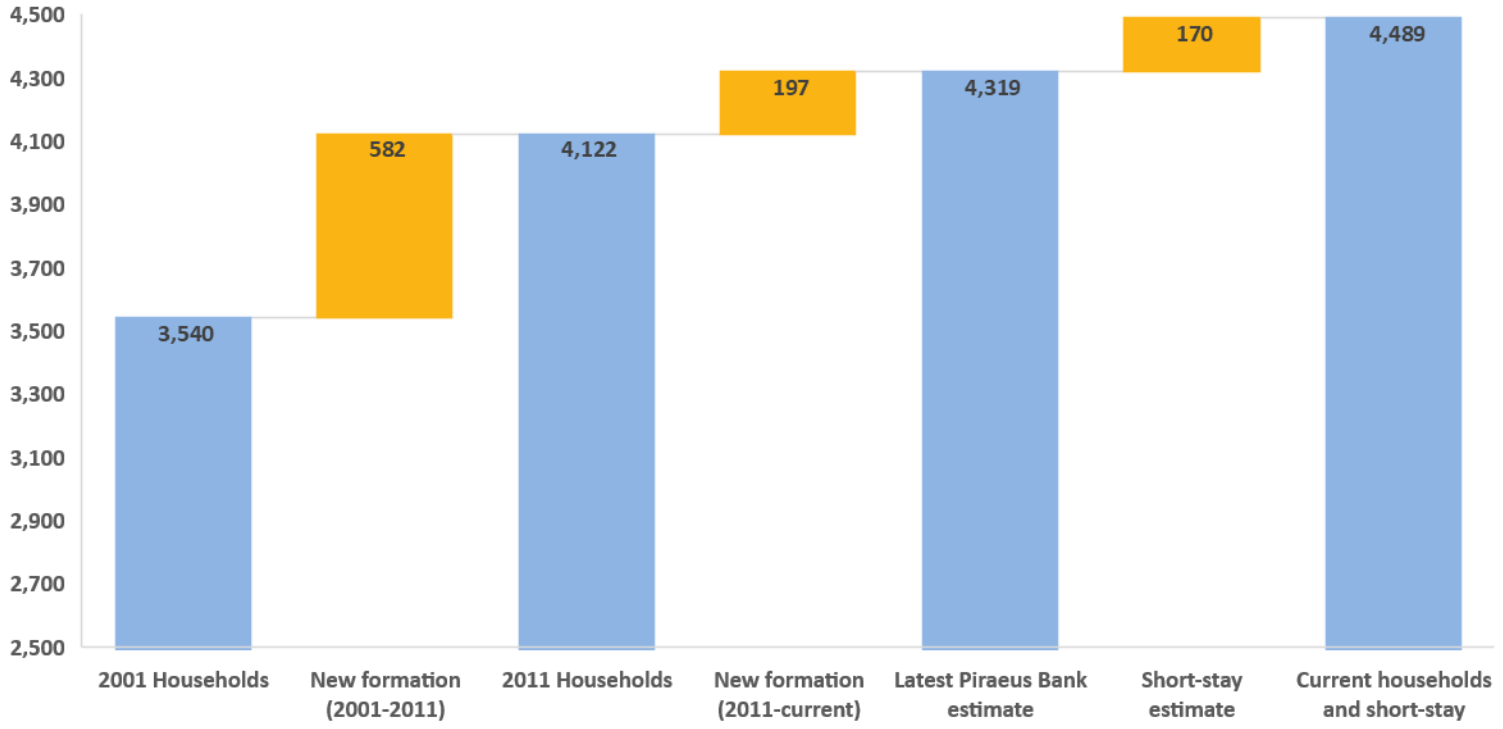
2 Step by Step Analysis of Housing Supply

3 Estimating Housing Demand & The Supply - Demand Equilibrium

Housing Demand: Households & Short-stay accommodation

- The demand for primary residences is approximated by the number of households living in Greece at any given time:
  - According to the 2001 Census, in Greece we had 3.54 mn of households.
  - According to the 2011 Census, the number of households had increased by 582K to 4.12 mn.
  - According to the 2021 Census and our estimates, the number of domestic households stood at 4.32 mn up by 197K (versus to 155K estimated new homes).
- But, nowadays, we have extra demand for 170K short-stay accommodation (Airbnb type of demand).

Primary Residencies of Households and Short-stay Accommodation (000')

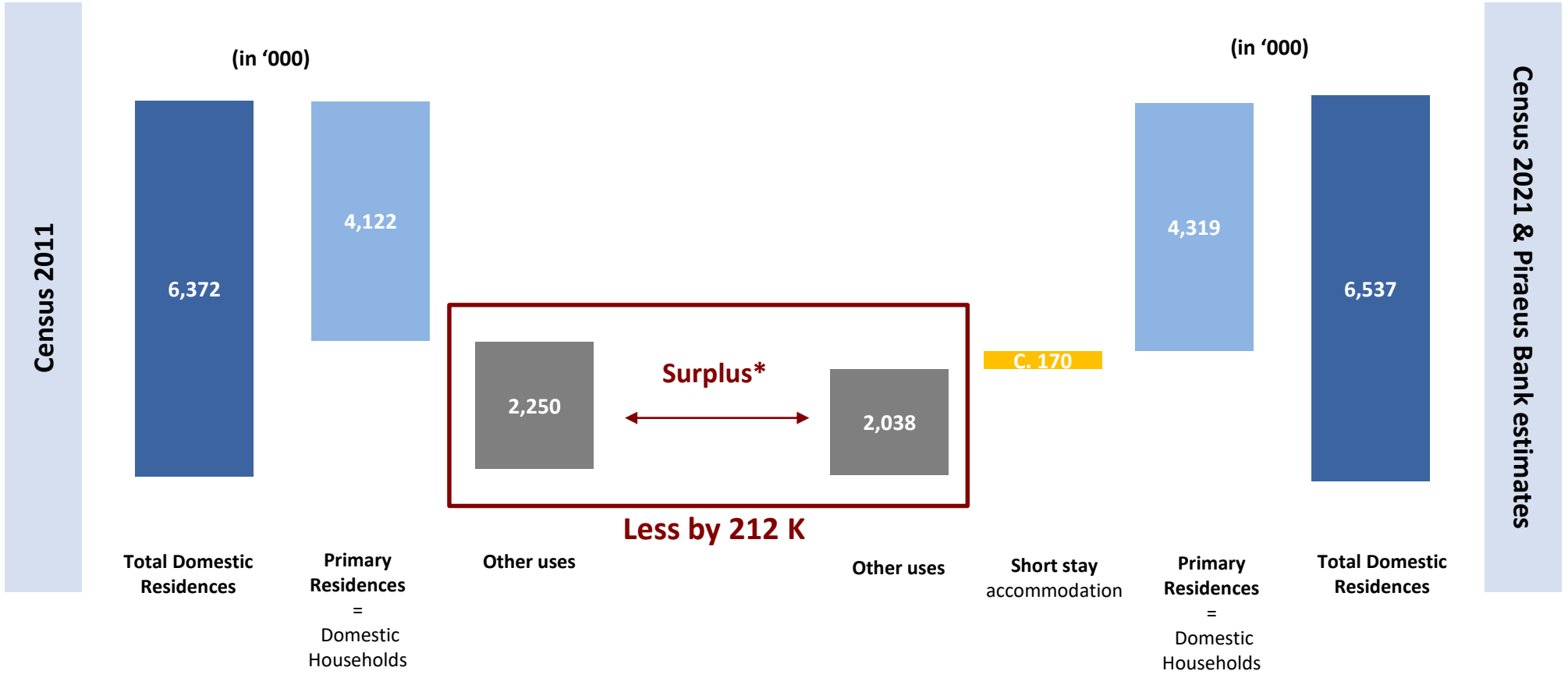


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Source: ELSTAT, Economic Research & Investment Strategy

The Supply - Demand Equilibrium: 2011 vs. 2022

- The imbalance between household formation (197K) and new construction (155K) plus demand for short-stay accommodation (170K) has created a substantial depletion to the surplus of housing units available for uses other than primary residence by 212K units, that is driving prices up far beyond what fundamentals justify.



*Surplus for other uses: for secondary use, for seasonal use, for rent and sale, vacant for other reason.

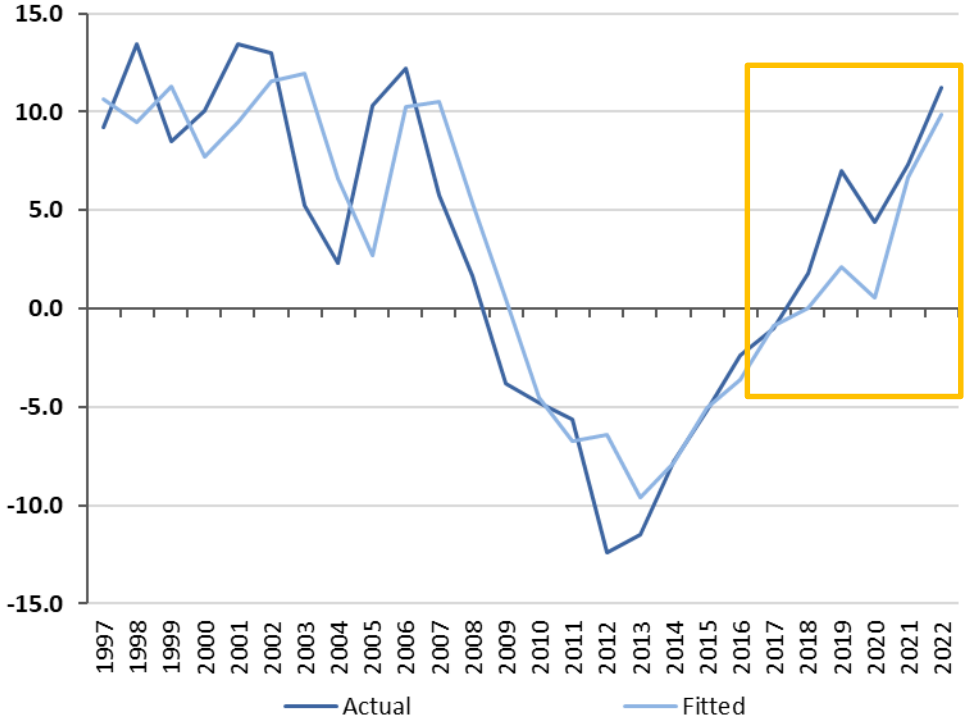
Source: ELSTAT, Economic Research & Investment Strategy

House Prices: Deviations from fundamentals

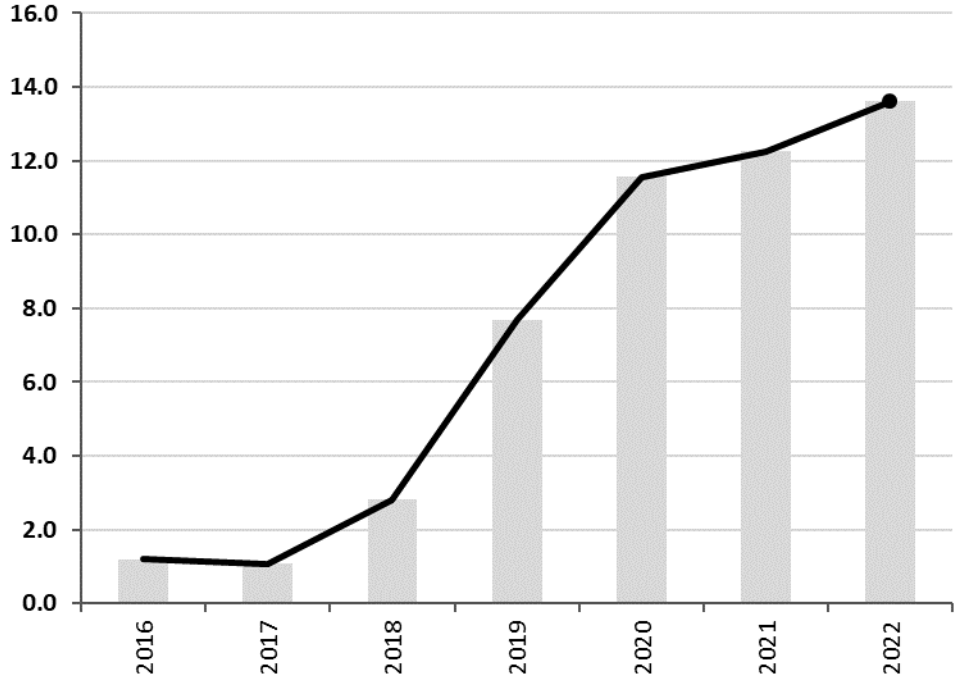
- The imbalance between demand and supply has led to a cumulative increase of 14% in house prices since 2016, over and above the price growth justified by the improvement in the macroeconomic fundamentals of the Greek economy.

Estimated output [actual vs fitted]

$$y_t = a_0 + a_1 x_t + a_2 y_{t-1} + e_t$$



Cumulative overpricing vs fundamentals
2016 up to 2022



Where:
y_t: Residential real estate Price index (annual % change)
x_t: Nominal GDP (annual % change)

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Source: Bank of Greece, ELSTAT, Economic Research & Investment Strategy

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