

PIRAEUS BANK



**Ελληνική Οικονομία:
Όταν το «αισιόδοξο» μετατρέπεται σε «βασικό»**

Greek & Regional Economics Research (GREC) Team

Economic Research & Investment Strategy

June 2021

Όταν το «αισιόδοξο» μετατρέπεται σε «βασικό»



- Όταν, στα τέλη του 2020 και αρχές του 2021, είχαμε αναθεωρήσει ριζικά προς το θετικότερο τις προβλέψεις μας αναφορικά με την ελληνική οικονομία, η αναθεώρηση αυτή είχε τότε θεωρηθεί από υπεραισιόδοξη έως ανεδαφική. Το πιο χαρακτηριστικό σχόλιο που είχα δεχθεί σε μια από τις παρουσιάσεις των προβλέψεων μας σε επενδυτές ήταν ότι το αναθεωρημένο μας σενάριο ήταν για τους επενδυτές πάρα πολύ χρήσιμο και ενδιαφέρον καθώς αυτοί το χρησιμοποιούσαν ως το αισιόδοξο σενάριο στα δικά τους υποδείγματα. Έχοντας φτάσει στα μέσα του 2021 και ιδιαίτερα μετά την ανακοίνωση από την ΕΛΣΤΑΤ των στοιχείων του ΑΕΠ του 1^{ου} τριμήνου 2021, η πρόβλεψη μας για ανάπτυξη στην περιοχή του 6% για το 2021-2022 έχει υιοθετηθεί πλέον ως το βασικό σενάριο της πλειοψηφίας των αναλυτών της ελληνικής οικονομίας.
- Το σκεπτικό βάσει του οποίου είχαμε αναθεωρήσει τις προβλέψεις μας στις αρχές του έτους και για το οποίο τώρα αισθανόμαστε δικαιωμένοι ήταν διττό:
 - ❑ Καταρχήν αξιολογήσαμε την επίδραση στις αναπτυξιακές προοπτικές της ελληνικής οικονομίας τριών πολύ σημαντικών παραγόντων:
 1. της βελτίωσης στους όρους χρηματοδότησης και ρευστότητας της οικονομίας μετά την ένταξη των ελληνικών κρατικών ομολόγων στο πρόγραμμα PEPP έκτακτης ποσοτικής χαλάρωσης της ΕΚΤ,
 2. της επερχόμενης δημοσιονομικής χαλάρωσης και
 3. τέλος αλλά περισσότερο σημαντικό, τις επιπτώσεις του Ταμείου Ανάκαμψης και Ανθεκτικότητας ύψους €30 δισεκ.
 - ❑ Ταυτόχρονα όμως αξιολογήσαμε το γεγονός ότι οι τρεις αυτοί πολύ θετικοί παράγοντες έρχονταν - με τρόπο παντελώς απρόβλεπτο - να ικανοποιήσουν σε υπερθετικό μάλιστα βαθμό τις δύο αναγκαίες αναπτυξιακές προϋποθέσεις όπως τις είχαμε διατυπώσει σε ανύποπτο



Όταν το «αισιόδοξο» μετατρέπεται σε «βασικό»



χρόνο, δηλαδή την ανάγκη για «αναπτυξιακό προσανατολισμό των πρωτογενών πλεονασμάτων» καθώς και την ανάγκη «αναπτυξιακής ποσοτικής χαλάρωσης». Καταρχήν το οικονομικό επιτελείο κατάφερε, παράλληλα με τα πρόσκαιρα μέτρα οικονομικής στήριξης, να χρησιμοποιήσει μέρος της μείωσης των πρωτογενών πλεονασμάτων για να υλοποιήσει και πιο μόνιμα μέτρα όπως η μείωση ασφαλιστικών εισφορών και συντελεστών φορολογίας εισοδημάτων και κερδών, κατάργηση της εισφοράς αλληλεγγύης για τους εργαζόμενους του ιδιωτικού τομέα ενώ πολλά περισσότερα είναι στη φάση της επεξεργασίας και του σχεδιασμού. Ταυτόχρονα και το Πρόγραμμα Ανάκαμψης και Ανθεκτικότητας το οποίο θα χρηματοδοτηθεί μέσω ομολόγων που θα εκδοθούν από πλευράς Ευρωπαϊκής Ένωσης και θα αγοραστούν - εν μέρη - από την ΕΚΤ μέσω προγραμμάτων ποσοτικής χαλάρωσης, έχει όλα εκείνα τα χαρακτηριστικά της «αναπτυξιακής ποσοτικής χαλάρωσης» δηλαδή της διαδικασίας εκείνης όπου η αγορά ομολόγων από πλευράς κεντρικής τράπεζας δημιουργεί τον απαραίτητο δημοσιονομικό χώρο έτσι ώστε τα κράτη-μέλη της Ευρωζώνης να προωθήσουν μακρόπνοα σχέδια επενδύσεων υποδομών, βιώσιμης ανάπτυξης και αναδιάρθρωσης των οικονομιών τους. Καθώς δε η ελληνική οικονομία ξεκινά από ένα πολύ χαμηλό επίπεδο οικονομικής δραστηριότητας και ταυτόχρονα θα είναι από τις πιο ωφελημένες οικονομίες σε όρους χρηματοδότησης προς ΑΕΠ, οι προοπτικές της προδιαγράφονται ιδιαίτερα θετικές.

- Τώρα λοιπόν που το αισιόδοξο σενάριο έχει γίνει βασικό, υπάρχει κάτι που διαφοροποιεί τον τρόπο που «διαβάζουμε» εμείς την ελληνική οικονομία έναντι των υπολοίπων; Κατά την άποψη μας αυτό που δεν έχουν ακόμα ενστερνισθεί και προεξοφλήσει πλήρως οι αγορές είναι οι μακροχρόνιες επιπτώσεις των παραγόντων αυτών. Ενώ λοιπόν η πλειοψηφία των αναλυτών εξακολουθεί να θεωρεί ότι μετά την αρχική ανάκαμψη, η ελληνική οικονομία από το 2023 και ύστερα θα επανέλθει σε ρυθμούς μεγέθυνσης περί το 2%, η δική μας τοποθέτηση είναι ότι το ελληνικό ΑΕΠ μπορεί να συνεχίσει να αυξάνεται με ρυθμούς 3,5%-4% σε μεσοπρόθεσμο ορίζοντα, βάζοντας την ελληνική οικονομία σε μια αισθητά υψηλότερη αναπτυξιακή τροχιά σε σχέση με τα προ-COVID επίπεδα.





	Economic Outlook, Baseline Scenario					
	(as of Jun. 21)	2020 (a)	2021	2022	2023	2024
Real GDP (% change) ¹		-7.8	6.6	6.1	4.1	3.8
Unemployment rate (% of labour force)		16.3	16.3	15.2	12.5	11.0
Non-residential real estate prices (% change) ²		1.2	4.5	6.1	6.0	5.7
Residential real estate prices (% change)		4.3	5.7	6.4	5.7	5.0
General Government Primary Balance (% of GDP, ESA 2010)		-6.7	- 7.2	0.0	1.5 up to 2.0	1.5 up to 2.0

Note: 1) 2020 Real GDP (% change) is based on the average of the quarterly annual seasonally adjusted growth rates. 2) Bank of Greece Office Price Index





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3 Sources of funding & GFCF Outlook

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7 Sovereign Rating & Bonds markets

8 Assessing Corporate Distress due to COVID-19 Recession

9 SWOT analysis

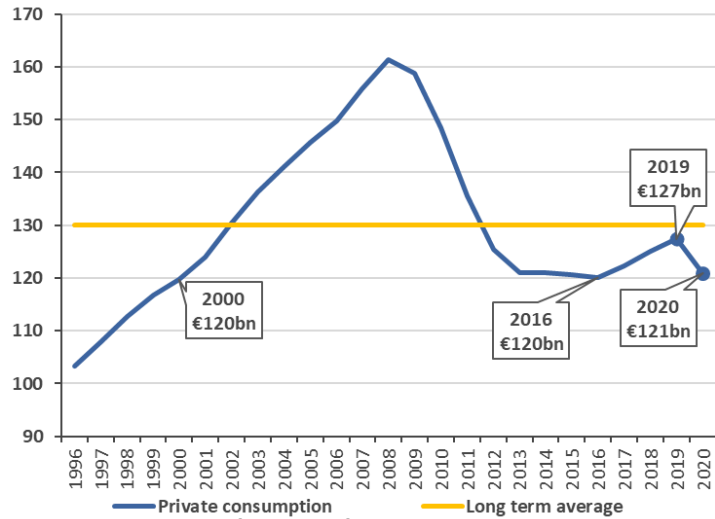


A Bird's Eye View of Greek GDP: Real GDP falls to €168bn due to the pandemic shock

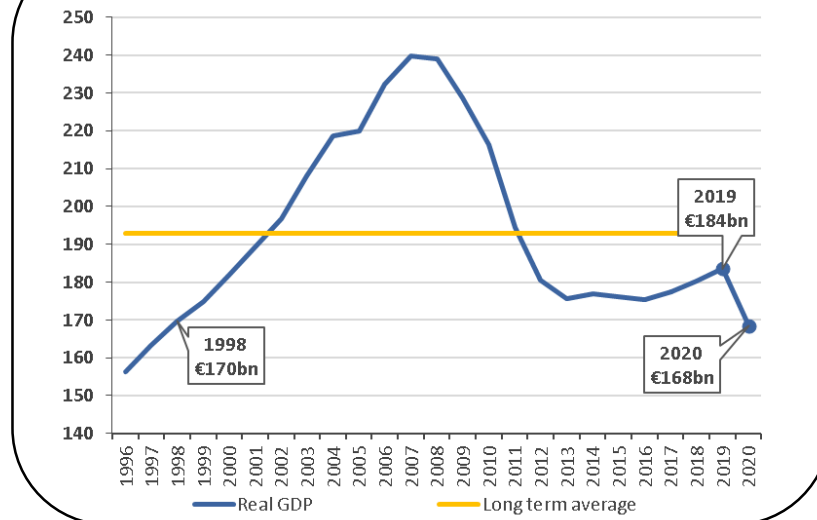


Private Consumption

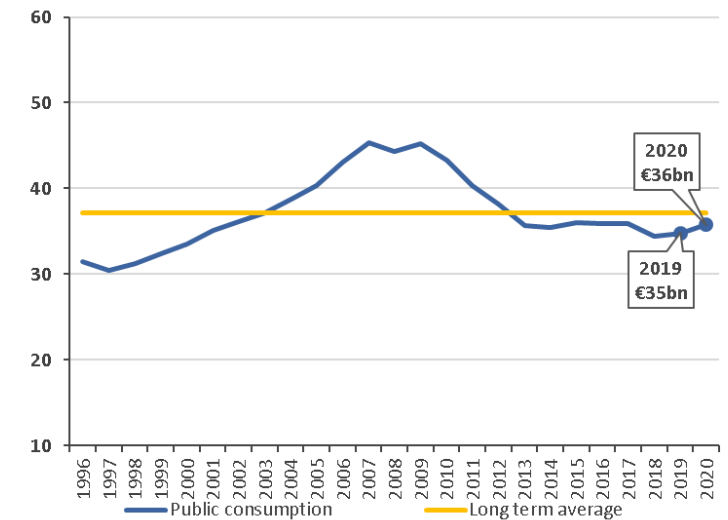
have been significantly affected by the COVID-19 measures



Real GDP close to 1998 levels (€ bn, 2015 prices)

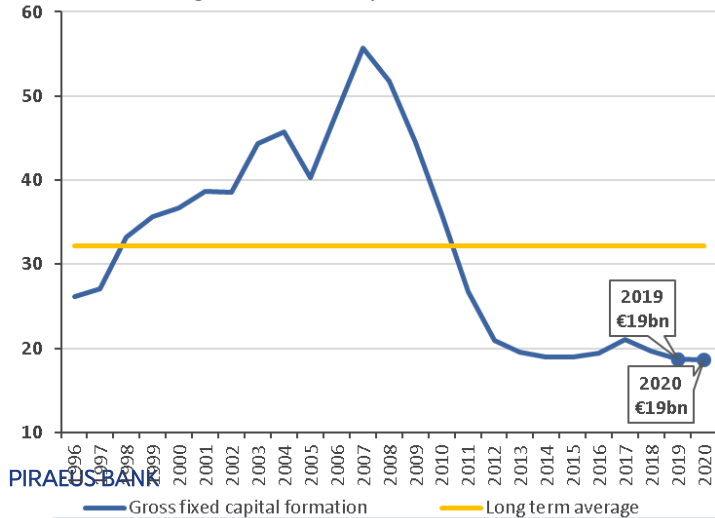


Public Consumption is trying to support GDP



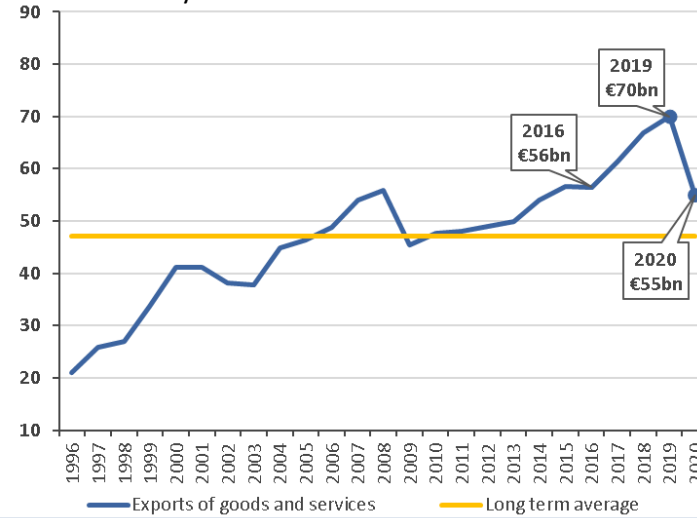
Gross Fixed Capital Formation

is "waiting" the Recovery Fund



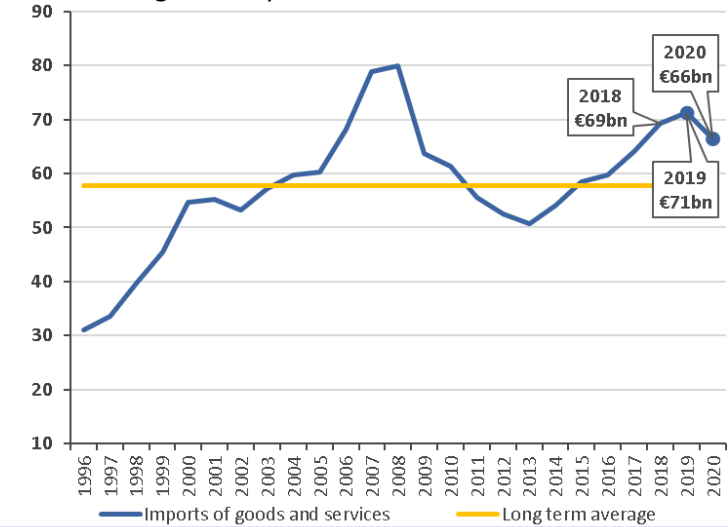
Exports of Goods & Services

affected by the social distance measures



Imports of Goods & Services

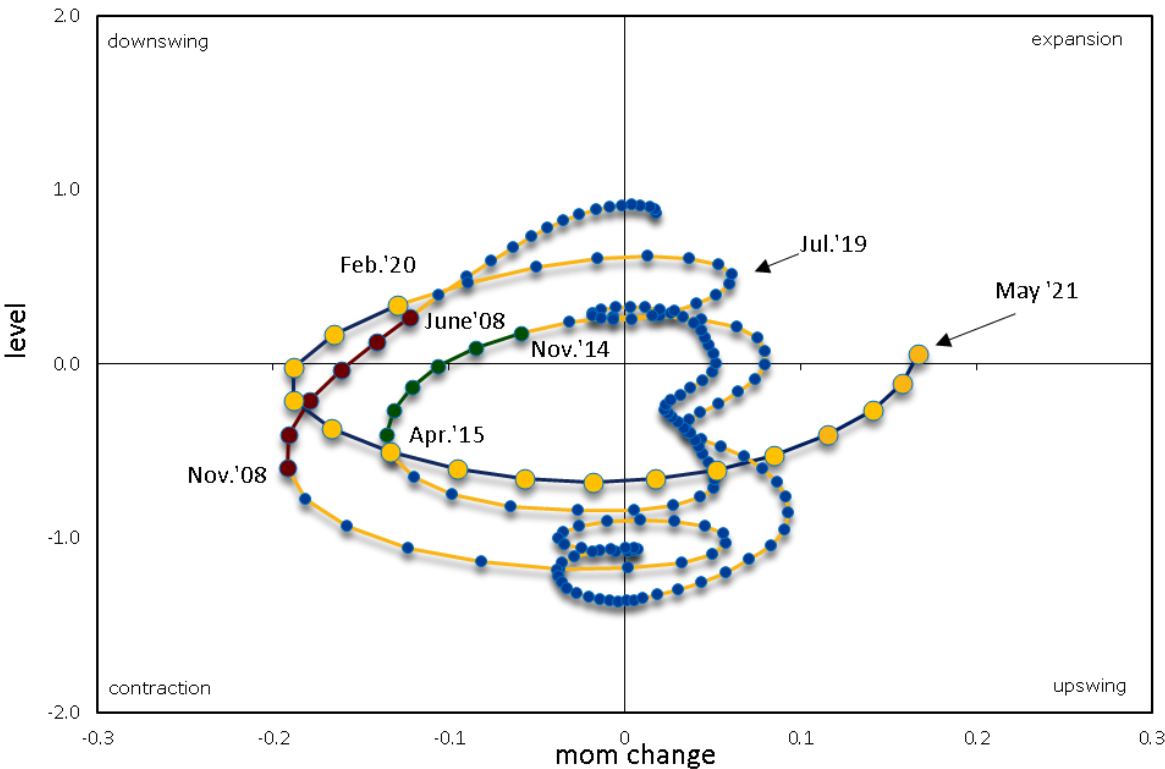
fall significantly



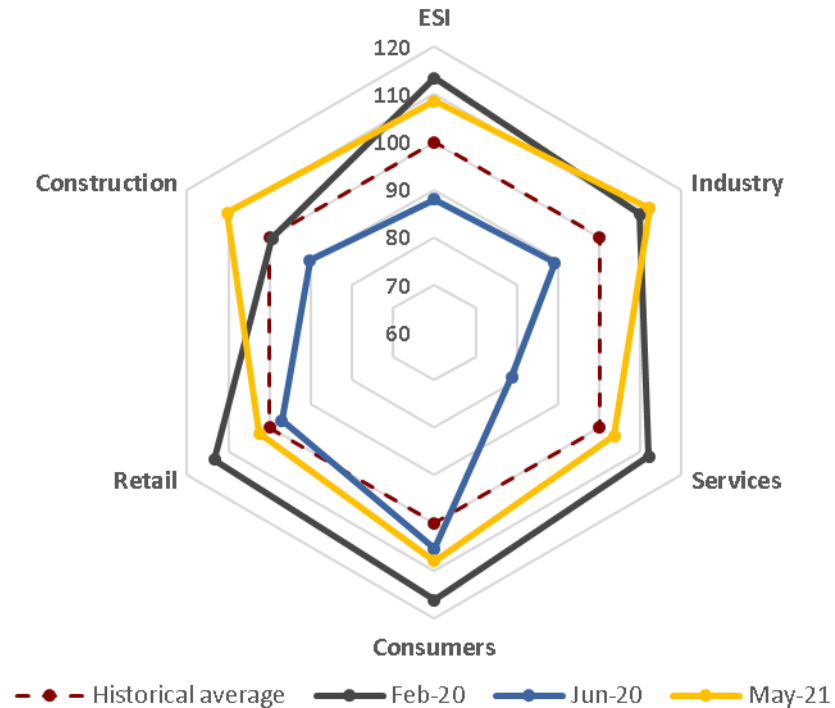
Covid-19 Impact on Sentiment Indicators: We have already been here 2 times before since 2008. So we are a tough bunch of guys!



Economic Sentiment Tracer



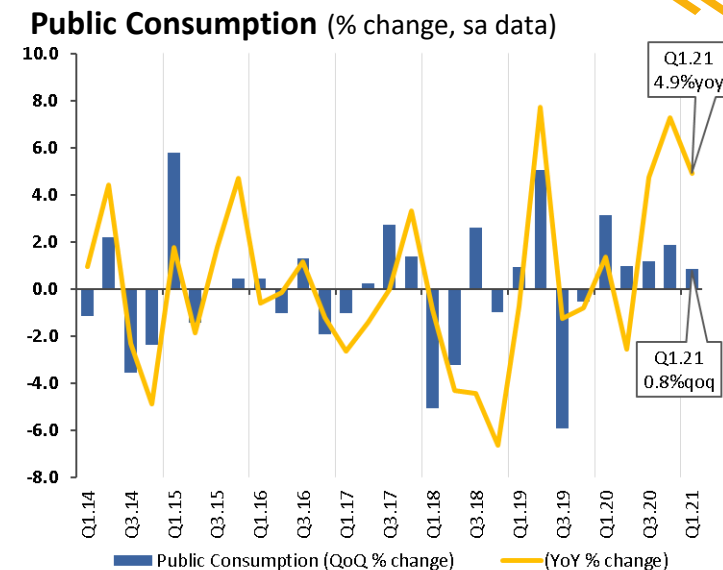
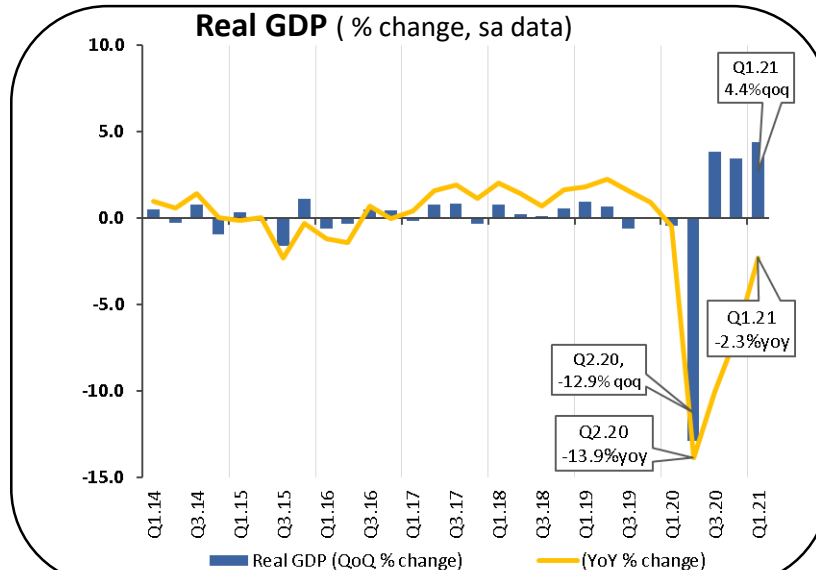
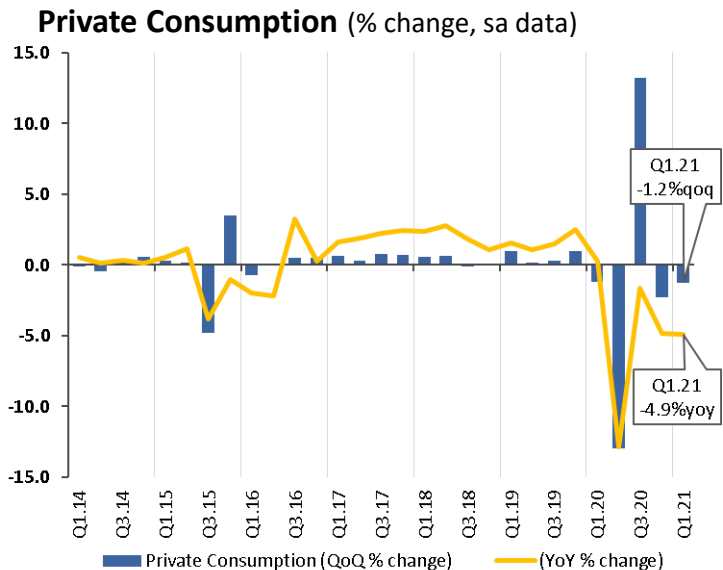
Radar Chart - Confidence Indicators (sa data)¹



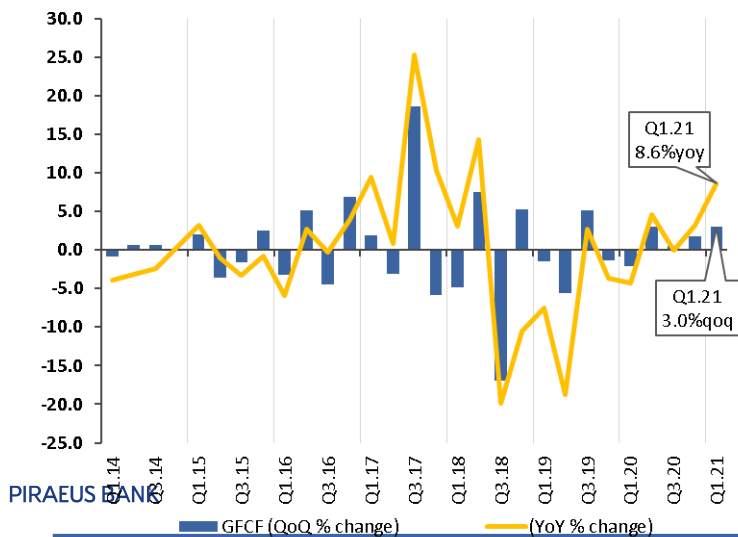
Note: 1. In the radar chart, a development away from the center reflects improvement in a given indicator. The ESI is computed with the following sector weights: industry, 40%; services, 30%; consumers, 20%; construction, 5%; and retail trade, 5%. All confidence indicators are normalised to a mean of 100 and a standard deviation of 10, similar ESI (Jan 2000 – Dec 2020 = 100).



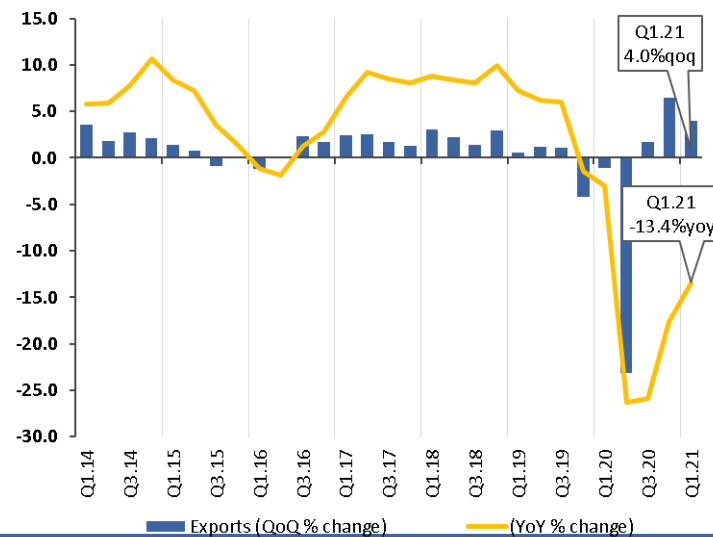
GDP components: Private consumption and the external sector have been affected the most



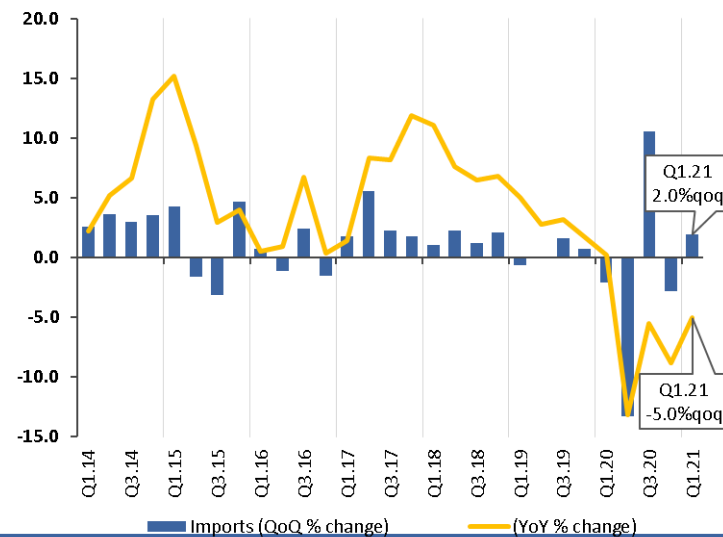
Gross Fixed Capital Formation (% change, sa data)



Exports of Goods & Services (% change, sa data)



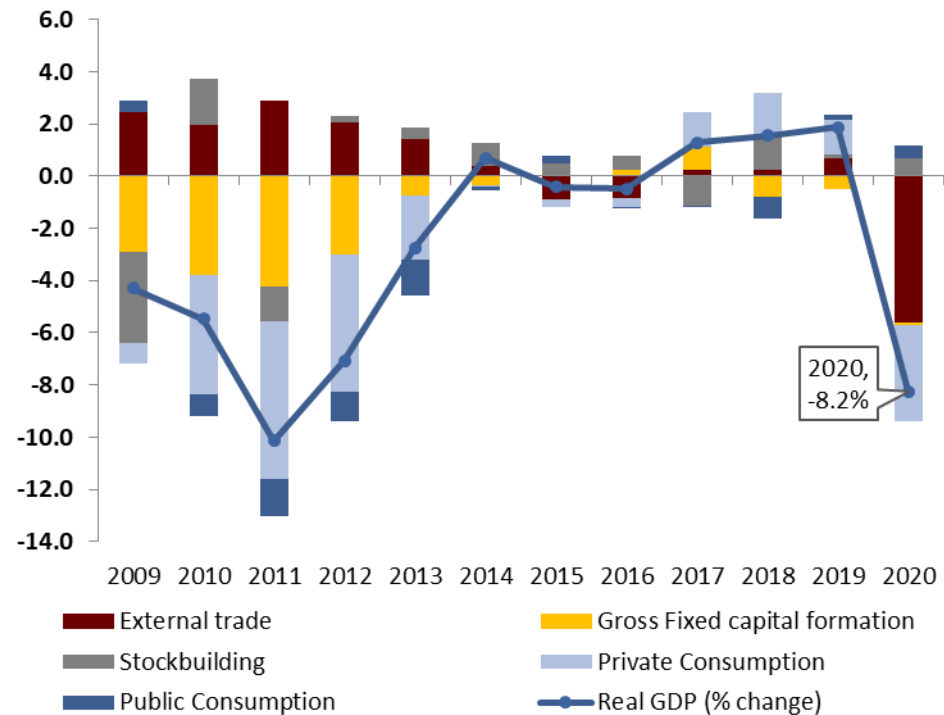
Imports of Goods & Services (% change, sa data)



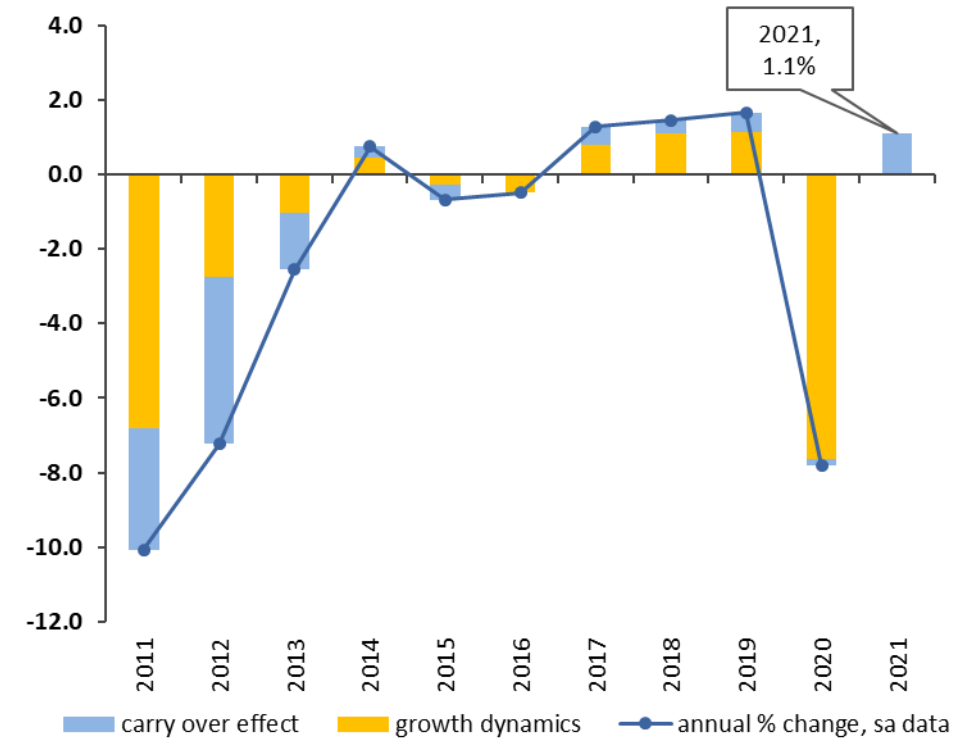
The impact of GDP components & 2021 carry over effect



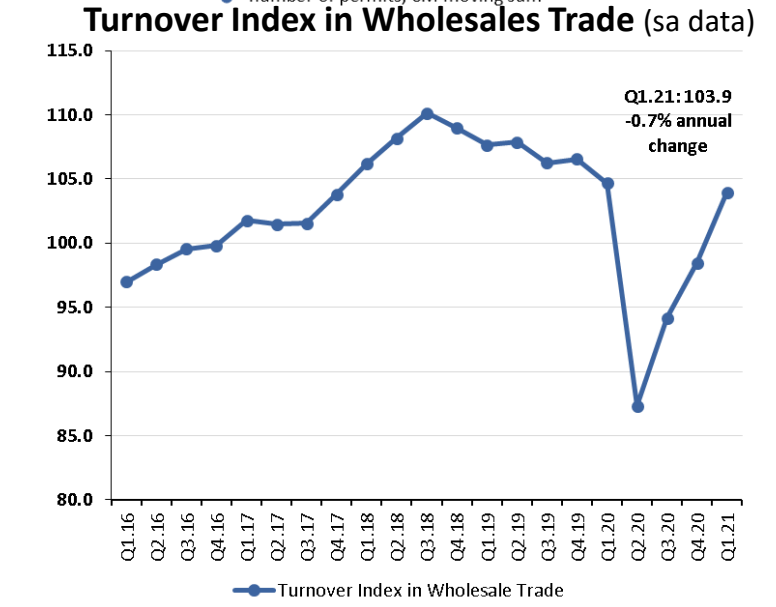
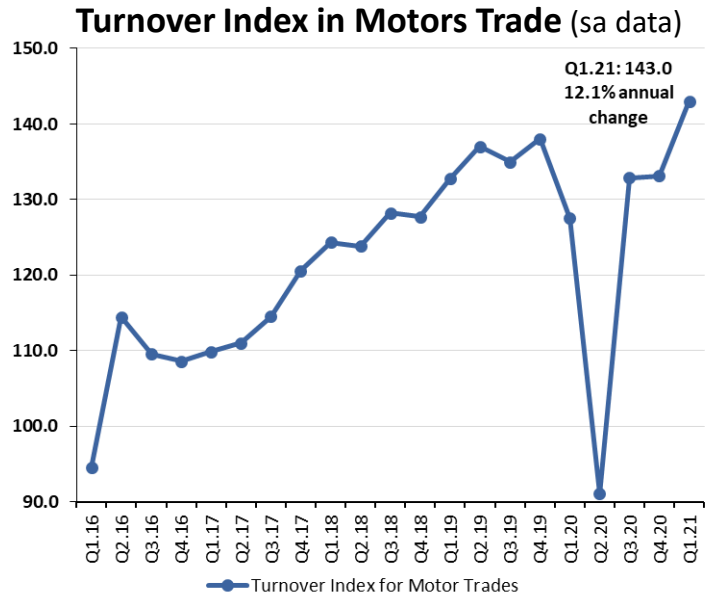
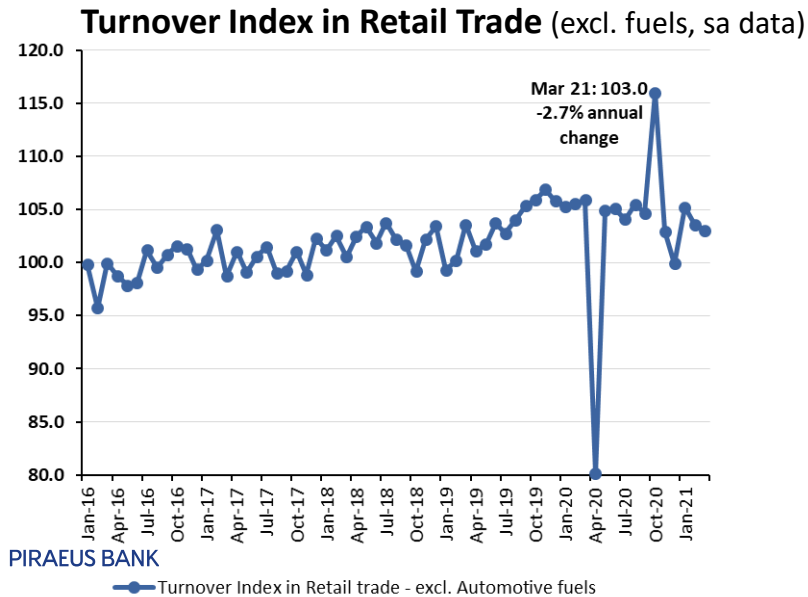
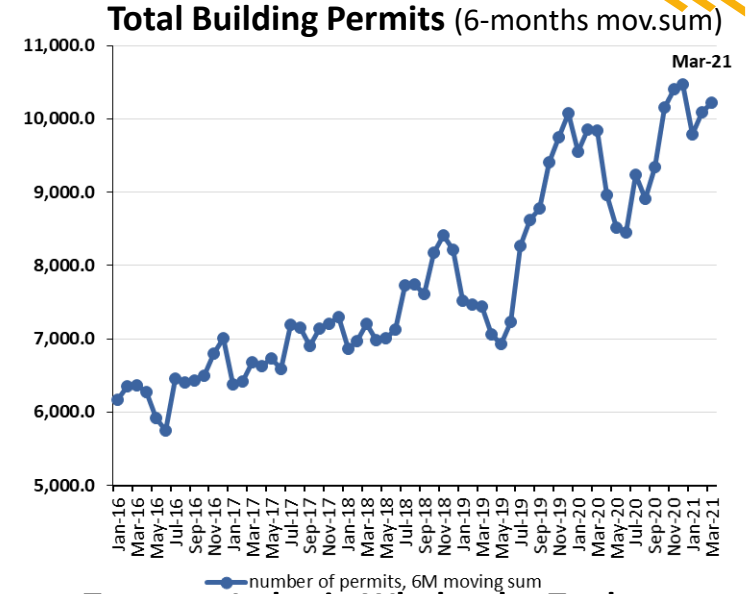
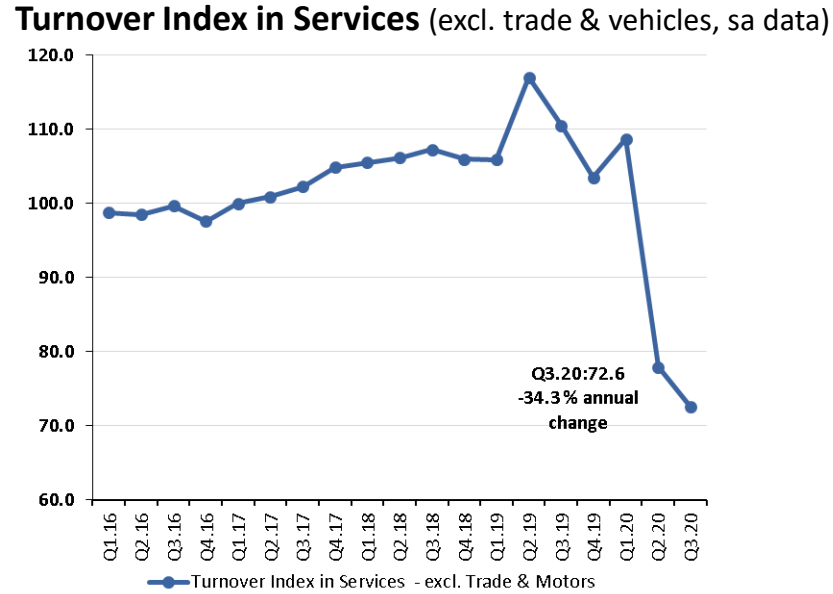
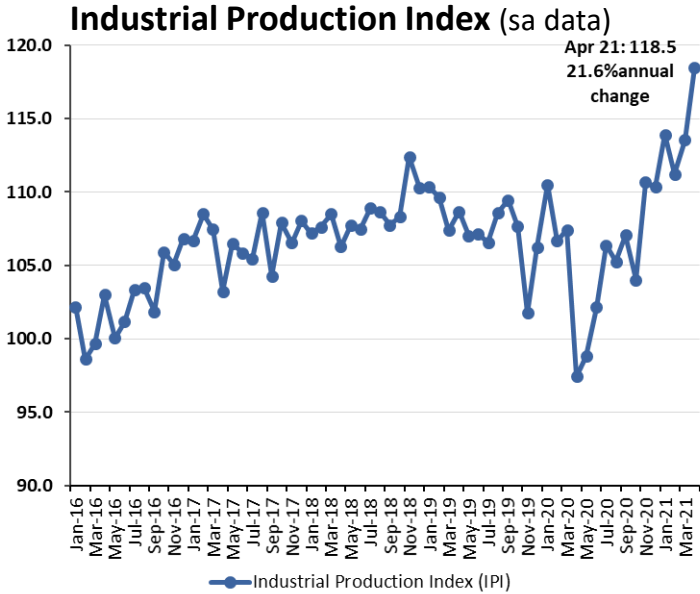
Contribution of GDP components to annual growth rate (%)



Carry over effect & growth dynamics (%)



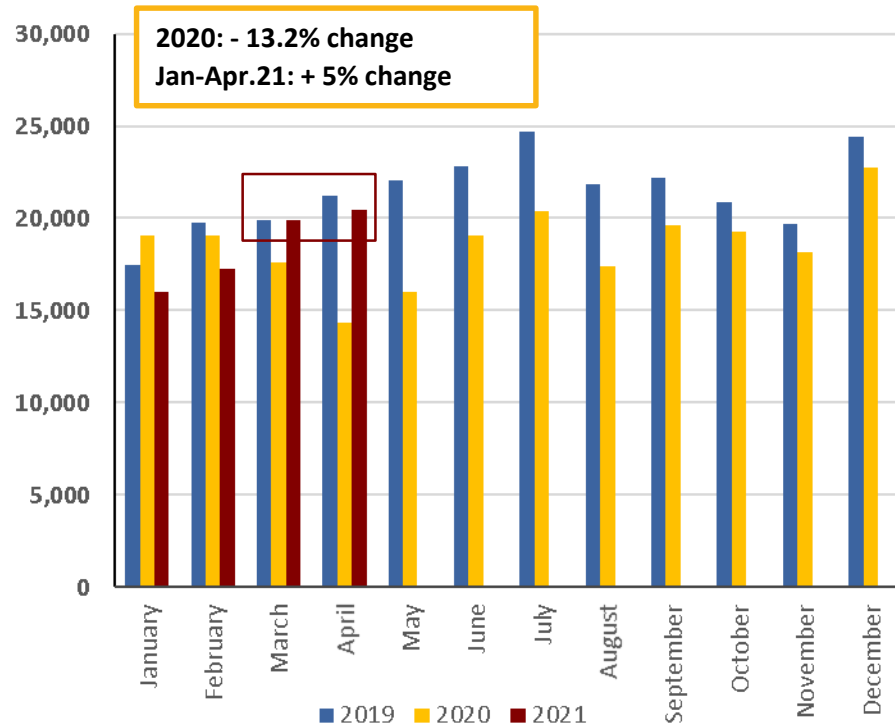
Short-term economic indicators: A significant asymmetry between Manufacturing & Services



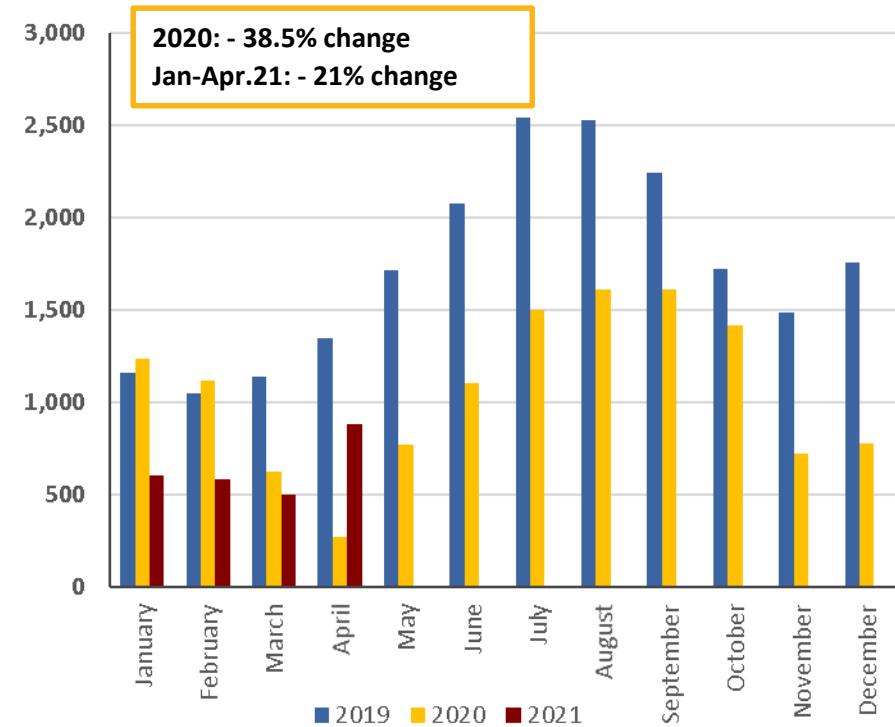
Covid-19 Impact on Enterprises: The “lockdown pain” has not been evenly spread



Turnover of Enterprises^{1,2} (€ mn)



Turnover of Enterprises under Suspension of Operation^{1,2} (€ mn)



Note: 1) Only double-entry accounting bookkeeping. Enterprises with single-entry accounting bookkeeping are obliged to submit data to tax authorities on a quarterly basis, while enterprises with double-entry accounting bookkeeping are obliged to submit data respectively on a monthly basis. Therefore, for the total of enterprises, data are available only on a quarterly basis.

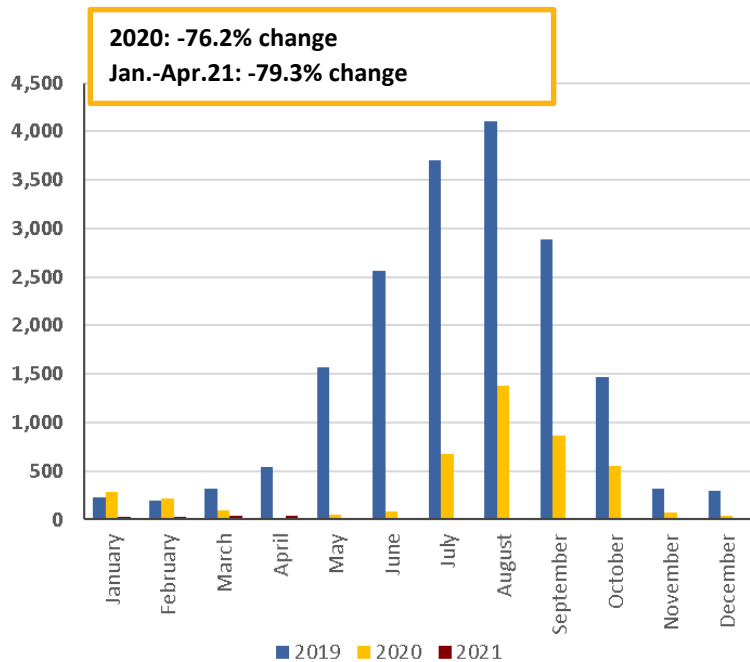
2) The enterprises that were under suspension of operation, on the basis of state order, due to covid-19 were classified in the following economic activity classes: **47** Retail trade (exc. motor vehicles & motorcycles), **55** Accommodation, **56** Food & beverage service activities, **59** Motion picture, video, television programme production etc., **71** Architectural & engineering activities etc, **77** Rental & leasing activities, **82** Office administrative & support etc, **85** Education, **88** Social work activities without accommodation, **90** Creative, arts & entertainment, **91** Libraries, archives, museums etc, **92** Gambling & betting activities, **93** Sports activities, amusement etc, **94** Activities of membership organisations, **96** Other personal service activities



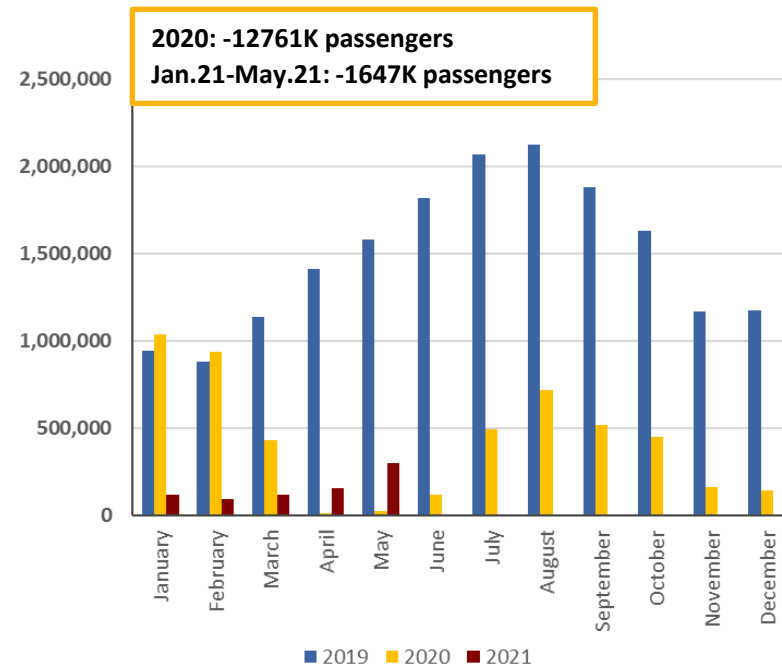
Covid-19 Impact on Tourism: Tourism is beginning to show signs of a pick-up, but we are still way-off normal levels



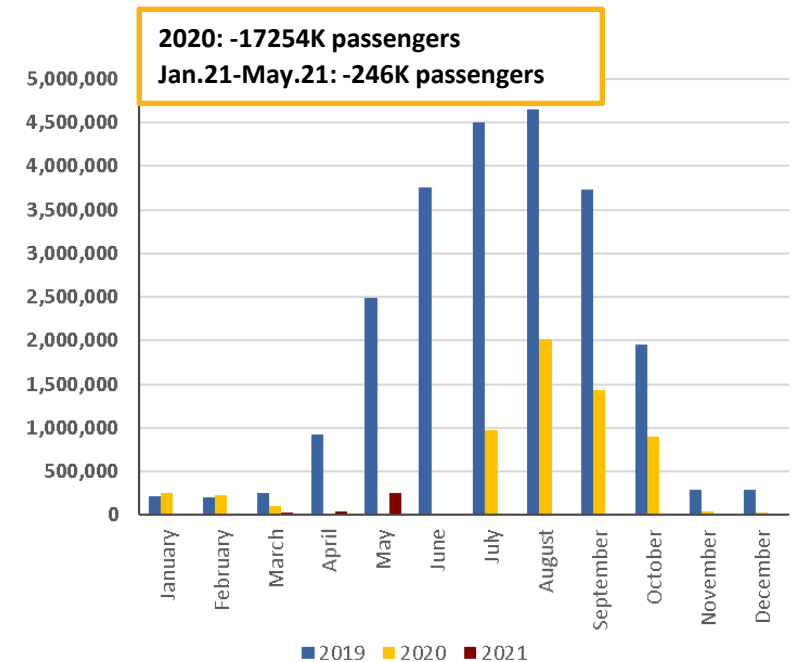
Travel Receipts
(€ mn)



International Athens Airport
(traffic – international passengers)



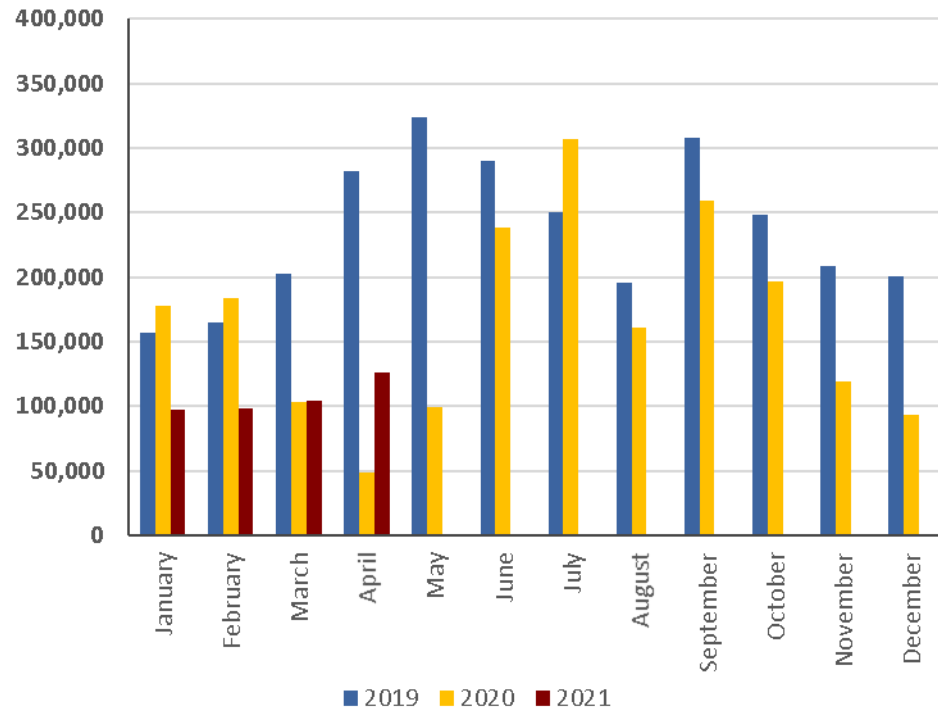
14 Regional Airports ¹
(traffic – international passengers)



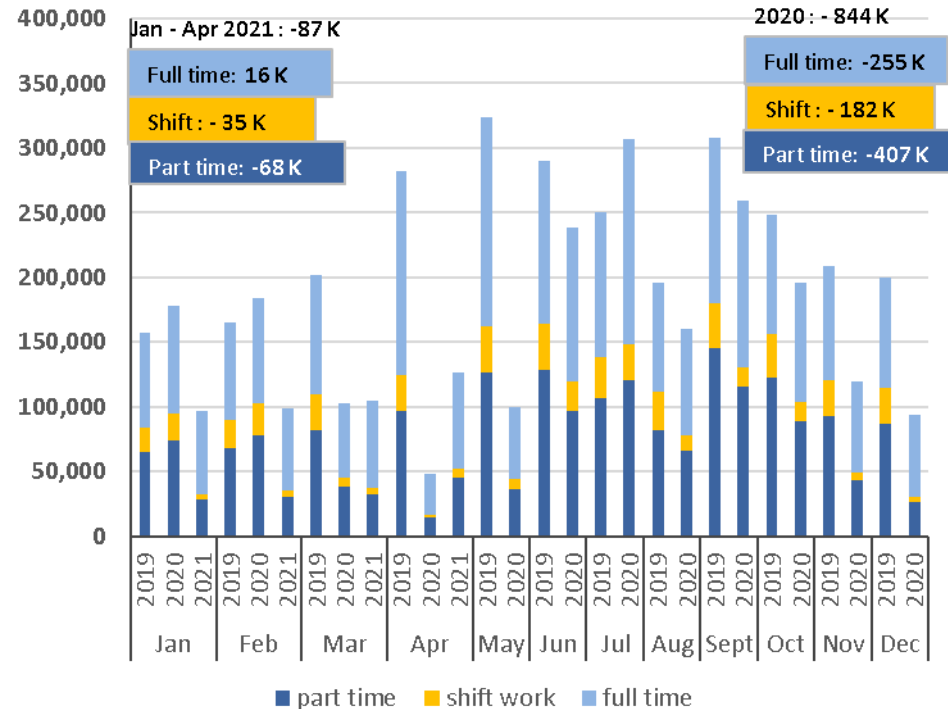
Covid-19 Impact on new hirings of private sector employees: year-on-year comparisons are still unfavorable for the labour market



New hirings
(private sector employees)



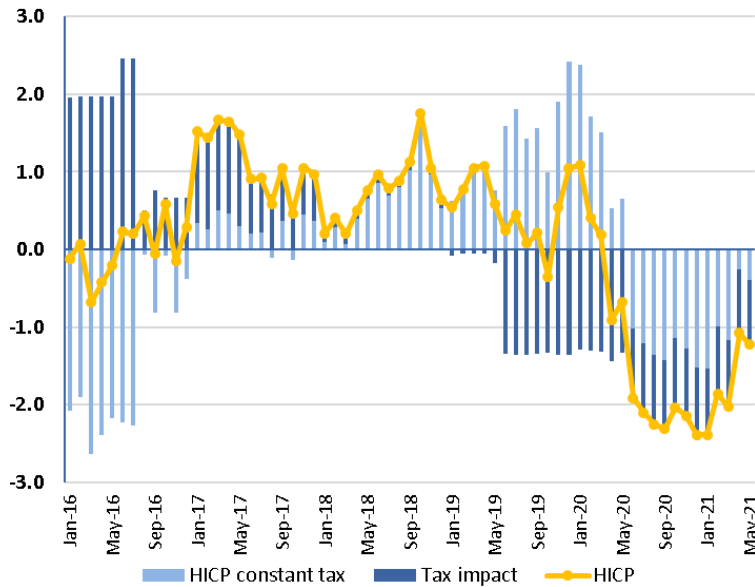
New hirings per type of employment
(private sector employees)



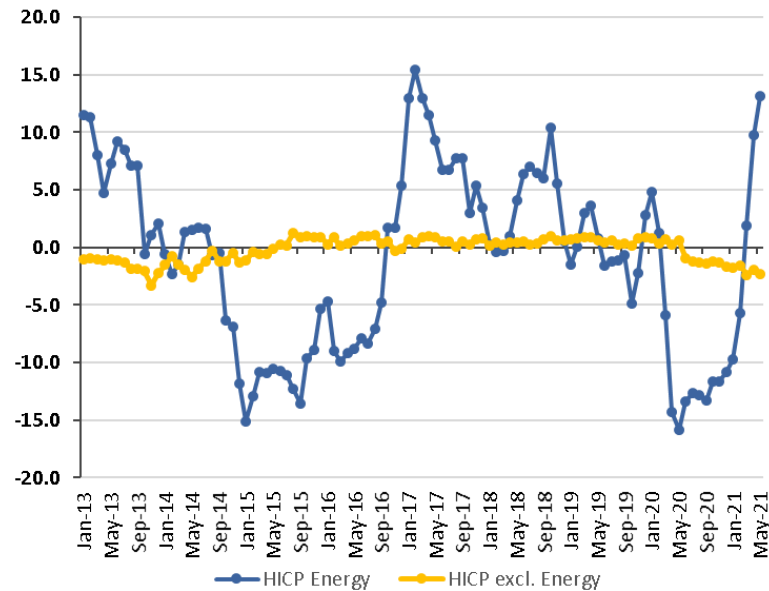
Inflation: Driven by massive volatility in energy prices and insufficient demand



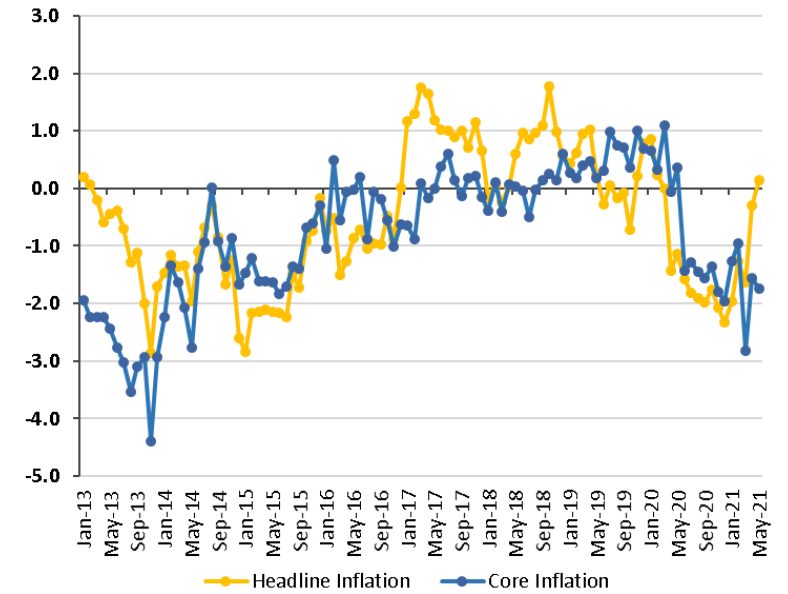
HICP (annual % change) & Effect of tax changes



HICP in Energy (annual % change)



CPI vs Core CPI ¹ (annual % change)





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2 **Greek Macro Outlook: No “scarring” – No “hysteresis”**

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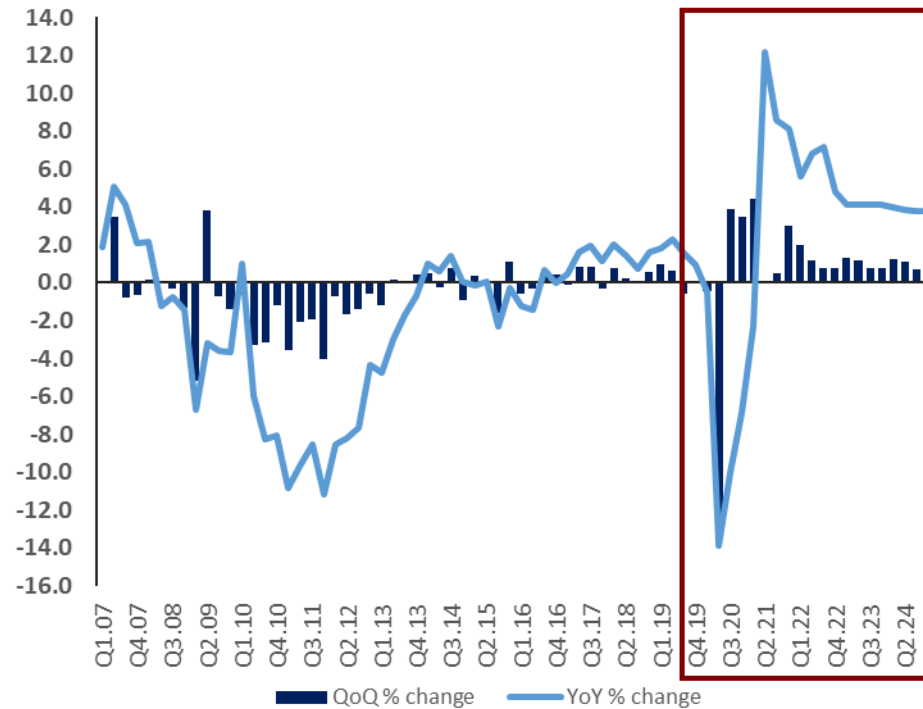
9 SWOT analysis



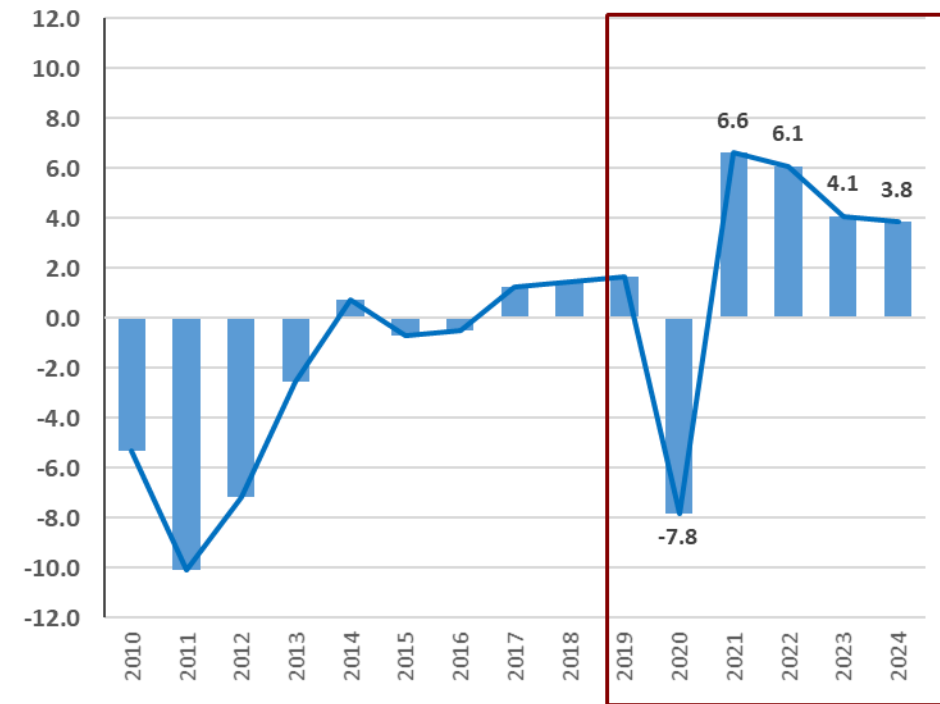
Drivers of the Outlook Revision: “V” shaped outlook



Real GDP (sa data, 2015 prices, % change)¹:
the second lockdown creates a “V” shape in quarterly data



Real GDP (sa data, 2015 prices, annual % change):
.....and a “V” shape in annual frequency



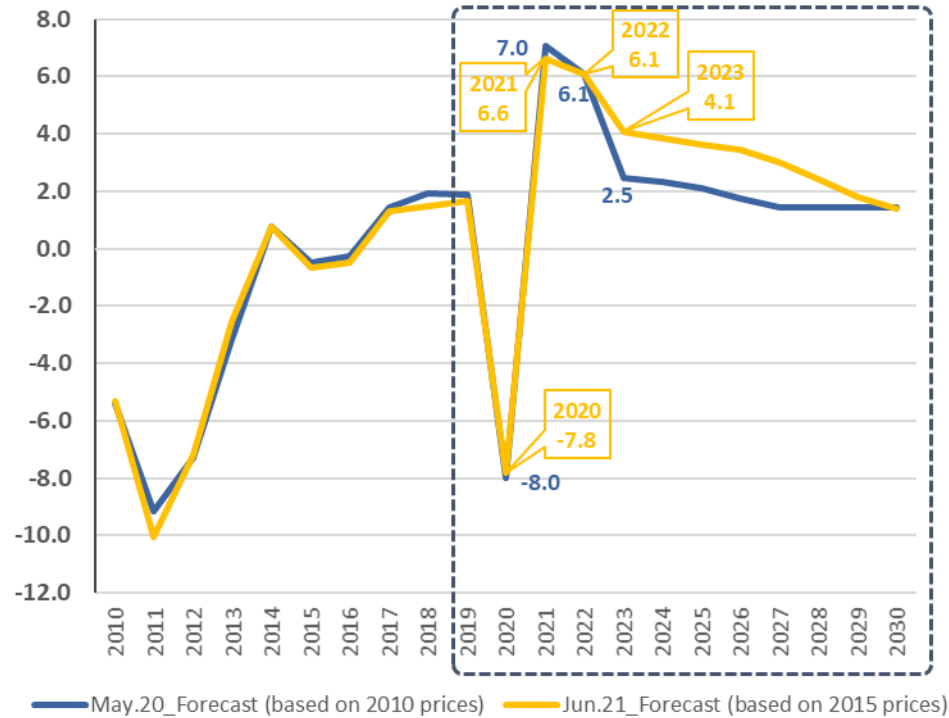
Note: 1) the 1996-2009 quarterly sa GDP data are based on ECO calculations



GDP Outlook: While everyone is focused on the short-term, the “game changer” comes from higher long-term growth forecasts



Annual Real GDP (sa data, constant prices, YoY % change)¹



Quarterly Real GDP (sa data, constant prices, YoY % change)

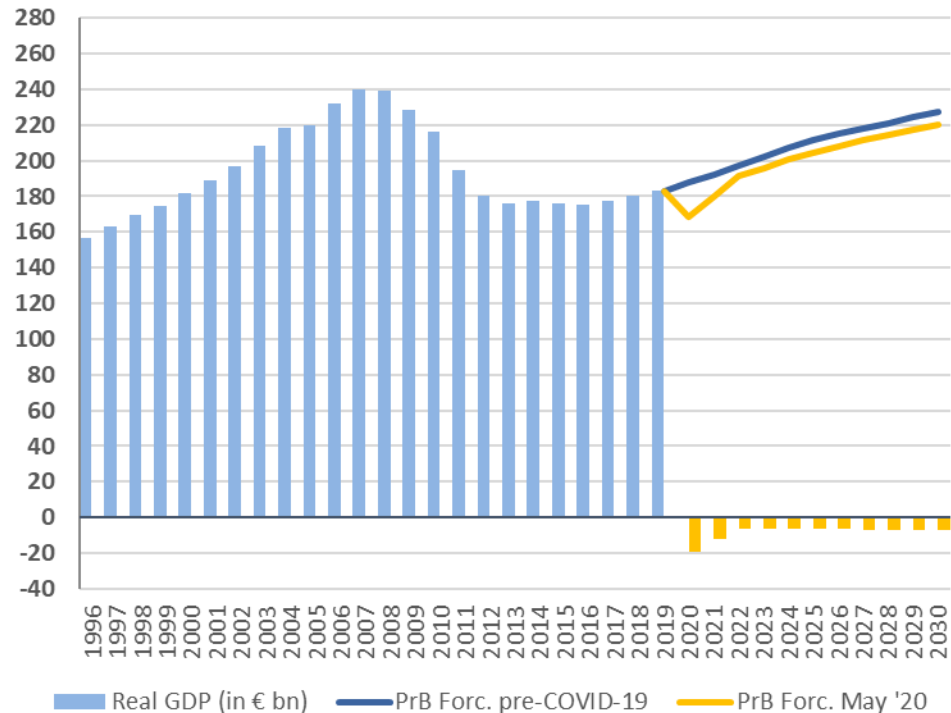


No “Scarring” & No “Hysteresis” – Only “Goldilocks”

- ✓ Our latest projections imply that the Greek economy will not only avoid “scarring” or “hysteresis” recovering all lost output by 2025 but it will enter a “Goldilocks” period with growth rates strong enough to allow the Greek economy to transition into a higher economic trajectory.

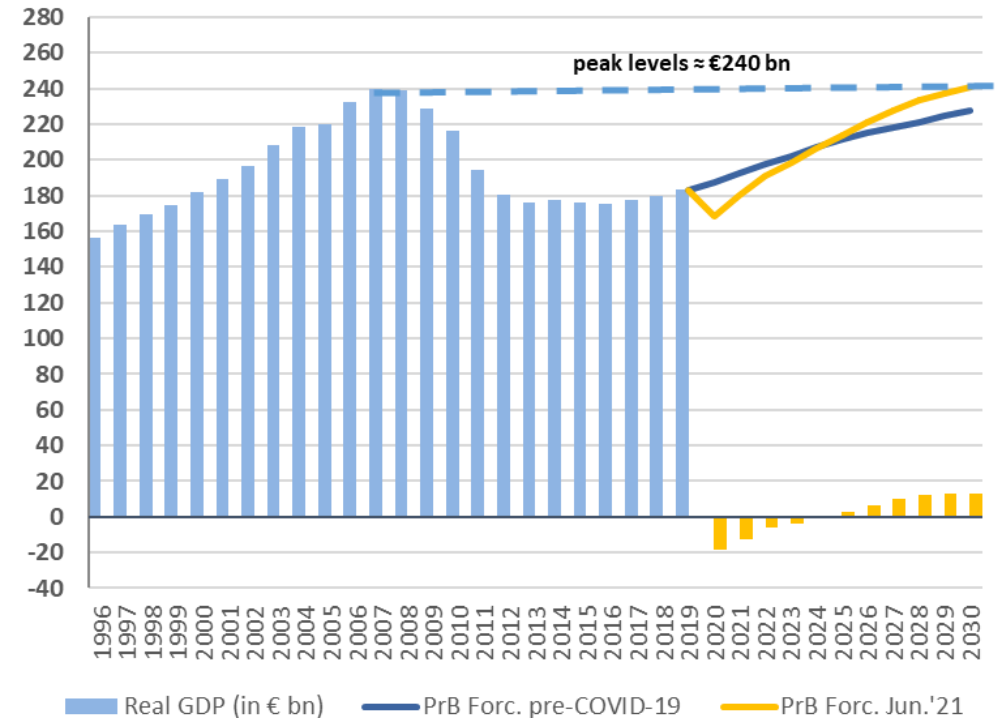
Real GDP: First Estimate vs Pre - Covid forecasts (€ bn)

GDP (in value terms) never returns to its pre-COVID trajectory



Real GDP: Final Estimate vs Pre - Covid forecasts (€ bn)

GDP will exceed its pre-COVID trajectory by 2025



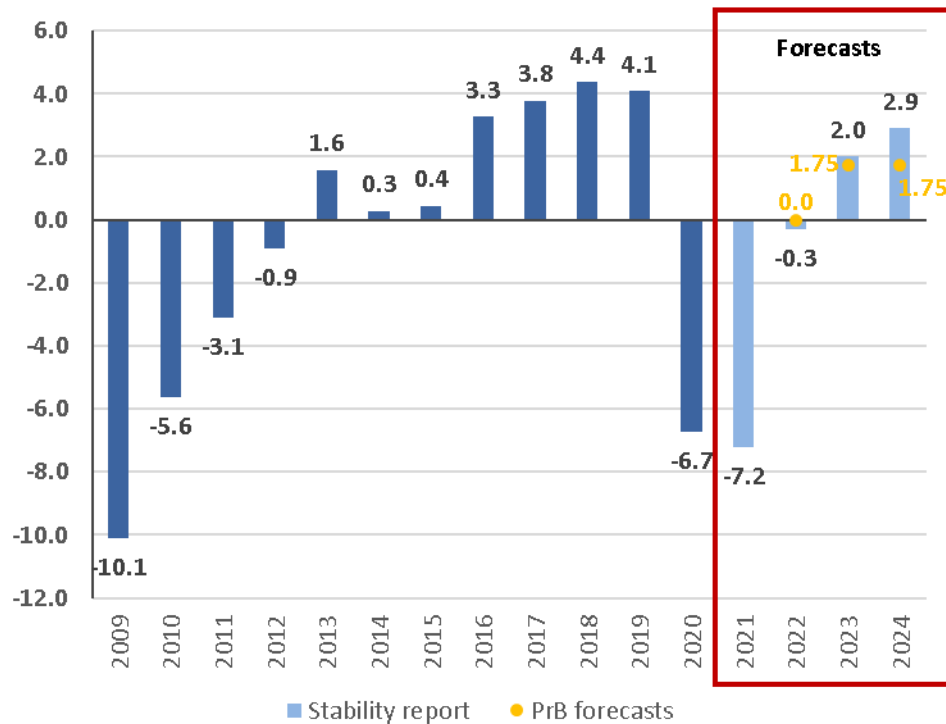
Drivers of Optimism: (I) Fiscal Rationalisation



General Government Primary Balance

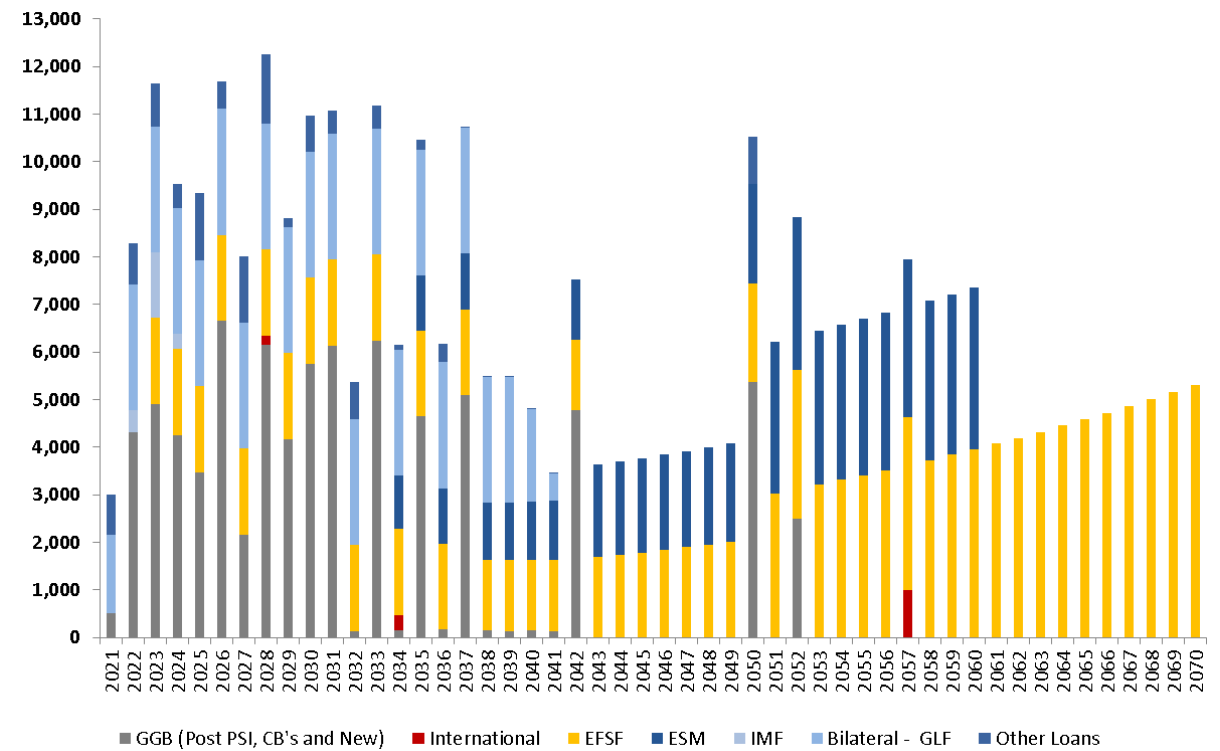
(ESA definition, % of GDP)

2009 – 2020 excl. support for financial institutions)



Bonds & Loans Maturities¹

(as of 15 June 2021, € mn)



Note: 1) figures do not include T bills and repos.

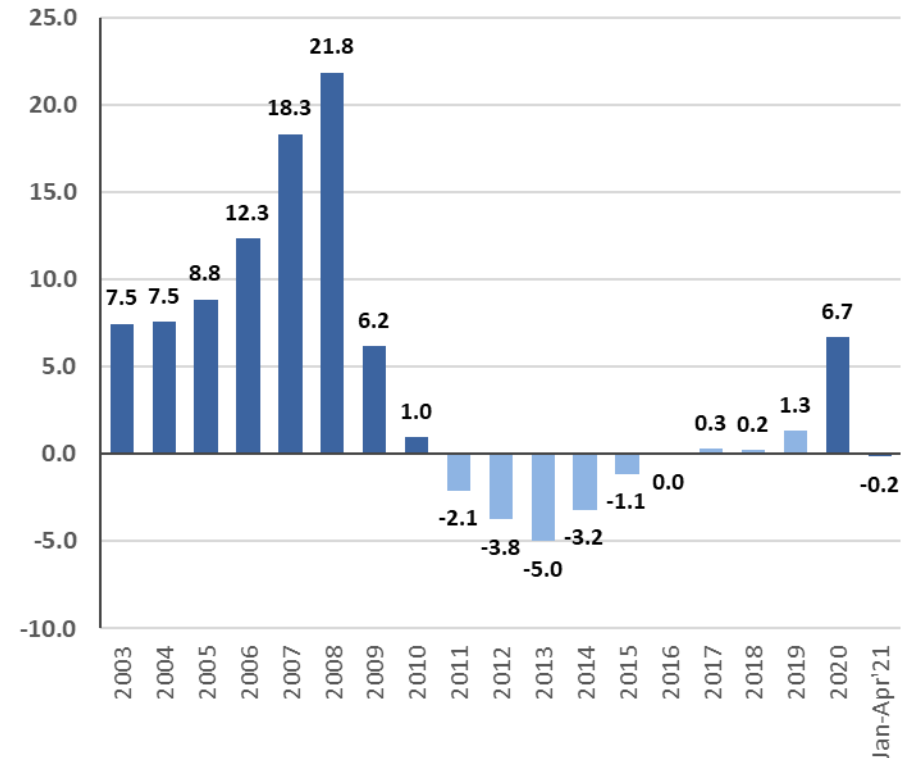
Drivers of Optimism: (II) Lower funding costs & Credit expansion



10 - year yield
(Generic bond yield in %)



Credit to domestic Non financial Corporations ^{1,2}
(net flows in € bn)



Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. 2) Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments.



Driver of Optimism: (III) Total funding & EU Support



- ✓ Total amount of €87bn of funding for the period 2021 - 2027

NATIONAL DEVELOPMENT PROGRAMME [NDP, 2021-2025] (€ bn)	
Sectoral Programmes (68.35%), of which:	6.8
Ministry of Infrastructure and Transport	2.6
Ministry of Maritime Affairs and Insular Policy	0.9
Ministry of Development	0.9
Ministry of Education	0.6
Ministry of Interior	0.5
Ministry of Digital Governance	0.4
Ministry of Environment and Energy	0.3
Ministry of Health	0.2
Ministry of Culture & Sports	0.2
Ministry of Labour and Social Affairs	0.1
Ministry of Justice	0.0
Ministry of Tourism	0.1
Other Sectoral Programmes	0.2
Regional Programmes (22.5%)	2.3
Continuance of specific programmes (North & South Aegean, Athens Municipality)	0.2
Technical assistance programme	0.0
Reserve	0.8
TOTAL	10

“Next Generation EU” – Greece 2.0 plan: Recovery & Resilience Facility, 2021 - 2026

(bn €)

Main Pillar	Grants	% of total	Loans	Total Grants & Loans
1. Green Transition	6.2	34%		
2. Digital Transformation	2.2	12%		
3. Employment skills and social cohesion	5.2	28%		
4. Private investment & transformation of the economy	4.9	26%		
TOTAL	18.4⁽¹⁾	100%	12.7	31.2

NATIONAL STRATEGIC REFERENCE FRAMEWORK, 2021-2027 (bn €)

European Regional Development Fund	10.8
European Social Fund	5.6
Just Transition Fund	1.4
Cohesion Fund	3.0
European Maritime, Fisheries and Aquaculture Fund	0.4
Total amounts from European Funds	21.2
+ National contribution	5.5
TOTAL FUNDS	26.7

COMMON AGRICULTURAL POLICY [2021 - 2027]

(€ bn, resource allocation estimates)

Direct payments	14.5
Rural development	4.4
Market measures	0.4
TOTAL	19.3

Note: (1) “The total amount of resources included in Greece 2.0 amount to EUR 30.5 bn € up to 2026, out of which grants are estimated at EUR 17.8 bn € and loans up to 12.7 bn €. Note that investments and reforms of 18.4 bn € have been budgeted so as to ensure the absorption of grants.” MinFin, Stability Programme 2021, April 2021 p.27.

“The cost of all projects in the plan amounts to EUR 31.164 billion, of which EUR 17.770 billion is foreseen to be financed from non-repayable financial support and EUR 12.728 billion from loans up to 2026.” Commission Staff Working Document 17.6.2021

https://ec.europa.eu/info/system/files/com_328_6_swd_en.pdf





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“Next Generation EU” – Greece 2.0 plan: Total investment resources

	Recovery & Resilience Facility - RRF Budget (mn €)	Mobilised investment Resources (mn €)
Green Transition		
1.1 Power up	1200	2348
1.2 Renovate	2711	5203
1.3 Recharge and Refuel	520	1305
1.4 Sustainable use of resources, climate resilience and environmental protection	1763	2726
Pillar 1	6194	11582
Digital Transformation		
2.1 Connect	522	582
2.1 Modernise	1281	1303
2.1 Digitalisation of businesses	375	475
Pillar 2	2178	2360
Employment skills and social cohesion (Health, Education , Social protection)		
3.1 Increasing job creation and participation in the labour market	776	776
3.2 Education, vocational education, training and skills	2311	2395
3.3 Improve resilience, accessibility and sustainability of healthcare	1486	1486
3.4 Increase access to effective and inclusive social policies	611	611
Pillar 3	5184	5268
Private investment and transformation of the economy		
4.1 Making taxes more growth friendly and improving tax administration and tax collection	187	215
4.2 Modernise the public administration, incl. through speeding up the implementation of public investments improving the public procurement framework, capacity building measures & fighting corruption	189	189
4.3 Improve the efficiency of the justice system	251	464
4.4 Strengthen the financial sector and capital markets	21	20
4.5 Promote research and innovation	444	612
4.6 Modernise and improve resilience of key economic sectors	3743	7233
4.7 Improve competitiveness and promote private investment and exports	5	5
Technical Assistance	40	40
Pillar 4	4880	8778
Grants	18436	27988
Loans	12728	31819
Total Investment Resources	31164	59807

Note: “The total amount of resources included in Greece 2.0 amount to EUR 30.5 bn € up to 2026, out of which grants are estimated at EUR 17.8 bn € and loans up to 12.7 bn €. Note that investments and reforms of 18.4 bn € have been budgeted so as to ensure the absorption of grants.” MinFin, Stability Programme 2021, April 2021 p.27.

“The cost of all projects in the plan amounts to EUR 31.164 billion, of which EUR 17.770 billion is foreseen to be financed from non-repayable financial support and EUR 12.728 billion from loans up to 2026.” Commission Staff Working Document 17.6.2021
https://ec.europa.eu/info/system/files/com_32_8_6_swf_en.pdf

Greece 2.0 plan: Key Investments & Reforms

Investments

- ✓ **Upgrading energy efficiency of buildings** for households, firms & the public sector
- ✓ Investments in energy storage, electric charge points, batteries, electric vehicles
- ✓ Improving **electric interconnectivity of islands**
- ✓ National **reforestation plan, biodiversity** & strengthening of **civil protection**
- ✓ **Urban plans & strategic urban regeneration**
- ✓ **5G infrastructure, fast broadband connections, fiber optic infrastructure** in buildings, **submarine fiber cables**
- ✓ **Digitisation of the public sector** with emphasis on archives, interoperability of IT systems & quality service to firms & citizens
- ✓ **Revenue-enhancing digitisation of tax authorities** & real-time **interconnection with firms**
- ✓ **Strong incentives for private investment** (green, digital transformation, innovation, extroversion, economies of scale)
- ✓ **Public-Private Partnerships** in new, large infrastructure projects (irrigation, railways)
- ✓ **Investments in culture, tourism & the agri-food sector** as drivers of growth
- ✓ **Training, upskilling & reskilling** of the workforce (with emphasis on digital skills)
- ✓ Large investments in **health, education & social inclusion** of vulnerable groups

Reforms

- ✓ Reform of the **licensing procedure** for **renewable energy sources**
- ✓ **Promotion of e-mobility** through a modern institutional framework
- ✓ Preparation of **urban plans**, establishment of new spatial planning for **renewables, industry, tourism & aquaculture, & marine spatial planning**
- ✓ Action plan for the provision of "customer-centric" **digital services by the public administration**
- ✓ **5G technology** & development of innovative digital services
- ✓ **Transition to fast broadband**
- ✓ **Digital transformation of SMEs**
- ✓ Reforms to promote **basic & applied research**
- ✓ Reforms to **simplify the business environment & licensing**, improve the **ease of doing business, support investment & trade facilitation**
- ✓ Improve the efficiency of the **justice system**, including digitalisation & administration reform
- ✓ Incentivizing **economies of scale** through **increasing the size of enterprises**
- ✓ **Artificial intelligence & big data** deployed against tax evasion
- ✓ **Modernising & upgrading Greece's upskilling & reskilling system**
- ✓ **Labour law reform**
- ✓ Reform of **active & passive labour market policies**, incl. to increase female labour force participation
- ✓ **Digitisation of education**, both equipment & curricula
- ✓ **Primary health care reform & digital telemedicine service**
- ✓ **Training against discrimination** in the public & private sector

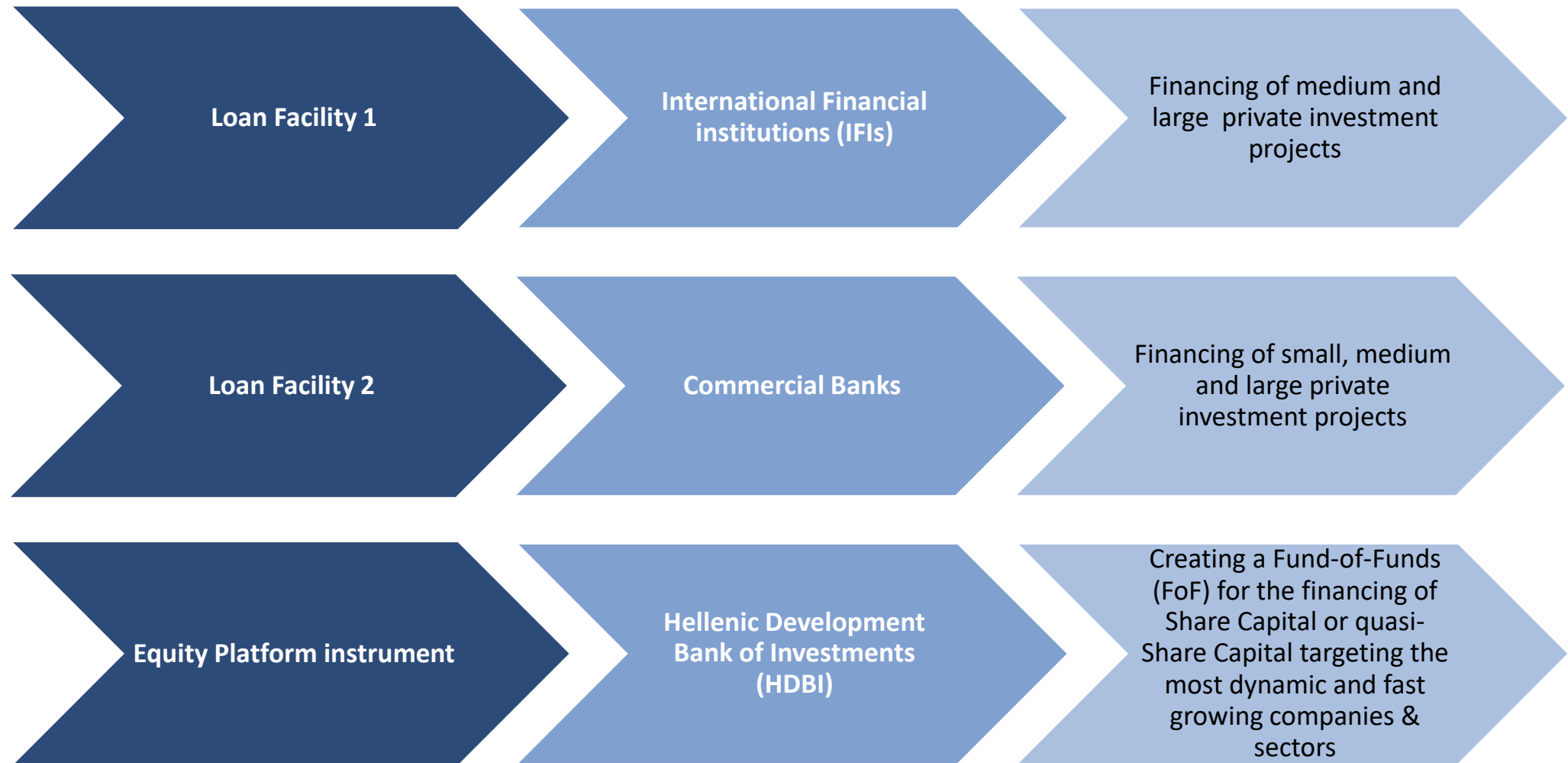
Greece 2.0 plan: Loans / Main principles



- ✓ € 12.7 bn financed from RRF loan envelope
- ✓ Loans to be provided through International Financial Institutions (IFIs) and the banking system
- ✓ Exclusively for private sector, based entirely on market criteria, with no state involvement
- ✓ Maximum RRF funding set at 50% of project value
- ✓ Co-financing, no state guarantees
- ✓ Participation of banks and investors (at least 30% and 20% respectively)
- ✓ Funding only projects under five eligibility criteria, based on Pissarides Committee priorities



Greece 2.0 plan: Loans / Distribution channels





The plan aims to enhance growth, productivity, job creation and economic and social resilience

Study by Bank of Greece concludes that Greece 2.0 will lead to:

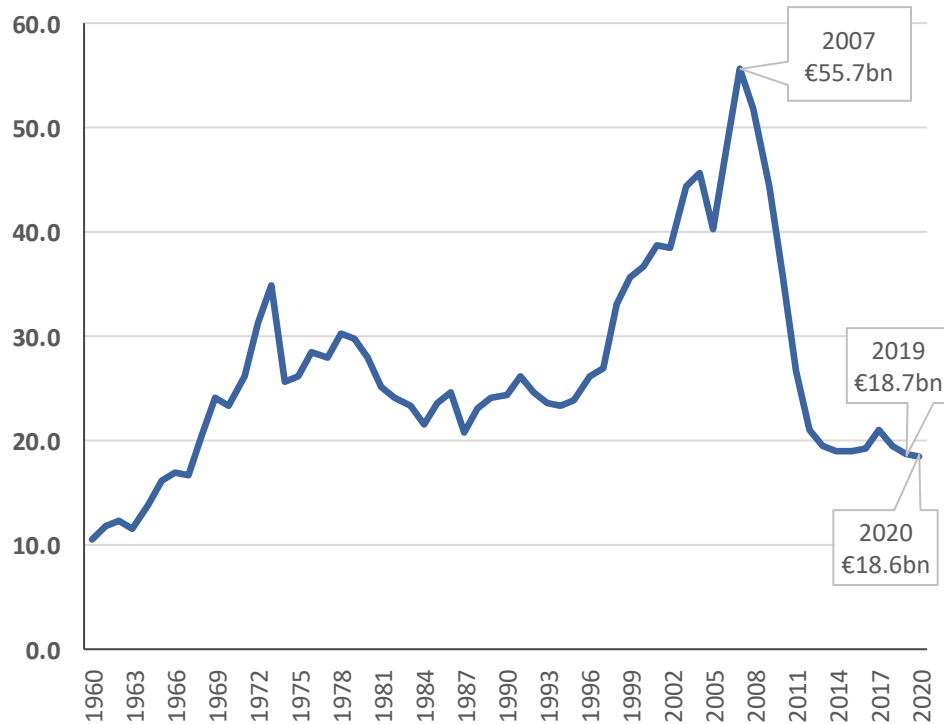
- ✓ Increase in real GDP by 7% by 2026, 30pp cumulatively in 2021 – 2026
- ✓ Creation of 180,000 new job
- ✓ In 2021 -2026, the positive economic impact derives mainly from increased private investment financed by loans. Increased public investment, financed by grants also makes a significant contribution.
- ✓ Investment by private sector is estimated to grow by 20%
- ✓ GDP and employment gains permanent over the long term, driven primarily by reforms and higher productivity



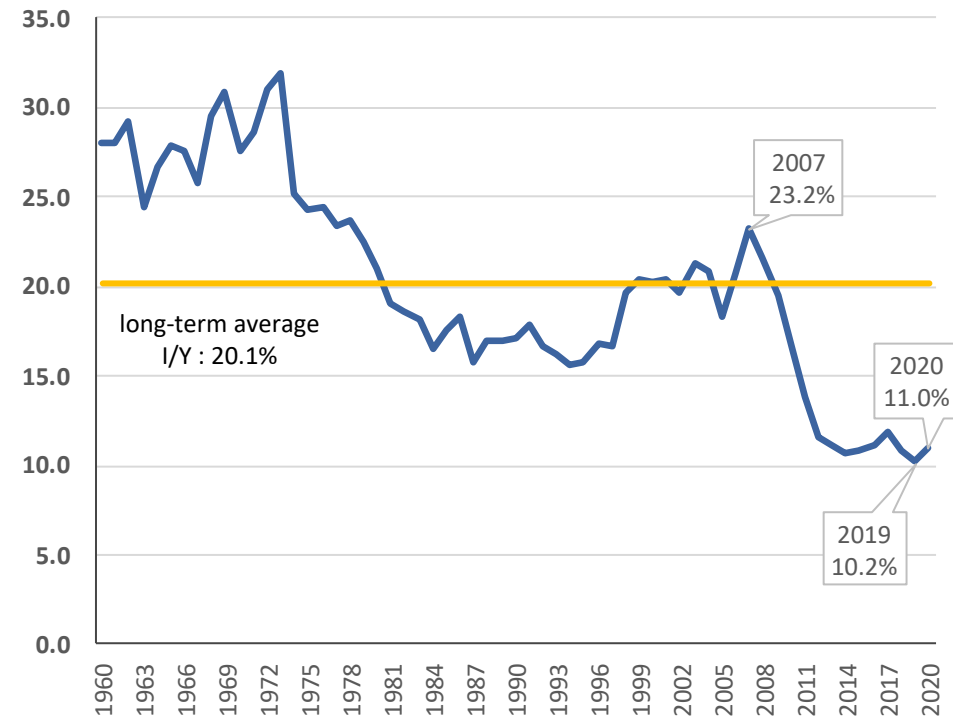
From a Peak of €55.7bn to a Trough of €18.7bn in 2019...and €18.6bn in 2020, despite the Shock



Gross Fixed Capital Formation
(€bn, constant prices 2015, nsa data)



Investments as a Share of GDP (I/Y)
(%, constant prices 2015, nsa data)



The Fundamentals of Capital Accumulation



The evolution of net Capital Stock (K) is a function of new Investments (I) and the level of Depreciation (δ) of the Capital Stock:

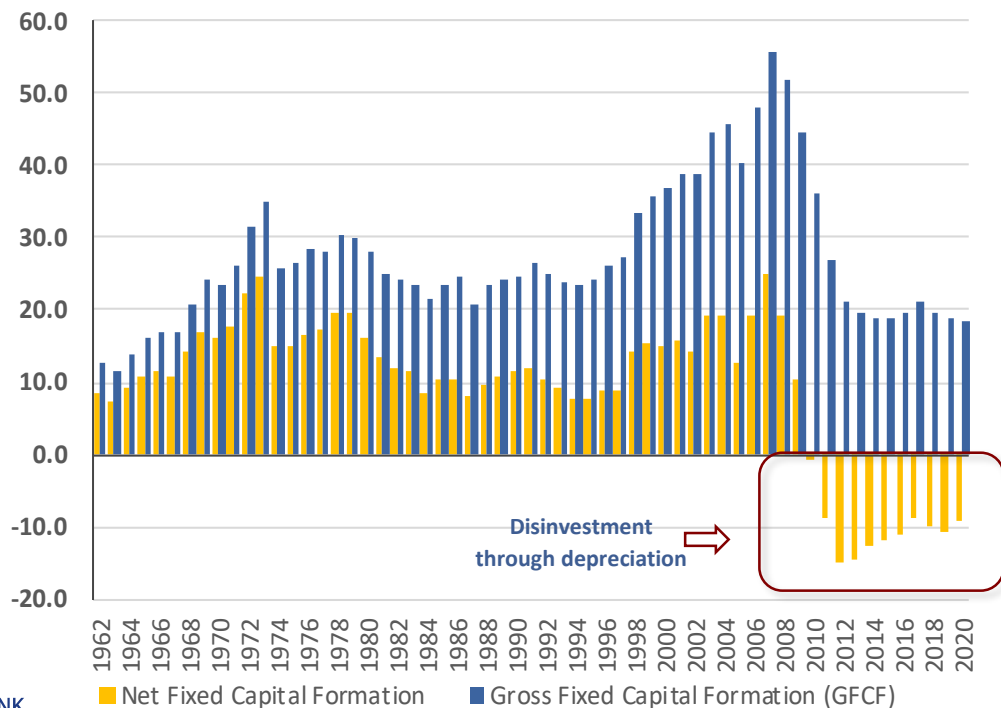
$$K_{(t)} = K_{(t-1)} + I_{(t)} - \delta K_{(t)}$$

eq.1

Since 2010 a net disinvestment has taken place in the Greek economy, as a result of the negative balance between new investment and depreciation rates, causing the net capital stock to fall

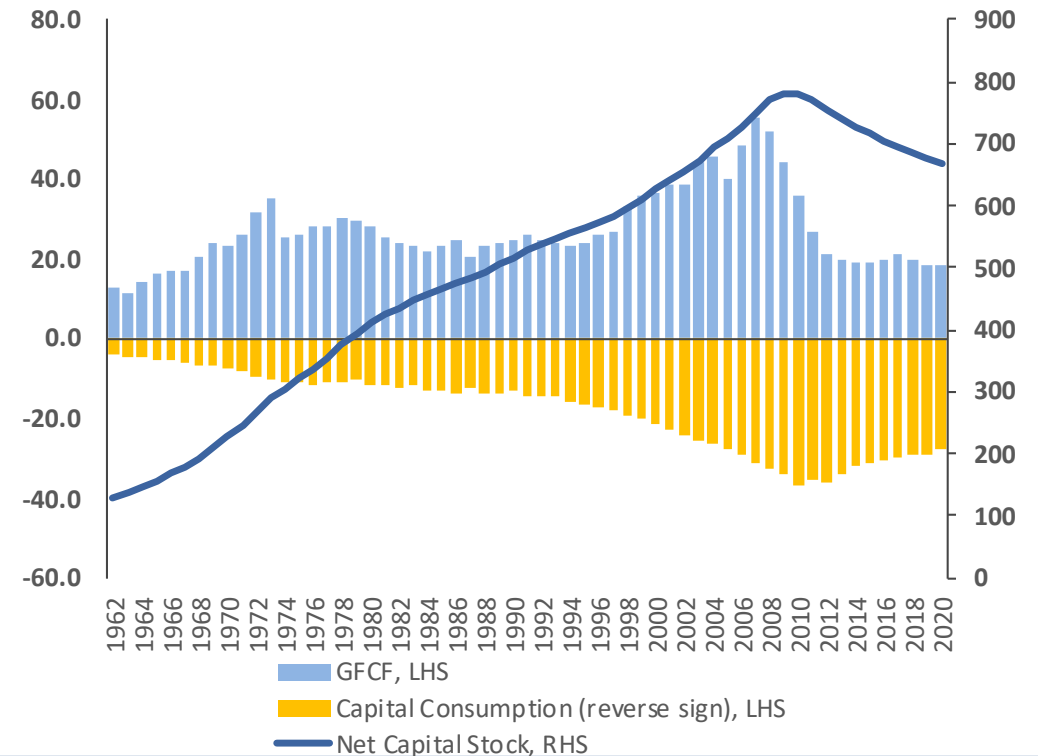
Net vs Gross Fixed Capital Formation

(€bn, constant prices 2015, nsa data)



Capital Stock, Investment Flow & Consumption of Fixed Capital

(€bn, constant prices 2015, nsa data)



The equilibrium level of Investments



The dynamics of capital formation are driven by:

$$K_{(t)} = K_{(t-1)} + I_{(t)} - \delta K_{(t)}$$

eq.1

From the above the equilibrium level of Investments as % of GDP is given by:

$$\frac{I}{Y} = (\delta + g) \frac{K}{Y}$$

where, $\delta = 4.18\%$ and $\frac{K}{Y} = 3.53$

eq.2

(I) : Gross fixed capital formation at 2015 prices

(Y): Real Gross Domestic Product,

(g): Potential real GDP growth rate,

(K): Net capital stock at 2015 prices,

(δ): Depreciation rate of net capital stock to the fixed capital consumption at 2015 prices



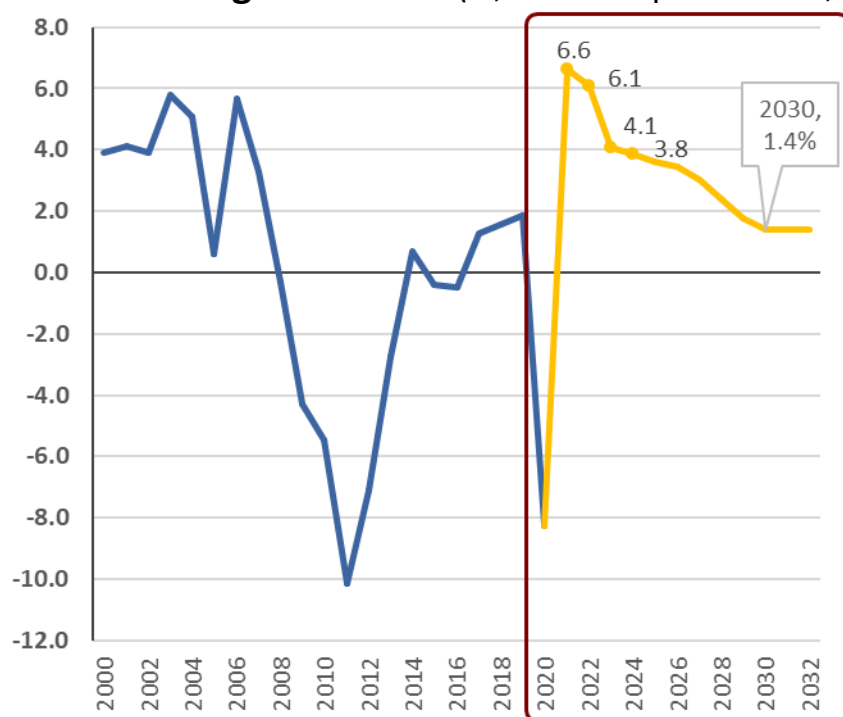
The EU Funding Boost Towards a Steady State I/Y in 2030: The I/Y Steady State estimate



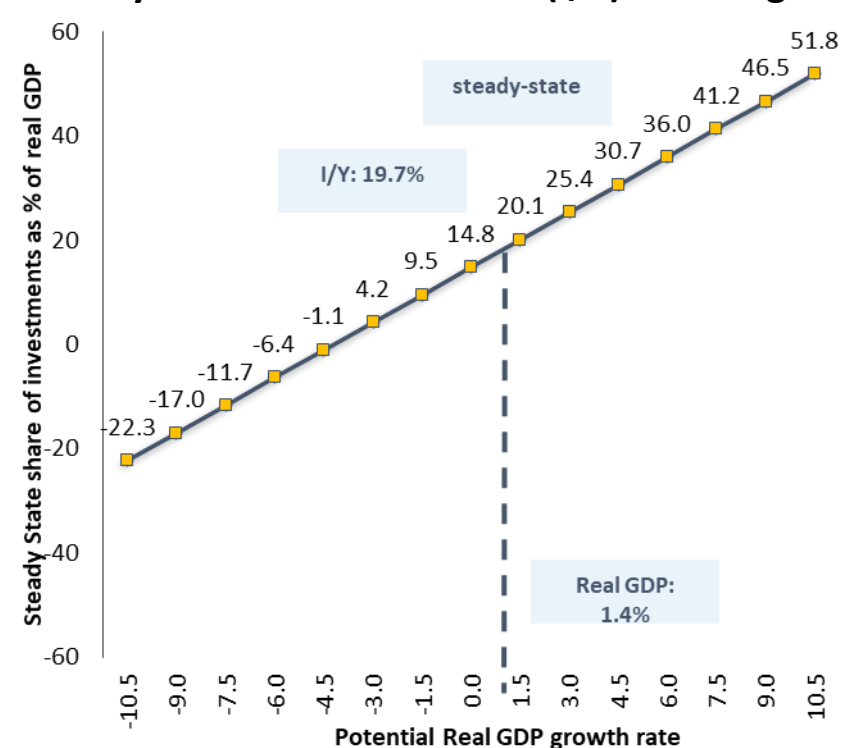
After the Real GDP shock effect in 2020-2022 growth rates, the Greek economy is assumed to achieve an average growth rate of 3.2% in 2023-2029 before settling down to a long-term trend growth around 1.4%. Investments as a share of GDP (I/Y) in 2021-2026, are based on assumptions incorporating the boost of the unprecedented levels of EU funding during this period.

Based on eq.2, the Steady-state investment share after 2030 is estimated at 19.7% of GDP.

Real GDP growth rate (% , constant prices 2015, nsa)



Steady state investment rate (I/Y) vs GDP growth rate



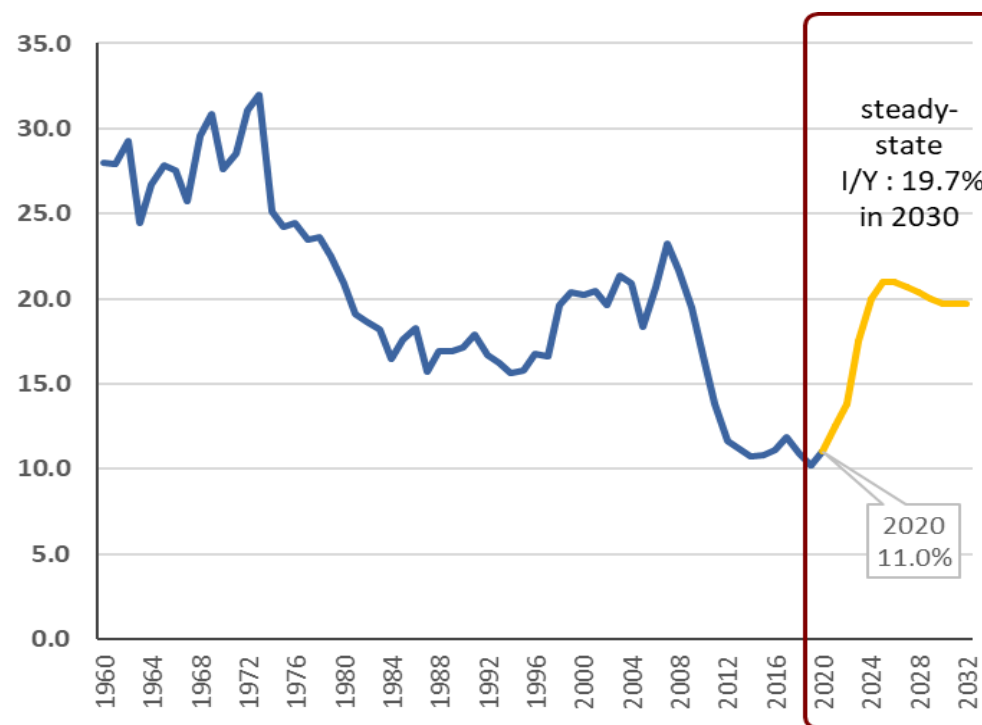
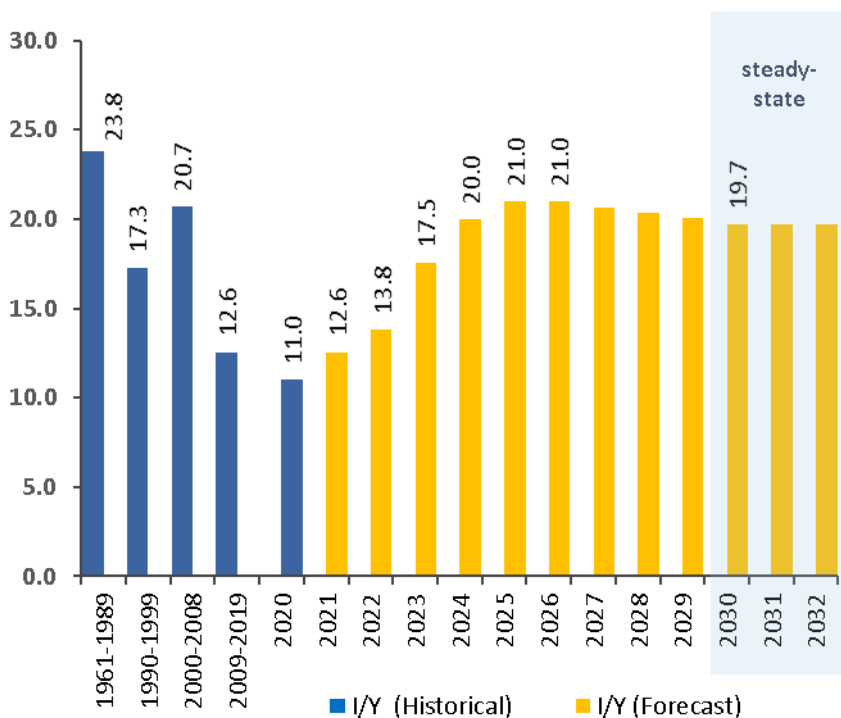
The EU Funding Boost Towards a Steady State I/Y in 2030: The I/Y medium term estimate



In 2020, the investment environment remains stable despite the shock. In 2021-2026, the unprecedented levels of EU funding is expected to boost investment in Greece (different assumptions in each year based accordingly on the historical performance of I/Y and the impact of EU funding). In 2027-2030, a linear convergence to steady-state I/Y is assumed.

Investments as a Share of GDP (% , constant prices 2015, nsa data)

the I/Y ratio creates a “U” shape



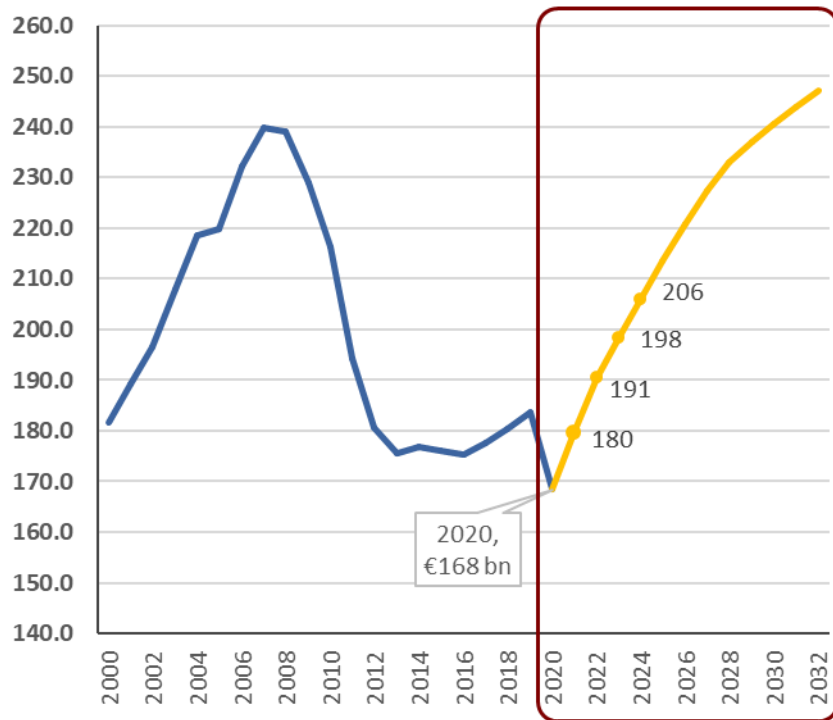
From a Trough of €18.6 bn in 2020 to an average of c. €46 bn after 2023



By having estimated the I/Y ratio and by taking into account our forecasts of Real GDP levels, the Gross Fixed Capital formation (I) levels are calculated.

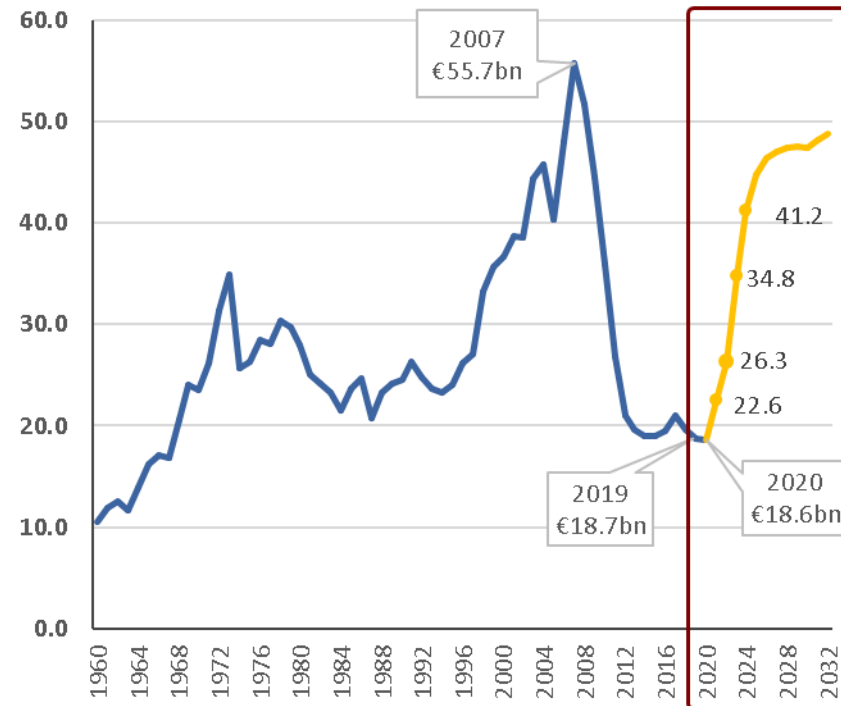
Real GDP level

(€bn, constant prices 2015, nsa data)



Gross Fixed Capital Formation

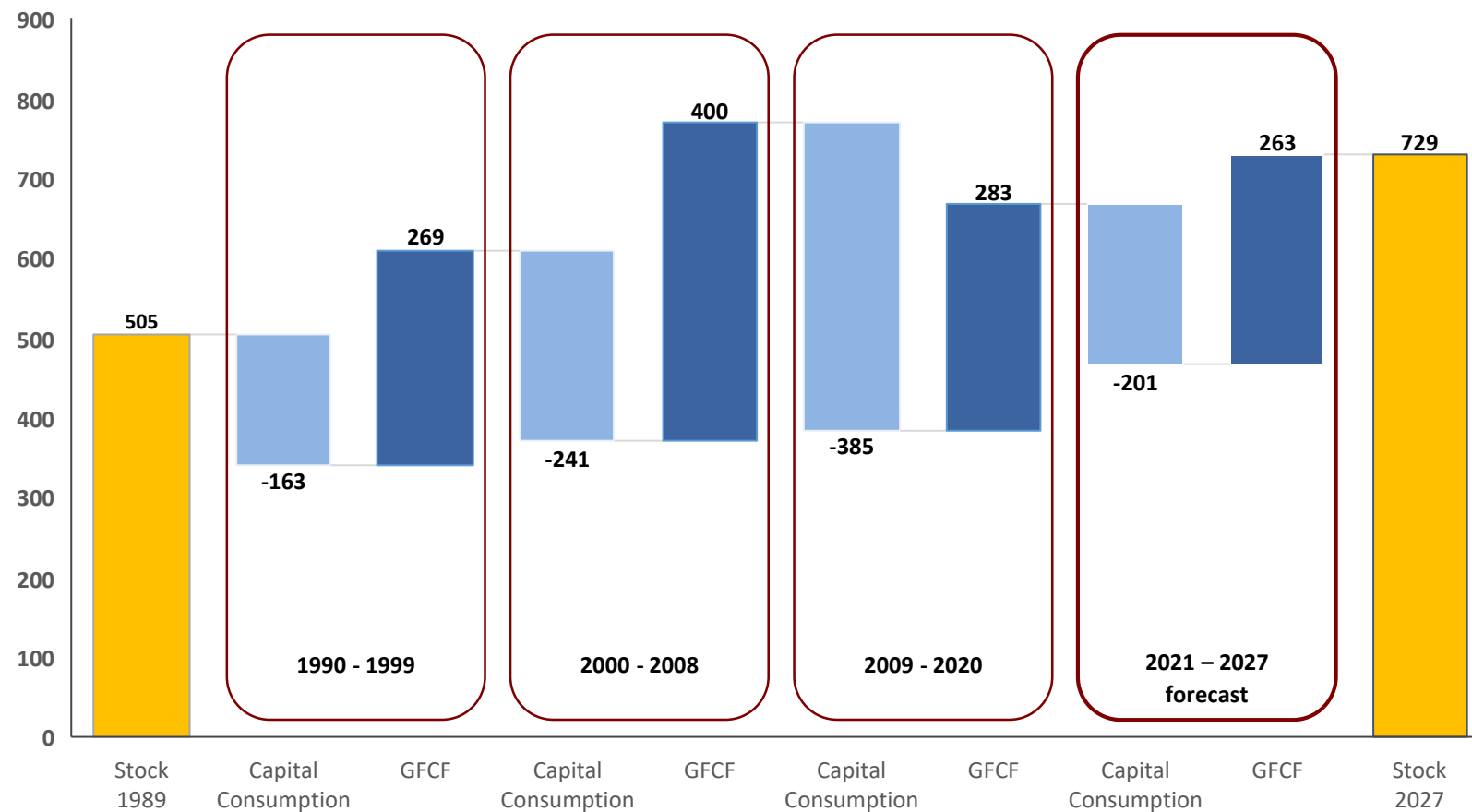
(€bn, constant prices 2015, nsa data)



Macroscopic View: Investments, Depreciation & Capital Stock



Investments & Net capital stock (€bn ,constant prices 2015, nsa data)





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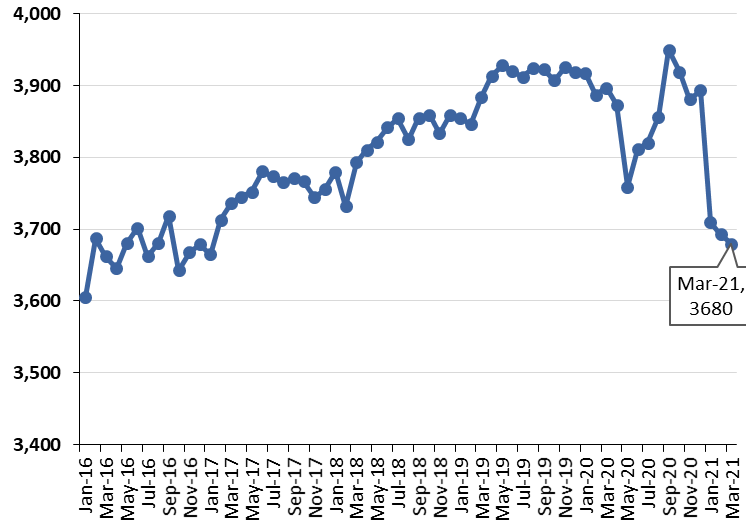
8 Assessing Corporate Distress due to COVID-19 Recession

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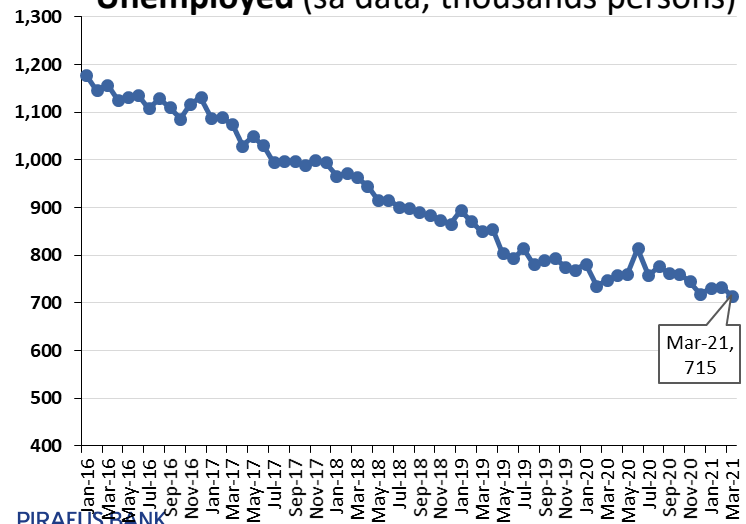


Unemployment Rate: Policy support has kept unemployment on a declining track

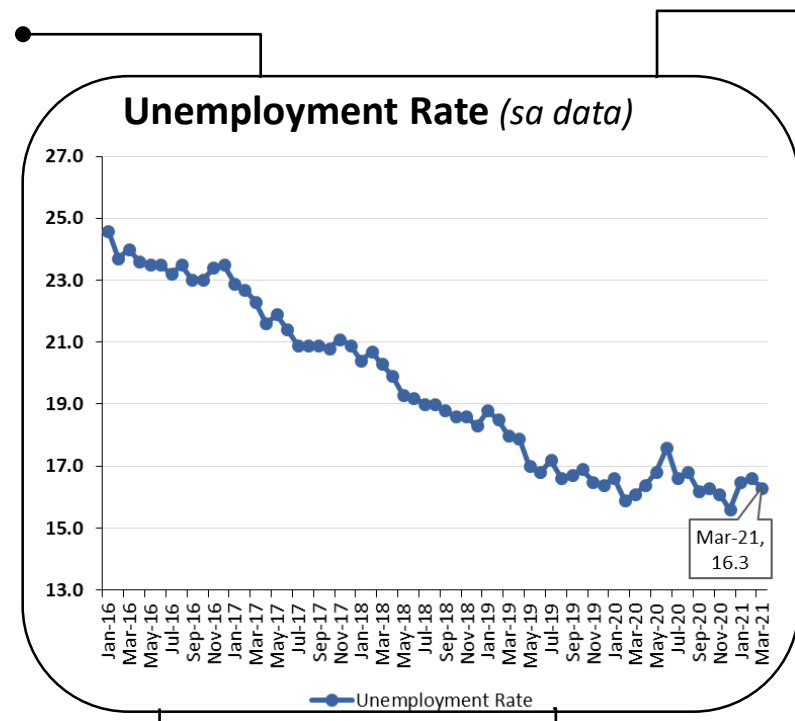
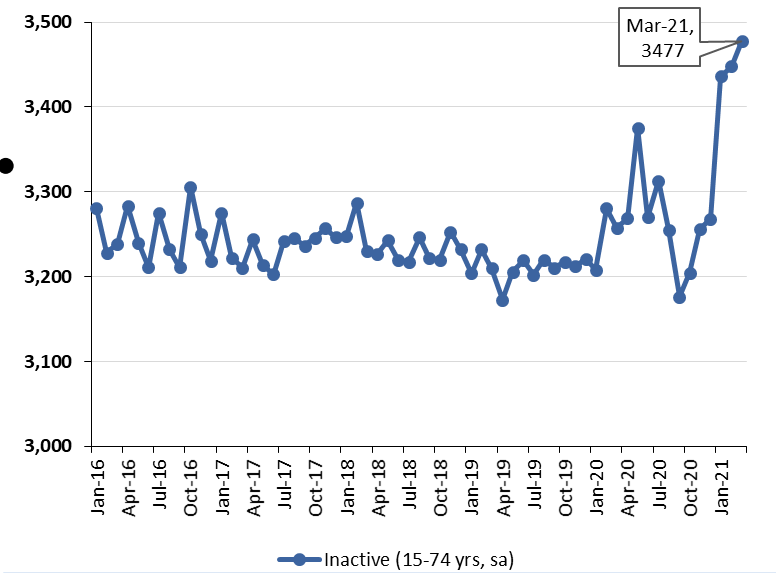
Employed (sa data, thousand persons)



Unemployed (sa data, thousands persons)



Inactive Population (sa data, thousand persons)



Highlights

- ✓ According to Eurostat guidelines, in the light of the COVID-19 pandemic, persons in lay-off are still considered employed persons if the duration of their contract suspension is less than three months or if they receive more than 50% of their salary.
- ✓ Due to the COVID-19 pandemic, several job seekers reported that they were not immediately available to work and therefore, according to the definitions, were classified as economically inactive.

Unemployment rate Outlook: 16.3% in 2021, 15.2% in 2022

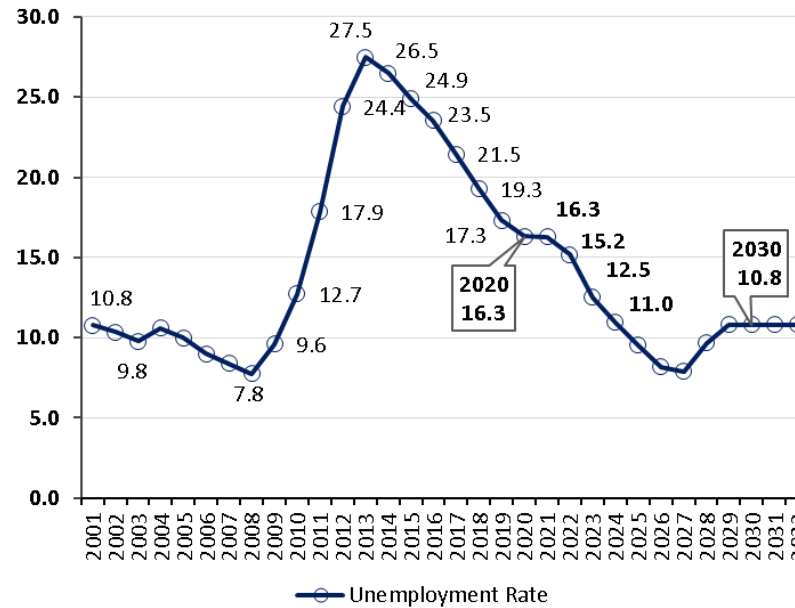


Main Assumptions

- ✓ GDP contracted by -7.8%* in 2020
- ✓ Unemployment rate improved at 16.3% in 2020
- ✓ Convergence to a steady state level of 10.8% by 2030

Note: Our analysis is based on seasonal adjusted data after having isolated the irregular component (i.e UN_tc). We use U.S Census Bureau X-12 ARIMA procedure, in order to produce the trend-cycle time series, which represent the underlying behavior and direction of the series and capture the long-term behavior and the medium-term cycles.

Unemployment Rate (%)



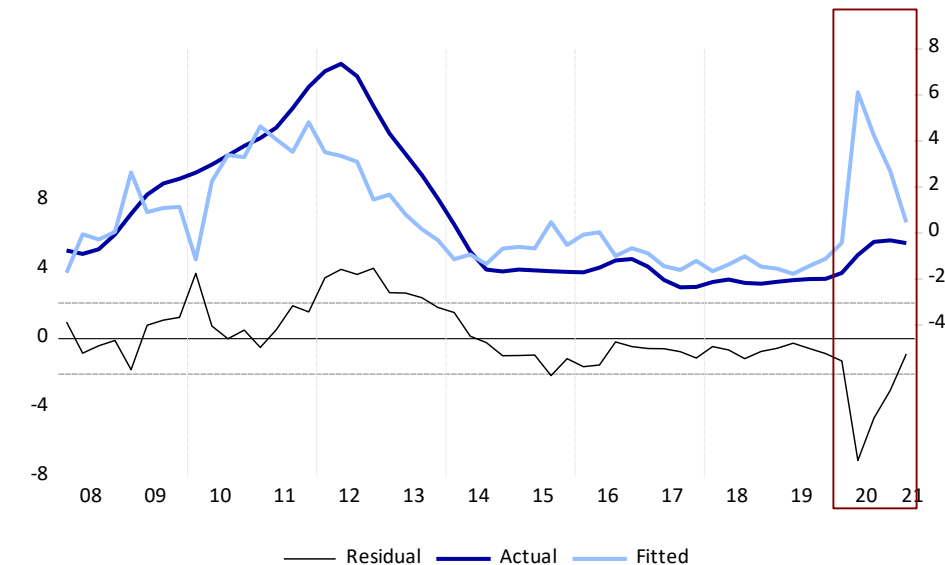
Dependent Variable: UN_TC-UN_TC(-4)
 Method: Least Squares
 Sample (adjusted): 2008Q1 2021Q1
 Included observations: 53 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.661854	0.331689	-1.995403	0.0514
RGDP_GRWTH_BL	-0.489100	0.066709	-7.331888	0.0000

Root MSE	2.025788	R-squared	0.513157
Mean dependent var	0.598525	Adjusted R-squared	0.503611
S.D. dependent var	2.931135	S.E. of regression	2.065128
Akaike info criterion	4.325266	Sum squared resid	217.5023
Schwarz criterion	4.399617	Log likelihood	-112.6196
Hannan-Quinn criter.	4.353858	F-statistic	53.75658
Durbin-Watson stat	0.439731	Prob(F-statistic)	0.000000

	Unemployment rate	Real GDP growth rate
2020	16.3%	-7.8%*
2021	16.3%	6.6%
2022	15.2%	6.1%
2023	12.5%	4.1%
2024	11.0%	3.8%

* Based on the average of the quarterly annual seasonally adjusted growth rates





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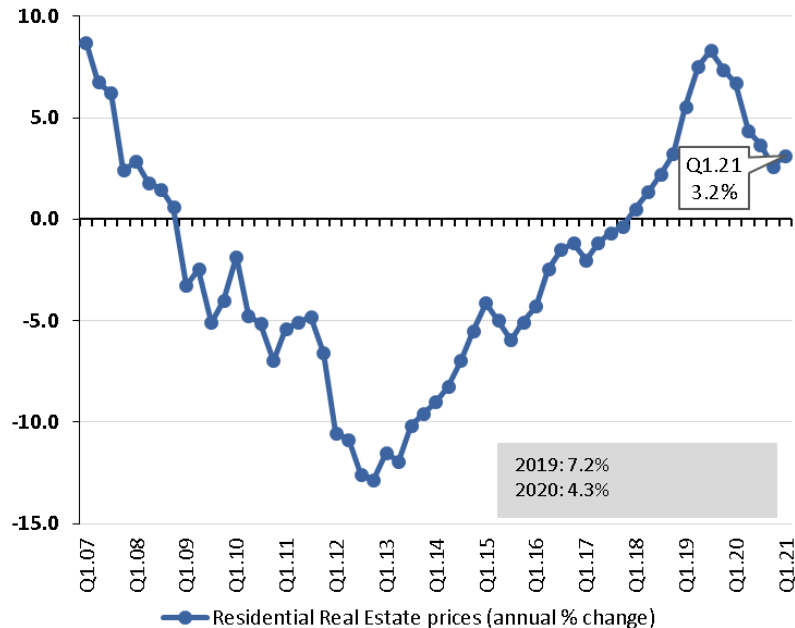


Real Estate: Retains its growth dynamic, despite a record economic contraction



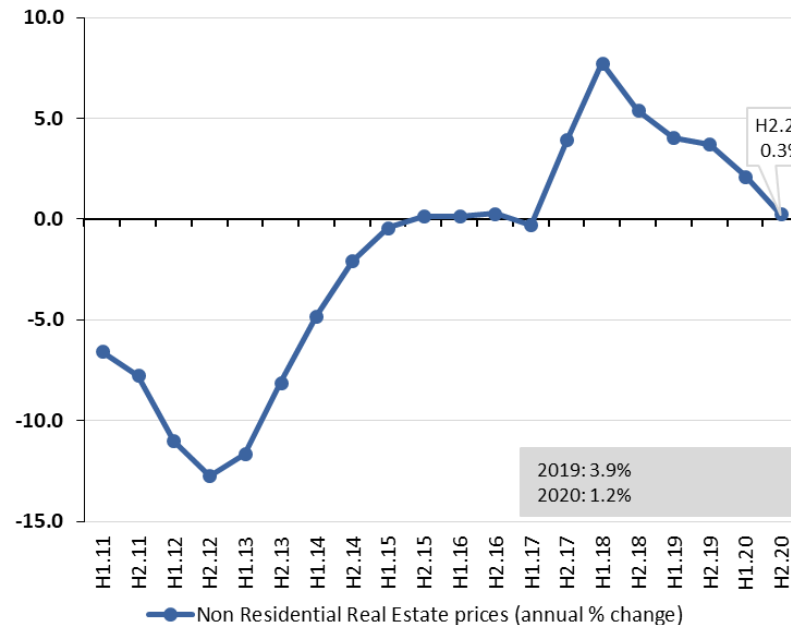
Residential Real Estate Prices

(annual % change)



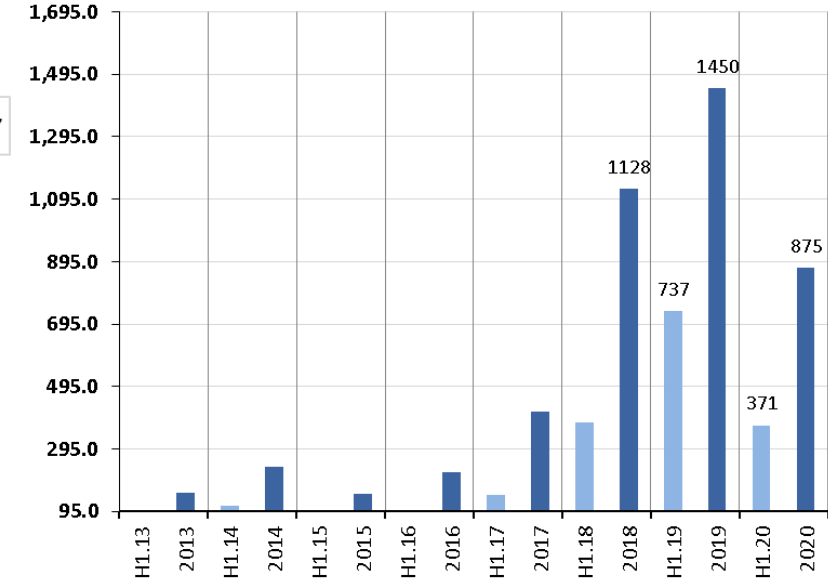
Non Residential Real Estate Prices¹

(annual % change)



Real Estate FDI in Greece²

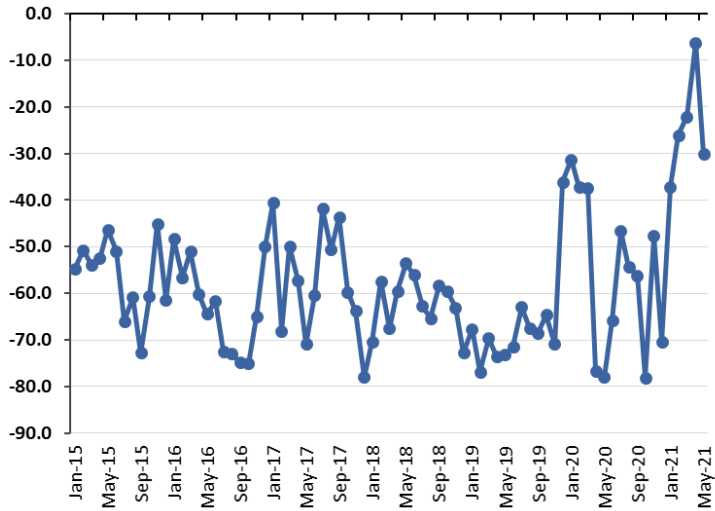
(annual cumulative flows, € mn)



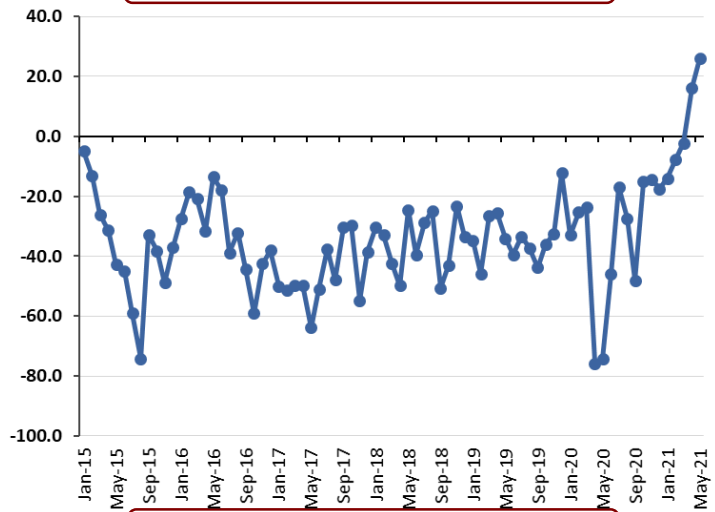
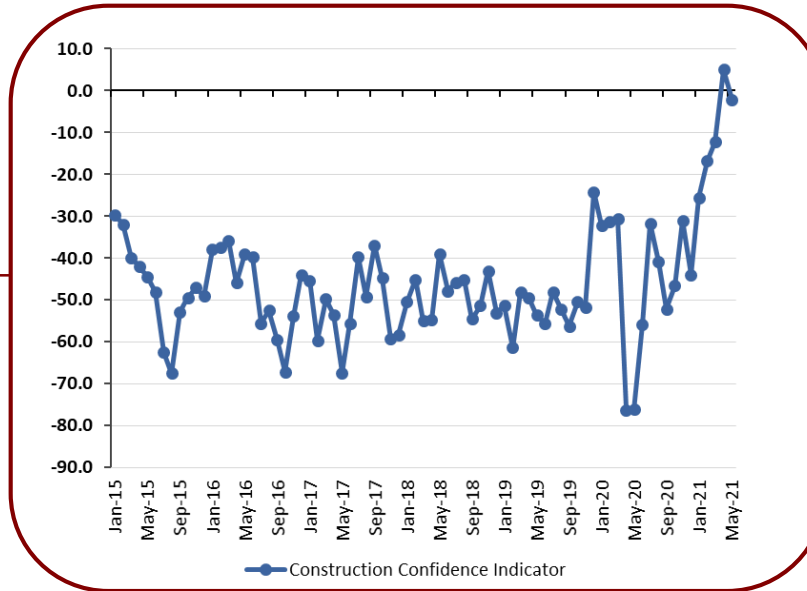
Note: 1) Office Price Index
2) Net Foreign Direct Investment in Greece: Real Estate



Construction Sector: Confidence Indicator affected by COVID only for the duration of the 1st lockdown

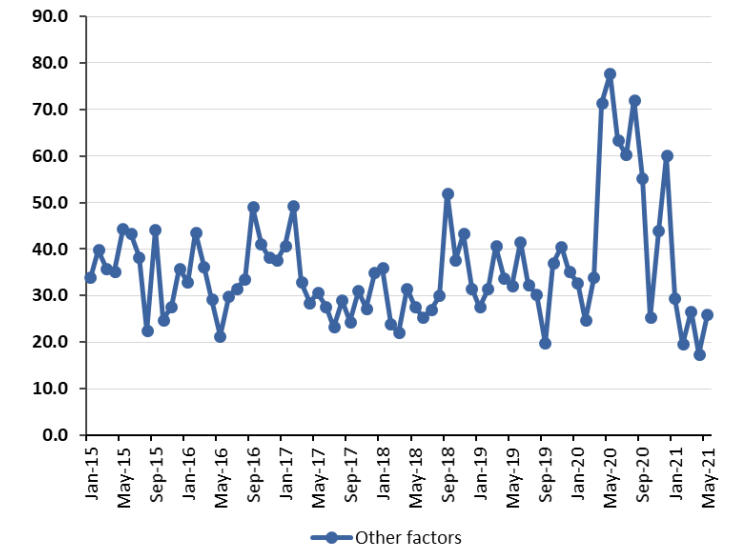


Construction Confidence Indicator



Other factors currently limiting building activity

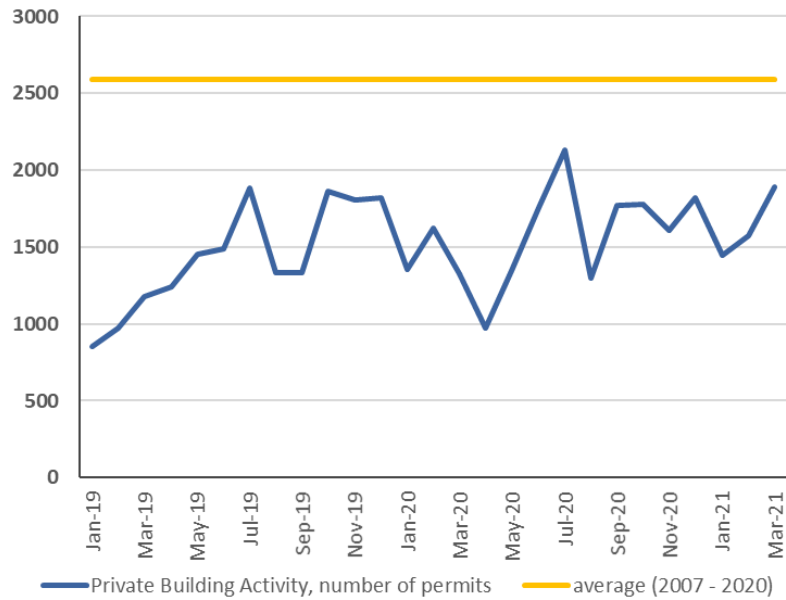
(excl. Insufficient demand, Weather conditions, Shortage of labour force, Shortage of material and/or equipment)



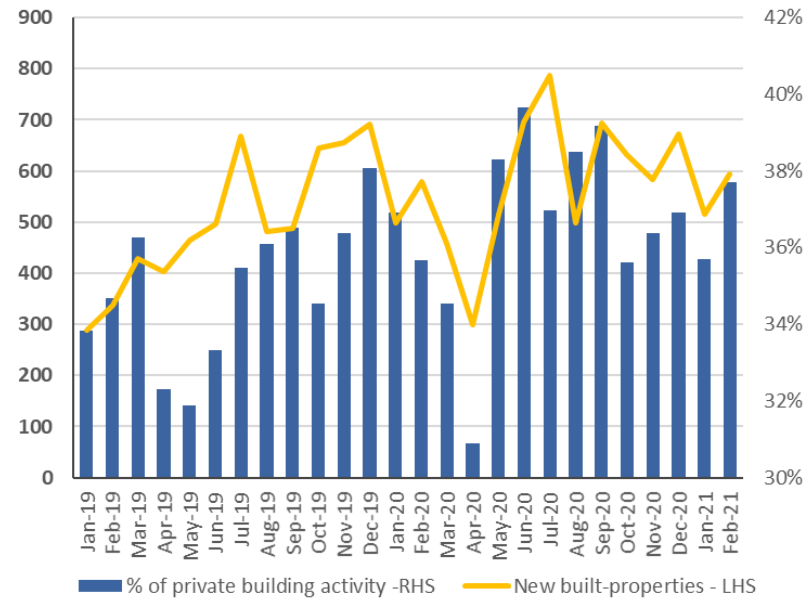
Construction Sector: Activity on the “ground” remains strong!



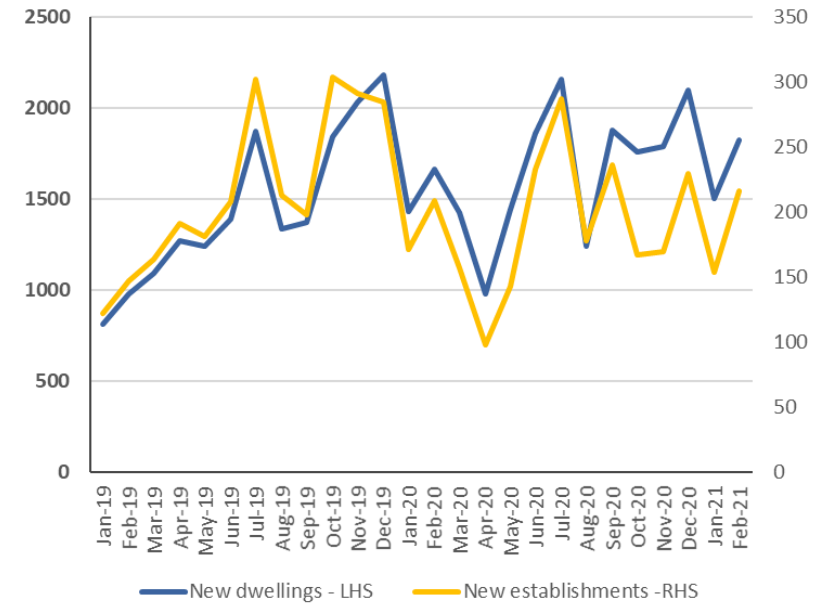
Private Building Activity
(number of permits, nsa data)



New Built-Properties
(number, % of private permits, nsa data)



New Dwellings & New Establishments
(number, nsa data)

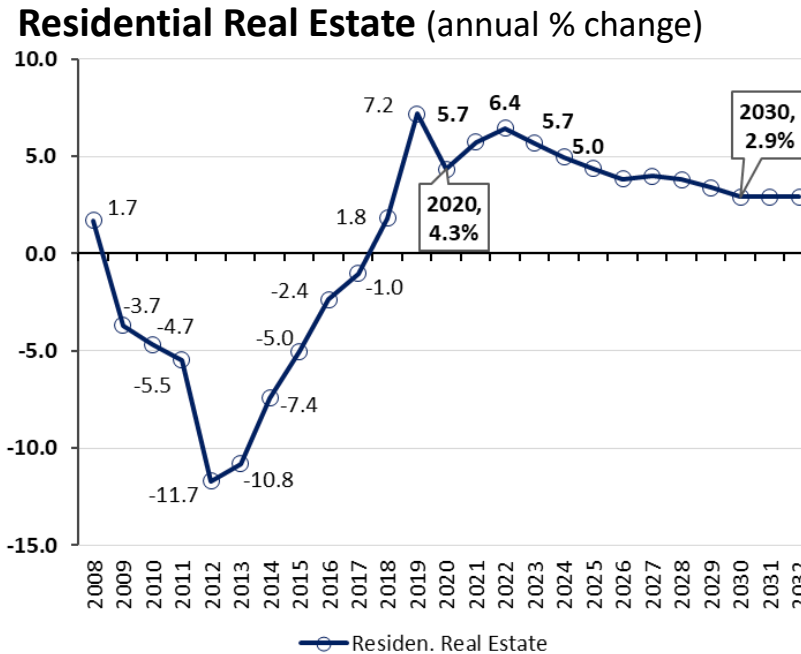


Residential Real Estate Outlook: +5.7% in 2021, +6.4% in 2022



Main Assumptions

- ✓ GDP to increase by 6.6% in 2021
- ✓ Convergence to a steady state level by 2030.

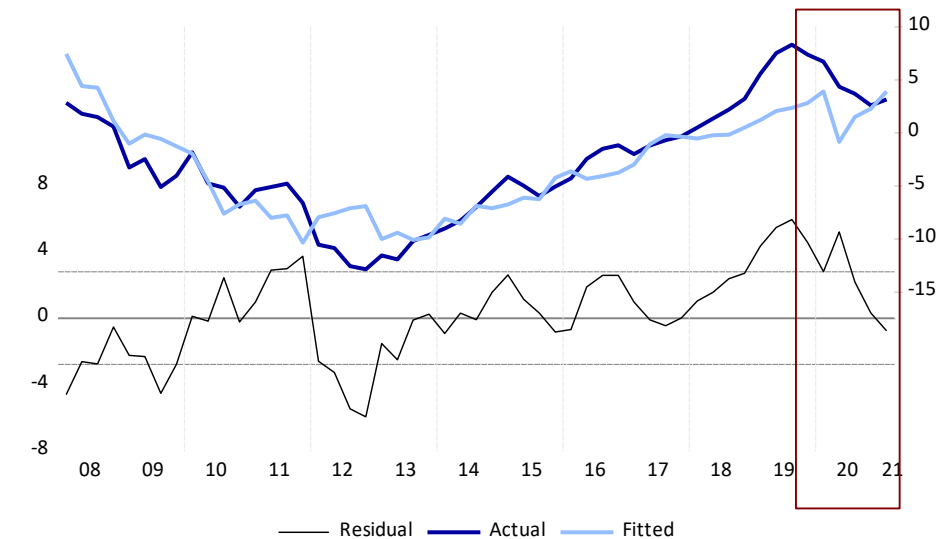


Dependent Variable: RRE_GRWTH
 Method: Least Squares
 Sample (adjusted): 2008Q1 2021Q1
 Included observations: 53 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RGDP_GRWTH_BL	0.462869	0.077900	5.941835	0.0000
RRE_GRWTH(-4)	0.739929	0.061214	12.08760	0.0000
Root MSE	2.736930	R-squared		0.752642
Mean dependent var	-2.747380	Adjusted R-squared		0.747792
S.D. dependent var	5.555680	S.E. of regression		2.790079
Akaike info criterion	4.927022	Sum squared resid		397.0116
Schwarz criterion	5.001373	Log likelihood		-128.5661
Hannan-Quinn criter.	4.955614	Durbin-Watson stat		0.435234

	RRE growth	Real GDP growth rate
2020	4.3%	-7.8%*
2021	5.7%	6.6%
2022	6.4%	6.1%
2023	5.7%	4.1%
2024	5.0%	3.8%

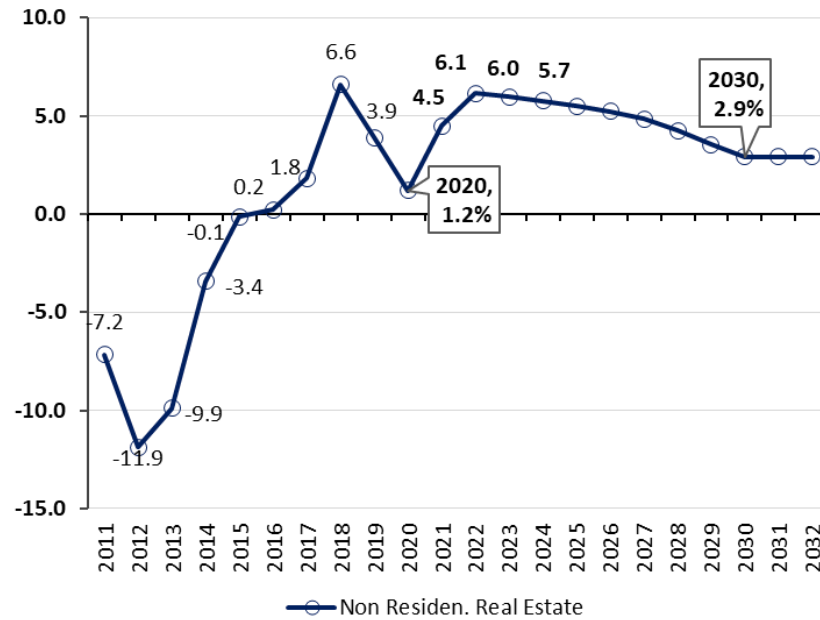
* Based on the average of the quarterly annual seasonally adjusted growth rates



Non-Residential Real Estate Outlook: +4.5% in 2021, +6.1% in 2022



Non Residential Real Estate (annual % change)



	CRE growth	Real GDP growth rate
2020	1.2%	-7.8%*
2021	4.5%	6.6%
2022	6.1%	6.1%
2023	6.0%	4.1%
2024	5.7%	3.8%

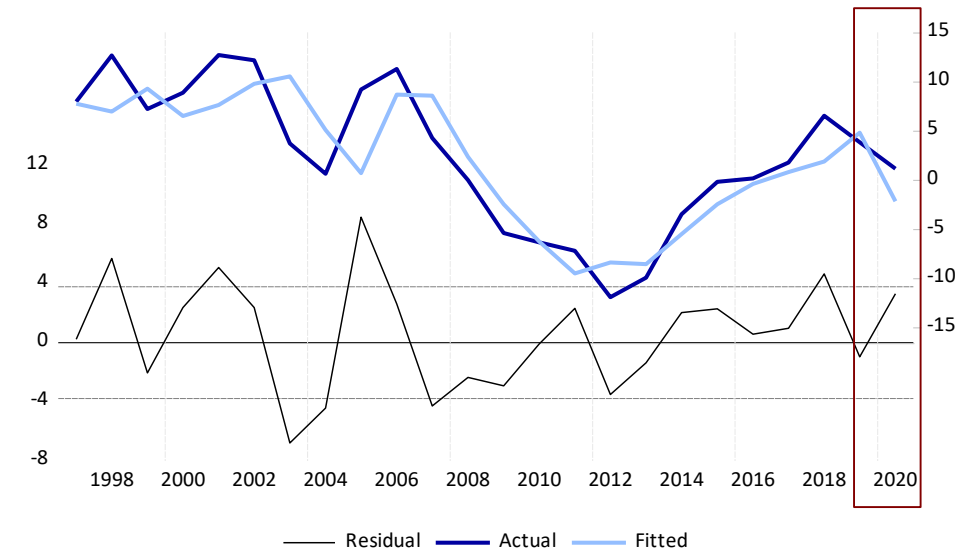
* Based on the average of the quarterly annual seasonally adjusted growth rates

Main Assumptions

- ✓ CRE increased by 1.2% in 2020
- ✓ GDP to increase by 6.6% in 2021
- ✓ Convergence to a steady state level by 2030.

Dependent Variable: CRE_GRWTH
 Method: Least Squares
 Sample (adjusted): 1997 2020
 Included observations: 24 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RGDP_GRWTH_BL	0.568268	0.238041	2.387269	0.0260
CRE_GRWTH(-1)	0.596018	0.136547	4.364934	0.0002
Root MSE	3.630788	R-squared		0.735839
Mean dependent var	2.535217	Adjusted R-squared		0.723832
S.D. dependent var	7.216198	S.E. of regression		3.792234
Akaike info criterion	5.583443	Sum squared resid		316.3829
Schwarz criterion	5.681614	Log likelihood		-65.00132
Hannan-Quinn criter.	5.609488	Durbin-Watson stat		1.900030





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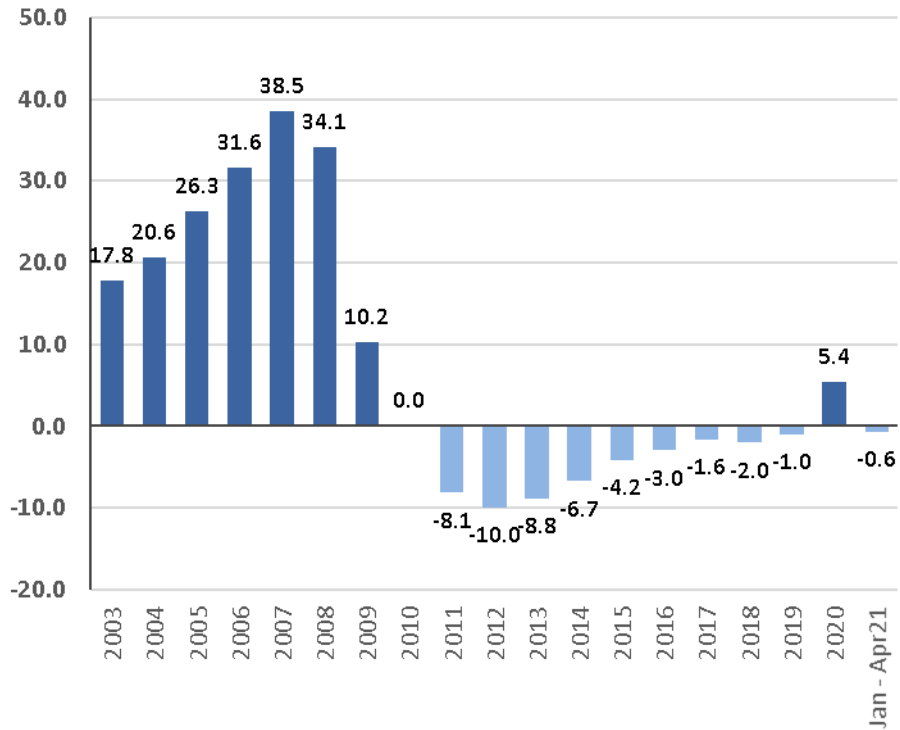
9 SWOT analysis



Private sector credit: Record net credit flows in 2020, have been marginally reversed at the beginning of 2021



Private Sector Credit^{1,2} (net flows, €bn)



Private Sector Credit^{1,2} (annual % change)



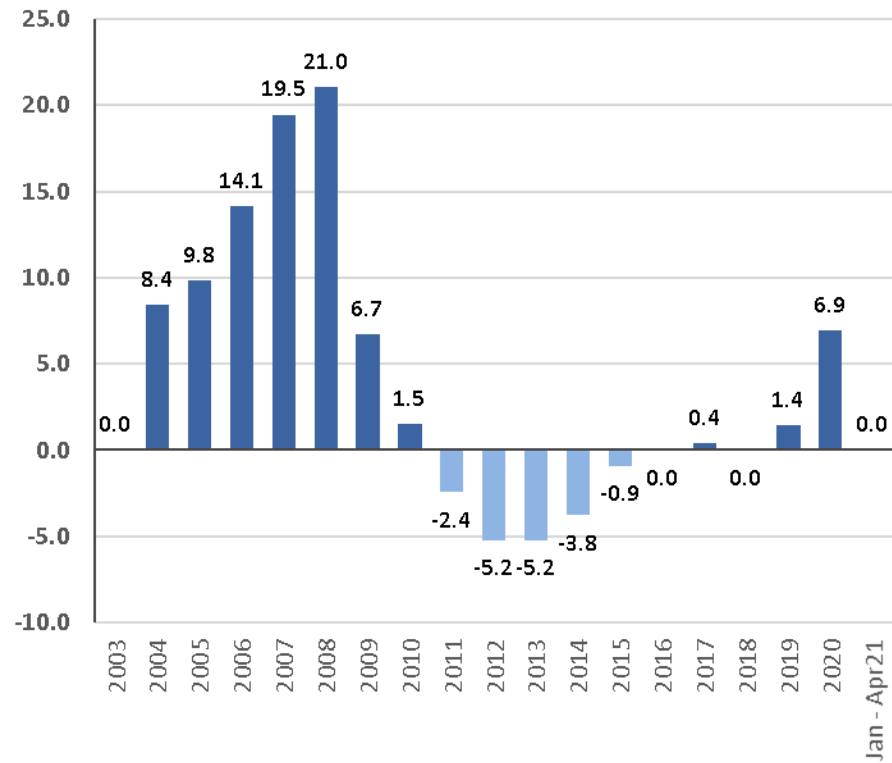
Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. 2) Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments.



...driven mainly by corporate credit



Corporate Loans^{1,2} (net flows, €bn)



Corporate Loans^{1,2} (annual % change)



Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. 2) Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments.

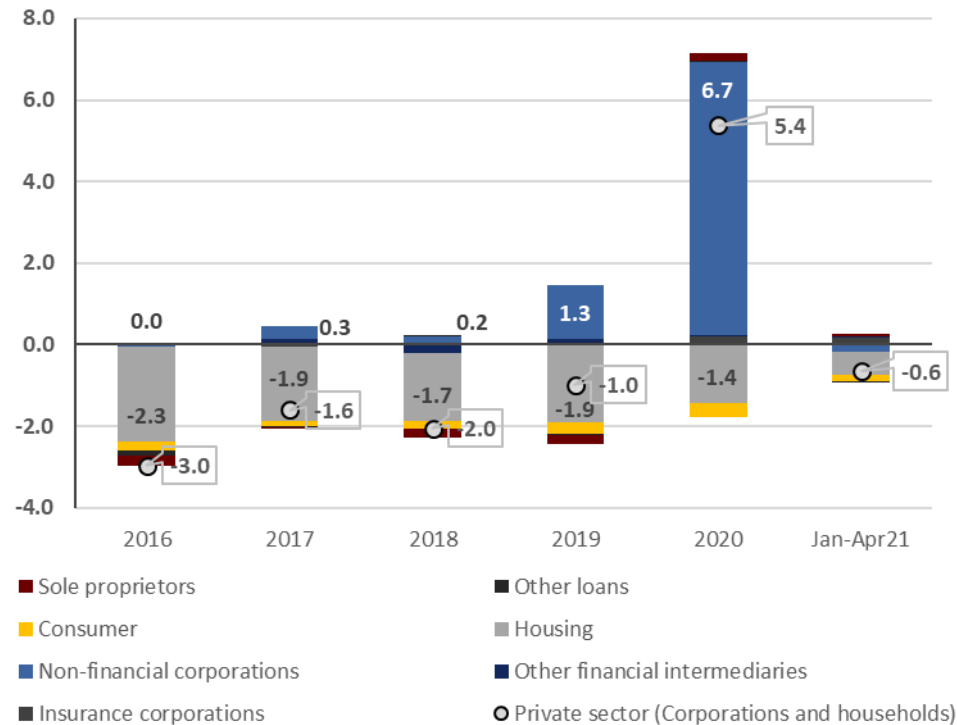


Government intervention has pushed credit to sectors most affected by the recession

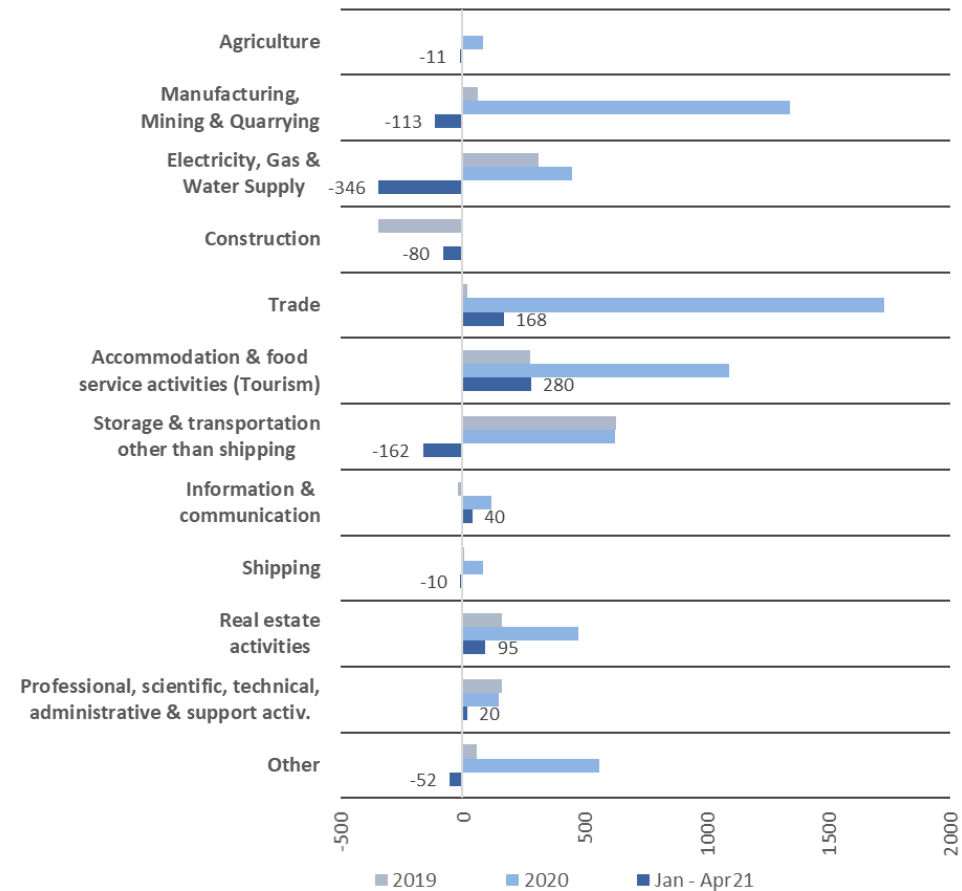


Loans breakdown by sector^{1,2}

(net flow in €bn)



Credit to domestic non financial corporations (net flows in €mn)



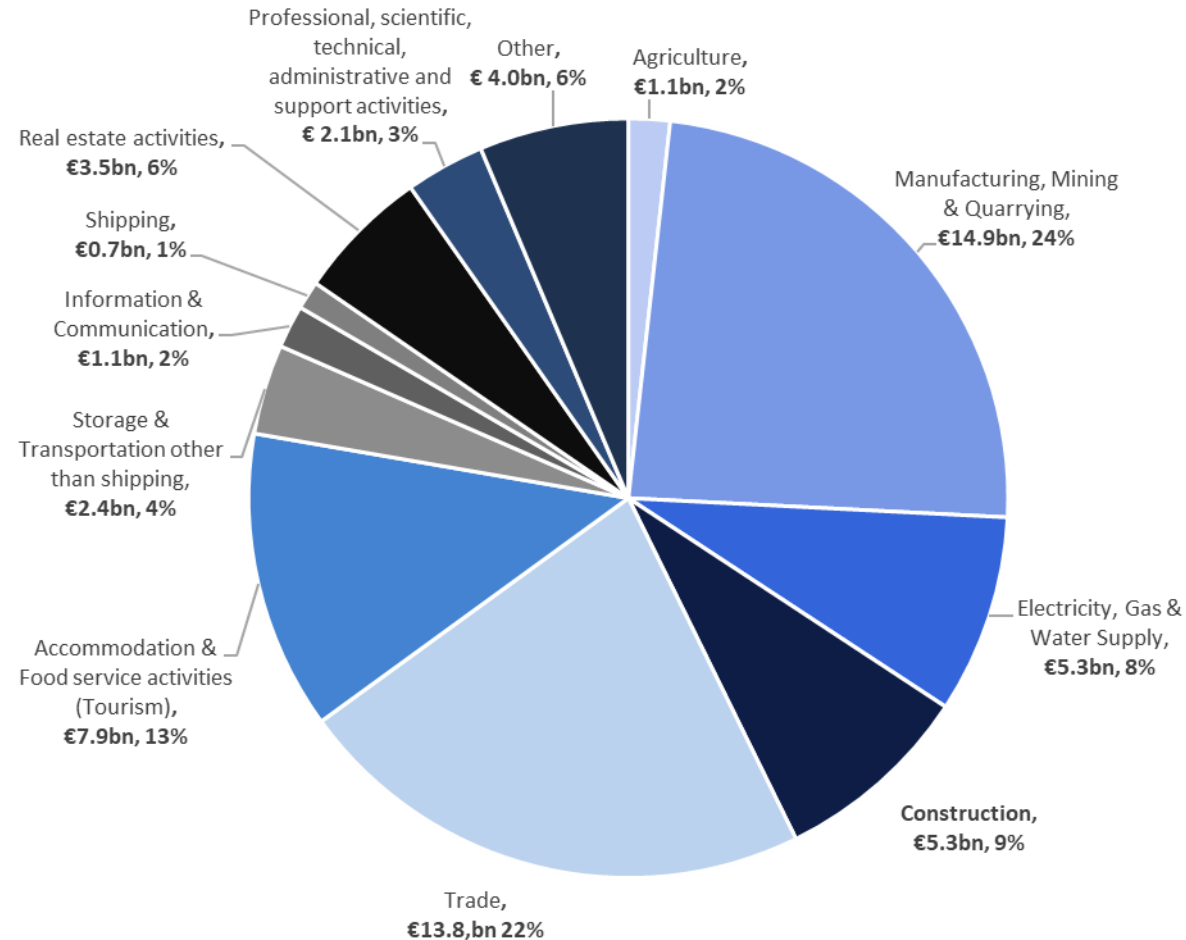
Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. 2) Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments.



Credit to domestic non financial corporations breakdown by type of activity



**Total Outstanding amount
Apr. 21: € 62.1bn**



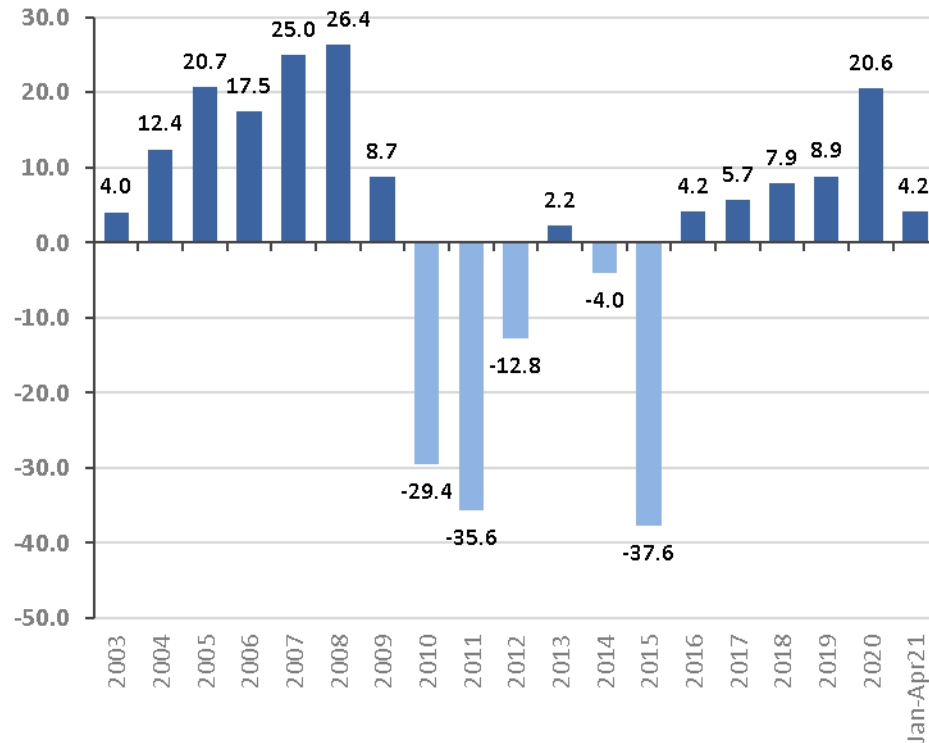
Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries



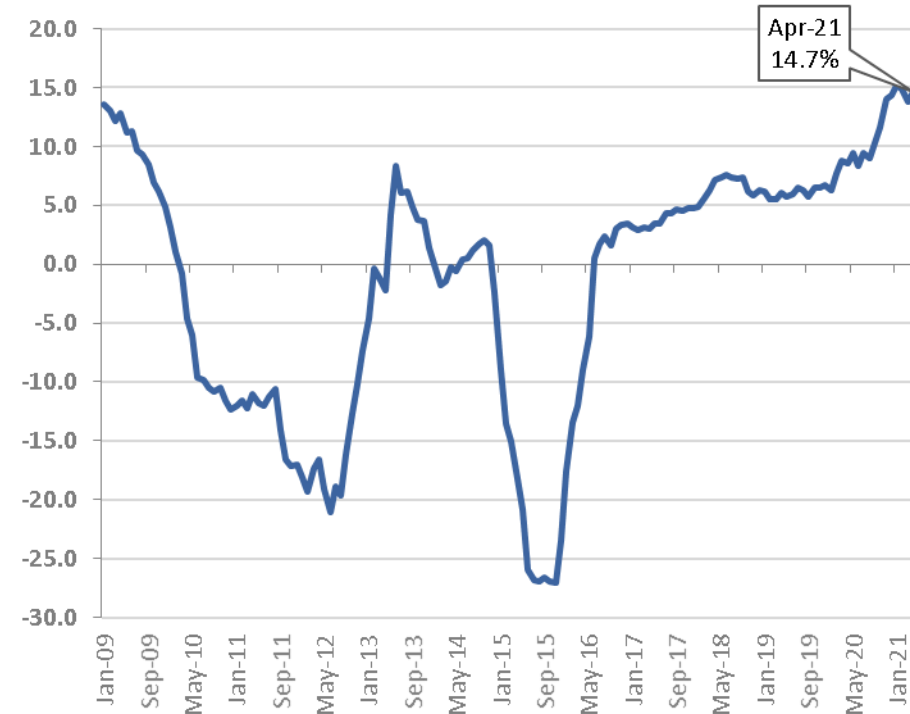
Private sector deposit base on the mend



Private Sector Deposits^{1,2} (net flows, €bn)



Private Sector Deposits^{1,2} (annual % change)

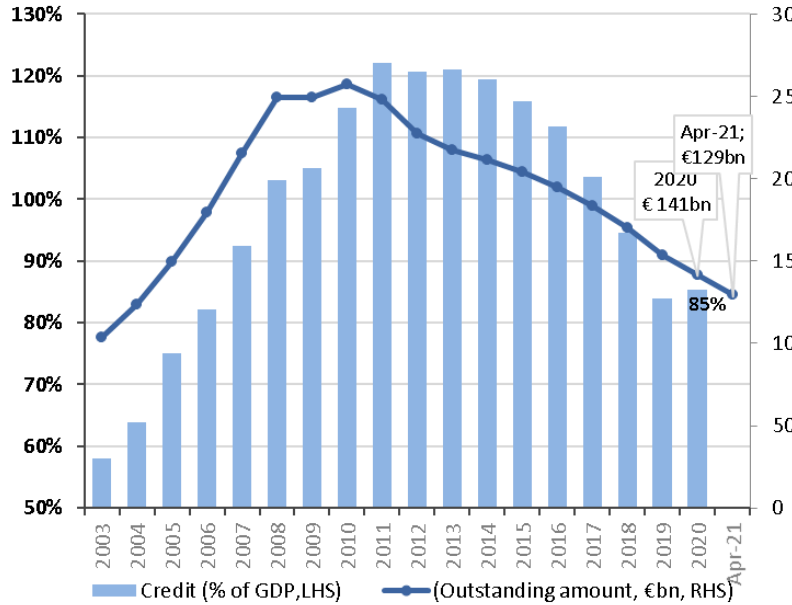


Notes: 1) Excluding the Bank of Greece. As of December 2016, deposits of the Consignment Deposits and Loan Fund are excluded from the domestic deposits as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, deposits and repos of shipping companies which have their registered office abroad, are no longer included in the deposits of the domestic economy, as they were reclassified to Other Countries. 2) Flows and growth rates are derived from changes in outstanding amounts corrected for foreign exchange valuations and reclassifications adjustments. The flow of deposits does not include the accounting increase in deposits that is related to securitisation operations and represent liabilities of credit institutions to Special Purpose Vehicles.

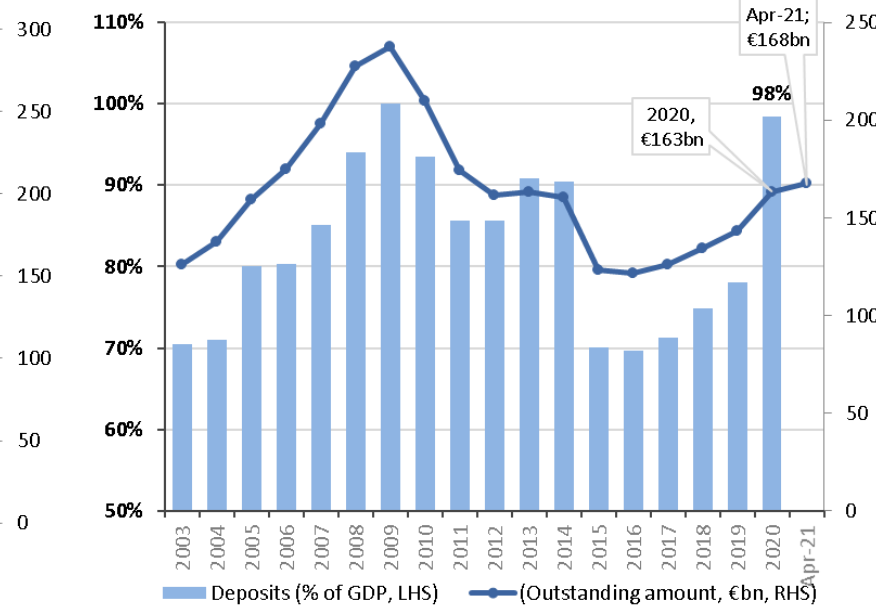




Private Sector Loans¹ (% of GDP & € bn)

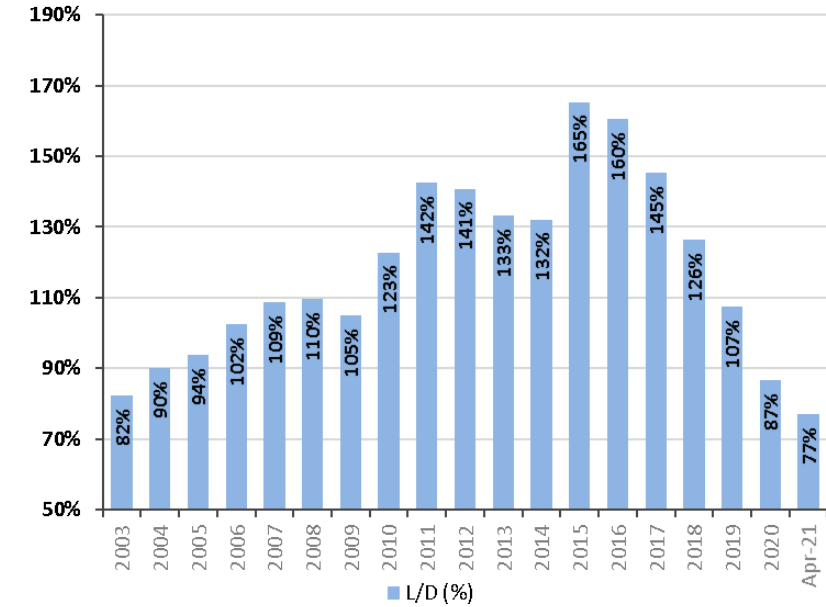


Private Sector Deposits² (% of GDP & € bn)



Private Sector

Loans to Deposits Ratio (%)



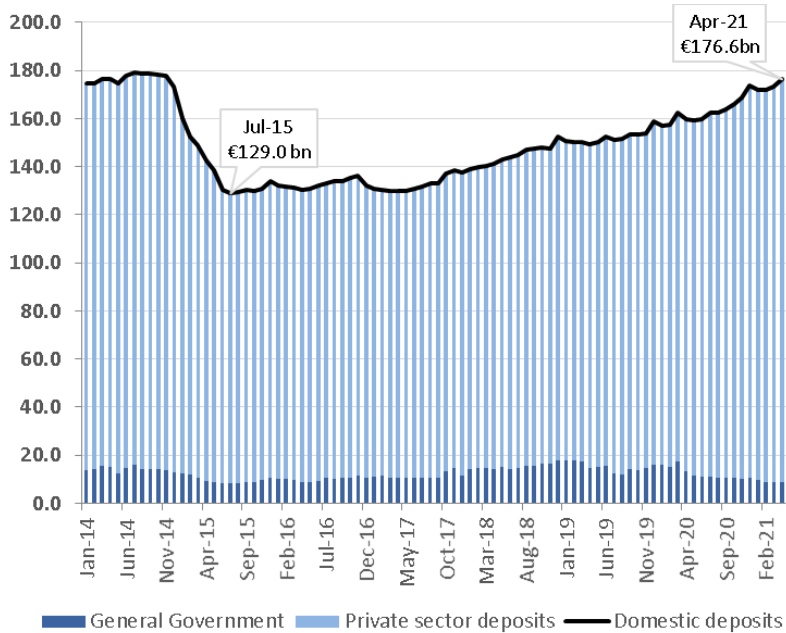
Notes: 1) Including securitised loans and corporate bonds that have been derecognised from the balance sheet and serviced by credit institutions. As of June 2010 non traded corporate bonds are included in 'loans' rather than 'debt securities'. As of December 2016, loans of the Consignment Deposits and Loan Fund are excluded from the domestic credit as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, loans to shipping companies which have their registered office abroad, are no longer included in credit to the domestic economy, as they were reclassified to Other Countries. Flows are derived from changes in outstanding amounts corrected for foreign exchange valuations write-offs/write-downs and reclassifications adjustments. 2) Excluding the Bank of Greece. As of December 2016, deposits of the Consignment Deposits and Loan Fund are excluded from the domestic deposits as the institution has been reclassified from the financial sector to the general government sector. As of March 2019, deposits and repos of shipping companies which have their registered office abroad, are no longer included in the deposits of the domestic economy, as they were reclassified to Other Countries. Flows and growth rates are derived from changes in outstanding amounts corrected for foreign exchange valuations and reclassifications adjustments. The flow of deposits does not include the accounting increase in deposits that is related to securitisation operations and represent liabilities of credit institutions to Special Purpose Vehicles.



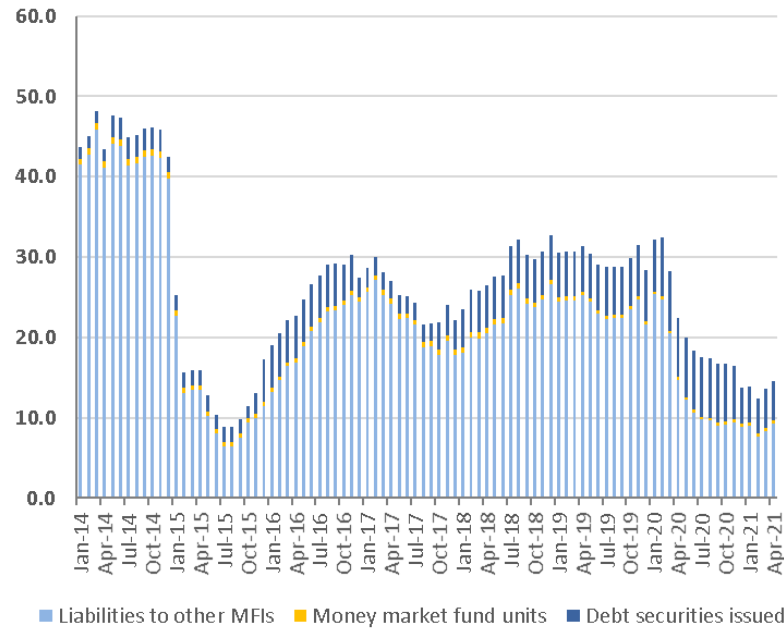
Greek banks have reduced interbank borrowing to take advantage of cheaper ECB funding



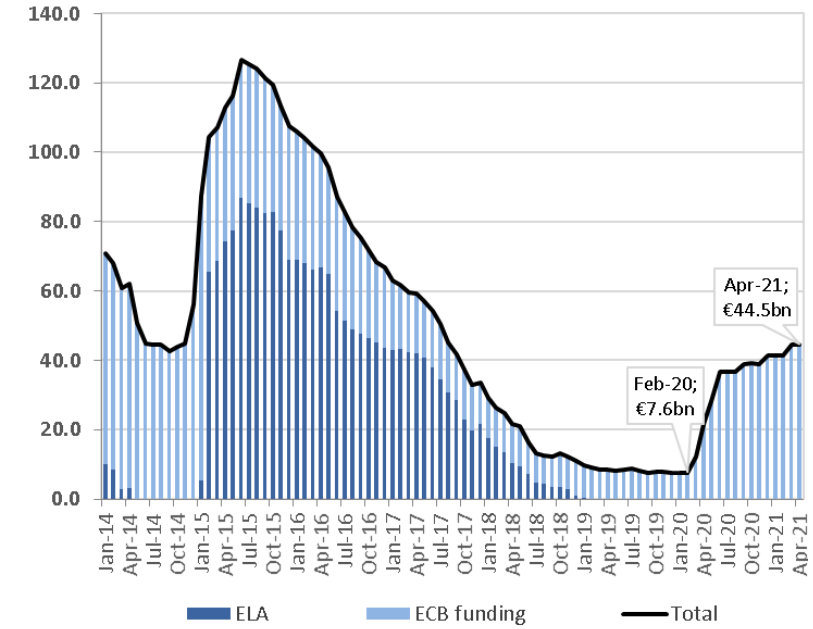
Total Domestic Deposits (€ bn)



Other Sources of Funding (€ bn)



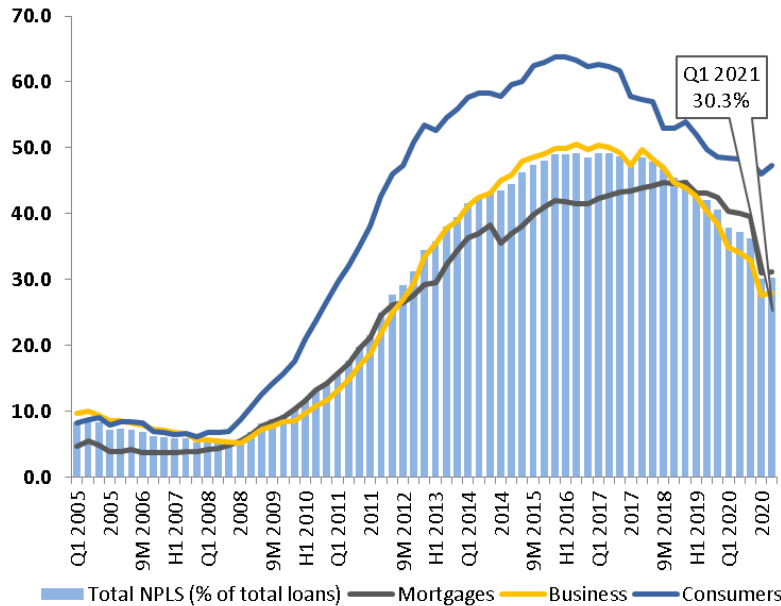
Eurosystem Funding (€ bn)



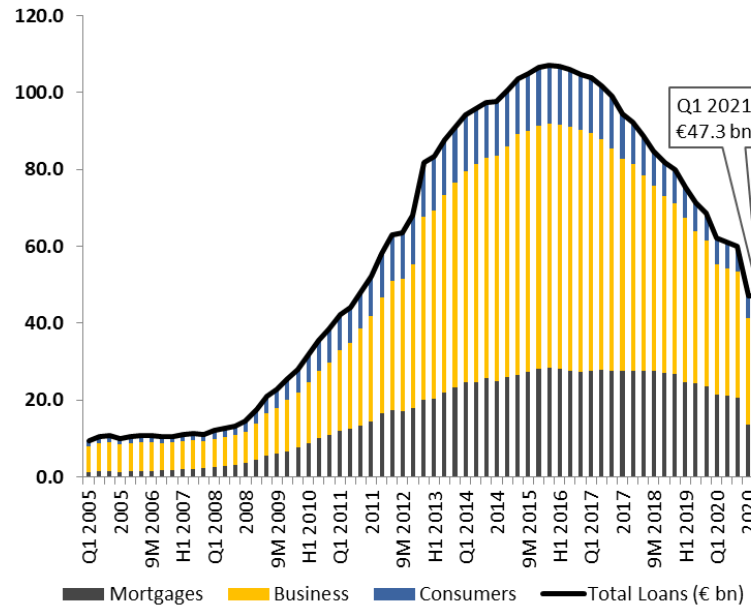
Evolution of Non-Performing Loans



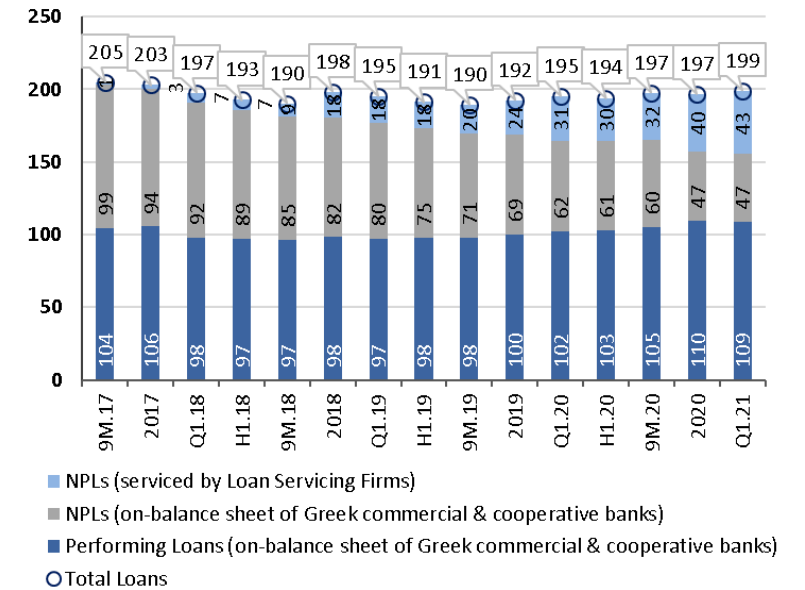
Non-Performing Loans ratio on balance sheet gross loans ^{1,2,3,4,5} (%)



Non-Performing Loans, on balance sheet gross loans ^{1,2,3,4,5} (€ bn)



Total Loans, on balance sheet gross loans ^{1,2,3,4,5} & transferred to foreign specialised financial institutions & that are serviced by the domestic CSFs⁶. (€ bn)



Notes: (1) All items are on solo basis and refer to on-balance sheet gross loans and advances of Greek commercial and cooperative banks. (2) For 2014 onwards, the source is data from bank's submissions according to Act 42/2014 (as applicable) and European Banking Authority (EBA) rules and definitions (3) For 2002 - 9M 2014, the source is data from banks' submissions according to Act 2442/1999 with the following assumption: Non-performing loans include also loans that have been restructured over the past 12 months. (4) Balance changes between some quarters may be affected by the restructuring of the Greek banking system (resolution of banks, sale of foreign branches e.t.c.) (5) All items refer to on-balance sheet loans and advances, in consistency with the operational targets for the reduction of non-performing loans. For that reason, balances and indicators may differ from previously published figures, where off-balance sheet items were also included in the perimeter.

(6) Concern loans that have been transferred by domestic credit institutions to foreign specialised financial institutions and that are serviced by the domestic CSFs. Included in these loans are loans that have been written off by credit institutions and were thus not reported on their balance sheet





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6 Banking Sector Developments

7 **Sovereign Rating & Bonds markets**

8 Assessing Corporate Distress due to COVID-19 Recession

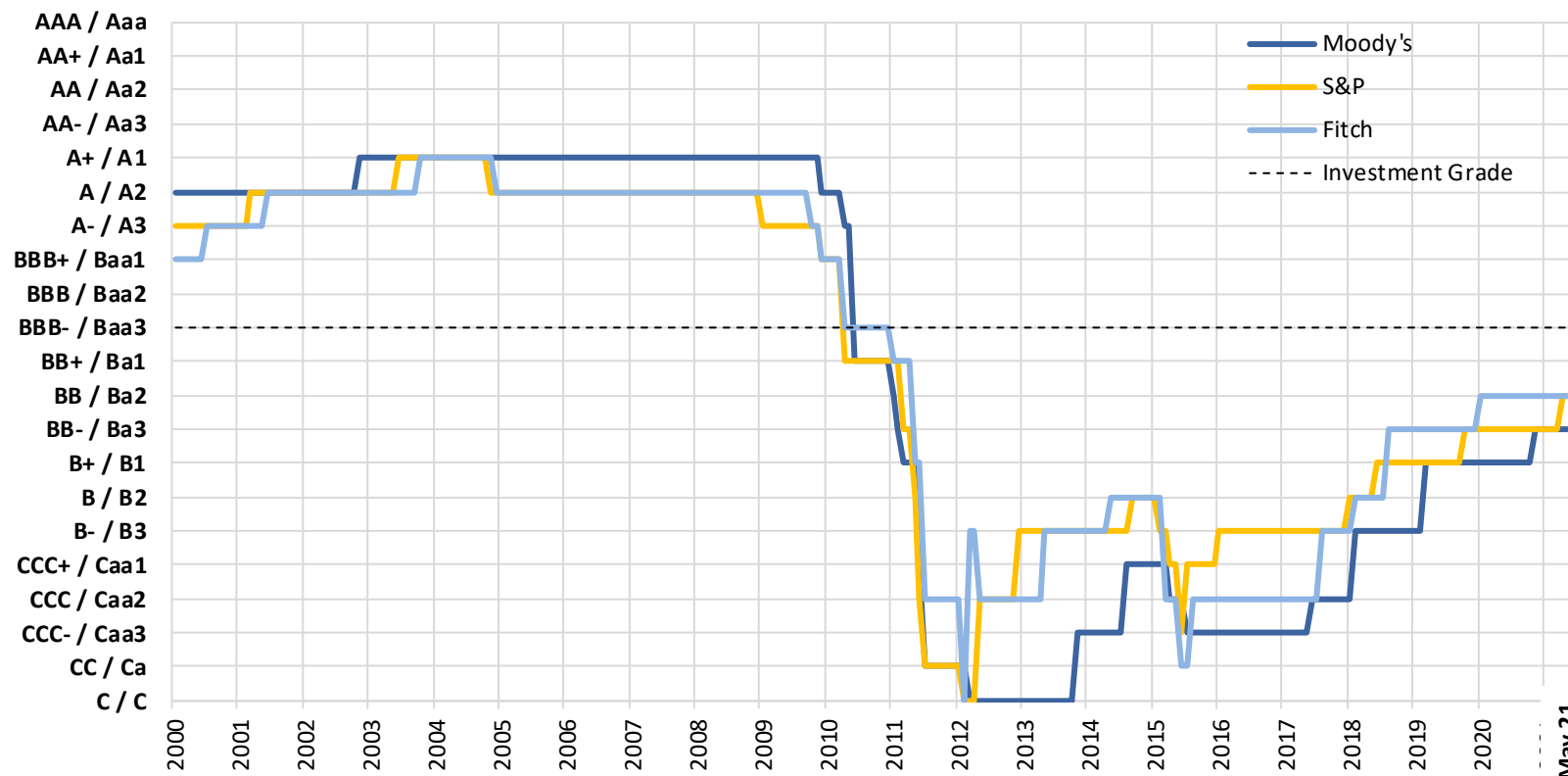
9 SWOT analysis



Greek sovereign rating history: Moodys rating unchanged at Ba3 and stable outlook



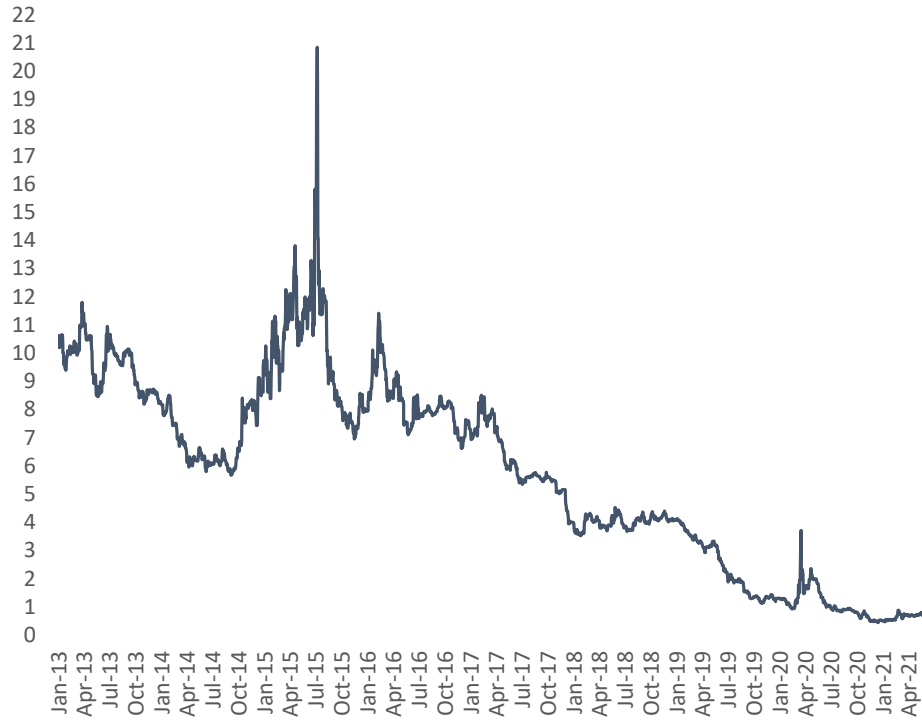
	Current LT Rating	Outlook	Last Rating Up/ Down grade	Latest Review	Next Scheduled Review
Fitch	BB	Stable	January 2020	January 2021	16 July 2021
Moody's	Ba3	Stable	November 2020	November 2020	19 November 2021
Standard & Poor's	BB	Positive	May 2021	May 2021	22 October 2021
DBRS	BB (low)	Stable	May 2019	March 2021	17 September 2021



Low yields amid rising international inflation worries



Piraeus Bank Sovereign Bond Index (YtM): Piraeus Bank Government Bond Index yield remained low at 0.59%



BLOOMBERG TICKERS

Piraeus Bank Government Bond Index: {PBGGGSBI Index<GO>}

Weighted Average Yield: {PBGGWAY Index<GO>}

Piraeus Bank Corporate ex-Financials Bond Index(YtM): The Corporate Bond Index YtM declined in May by 9 bps at 2.57%.



BLOOMBERG TICKERS

Piraeus Bank Corporate Bond Index : {PBGGGCBI Index<GO>}

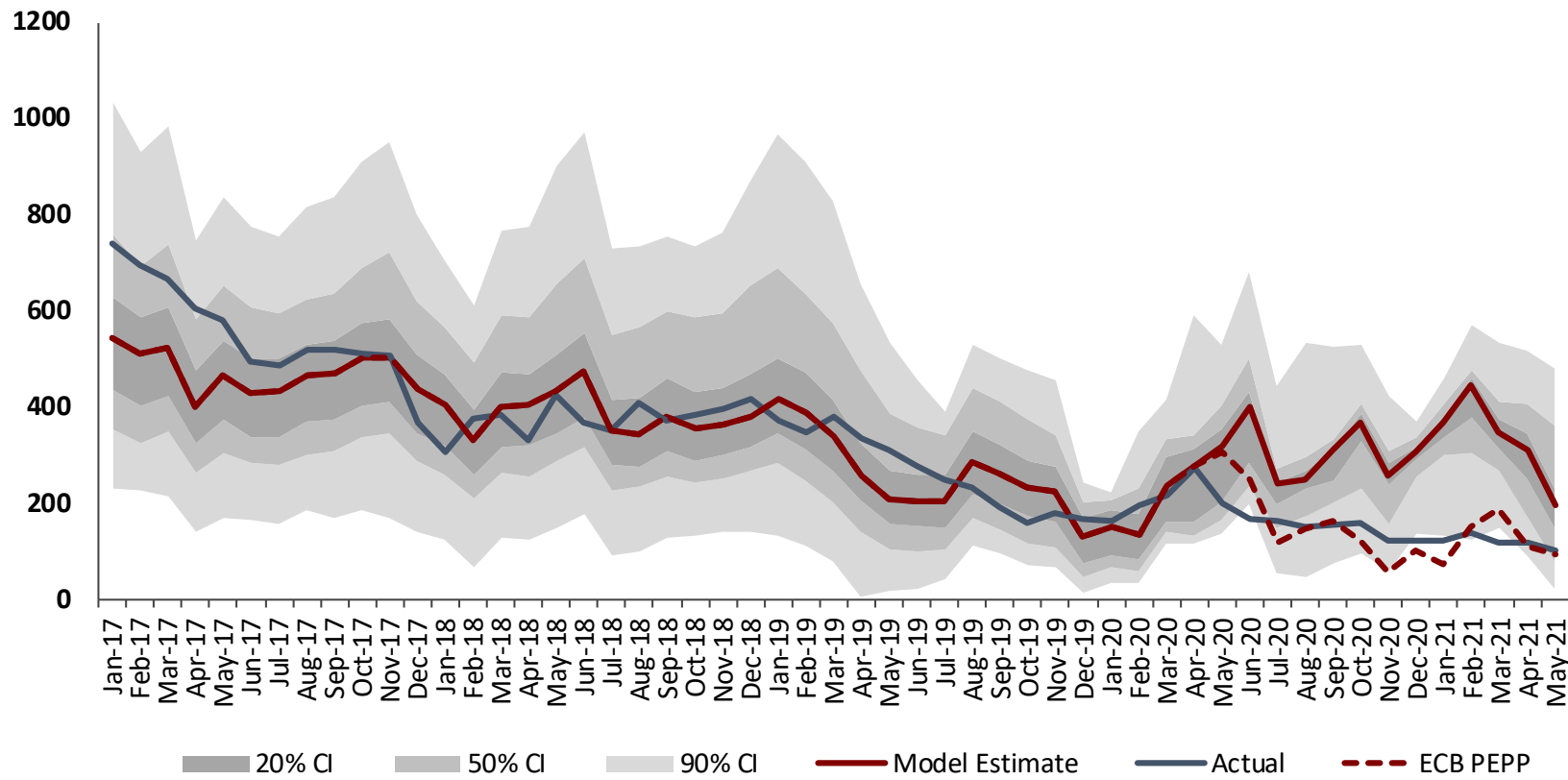
Weighted Average Yield : {PBGGIWAY Index<GO>}



Greek Government Bond Spreads: Greek 10-Year spread narrows close to 100 bps



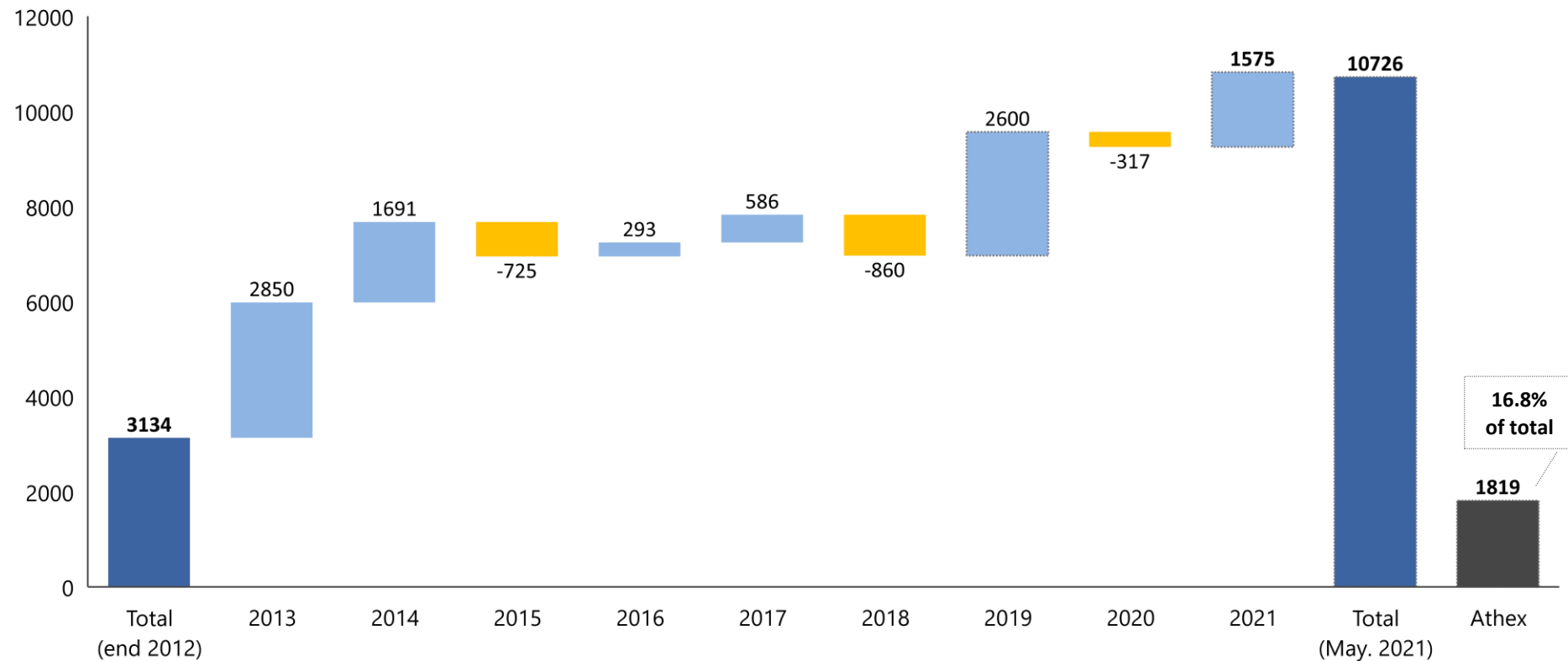
Greek Government 10-Year Spread vs 10-Year Bund (basis points)



Piraeus Bank Greek Corporate Bond Index: €100 mn Costamare bond increases net issuance in May



Greek Corporate Bond Net Issuance (mn €)

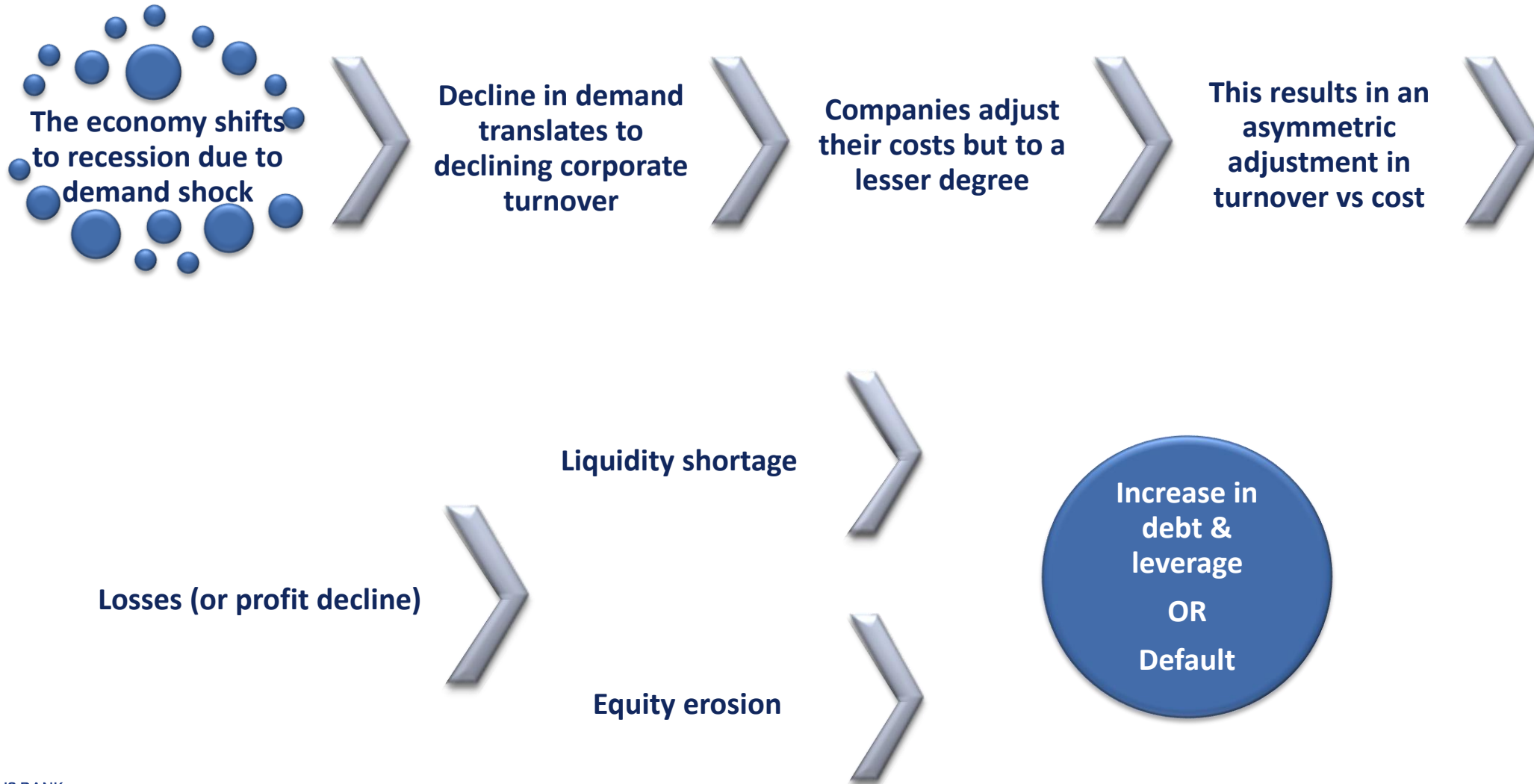




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How Is the Macroeconomic Demand Shock Transmitted to Corporate Balance Sheets?



Final Framework

- ✓ All of these so-called adjustments introduced above form a system of equations that allows us to demonstrate how a macroeconomic demand shock reverberates across the Greek corporate balance sheet:

$$\text{Revenue Adjustment}_{i,t} = (1 - d_s) \times S_{si,t-1}$$

$$\text{Cost Adjustment}_{i,t} = (1 - x\% \times d_s) \times C_{si,t-1}, \text{ with } x = 50\%$$

$$\begin{aligned} \text{Profit/Loss Adjustment}_{i,t} \\ = \text{Revenue Adjustment}_{i,t} - \text{Cost Adjustment}_{i,t} - (\text{Interest Expenses}_{i,t} + \text{Taxes}_{i,t} + \text{Other}_{i,t}) \end{aligned}$$

$$\text{Equity Adjustment}_{i,t} = \text{Equity}_{i,t-i} + \text{Profit/Loss Adjustment}_{i,t}$$

$$\begin{aligned} \text{Liquidity (Cash or Working Capital) Adjustment}_{i,t} = \\ \max[\text{Cash (or Working Capital)}_{i,t-i} + \text{Profit/Loss Adjustment (excl. depreciation and amortisation)}_{i,t}, 0] \end{aligned}$$

$$\begin{aligned} \text{Liquidity (Cash or Working Capital) Shortfall}_{i,t} = \text{Loss Adjustment (excl. depreciation and amortisation)}_{i,t} > \\ \text{Liquidity}_{i,t-1} \end{aligned}$$

$$\text{Liabilities}_{i,t} = \text{Liabilities}_{i,t-1} + \text{Cash Shortfall}_{i,t}$$

$$\text{Current Liabilities}_{i,t} = \text{Current Liabilities}_{i,t-1} + 50\% \times \text{Cash Shortfall}_{i,t}$$



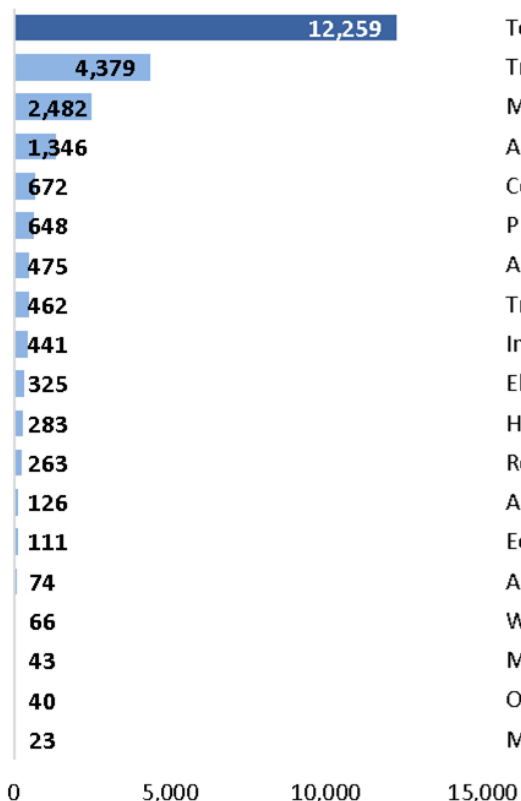
Estimating the Impact of the COVID-19 Recession on Greek Corporate Balance Sheets*:

Enterprise Sample Description

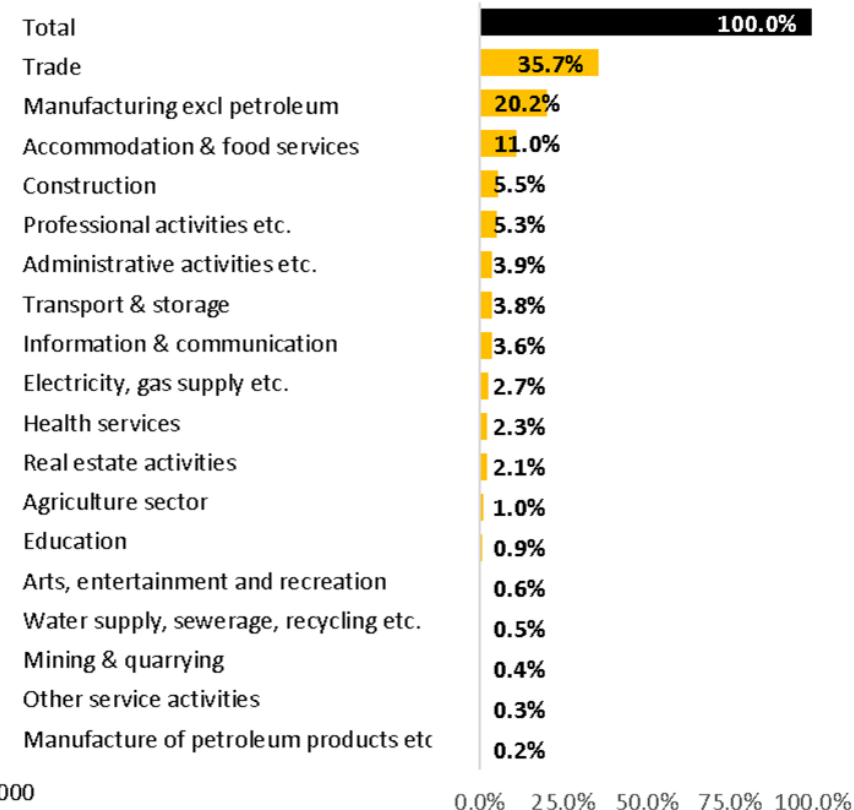
Main Assumptions

- ✓ We examine all non-financial sectors of economic activity according to the NACE rev. 2 classification.
- ✓ For our analysis, we used the sample of selected enterprises described in the methodological framework of our ERS, published in our September 2019 report**. The data reference year is 2018. We assume that in 2019, financial conditions were not drastically different from 2018.

Firms by Sector



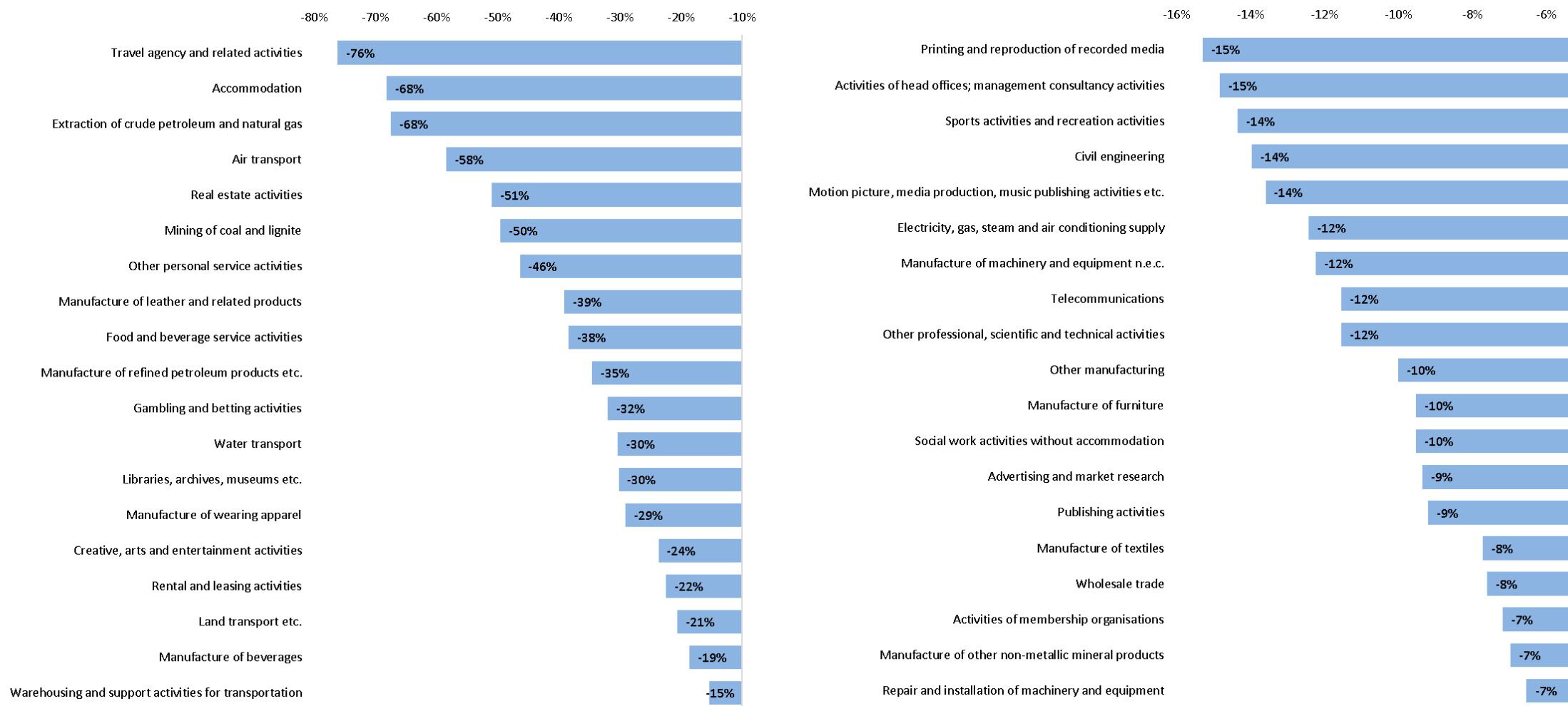
Share of Firms by Sector



Demand Shock on 2020 Sectoral Sales (I)



✓ Based on January – December 2020 yoy changes, we have defined the per-sector demand trends as follows:



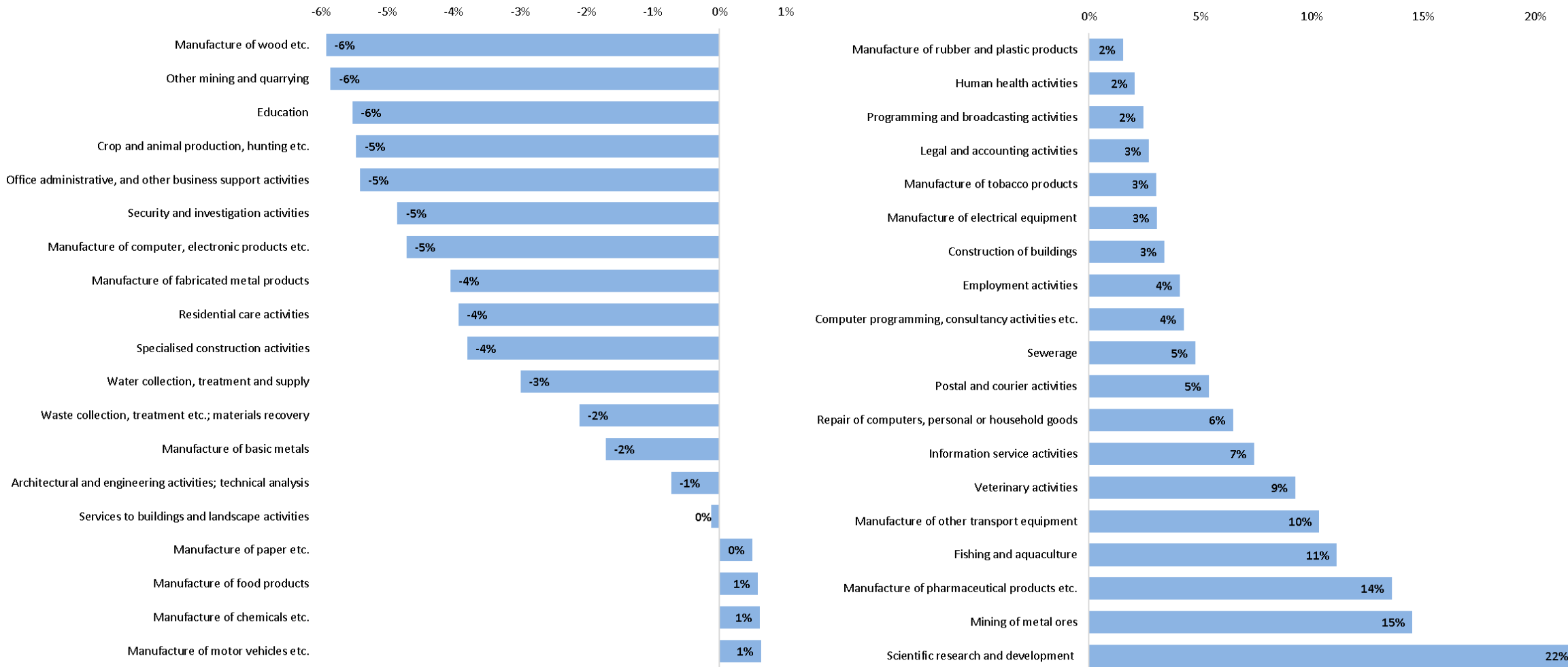
PIRAEUS BANK ✓ Our analysis is based on enterprises with available financial statements. For consistency reasons, we used the turnover of entities with double-entry bookkeeping by ELSTAT per two-digit NACE rev. 2 analysis, except for 45 (trade and repair of vehicles) and 47 (retail trade).



Demand Shock on 2020 Sectoral Sales (II)



✓ Based on January – December 2020 yoy changes, we have defined the per-sector demand trends as follows:

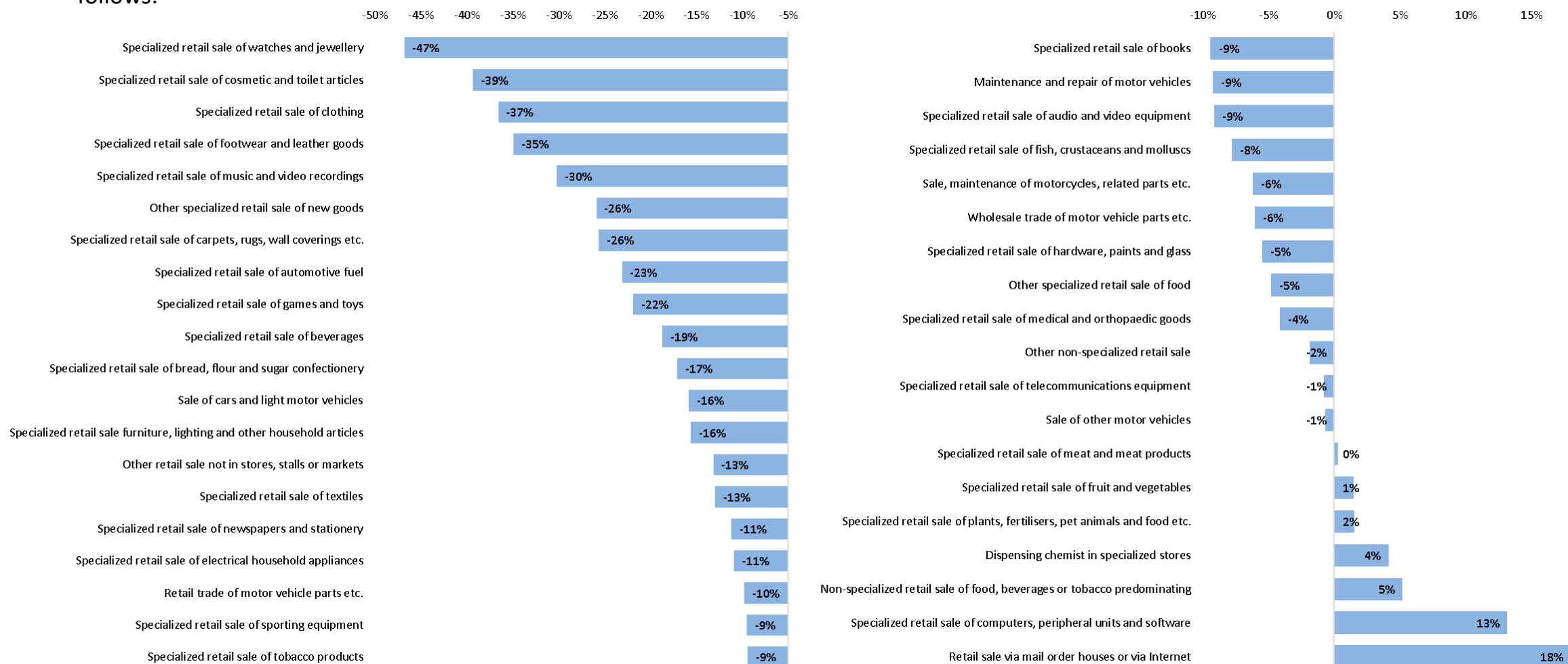


PIRAEUS BANK ✓ Our analysis is based on enterprises with available financial statements. For consistency reasons, we used the turnover of entities with double-entry bookkeeping by ELSTAT per two-digit NACE rev. 2 analysis, expect for 45 (trade and repair of vehicles) and 47 (retail trade).

Demand Shock on 2020 Sectoral Sales (III): A Deep Dive in Autos' and Retail Trade



✓ Based on Q1-Q4 2020 yoy changes, for trade and repair of vehicles and retail trade we have defined the per-sector demand trends as follows:



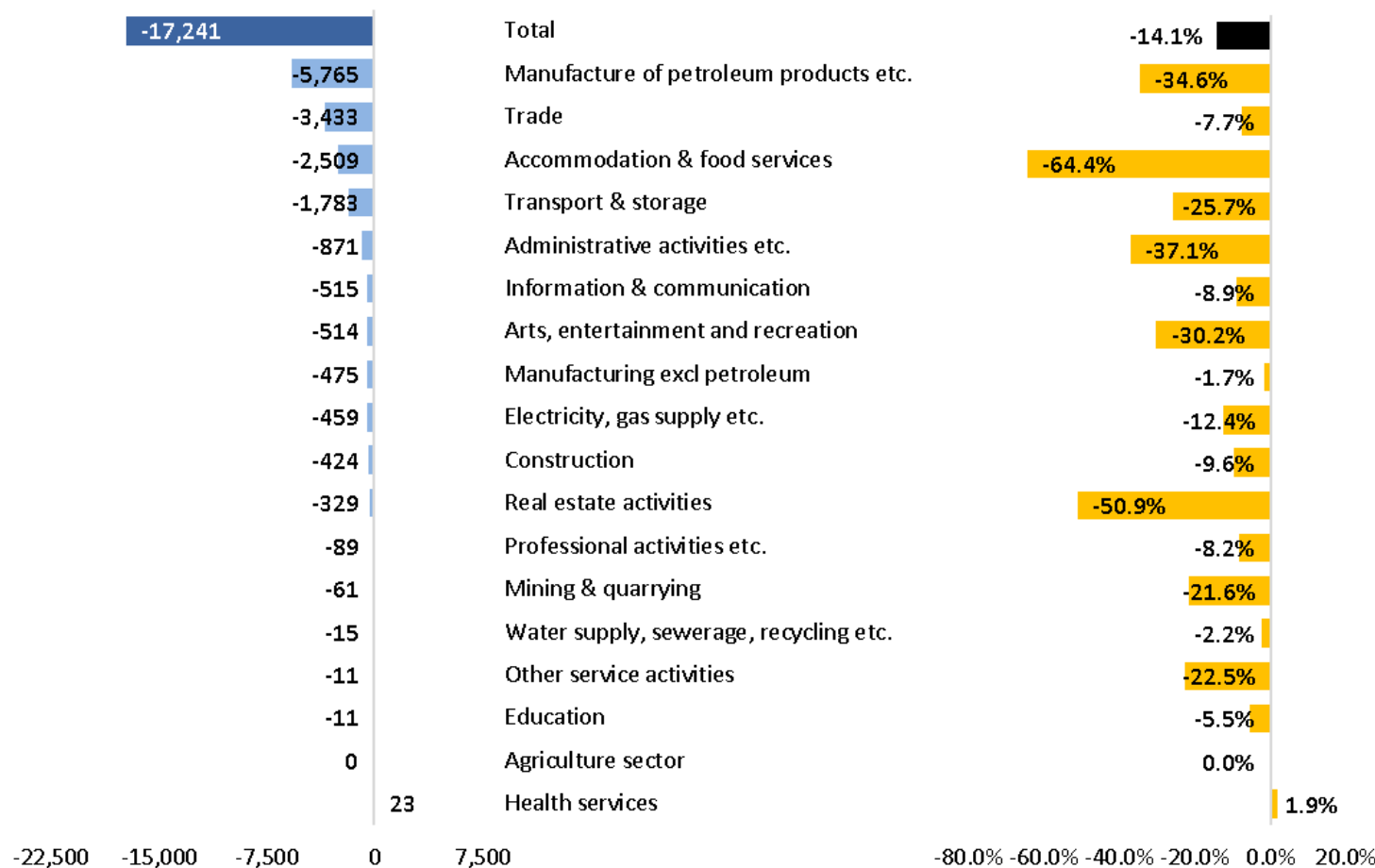
- ✓ The turnover trends of the subsectors of the retail trade were mixed, depending on the health crisis measurements.
- ✓ ELSTAT has available further details for the turnover of trade and repair of vehicles (45) and the retail trade (47) per four-digit NACE rev. 2 analysis. However, the turnover of entities with double-entry bookkeeping is not available for all months of 2020.
- ✓ Since we wanted to examine the impact of the COVID-19 pandemic for the whole 2020, for sectors 45 and 47 we used the turnover data for the total of enterprises, available in quarters.

The impact of our methodology on the b/s of our 12,259 rated Greek corporations is as follows:

Turnover Adjustment is estimated at €17.2bn, or 14.1% of pre-COVID-19 sales.

€-17.2bn turnover decline due to COVID-19 (figures in €mn)

% Turnover decline due to COVID-19

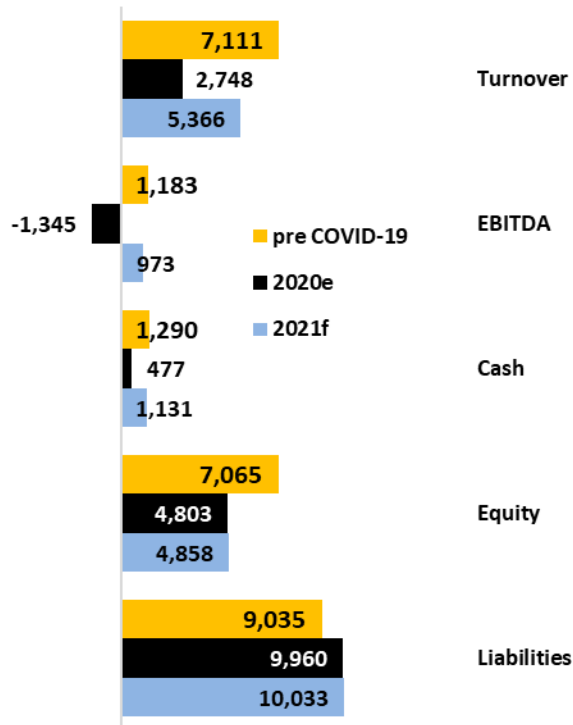


Tourism 2021 Forecast: Under the assumption that 2021 turnover will recover 60% of 2020e turnover loss

- ✓ The tourism sector will regain a part of its lost “glory” in terms of profitability and liquidity, but with an additional credit burden.

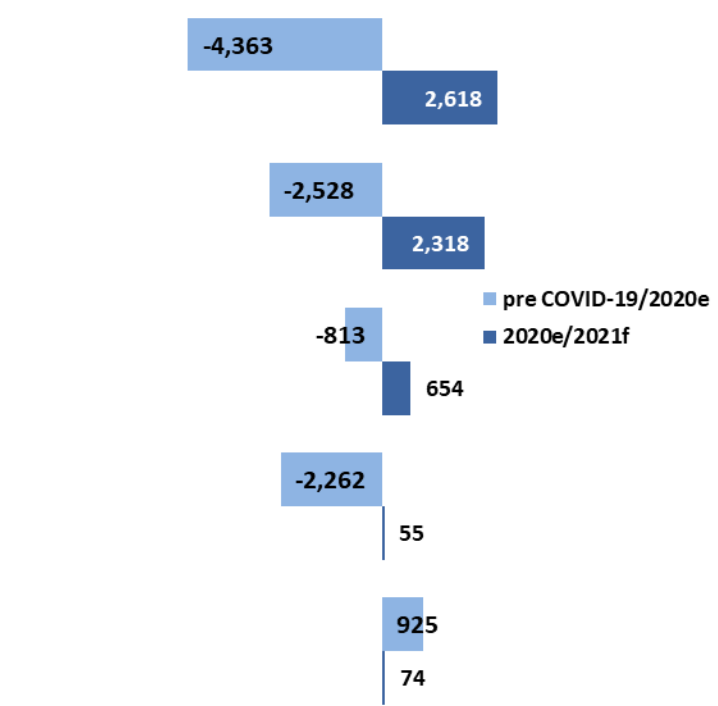
Key figures (figures in €mn)

-5,000 0 5,000 10,000 15,000



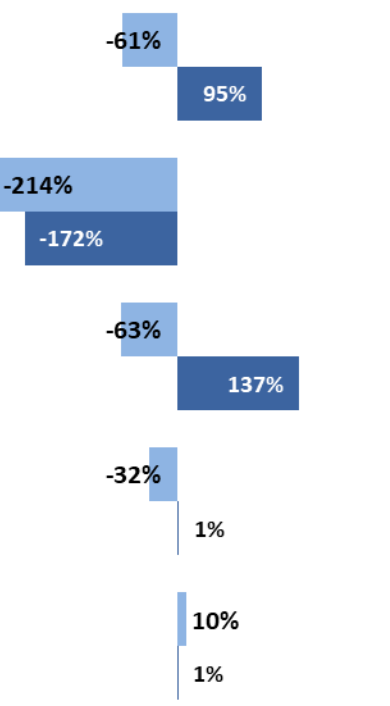
COVID-19 impact and forecasts (figures in €mn)

-6,000 -4,000 -2,000 0 2,000 4,000



% COVID-19 impact and forecasts

-300% -200% -100% 0% 100% 200%



- ✓ **Tourism definition:** water transport, air transport, accommodation, beverage and food services, travel agencies.
- ✓ Under the assumption that 2021 operating revenue to operating expenses ratio is the same with the pre COVID-19 relevant ratio.

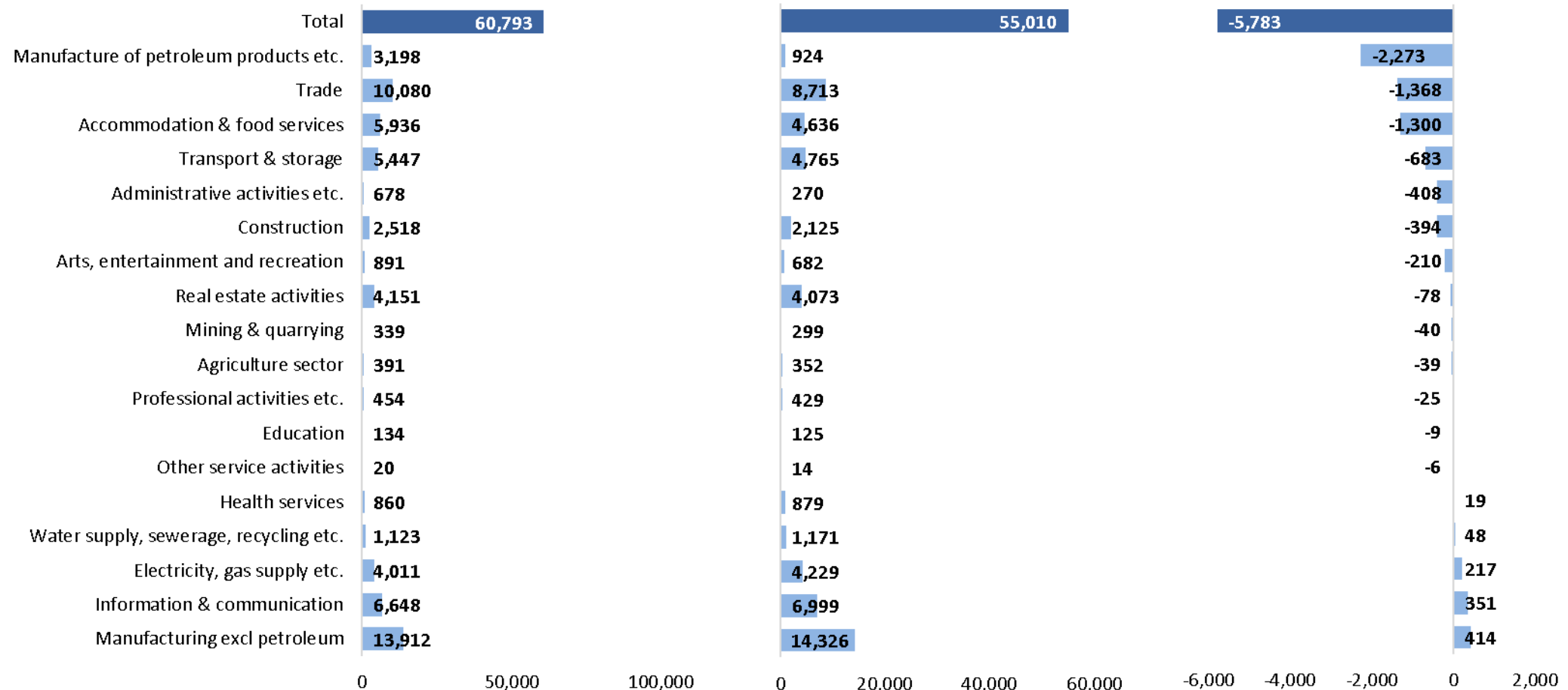
Equity Adjustment is estimated at €5.8bn.

- ✓ 85.4% of equity erosion is recorded in just three sectors: manufacturing of petroleum products, trade and accommodation and food services.

Equity before COVID-19 (figures in €mn)

Estimated equity 2020 (figures in €mn)

Equity change due to COVID-19 (figures in €mn)



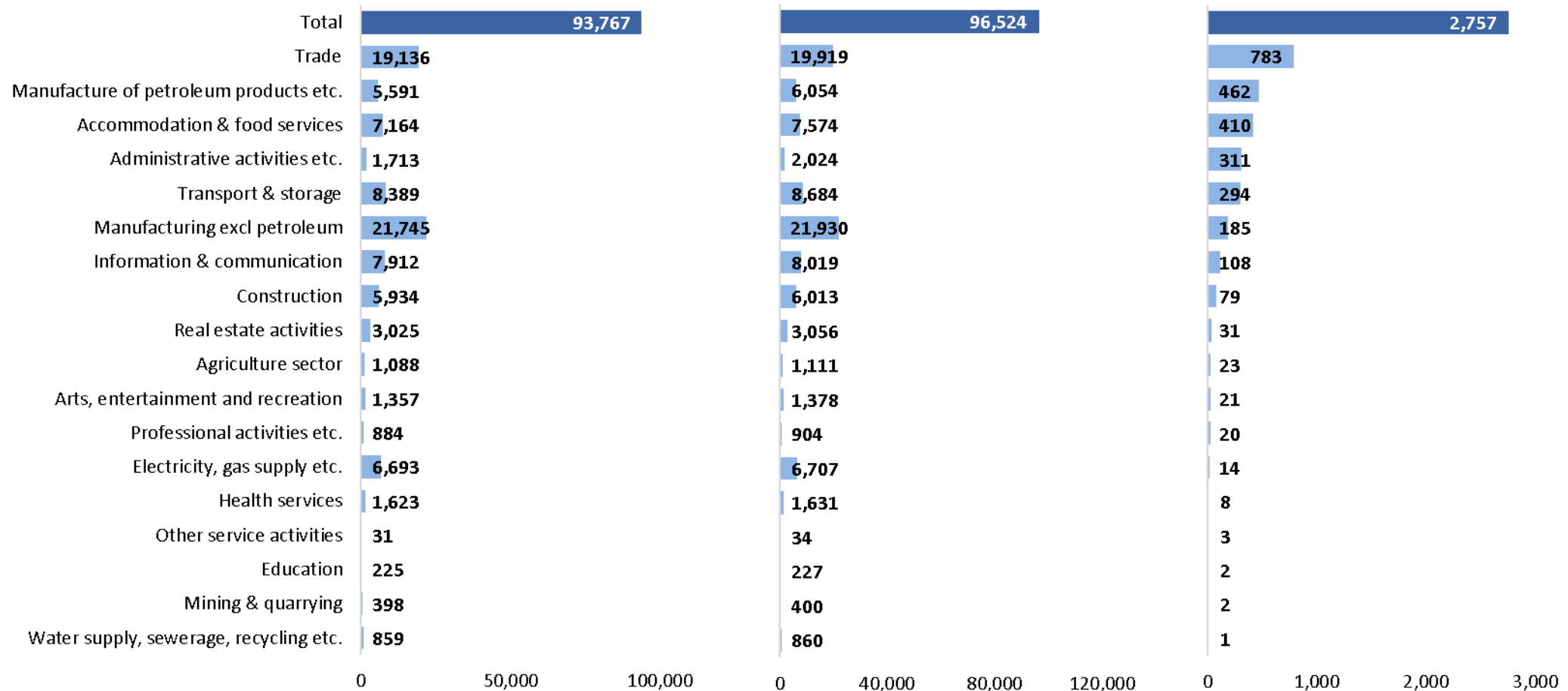
Liabilities Adjustment is estimated at €2.8bn.

- ✓ 60% of additional need for credit support stems from trade, manufacturing of petroleum products and accommodation and food services.

Liabilities before COVID-19 (figures in €mn)

Estimated liabilities 2020 (figures in €mn)

Additional liabilities (figures in €mn)





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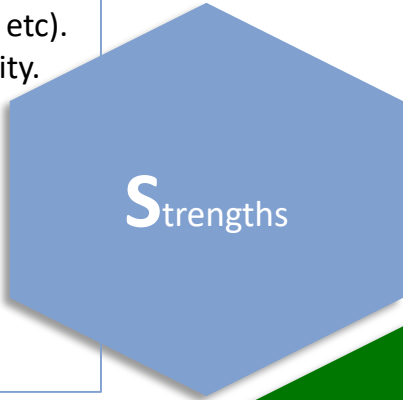
8 Assessing Corporate Distress due to COVID-19 Recession

9 **SWOT analysis**

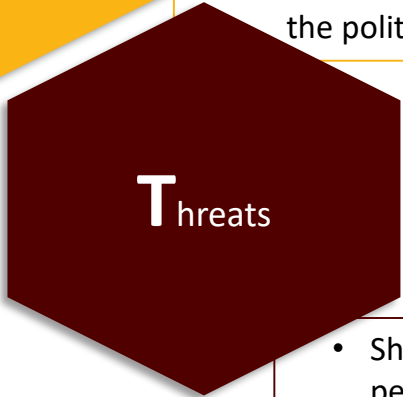


SWOT analysis

- Priority in key development areas (i.e., green economy, digital transformation, infrastructure etc).
- The banking sector can boost investment activity by exploiting ECB's liquidity facilities.
- Continuing the reforms that have taken place in recent years.
- Capitalizing on the country's key geographic location.
- Emphasizing sectors with a comparative advantage.



- Low efficiency of the state mechanism in the management of financial resources based on previous experiences with EU financial programs.
- High NPE burden for Greek banks.
- High public debt.
- The comparatively small size of most Greek companies.
- A tax system that create disincentives for foreign investors.
- Occasionally, low acceptance of reform frameworks on the political and social levels.



- Available funding sources of €87bn in 2021-2027
- Dynamic restart of the economy to change the economic paradigm.
- Mitigation of fiscal stability rules.
- Rapid removal of NPEs from banks.
- Distribution of funds to dynamic businesses and industries aimed at extroversion and innovation.
- Exclusion of unsustainable 'zombies' and non-productive companies.

- Shallow recovery of the Greek economy, along with persistently high unemployment.
- Lack of ownership in and commitment to structural reforms.
- Delays in disbursements from the Recovery Fund.
- Return to the regime of primary surpluses.
- The competitive nature of the Recovery Fund in conjunction with the time constraints for the submission of investment projects.





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