

Sectoral Dynamics Index (SDI)

Introducing a sectoral performance monitoring tool for the Greek economy

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Economic Research & Investment Strategy

Μια νέα μεθοδολογία αξιολόγησης της δυναμικής των κλάδων της ελληνικής οικονομίας (I)

- Παράλληλα με την εκτίμηση της πορείας των βασικών μακροοικονομικών μεγεθών της ελληνικής οικονομίας, είναι εξίσου σημαντικό να έχουμε τη δυνατότητα ανάλυσης και κατανόησης της δυναμικής και των προοπτικών των επιμέρους κλάδων της ελληνικής οικονομικής δραστηριότητας. Η ανάλυση των κλαδικών προοπτικών είναι απαραίτητη τόσο για σκοπούς διαχείρισης κινδύνων όσο και ως εργαλείο ενίσχυσης της πιστωτικής επέκτασης.
- Προς αυτή την κατεύθυνση έχουμε ήδη αναπτύξει το ERS (Enterprise Rating System), ένα εργαλείο το οποίο αξιολογεί τις επιδόσεις ενός μεγάλου τμήματος του ελληνικού επιχειρείν. Το εργαλείο αυτό είναι εξαιρετικά αναλυτικό καθώς εξετάζει τις επιδόσεις κλάδων βασιζόμενο στην ανάλυση και στατιστική επεξεργασία στοιχείων ισολογισμών και αποτελεσμάτων χρήσης άνω των 13 χιλ. επιχειρήσεων. Ταυτόχρονα όμως το βασικό μειονέκτημα του ERS έγκειται ακριβώς στη φύση των στοιχείων στα οποία βασίζεται. Τα στοιχεία λογιστικών καταστάσεων όχι μόνο είναι διαθέσιμα σε ετήσια συχνότητα αλλά και δημοσιοποιούνται με μεγάλη χρονική υστέρηση. Χαρακτηριστικό είναι το γεγονός ότι η επικείμενη επικαιροποίηση του ERS για το 2025 θα βασίζεται σε στοιχεία ισολογισμών του 2023.
- Σε μια προσπάθεια παρουσίασης μιας πιο έγκαιρης εικόνας των κλαδικών προοπτικών της ελληνικής οικονομίας προχωρήσαμε στην ανάπτυξη ενός εργαλείου ανάλυσης της δυναμικής των κλάδων της ελληνικής οικονομίας, ονόματι SDI (Sectoral Dynamics Index).
- Το εργαλείο αυτό έρχεται όχι να αντικαταστήσει αλλά, να συμπληρώσει το ERS, καθώς αντί να βασίζεται σε στοιχεία ισολογισμών, αναλύει τις κλαδικές προοπτικές βάσει μακροοικονομικών στοιχείων. Πιο συγκεκριμένα, το SDI αποτελείται από τις εξής διαστάσεις:
 - i. Επιχειρηματικές προοπτικές: κλαδική κερδοφορία και κύκλος εργασιών.
 - ii. Δανεισμός: νέος και υφιστάμενος δανεισμός.
 - iii. Κόστος εργασίας: αμοιβές και μοναδιαίο κόστος εργασίας.
 - iv. Τιμολογιακή πολιτική: τιμές παραγωγής και αποπληθωριστές ακαθάριστης προστιθέμενης αξίας.

Μια νέα μεθοδολογία αξιολόγησης της δυναμικής των κλάδων της ελληνικής οικονομίας (II)

- Παρακάμπτοντας λοιπόν τη χρήση στοιχείων ισολογισμών, η επικαιροποίηση του SDI παρουσιάζει ελάχιστη χρονική υστέρηση ενός μόνο τριμήνου από την περίοδο δημοσίευσής του.
- Τέλος είναι πολύ σημαντικό να γίνει απολύτως κατανοητό το ακριβές πληροφοριακό περιεχόμενο και ο τρόπος χρήσης του SDI. Όπως είναι γνωστό, οι κλάδοι της ελληνικής οικονομίας παρουσιάζουν τεράστια ανομοιογένεια όσον αφορά τα μεγέθη τους και το αποτύπωμα τους στην ελληνική οικονομία. Για παράδειγμα, ο κλάδος πετρελαιοειδών αποτελείται από 34 επιχειρήσεις με €26 δισ. κύκλο εργασιών, ο κλάδος του λιανεμπορίου από 143 χιλ. επιχειρήσεις με €55 δισ. πωλήσεις*. Αντίθετα, στον κλάδο των ορυχείων και λατομείων δραστηριοποιούνται 582 επιχειρήσεις, επιτυγχάνοντας με κύκλο εργασιών €933 χιλ. και ο κλάδος κατασκευής υφασμάτων, ένδυσης και δερμάτινων ειδών αποτελείται από 6 χιλ. επιχειρήσεις, με €2 δισ. πωλήσεις.
- Κατά συνέπεια, πολύ γρήγορα γίνεται αντιληπτό ότι οποιαδήποτε ιεράρχηση και αξιολόγηση διεξαχθεί βάσει των συνολικών μεγεθών των κλάδων, θα ήταν μεροληπτική υπέρ των μεγάλων κλάδων και εξαιρετικά στατική καθώς η συμβολή του κάθε κλάδου στην οικονομία μεταβάλλεται ελάχιστα από έτος σε έτος. Για αυτούς τους λόγους, η αξιολόγηση των κλάδων βασίζεται όχι στις απόλυτες επιδόσεις των κλάδων αλλά, στον ρυθμό μεταβολής τους.
- Συνεπώς ο SDI παρουσιάζει, κάθε τρίμηνο, την ιεράρχηση των κλάδων της ελληνικής οικονομίας με βάση τη δυναμική μεταβολή τους, δηλαδή ποιοι κλάδοι παρουσιάζουν τα μεγαλύτερα ποσοστά βελτίωσης ή υποχώρησης π.χ. του κύκλου εργασιών και της κερδοφορίας και όχι με βάση το απόλυτο μέγεθος των πωλήσεων και της κερδοφορίας. Επιπρόσθετα, αντιπαραβάλλοντας τον δείκτη SDI και τη μεταβολή του μπορούμε να κατατάξουμε κάθε κλάδο σε τέσσερις κατηγορίες:
 - i. κλάδους με υψηλή και επιταχυνόμενη δυναμική,
 - ii. κλάδους με υψηλή αλλά επιβραδυνόμενη δυναμική,
 - iii. κλάδους με χαμηλή και επιβραδυνόμενη δυναμική και
 - iv. κλάδους με χαμηλή αλλά επιταχυνόμενη δυναμική.

* Στατιστικό Μητρώο Επιχειρήσεων 2022.

Βασικά συμπεράσματα

- Σύμφωνα με τα αποτελέσματα του SDI για το α' τρίμηνο 2025, οι κλάδοι με την ισχυρότερη δυναμική των επιδόσεων τους ήταν:
 - i. της παροχής νερού, επεξεργασίας λυμάτων κτλ.,
 - ii. του αγροτικού τομέα,
 - iii. των ορυχείων και λατομείων και
 - iv. των επαγγελματικών, επιστημονικών και τεχνικών δραστηριοτήτων.
- Τέλος, το α' τρίμηνο 2025 σε σχέση με τη μέση επίδοση του 2024, δύο περιπτώσεις κατατάσσονται στους κλάδους υψηλής και επιταχυνόμενης απόδοσης:
 - i. της παροχής νερού, επεξεργασίας λυμάτων κτλ. και
 - ii. του αγροτικού τομέα.

Research Motivation – Introducing the Sectoral Dynamics Index

- Until now, our research team has developed bottom-up assessments tools that provide valuable insights into the performance of sectors, utilising data from the financial statements of the whole Greek corporate universe, based on the respective methodology criteria and data availability.
- This approach is very meticulous, since our tools examine the performance of a wide range of firms, from the micro enterprises to the large corporations. However, due to the data nature, the publication of our analysis is annual. Moreover, the data usually has a two-year lag at the time of publication because of the pace of financial statements releases and subsequently the completion of adequate updating of the relevant databases.
- So, we wanted to fill in the time and frequency gap with the construction of a new analytical tool, which bridges the above limitations.
- We are proud to introduce a new sectoral monitoring tool, which aims to provide useful, more updated, insights into the performance of the Greek economic sectors. **We constructed a new Index, named Sectoral Dynamics Index (SDI), with quarterly frequency and lag of only one or two quarters at the time of publication*.**
- The difference from our previous assessment tools is that we use a **top-down approach**. This allows us to take advantage of the sectoral aggregated secondary data released by statistical sources.
- Our new monitoring tool comes to supplement the existing assessment models and to give a holistic view of the sectoral health. The Sectoral Dynamics Index reflects the dynamics over time and **sectoral shifts**, and it could be a useful repository for stakeholders to make informed decisions based on scientifically structured analysis.
- We intent to update the Index on a continuous base, giving insights into recent trends. The frequent updates allow us to incorporate short-term fluctuations and capture significant **market dynamics**. In other words, our new Index, the SDI, has the characteristics of a coincident indicator and so, it can be used by stakeholders for proactive responses and effective policies to market conditions.
- By comparing the SDI index and its change, each sector can be classified into four categories:
 - i. sectors with high and accelerating dynamics,
 - ii. sectors with high but decelerating dynamics,
 - iii. sectors with low and decelerating dynamics, and
 - iv. sectors with low but accelerating dynamics.

* In our introductory release, the lag is two quarters, but on regular basis the lag will be one quarter. An update will follow soon, so stay tuned.

Key findings

- Since 2020, the Greek economy has encountered several external shocks, including the effects of the COVID-19 pandemic, Russia's invasion of Ukraine, and the resulting energy crisis. While some sectors experienced setbacks, others benefited.
- In 2021, activity in many sectors was suspended, which slowed down their business performance.
- Consequently, 2022 saw a recovery in economic activity, with nearly all sectors showing improvements in sales and profits.
- However, economic activity was further affected by disruptions in the global supply chain following the reopening of economies and rising energy costs. This disruption contributed to rising prices driven by cost inflationary pressures, which were largely passed on to consumers. These effects are captured in our new sectoral index (SDI) and its components. Conversely, labour costs shifted favorably for most sectors.
- The manufacturing of petroleum products and the energy sectors were the primary beneficiaries of the positive momentum in 2022.
- Since 2023, the mining and quarrying sector has demonstrated positive momentum, thus increasing its footprint in the Greek economy.
- The positive trend from 2022 continued into the first quarter of 2023, but declined during the remainder of the year, mainly due to the base effect from 2022. The labor costs and mixed contributions from business dynamics and lending were the drivers of 2023 trends.
- In 2024, most sectors did not outperform compared to the previous year. Business dynamics had the highest negative significance to the lower performance of SDI, following by labour cost.
- Based on the SDI results for Q1 2025, the sectors demonstrating the most robust performance dynamics included:
 - i. water supply, sewerage, and related services,
 - ii. agriculture,
 - iii. mining and quarrying, and
 - iv. professional, scientific, and technical activities.
- Lastly, when comparing Q1 2025 to the average SDI score of 2024, two sectors were identified as exhibiting high and accelerating performance:
 - i. water supply, sewerage, and related services, and
 - ii. agriculture.

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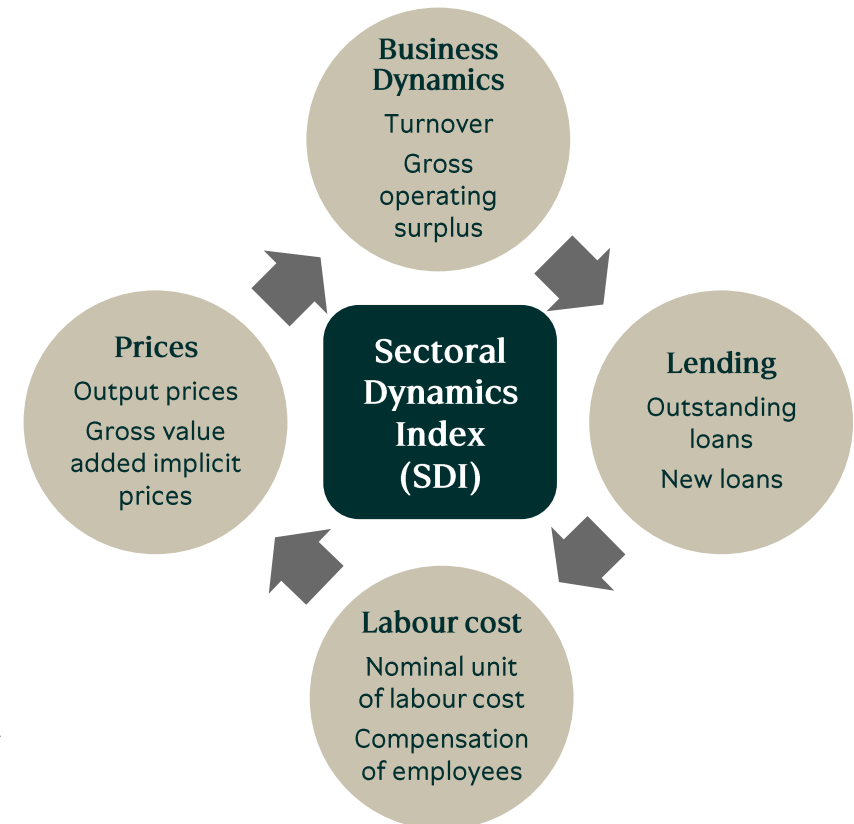
Index Construction

Index Construction

- The index allow us a thorough assessment by integrating several industry performance metrics into single dimension. Since we want to record the dynamic progress of each sector over time, **we focus on the rate of change (rather than the absolute level) of each variable.**
- In order to compile each variable into a single index – the Sectoral Dynamics Index (SDI) – we **normalize the data** to a common scale for **25 business, non-financial sectors** of the Greek economy from 2021 to date*.
- Our aim is to explore four key structural components and to understand the significance of each one.
- Since we want to examined the sectors' performance, if a change is a positive or negative shift, it is from the point of view of the enterprises. For instance, price increases are counted as a positive effect and labour costs increases as a negative effect. We approach the lending increase as a positive effect from the perspective that it indicates a positive prospect for investments.

Overview of the associated variables** by each component

- ❑ **Business dynamics:**
 - **Turnover** indicates total generated sales.
 - **Gross operating surplus** reflects business profitability.
- ❑ **Lending:**
 - **Outstanding loans** measure total borrowed amount.
 - **New loans** indicate recent borrowing trends.
- ❑ **Labour cost:**
 - **Nominal unit labor cost** measures compensation of employees per gross value added.
 - **Compensation of employees** accounts for total employee expenses.
- ❑ **Prices:**
 - **Output prices** indicate producer prices of final goods and services.
 - **Gross value added implicit prices** reflect the implied price fluctuations of the production process.



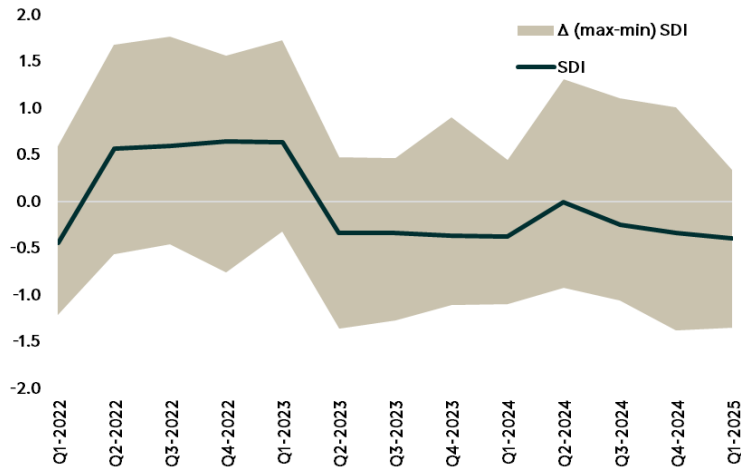
* For more technical notes in the Appendix.

** The associated variables are chosen based on their availability in quarterly frequency.

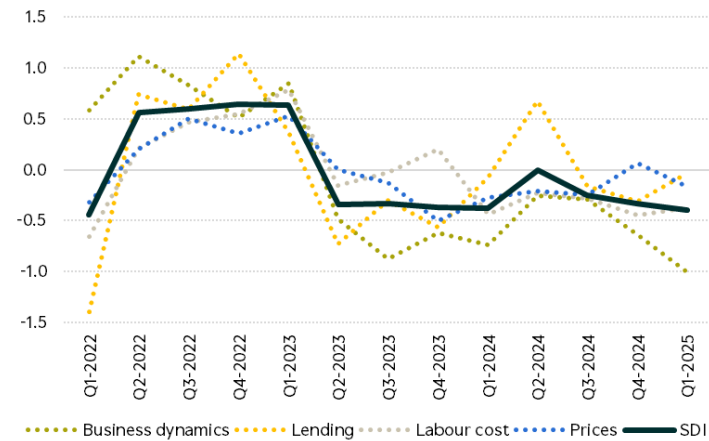
Estimation of Sectoral Dynamics

Sectoral performance development

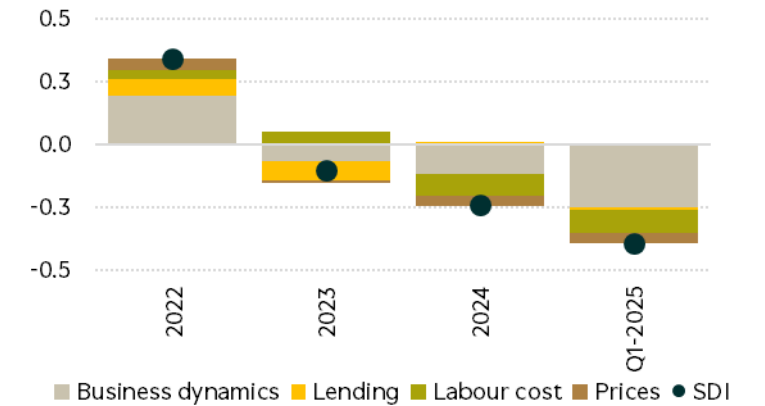
Dispersion of SDI scores



Decomposition of the average SDI performance



Contribution of each component to average SDI







- At the start of the period under review, economic activity experienced a significant upswing following the COVID-19 lockdown and the shock caused by Russia's invasion of Ukraine. Moreover, from the second quarter of 2022, the growth in average economic activity was driven by all components of the SDI. Strong business activity and pricing power were the primary forces behind high SDI values in 2022, with labour cost playing a supportive role and lending varying by sector.
- In the first quarter of 2023, the positive momentum from 2022 persisted, but this did not continue through the rest of the year, as downward trends emerged, largely due to the base effect from 2022. On average of 2023, labour cost was the dominant driver, and especially across top performing sectors prices played a supportive role. However, business dynamics and lending had mixed or weaker contributions.
- By the end of 2024, economic dynamics slowed, affected negatively by lower momentum of business dynamics and rising labour costs. This was partially offset by price increases imposed by some sectors, although the rise was lower than the long-term average from 2022 to 2024.
- Overall, average economic activity failed to recapture the strong momentum seen in 2022, a pattern that appeared to continue into the first quarter of 2025. Business dynamics had the highest negative impact to the lower performance of SDI, following by labour cost.

* Since we want to examine the sectors' performance, if a change is a positive or negative shift, it is from the point of view of the enterprises. For instance, price increases are counted as a positive effect and labour costs increases as a negative effect. We approach the lending increase as a positive effect from the perspective that it indicates a positive prospect for investments.

SDI Scoreboard by component; Q1 2025

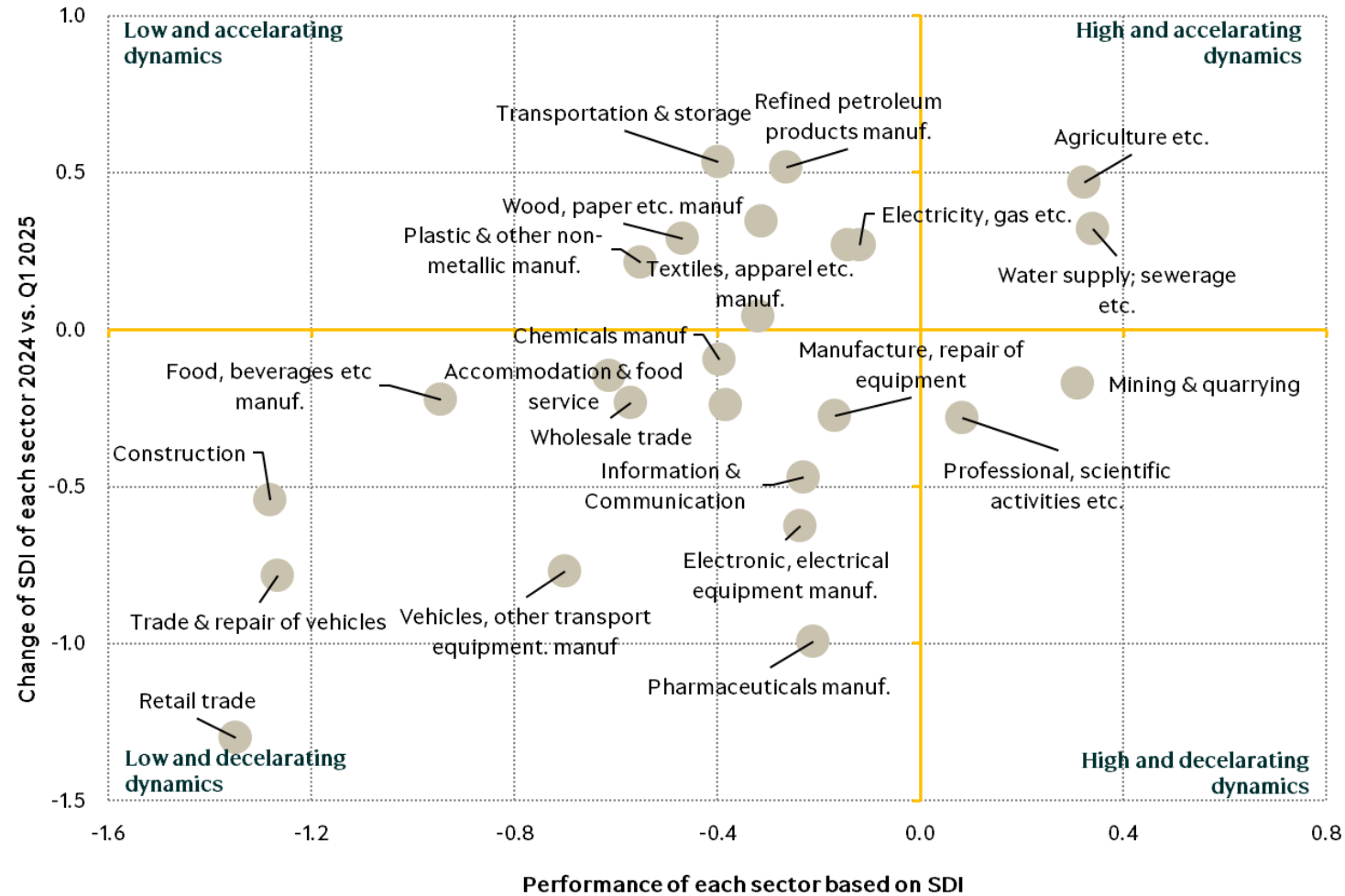
Sectors; Q1 2025		SDI		Business Dynamics		Lending		Labour cost		Prices	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
E	Water supply; sewerage etc.	0.34	1	↑-0.58	5	↑-0.08	5	↑ 0.16	6	↑ 1.86	2
A	Agriculture, forestry and fishing	0.32	2	↑-0.56	4	↑ 4.93	1	↓-0.97	21	↓-2.10	25
B	Mining and quarrying	0.31	3	↑-0.17	2	↑ 0.81	3	↑ 0.31	4	↔ 0.29	9
M	Professional, scientific and technical activities	0.08	4	↔-1.00	15	↑ 0.41	4	↔-0.04	8	↑ 0.96	3
D	Electricity, gas, steam and air conditioning supply	-0.12	5	↑-0.17	3	↓-0.73	24	↑ 0.65	1	↔-0.21	12
31-32	Other manufacturing	-0.14	6	↔-0.75	12	↔-0.35	9	↑ 0.47	3	↔ 0.05	11
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-0.17	7	↑-0.60	7	↔-0.35	9	↔-0.64	17	↑ 0.91	5
21	Manufacture of pharmaceutical products etc.	-0.21	8	↔-1.19	18	↔-0.35	9	↔-0.12	11	↑ 0.81	6
J	Information and Communication	-0.23	9	↓-1.64	22	↓-0.55	23	↓-1.27	23	↑ 2.54	1
26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.24	10	↑ 0.14	1	↔-0.35	9	↓-1.07	22	↔ 0.33	8
19	Manufacture of refined petroleum products etc.	-0.26	11	↔-0.71	11	↔-0.35	9	↑ 0.61	2	↔-0.61	16
N	Administrative activities etc.	-0.31	12	↔-1.11	17	↓-0.52	22	↑ 0.25	5	↔ 0.13	10
13-15	Manufacture of textiles, apparel and leather products	-0.32	13	↓-1.46	20	↔-0.35	9	↔-0.39	15	↑ 0.92	4
24-25	Manufacture of basic metals and fabricated metal products	-0.38	14	↔-0.67	10	↔-0.35	9	↔-0.27	14	↔-0.24	13
20	Manufacture of chemicals etc.	-0.40	15	↔-0.60	8	↔-0.35	9	↔-0.12	10	↔-0.52	15
H	Transportation and storage	-0.40	16	↔-0.90	13	↑ 1.03	2	↔-0.67	19	↓-1.04	20
16-18	Manufacture of wood, paper, printing and reproduction	-0.47	17	↔-0.95	14	↔-0.35	9	↑ 0.09	7	↔-0.66	17
22-23	Manufacture of rubber, plastic and other non-metallic products	-0.55	18	↔-1.24	19	↔-0.35	9	↔-0.24	12	↔-0.37	14
46	Wholesale trade	-0.57	19	↑-0.59	6	↑-0.30	6	↔-0.63	16	↔-0.76	18
I	Accommodation and food service activities	-0.61	20	↔-1.09	16	↓-0.39	21	↔-0.08	9	↔-0.88	19
29-30	Manufacture of vehicles, other transport equipment etc.	-0.70	21	↔-0.62	9	↔-0.35	9	↓-2.17	25	↑ 0.34	7
10-12	Manufacture of food, beverages and tobacco products	-0.95	22	↓-1.46	21	↔-0.35	9	↔-0.25	13	↓-1.73	23
45	Trade and repair of motor vehicles	-1.27	23	↓-2.71	25	↑-0.30	6	↓-0.83	20	↓-1.22	22
F	Construction	-1.28	24	↓-2.58	24	↓-0.81	25	↔-0.65	18	↓-1.09	21
47	Retail trade	-1.35	25	↓-1.78	23	↑-0.30	6	↓-1.49	24	↓-1.82	24

The arrow indicates the intensity of the direction of each sector relative to the median score of the corresponding component.

-  score ≥ 75% of score range
-  50% ≤ score < 75%
-  25% ≤ score < 50%
-  score < 25%

Sectors' performance and development; Q1 2025

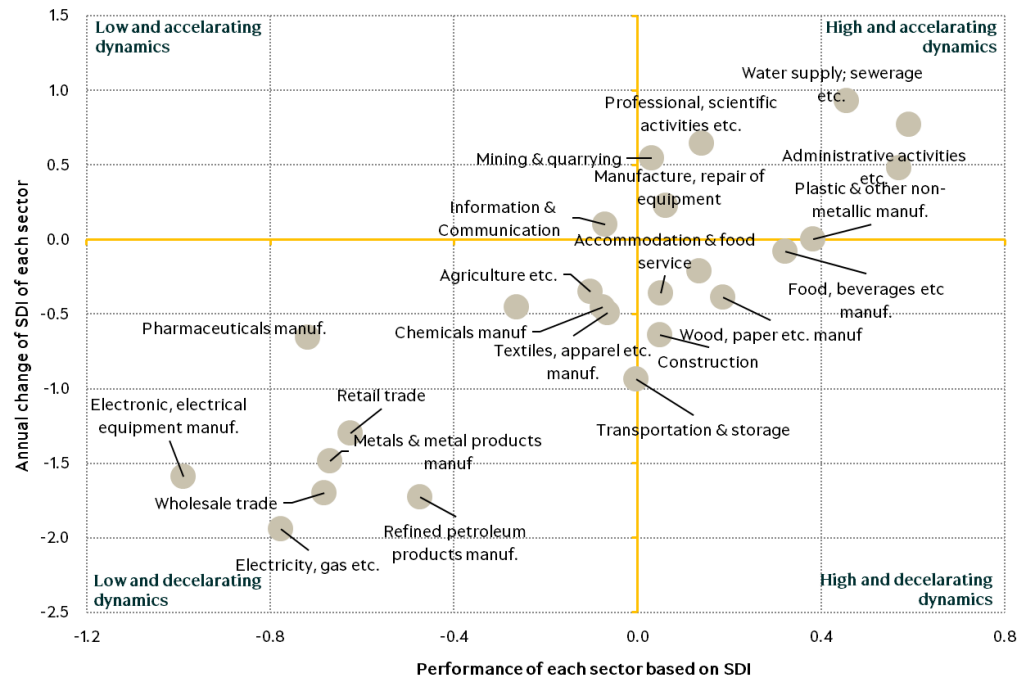
- In Q1 2025, only the water supply, sewerage, etc. and agriculture sectors had positive scores and demonstrated improved performance compared to their average scores in 2024.



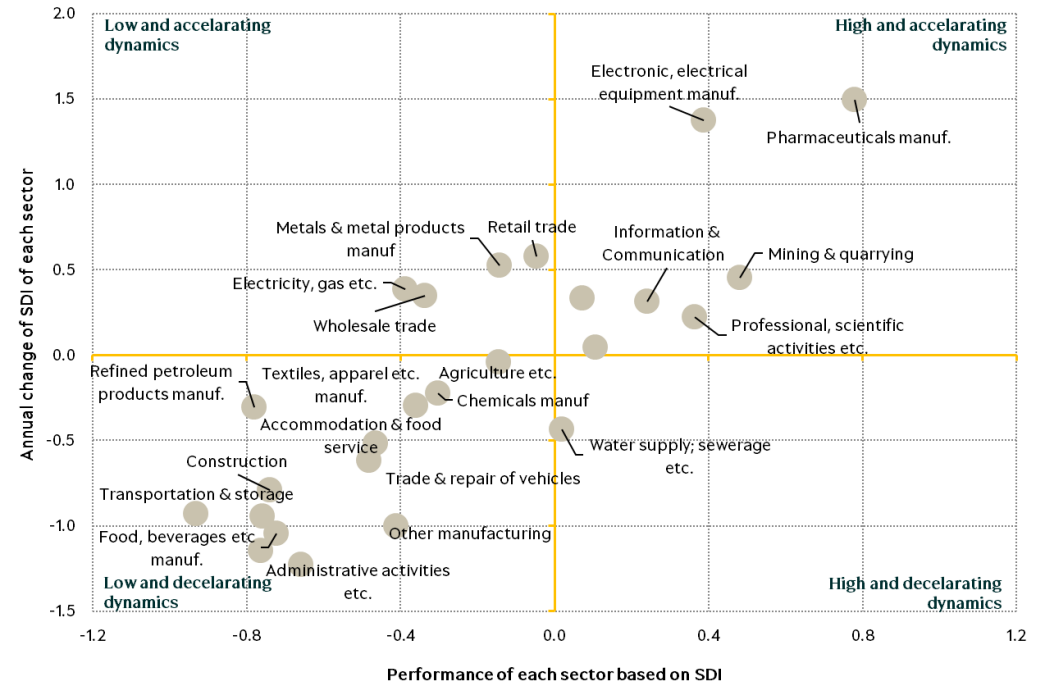
Sectors' performance and development; 2023 – 2024

- In 2023, economic activity was recovering from the pandemic shock, but it appeared not to have fully bounced back.
- After a substantial overperformance in 2022, linked to Russia's invasion of Ukraine, the energy and petroleum product manufacturing sectors decelerated in 2023.
- Since 2023, the mining and quarrying sector has demonstrated positive momentum, thus increasing its footprint in the Greek economy.
- In 2024, most sectors did not outperform compared to the previous year.

2023



2024



Sectoral Dynamics Index (SDI) Ranking change: 2024 – Q1 2025

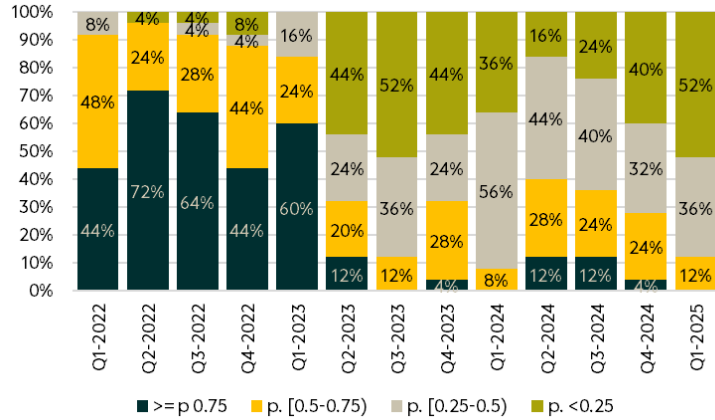
Sectors		2024	Ranking change	Sectors	Q1 2025	
21	Manufacture of pharmaceutical products etc.	0.78		E	Water supply; sewerage etc.	0.34
B	Mining and quarrying	0.48		A	Agriculture, forestry and fishing	0.32
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.39		B	Mining and quarrying	0.31
M	Professional, scientific and technical activities	0.36		M	Professional, scientific and technical activities	0.08
J	Information and Communication	0.24		D	Electricity, gas, steam and air conditioning supply	-0.12
28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.11		31-32	Other manufacturing	-0.14
29-30	Manufacture of vehicles, other transport equipment etc.	0.07		28 & 33	Manufacture, repair and installation of equipment n.e.c.	-0.17
E	Water supply; sewerage etc.	0.02		21	Manufacture of pharmaceutical products etc.	-0.21
47	Retail trade	-0.05		J	Information and Communication	-0.23
24-25	Manufacture of basic metals and fabricated metal products	-0.14		26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.24
A	Agriculture, forestry and fishing	-0.15		19	Manufacture of refined petroleum products etc.	-0.26
20	Manufacture of chemicals etc.	-0.30		N	Administrative activities etc.	-0.31
46	Wholesale trade	-0.34		13-15	Manufacture of textiles, apparel and leather products	-0.32
13-15	Manufacture of textiles, apparel and leather products	-0.36		24-25	Manufacture of basic metals and fabricated metal products	-0.38
D	Electricity, gas, steam and air conditioning supply	-0.39		20	Manufacture of chemicals etc.	-0.40
31-32	Other manufacturing	-0.41		H	Transportation and storage	-0.40
I	Accommodation and food service activities	-0.47		16-18	Manufacture of wood, paper, printing and reproduction	-0.47
45	Trade and repair of motor vehicles	-0.48		22-23	Manufacture of rubber, plastic and other non-metallic products	-0.55
N	Administrative activities etc.	-0.66		46	Wholesale trade	-0.57
10-12	Manufacture of food, beverages and tobacco products	-0.72		I	Accommodation and food service activities	-0.61
F	Construction	-0.74		29-30	Manufacture of vehicles, other transport equipment etc.	-0.70
16-18	Manufacture of wood, paper, printing and reproduction	-0.76		10-12	Manufacture of food, beverages and tobacco products	-0.95
22-23	Manufacture of rubber, plastic and other non-metallic products	-0.76		45	Trade and repair of motor vehicles	-1.27
19	Manufacture of refined petroleum products etc.	-0.78		F	Construction	-1.28
H	Transportation and storage	-0.93		47	Retail trade	-1.35

Sectoral Dynamics Index (SDI) Heatmap: Q1 2022 – Q1 2025

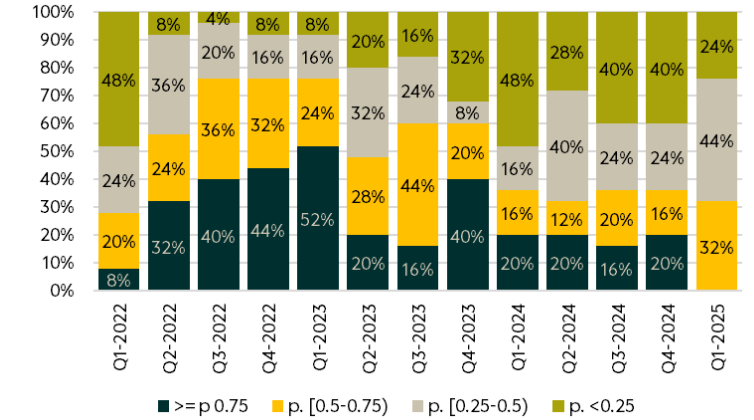
Sectors		Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024	Q1-2025	Q1-2022 - Q1-2025
A	Agriculture, forestry and fishing	-0.07	0.70	0.33	0.04	0.08	-0.09	-0.06	-0.34	-0.07	0.09	-0.17	-0.44	0.32	
B	Mining and quarrying	-0.41	-0.52	-0.37	-0.76	0.18	-0.15	-0.25	0.34	0.09	0.35	0.48	1.00	0.31	
10-12	Manufacture of food, beverages and tobacco products	-0.88	0.82	0.75	0.91	1.73	-0.31	0.06	-0.19	-0.88	-0.12	-0.89	-1.00	-0.95	
13-15	Manufacture of textiles, apparel and leather products	-0.45	0.77	0.60	0.78	1.11	-0.56	-0.26	-0.56	-0.61	0.01	-0.58	-0.27	-0.32	
16-18	Manufacture of wood, paper, printing and reproduction	-0.52	0.99	0.97	0.86	1.53	-0.39	-0.18	-0.22	-0.98	-0.25	-0.84	-0.96	-0.47	
19	Manufacture of refined petroleum products etc.	0.59	1.68	1.33	1.43	-0.11	-0.82	-0.39	-0.57	-0.79	-0.38	-0.99	-0.96	-0.26	
20	Manufacture of chemicals etc.	-0.67	0.69	0.76	0.73	1.21	-0.63	-0.39	-0.50	-0.54	0.20	-0.42	-0.45	-0.40	
21	Manufacture of pharmaceutical products etc.	-0.71	0.14	-0.05	0.37	0.02	-1.16	-0.68	-1.05	0.45	1.31	0.52	0.85	-0.21	
22-23	Manufacture of rubber, plastic and other non-metallic products	-0.58	0.84	0.62	0.65	1.60	-0.15	0.05	0.02	-0.91	-0.42	-0.88	-0.83	-0.55	
24-25	Manufacture of basic metals and fabricated metal products	-0.14	1.17	1.15	1.08	0.35	-1.15	-0.89	-0.99	-0.37	0.24	-0.24	-0.21	-0.38	
26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.08	0.77	0.80	0.91	-0.21	-1.36	-1.28	-1.11	0.06	0.72	0.56	0.21	-0.24	
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-1.07	0.01	0.06	0.33	1.07	-0.32	-0.15	-0.35	-0.29	0.31	0.12	0.28	-0.17	
29-30	Manufacture of vehicles, other transport equipment etc.	-0.92	0.56	0.55	0.58	0.83	-0.77	-0.45	-0.66	-0.23	0.54	-0.12	0.09	-0.70	
31-32	Other manufacturing	-0.88	0.22	-0.08	0.02	1.36	0.20	0.46	0.33	-0.40	-0.08	-0.67	-0.49	-0.14	
D	Electricity, gas, steam and air conditioning supply	0.59	0.91	1.77	1.39	-0.33	-0.72	-1.07	-0.99	-0.50	-0.39	-0.36	-0.31	-0.12	
E	Water supply; sewerage etc.	-0.98	-0.41	0.08	-0.59	1.05	0.39	0.22	0.16	-0.34	-0.23	0.08	0.57	0.34	
F	Construction	0.00	0.12	1.09	1.56	0.49	0.41	-0.38	-0.33	-0.67	-0.91	-0.57	-0.81	-1.28	
45	Trade and repair of motor vehicles	-0.70	0.59	0.82	0.68	1.12	-0.15	-0.16	-0.27	-0.54	-0.20	-0.54	-0.65	-1.27	
46	Wholesale trade	0.02	1.38	1.44	1.24	0.00	-0.98	-0.86	-0.89	-0.45	-0.04	-0.37	-0.48	-0.57	
47	Retail trade	-0.54	1.12	1.22	0.89	0.38	-0.88	-0.90	-1.10	-0.14	0.28	-0.10	-0.23	-1.35	
H	Transportation and storage	0.27	1.32	1.38	0.77	0.78	-0.17	-0.24	-0.38	-1.10	-0.92	-1.06	-0.65	-0.40	
I	Accommodation and food service activities	-0.01	0.73	0.32	0.61	0.32	0.46	-0.08	-0.49	-0.38	-0.41	-0.52	-0.55	-0.61	
J	Information and Communication	-1.22	-0.16	-0.32	1.01	0.33	0.28	-0.30	-0.60	0.14	0.04	1.11	-0.32	-0.23	
M	Professional, scientific and technical activities	-0.81	-0.56	-0.46	-0.18	0.41	0.04	-0.49	0.60	0.44	0.44	0.90	-0.32	0.08	
N	Administrative activities etc.	-0.92	0.31	0.23	0.74	0.56	0.47	0.34	0.91	-0.39	-0.25	-0.62	-1.38	-0.31	

Current sectoral performance vs. long-term history

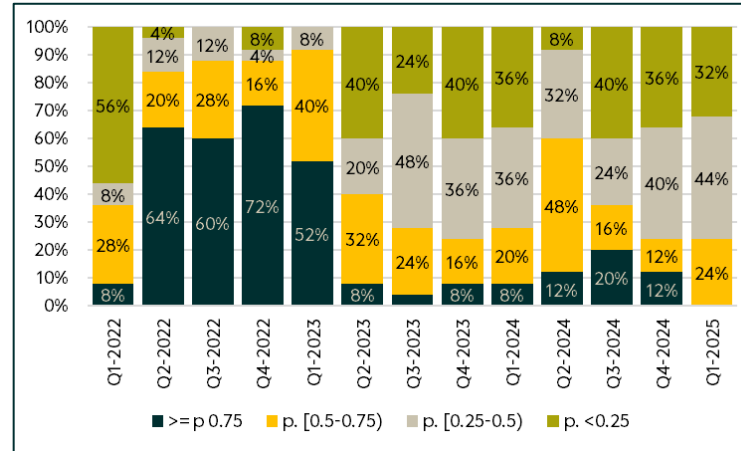
Business Dynamics



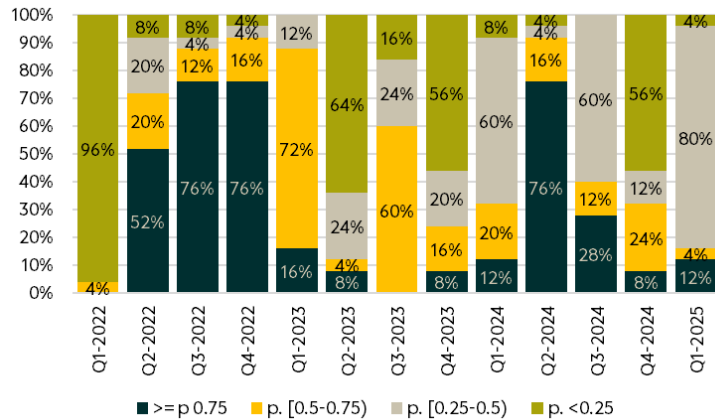
Labour cost



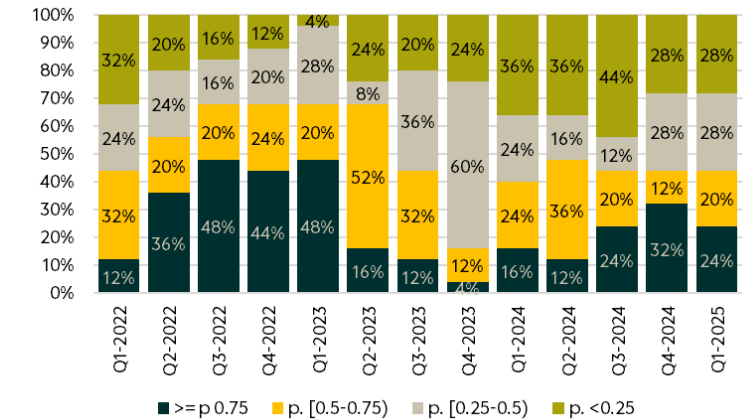
SDI



Lending



Prices



*p.: percentile

Appendix I

Technical notes

Technical Notes: Sector groups

- We examine the business, non-financial sectors of economic activity A-J and M-N, according to the classification NACE rev. 2. The sectors are aggregated in 25 groups according to their activity, as follow:

#	Codes	Sector groups
1	A	Agriculture, forestry and fishing
2	B	Mining and quarrying
3	10-12	Manufacture of food, beverages and tobacco products
4	13-15	Manufacture of textiles, apparel and leather products
5	16-18	Manufacture of wood, paper, printing and reproduction
6	19	Manufacture of refined petroleum products etc.
7	20	Manufacture of chemicals etc.
8	21	Manufacture of pharmaceutical products etc.
9	22-23	Manufacture of rubber, plastic and other non-metallic mineral products
10	24-25	Manufacture of basic metals and fabricated metal products
11	26-27	Manufacture of computer, electronic products, electrical equipment etc.
12	28 & 33	Manufacture, repair and installation of machinery and equipment n.e.c.
13	29-30	Manufacture of motor vehicles, other transport equipment etc.
14	31-32	Other manufacturing
15	D	Electricity, gas, steam and air conditioning supply
16	E	Water supply; sewerage etc.
17	F	Construction
18	45	Trade and repair of motor vehicles
19	46	Wholesale trade
20	47	Retail trade
21	H	Transportation and storage
22	I	Accommodation and food service activities
23	J	Information and Communication
24	M	Professional, scientific and technical activities
25	N	Administrative activities etc.

Technical Notes: Metrics and sources

- The main sources of the examined economic indicators are the Eurostat, Hellenic Statistical Authority (ELSTAT), and Bank of Greece.

Dimension	Name	Variable	Frequency	Source
Business dynamics	Turnover	Turnover of enterprises	Quarterly	ELSTAT
	Gross operating surplus	Gross value added at current prices	Annual and quarterly	Eurostat
		Compensation of employees at current prices	Annual and quarterly	Eurostat
Lending	Outstanding amount of loans	Outstanding amount of loans	Monthly	Bank of Greece
	New loans	New loans	Monthly	Bank of Greece
Labour cost	Nominal unit labour cost	Compensation of employees at current prices	Annual and quarterly	Eurostat
		Gross value added at current prices	Annual and quarterly	Eurostat
	Compensation of employees	Compensation of employees at current prices	Annual and quarterly	Eurostat
Prices	Output prices	Price indices of agricultural products, output	Quarterly	Eurostat
		Producer prices in industry	Quarterly	Eurostat
		Construction producer prices	Quarterly	Eurostat
		Turnover index for motor trade	Monthly	ELSTAT
		Volume index for motor trade	Monthly	ELSTAT
		Turnover index for wholesale trade	Monthly	ELSTAT
		Volume index for wholesale trade	Monthly	ELSTAT
		HICP at constant tax rates	Monthly	Eurostat
	Service producer prices	Quarterly	Eurostat	
	GVA implicit prices	GVA at current prices	Annual and quarterly	Eurostat
GVA at constant prices		Annual and quarterly	Eurostat	

Data transformations

- We use monthly or quarterly data, depending on the source. The monthly data are transformed into quarterly. When there is missing value, we fill in the value of the respective quarter of the previous year.
- When the data source is the National Accounts, for the conversion of relative metrics into quarterly for all examined sectors, we take the shares of subsectors of annual data, and we implement them to quarterly aggregates.
- For data from Bank of Greece, we implement the level of the aggregated sector for each subsector. For new loans we calculate the sum of the months of each quarter and for outstanding amount of loans, we take the end of period of each quarter.
- The output prices of motor trade and wholesale trade are estimated as: $deflator = \frac{Turnover\ index}{Volume\ index} \times 100$
- The Harmonised Index of Consumer Prices (HICP) at constant tax prices is used for output prices of retail trade.
- The Gross value added (GVA) implicit prices is estimated as: $GVA\ implicit\ prices = \frac{GVA\ at\ current\ prices}{GVA\ at\ constant\ prices} \times 100$

Data normalisation process

- All the values of examined variables are adjusted to a common scale. So, we normalise the annual changes of each metric by the following formulas:
 - If an increase of a metric is an improvement:
 - $S_{i,t} = \frac{X_{i,t} - \text{long term median}}{\text{long term standard deviation}}$
 - If a decrease of a metric is an improvement:
 - $S_{i,t} = -\frac{X_{i,t} - \text{long term median}}{\text{long term standard deviation}}$
- Since we want to examine the sectors' performance, if a change is a positive or negative shift, it is from the point of view of the enterprises. For instance, price increases are counted as a positive effect and labour costs increases as a negative effect. We approach the lending increase as a positive effect from the perspective that it indicates a positive prospect for investments.
- At first, we standardized the observations of each metric at sector level, to capture its own dynamics over time, and then as a second step we standardized the observations based on the whole panel data, so that we can compare the performances between the sectors.

Appendix II

Supplementary presentation of results

Business Dynamics Heatmap: Q1 2022 – Q1 2025

Sectors		Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024	Q1-2025	Q1-2022 Q1-2025
A	Agriculture, forestry and fishing	1.07	1.98	1.58	0.84	0.45	-0.68	-1.06	-1.75	-0.98	-0.46	-0.89	-0.10	-0.56	
B	Mining and quarrying	-0.84	-1.31	-0.93	-1.06	1.00	-0.09	-1.07	0.66	-0.01	1.11	1.81	0.74	-0.17	
10-12	Manufacture of food, beverages and tobacco products	0.06	1.38	0.89	0.39	2.11	-0.96	-0.82	-0.68	-1.20	0.04	-0.39	-0.83	-1.46	
13-15	Manufacture of textiles, apparel and leather products	1.35	1.47	1.23	0.04	1.58	-0.97	-1.29	-1.02	-1.19	-0.18	-0.62	-0.40	-1.46	
16-18	Manufacture of wood, paper, printing and reproduction	0.59	1.42	1.34	-0.01	1.78	-0.99	-1.37	-0.54	-1.10	-0.07	-0.13	-0.91	-0.95	
19	Manufacture of refined petroleum products etc.	1.49	2.05	1.78	1.19	-0.58	-1.16	-0.95	-0.91	-0.72	-0.44	-0.82	-0.92	-0.71	
20	Manufacture of chemicals etc.	0.12	0.54	0.90	-0.04	0.89	-1.35	-1.59	-1.08	-0.04	0.88	0.60	0.18	-0.60	
21	Manufacture of pharmaceutical products etc.	0.30	0.06	0.13	0.84	0.80	-1.18	-0.62	-1.54	-0.48	1.27	-0.04	0.47	-1.19	
22-23	Manufacture of rubber, plastic and other non-metallic products	0.31	1.24	0.50	-0.11	2.06	-0.64	-0.83	-0.02	-0.89	-0.65	-0.32	-0.66	-1.24	
24-25	Manufacture of basic metals and fabricated metal products	1.12	1.56	1.58	0.53	-0.02	-1.51	-1.84	-1.45	-0.42	0.22	0.33	-0.09	-0.67	
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.98	0.66	1.50	0.93	-0.34	-1.19	-2.09	-0.68	-0.28	0.13	1.16	-0.78	0.14	
28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.34	0.06	0.15	0.14	2.04	0.05	-0.11	0.17	-1.25	-0.37	-0.46	-0.74	-0.60	
29-30	Manufacture of vehicles, other transport equipment etc.	0.21	1.52	1.53	0.73	0.95	-1.30	-1.19	-1.26	-0.56	0.18	-0.62	-0.18	-0.62	
31-32	Other manufacturing	0.64	0.79	-0.01	-0.49	2.01	0.06	-0.30	0.18	-0.73	-0.41	-0.73	-1.02	-0.75	
D	Electricity, gas, steam and air conditioning supply	1.83	1.49	2.19	0.86	-0.86	-0.98	-1.25	-1.17	-0.76	-0.58	-0.35	-0.44	-0.17	
E	Water supply; sewerage etc.	-0.15	1.05	-0.38	-1.32	0.57	-0.19	-0.25	0.58	-0.30	0.07	0.22	0.08	-0.58	
F	Construction	0.28	-0.17	0.09	2.12	0.65	1.42	0.01	-0.42	-0.78	-1.25	-1.06	-0.89	-2.58	
45	Trade and repair of motor vehicles	0.01	1.01	0.74	0.18	2.56	0.34	0.23	0.07	-1.29	-1.01	-1.46	-1.40	-2.71	
46	Wholesale trade	1.46	2.25	1.63	1.06	-0.35	-1.09	-1.19	-1.37	-0.76	-0.40	-0.61	-0.64	-0.59	
47	Retail trade	0.84	1.89	1.01	0.36	0.44	-0.88	-1.08	-1.66	-0.36	0.10	-0.32	-0.34	-1.78	
H	Transportation and storage	1.38	2.50	1.08	0.45	0.68	-0.62	-0.64	-0.93	-1.13	-0.86	-0.97	-0.95	-0.90	
I	Accommodation and food service activities	1.93	2.28	0.70	0.42	0.30	-0.30	-0.42	-0.46	-1.10	-1.05	-1.14	-1.16	-1.09	
J	Information and Communication	-0.61	0.27	0.95	1.79	1.18	0.82	-1.09	-0.43	-0.59	-0.51	0.21	-1.99	-1.64	
M	Professional, scientific and technical activities	-0.09	0.14	0.07	1.09	0.99	0.87	-0.56	0.36	-0.54	-0.85	0.15	-1.63	-1.00	
N	Administrative activities etc.	0.04	1.83	0.58	1.86	0.43	0.39	-0.57	-0.11	-0.85	-1.27	-0.92	-1.41	-1.11	

Lending Heatmap: Q1 2022 – Q1 2025

Sectors		Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024	Q1-2025	Q1-2022 - Q1-2025
A	Agriculture, forestry and fishing	-1.79	0.27	0.28	0.86	0.79	-0.76	-0.98	-0.73	-1.01	0.91	1.76	0.39	4.93	
B	Mining and quarrying	-0.98	-0.72	-0.83	-0.75	-0.74	-0.38	0.05	0.60	0.44	0.27	0.09	2.95	0.81	
10-12	Manufacture of food, beverages and tobacco products	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
13-15	Manufacture of textiles, apparel and leather products	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
16-18	Manufacture of wood, paper, printing and reproduction	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
19	Manufacture of refined petroleum products etc.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
20	Manufacture of chemicals etc.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
21	Manufacture of pharmaceutical products etc.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
22-23	Manufacture of rubber, plastic and other non-metallic products	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
24-25	Manufacture of basic metals and fabricated metal products	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
26-27	Manufacture of computer, electronic, electrical equipment etc.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
29-30	Manufacture of vehicles, other transport equipment etc.	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
31-32	Other manufacturing	-1.16	1.75	0.59	1.89	0.27	-1.11	-0.07	-0.93	-0.39	0.76	-0.75	-0.85	-0.35	
D	Electricity, gas, steam and air conditioning supply	-2.04	-0.55	1.56	1.70	1.30	0.70	-0.86	-0.60	-0.60	0.18	-0.05	-0.74	-0.73	
E	Water supply; sewerage etc.	-1.09	-0.20	2.06	0.64	1.72	0.37	-0.21	-0.80	-1.15	-0.99	-0.23	-0.13	-0.08	
F	Construction	-1.39	-1.18	1.84	0.56	-0.07	-0.31	-0.82	-0.11	0.91	0.71	0.81	-0.97	-0.81	
45	Trade and repair of motor vehicles	-2.82	0.20	0.76	0.70	0.39	-1.17	-0.66	-0.05	0.53	1.35	0.63	0.15	-0.30	
46	Wholesale trade	-2.82	0.20	0.76	0.70	0.39	-1.17	-0.66	-0.05	0.53	1.35	0.63	0.15	-0.30	
47	Retail trade	-2.82	0.20	0.76	0.70	0.39	-1.17	-0.66	-0.05	0.53	1.35	0.63	0.15	-0.30	
H	Transportation and storage	-0.07	1.24	1.94	0.02	-0.11	-1.08	-0.94	-0.63	-0.47	-0.49	-0.62	1.21	1.03	
I	Accommodation and food service activities	-1.46	-0.69	-1.37	0.50	-0.08	1.48	0.35	-0.23	1.06	0.35	0.32	-0.23	-0.39	
J	Information and Communication	-1.42	-0.68	-0.29	1.27	-0.27	-0.25	-0.70	-0.89	2.02	-0.04	0.77	0.48	-0.55	
M	Professional, scientific and technical activities	-0.78	-0.77	0.00	-1.25	2.16	-0.64	-0.65	0.16	-0.17	1.14	0.67	0.14	0.41	
N	Administrative activities etc.	-1.39	0.09	0.28	0.22	0.02	-0.55	0.13	0.60	0.39	1.73	-0.53	-0.98	-0.52	

Labour cost Heatmap: Q1 2022 – Q1 2025

Sectors		Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024	Q1-2025	Q1-2022 - Q1-2025
A	Agriculture, forestry and fishing	0.54	0.90	0.30	-1.63	-1.34	-0.37	-0.37	1.14	0.95	0.38	-0.05	-0.44	-0.97	
B	Mining and quarrying	-0.42	-0.36	-0.07	-0.63	0.84	0.45	0.52	0.66	-0.28	-0.27	-0.36	-0.08	0.31	
10-12	Manufacture of food, beverages and tobacco products	-1.70	-0.32	0.44	0.09	2.48	0.08	0.64	1.09	-0.96	-0.20	-0.90	-0.74	-0.25	
13-15	Manufacture of textiles, apparel and leather products	0.39	1.14	1.38	1.06	1.38	-0.24	0.02	0.34	-1.57	-1.00	-1.41	-1.48	-0.39	
16-18	Manufacture of wood, paper, printing and reproduction	-1.35	0.06	0.82	0.47	2.34	-0.19	0.40	0.87	-1.12	-0.33	-1.05	-0.90	0.09	
19	Manufacture of refined petroleum products etc.	0.51	0.86	1.31	1.45	0.55	0.05	0.32	0.39	-1.38	-1.28	-1.53	-1.25	0.61	
20	Manufacture of chemicals etc.	-1.48	-0.26	0.31	-0.07	2.05	-0.19	0.28	0.70	-0.57	0.12	-0.48	-0.41	-0.12	
21	Manufacture of pharmaceutical products etc.	-0.96	-0.46	-0.22	-0.38	-0.45	-1.47	-1.26	-1.07	1.48	1.73	1.52	1.54	-0.12	
22-23	Manufacture of rubber, plastic and other non-metallic products	-1.20	-0.12	0.46	0.18	2.33	0.49	0.93	1.27	-1.29	-0.68	-1.24	-1.12	-0.24	
24-25	Manufacture of basic metals and fabricated metal products	-0.99	0.16	1.07	1.04	-0.12	-2.04	-1.40	-1.08	0.70	1.15	0.55	0.96	-0.27	
26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.50	0.15	0.66	0.63	-0.67	-1.87	-1.50	-1.29	1.02	1.28	0.95	1.15	-1.07	
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-1.60	-0.90	-0.42	-0.51	0.65	-0.31	0.01	0.17	0.63	0.92	0.59	0.76	-0.64	
29-30	Manufacture of vehicles, other transport equipment etc.	-1.61	-0.54	0.10	-0.11	1.01	-0.95	-0.47	-0.11	0.49	1.02	0.50	0.67	-2.17	
31-32	Other manufacturing	-1.17	-0.28	0.23	0.02	2.19	0.76	1.12	1.38	-1.23	-0.75	-1.21	-1.08	0.47	
D	Electricity, gas, steam and air conditioning supply	0.75	0.99	1.70	1.71	-1.16	-1.74	-1.23	-1.09	0.32	-0.25	-0.50	0.50	0.65	
E	Water supply; sewerage etc.	-1.25	-1.08	-0.43	-1.14	1.63	0.99	1.24	1.46	-0.31	-0.46	-0.68	0.03	0.16	
F	Construction	0.95	0.54	0.43	1.73	0.51	0.57	0.08	0.30	-1.85	-2.01	-0.97	-0.29	-0.65	
45	Trade and repair of motor vehicles	0.04	1.30	1.36	1.55	1.30	0.30	0.21	-0.24	-1.71	-1.33	-1.41	-1.37	-0.83	
46	Wholesale trade	0.05	1.26	1.58	1.96	0.63	-0.36	-0.47	-0.95	-1.17	-0.84	-0.88	-0.82	-0.63	
47	Retail trade	-0.63	1.28	1.28	1.52	1.09	-0.47	-0.59	-1.29	-0.90	-0.37	-0.48	-0.44	-1.49	
H	Transportation and storage	-0.74	0.66	0.87	1.20	1.77	0.71	0.61	0.11	-1.57	-1.17	-1.24	-1.19	-0.67	
I	Accommodation and food service activities	-0.53	0.40	0.43	0.57	0.34	-0.44	-0.50	-0.85	-0.03	0.24	0.17	0.19	-0.08	
J	Information and Communication	-0.96	1.05	-0.90	1.71	0.08	0.42	0.77	-1.09	-0.89	-0.16	1.63	-1.66	-1.27	
M	Professional, scientific and technical activities	-1.61	-0.77	-0.73	0.74	-0.42	0.70	-0.61	2.02	0.88	-0.14	1.47	-1.54	-0.04	
N	Administrative activities etc.	-0.81	-0.31	-0.28	0.61	0.70	1.35	0.56	2.09	-0.53	-1.18	-0.12	-2.08	0.25	

Prices Heatmap: Q1 2022 – Q1 2025

Sectors		Q1-2022	Q2-2022	Q3-2022	Q4-2022	Q1-2023	Q2-2023	Q3-2023	Q4-2023	Q1-2024	Q2-2024	Q3-2024	Q4-2024	Q1-2025	Q1-2022 - Q1-2025
A	Agriculture, forestry and fishing	-0.08	-0.37	-0.85	0.08	0.44	1.45	2.18	-0.04	0.76	-0.47	-1.49	-1.60	-2.10	
B	Mining and quarrying	0.60	0.32	0.36	-0.58	-0.37	-0.58	-0.50	-0.55	0.21	0.29	0.38	0.41	0.29	
10-12	Manufacture of food, beverages and tobacco products	-0.71	0.44	1.11	1.25	2.05	0.74	0.48	-0.22	-0.98	-1.07	-1.52	-1.57	-1.73	
13-15	Manufacture of textiles, apparel and leather products	-2.38	-1.27	-0.80	0.12	1.22	0.10	0.30	-0.61	0.72	0.46	0.46	1.68	0.92	
16-18	Manufacture of wood, paper, printing and reproduction	-0.17	0.71	1.12	1.10	1.74	0.74	0.31	-0.27	-1.30	-1.37	-1.45	-1.17	-0.66	
19	Manufacture of refined petroleum products etc.	1.50	2.03	1.63	1.18	-0.68	-1.08	-0.86	-0.83	-0.67	-0.55	-0.86	-0.82	-0.61	
20	Manufacture of chemicals etc.	-0.16	0.74	1.25	1.12	1.64	0.13	-0.18	-0.68	-1.17	-0.96	-1.05	-0.70	-0.52	
21	Manufacture of pharmaceutical products etc.	-1.02	-0.80	-0.69	-0.88	-0.56	-0.87	-0.75	-0.65	1.17	1.48	1.33	2.23	0.81	
22-23	Manufacture of rubber, plastic and other non-metallic products	-0.27	0.47	0.93	0.64	1.74	0.67	0.18	-0.22	-1.08	-1.12	-1.24	-0.70	-0.37	
24-25	Manufacture of basic metals and fabricated metal products	0.46	1.21	1.36	0.84	1.27	0.08	-0.26	-0.51	-1.37	-1.14	-1.10	-0.84	-0.24	
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.37	0.53	0.46	0.16	-0.08	-1.28	-1.44	-1.54	-0.10	0.73	0.89	1.31	0.33	
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-1.86	-0.86	-0.09	-0.19	1.31	0.10	-0.43	-0.82	-0.15	-0.08	1.11	1.96	0.91	
29-30	Manufacture of vehicles, other transport equipment etc.	-1.13	-0.49	-0.02	-0.19	1.09	0.27	-0.06	-0.33	-0.44	0.22	0.37	0.73	0.34	
31-32	Other manufacturing	-1.84	-1.38	-1.12	-1.35	0.99	1.09	1.10	0.71	0.74	0.09	-0.01	0.98	0.05	
D	Electricity, gas, steam and air conditioning supply	1.82	1.72	1.61	1.28	-0.58	-0.86	-0.94	-1.11	-0.94	-0.91	-0.55	-0.55	-0.21	
E	Water supply; sewerage etc.	-1.46	-1.41	-0.93	-0.53	0.30	0.38	0.08	-0.60	0.38	0.45	1.03	2.30	1.86	
F	Construction	0.16	1.27	1.99	1.83	0.86	-0.03	-0.79	-1.08	-0.98	-1.08	-1.05	-1.11	-1.09	
45	Trade and repair of motor vehicles	-0.02	-0.15	0.41	0.30	0.23	-0.06	-0.42	-0.87	0.30	0.18	0.08	0.04	-1.22	
46	Wholesale trade	1.38	1.79	1.79	1.25	-0.69	-1.29	-1.13	-1.17	-0.39	-0.28	-0.64	-0.62	-0.76	
47	Retail trade	0.46	1.12	1.84	0.96	-0.39	-1.02	-1.27	-1.38	0.17	0.02	-0.22	-0.29	-1.82	
H	Transportation and storage	0.51	0.89	1.62	1.41	0.76	0.32	0.02	-0.09	-1.22	-1.16	-1.41	-1.66	-1.04	
I	Accommodation and food service activities	0.01	0.93	1.54	0.95	0.72	1.09	0.25	-0.43	-1.45	-1.17	-1.43	-1.01	-0.88	
J	Information and Communication	-1.88	-1.27	-1.05	-0.72	0.36	0.14	-0.16	0.00	0.00	0.89	1.80	1.89	2.54	
M	Professional, scientific and technical activities	-0.76	-0.85	-1.19	-1.29	-1.10	-0.77	-0.14	-0.16	1.60	1.59	1.32	1.74	0.96	
N	Administrative activities etc.	-1.53	-0.35	0.35	0.25	1.07	0.71	1.25	1.04	-0.55	-0.26	-0.93	-1.05	0.13	

Sectoral Dynamics Index (SDI) Ranking change: 2022 – 2023

Sectors		2022	Ranking change	Sectors		2023
19	Manufacture of refined petroleum products etc.	1.25		31-32	Other manufacturing	0.59
D	Electricity, gas, steam and air conditioning supply	1.16		N	Administrative activities etc.	0.57
46	Wholesale trade	1.02		E	Water supply; sewerage etc.	0.46
H	Transportation and storage	0.93		22-23	Manufacture of rubber, plastic and other non-metallic products	0.38
24-25	Manufacture of basic metals and fabricated metal products	0.81		10-12	Manufacture of food, beverages and tobacco products	0.32
F	Construction	0.69		16-18	Manufacture of wood, paper, printing and reproduction	0.19
47	Retail trade	0.67		M	Professional, scientific and technical activities	0.14
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.60		45	Trade and repair of motor vehicles	0.13
16-18	Manufacture of wood, paper, printing and reproduction	0.57		28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.06
13-15	Manufacture of textiles, apparel and leather products	0.43		I	Accommodation and food service activities	0.05
I	Accommodation and food service activities	0.41		F	Construction	0.05
10-12	Manufacture of food, beverages and tobacco products	0.40		B	Mining and quarrying	0.03
22-23	Manufacture of rubber, plastic and other non-metallic products	0.38		H	Transportation and storage	0.00
20	Manufacture of chemicals etc.	0.38		13-15	Manufacture of textiles, apparel and leather products	-0.07
45	Trade and repair of motor vehicles	0.35		J	Information and Communication	-0.07
A	Agriculture, forestry and fishing	0.25		20	Manufacture of chemicals etc.	-0.08
29-30	Manufacture of vehicles, other transport equipment etc.	0.19		A	Agriculture, forestry and fishing	-0.10
N	Administrative activities etc.	0.09		29-30	Manufacture of vehicles, other transport equipment etc.	-0.26
21	Manufacture of pharmaceutical products etc.	-0.06		19	Manufacture of refined petroleum products etc.	-0.47
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-0.17		47	Retail trade	-0.63
J	Information and Communication	-0.17		24-25	Manufacture of basic metals and fabricated metal products	-0.67
31-32	Other manufacturing	-0.18		46	Wholesale trade	-0.68
E	Water supply; sewerage etc.	-0.47		21	Manufacture of pharmaceutical products etc.	-0.72
M	Professional, scientific and technical activities	-0.50		D	Electricity, gas, steam and air conditioning supply	-0.78
B	Mining and quarrying	-0.51		26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.99

Sectoral Dynamics Index (SDI) Ranking change: 2023 – 2024

Sectors		2023	Ranking change	Sectors		2024
31-32	Other manufacturing	0.59		21	Manufacture of pharmaceutical products etc.	0.78
N	Administrative activities etc.	0.57		B	Mining and quarrying	0.48
E	Water supply; sewerage etc.	0.46		26-27	Manufacture of computer, electronic, electrical equipment etc.	0.39
22-23	Manufacture of rubber, plastic and other non-metallic products	0.38		M	Professional, scientific and technical activities	0.36
10-12	Manufacture of food, beverages and tobacco products	0.32		J	Information and Communication	0.24
16-18	Manufacture of wood, paper, printing and reproduction	0.19		28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.11
M	Professional, scientific and technical activities	0.14		29-30	Manufacture of vehicles, other transport equipment etc.	0.07
45	Trade and repair of motor vehicles	0.13		E	Water supply; sewerage etc.	0.02
28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.06		47	Retail trade	-0.05
I	Accommodation and food service activities	0.05		24-25	Manufacture of basic metals and fabricated metal products	-0.14
F	Construction	0.05		A	Agriculture, forestry and fishing	-0.15
B	Mining and quarrying	0.03		20	Manufacture of chemicals etc.	-0.30
H	Transportation and storage	0.00		46	Wholesale trade	-0.34
13-15	Manufacture of textiles, apparel and leather products	-0.07		13-15	Manufacture of textiles, apparel and leather products	-0.36
J	Information and Communication	-0.07		D	Electricity, gas, steam and air conditioning supply	-0.39
20	Manufacture of chemicals etc.	-0.08		31-32	Other manufacturing	-0.41
A	Agriculture, forestry and fishing	-0.10		I	Accommodation and food service activities	-0.47
29-30	Manufacture of vehicles, other transport equipment etc.	-0.26		45	Trade and repair of motor vehicles	-0.48
19	Manufacture of refined petroleum products etc.	-0.47		N	Administrative activities etc.	-0.66
47	Retail trade	-0.63		10-12	Manufacture of food, beverages and tobacco products	-0.72
24-25	Manufacture of basic metals and fabricated metal products	-0.67		F	Construction	-0.74
46	Wholesale trade	-0.68		16-18	Manufacture of wood, paper, printing and reproduction	-0.76
21	Manufacture of pharmaceutical products etc.	-0.72		22-23	Manufacture of rubber, plastic and other non-metallic products	-0.76
D	Electricity, gas, steam and air conditioning supply	-0.78		19	Manufacture of refined petroleum products etc.	-0.78
26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.99		H	Transportation and storage	-0.93

SDI Scoreboard by component; 2022

Sectors; 2022		SDI		Business Dynamics		Lending		Labour cost		Prices	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
19	Manufacture of refined petroleum products etc.	1.25	1	↑ 1.63	1	↑ 0.77	2	↑ 1.03	4	↑ 1.59	2
D	Electricity, gas, steam and air conditioning supply	1.16	2	↑ 1.59	3	↔ 0.17	15	↑ 1.29	1	↑ 1.61	1
46	Wholesale trade	1.02	3	↑ 1.60	2	↓ -0.29	20	↑ 1.22	2	↑ 1.55	3
H	Transportation and storage	0.93	4	↑ 1.35	5	↑ 0.78	1	↔ 0.49	8	↑ 1.11	5
24-25	Manufacture of basic metals and fabricated metal products	0.81	5	↑ 1.20	7	↑ 0.77	2	↔ 0.32	9	↑ 0.97	7
F	Construction	0.69	6	↔ 0.58	16	↔ -0.04	16	↑ 0.91	6	↑ 1.31	4
47	Retail trade	0.67	7	↔ 1.02	9	↓ -0.29	20	↑ 0.86	7	↑ 1.10	6
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.60	8	↔ 1.02	11	↑ 0.77	2	↔ 0.24	10	↔ 0.38	13
16-18	Manufacture of wood, paper, printing and reproduction	0.57	9	↔ 0.83	13	↑ 0.77	2	↔ 0.00	14	↔ 0.69	10
13-15	Manufacture of textiles, apparel and leather products	0.43	10	↔ 1.02	10	↑ 0.77	2	↑ 0.99	5	↓ -1.08	23
I	Accommodation and food service activities	0.41	11	↑ 1.33	6	↓ -0.76	24	↔ 0.22	12	↔ 0.86	8
10-12	Manufacture of food, beverages and tobacco products	0.40	12	↔ 0.68	14	↑ 0.77	2	↔ -0.37	19	↔ 0.52	11
22-23	Manufacture of rubber, plastic and other non-metallic products	0.38	13	↔ 0.48	18	↑ 0.77	2	↔ -0.17	15	↔ 0.44	12
20	Manufacture of chemicals etc.	0.38	14	↔ 0.38	19	↑ 0.77	2	↓ -0.37	20	↔ 0.74	9
45	Trade and repair of motor vehicles	0.35	15	↔ 0.49	17	↓ -0.29	20	↑ 1.06	3	↔ 0.13	15
A	Agriculture, forestry and fishing	0.25	16	↑ 1.37	4	↔ -0.09	17	↔ 0.03	13	↔ -0.31	16
29-30	Manufacture of vehicles, other transport equipment etc.	0.19	17	↔ 1.00	12	↑ 0.77	2	↓ -0.54	22	↔ -0.46	18
N	Administrative activities etc.	0.09	18	↔ 1.08	8	↔ -0.20	18	↔ -0.20	16	↔ -0.32	17
21	Manufacture of pharmaceutical products etc.	-0.06	19	↓ 0.33	20	↑ 0.77	2	↓ -0.50	21	↓ -0.85	20
28 & 33	Manufacture, repair and installation of equipment n.e.c.	-0.17	20	↓ 0.17	23	↑ 0.77	2	↓ -0.86	24	↔ -0.75	19
J	Information and Communication	-0.17	21	↔ 0.60	15	↔ -0.28	19	↔ 0.23	11	↓ -1.23	24
31-32	Other manufacturing	-0.18	22	↓ 0.23	22	↑ 0.77	2	↔ -0.30	17	↓ -1.42	25
E	Water supply; sewerage etc.	-0.47	23	↓ -0.20	24	↔ 0.35	14	↓ -0.98	25	↓ -1.08	22
M	Professional, scientific and technical activities	-0.50	24	↓ 0.30	21	↓ -0.70	23	↓ -0.59	23	↓ -1.02	21
B	Mining and quarrying	-0.51	25	↓ -1.04	25	↓ -0.82	25	↔ -0.37	18	↔ 0.18	14

The arrow indicates the intensity of the direction of each sector relative to the median score of the corresponding component.

- ↑ score ≥ 75% of score range
- ↔ 50% ≤ score < 75%
- ↘ 25% ≤ score < 50%
- ↓ score < 25%

SDI Scoreboard by component; 2023

Sectors; 2023		SDI		Business Dynamics		Lending		Labour cost		Prices	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
31-32	Other manufacturing	0.59	1	↑ 0.49	3	↔ -0.46	12	↑ 1.36	1	↑ 0.97	3
N	Administrative activities etc.	0.57	2	↔ 0.04	10	↑ 0.05	5	↑ 1.18	4	↑ 1.02	1
E	Water supply; sewerage etc.	0.46	3	↑ 0.18	6	↑ 0.27	2	↑ 1.33	2	↔ 0.04	14
22-23	Manufacture of rubber, plastic and other non-metallic products	0.38	4	↑ 0.14	7	↔ -0.46	12	↑ 1.26	3	↑ 0.59	6
10-12	Manufacture of food, beverages and tobacco products	0.32	5	↔ -0.08	11	↔ -0.46	12	↑ 1.07	5	↑ 0.76	4
16-18	Manufacture of wood, paper, printing and reproduction	0.19	6	↔ -0.28	13	↔ -0.46	12	↑ 0.86	6	↑ 0.63	5
M	Professional, scientific and technical activities	0.14	7	↑ 0.42	4	↑ 0.26	3	↔ 0.42	10	↔ -0.54	19
45	Trade and repair of motor vehicles	0.13	8	↑ 0.80	1	↔ -0.38	8	↔ 0.39	11	↔ -0.28	17
28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.06	9	↑ 0.54	2	↔ -0.46	12	↔ 0.13	15	↔ 0.04	15
I	Accommodation and food service activities	0.05	10	↔ -0.22	12	↑ 0.38	1	↓ -0.36	21	↑ 0.41	7
F	Construction	0.05	11	↑ 0.41	5	↑ -0.33	7	↔ 0.37	13	↔ -0.26	16
B	Mining and quarrying	0.03	12	↔ 0.12	8	↑ -0.12	6	↔ 0.62	9	↔ -0.50	18
H	Transportation and storage	0.00	13	↔ -0.37	14	↓ -0.69	25	↑ 0.80	7	↔ 0.25	8
13-15	Manufacture of textiles, apparel and leather products	-0.07	14	↔ -0.43	15	↔ -0.46	12	↔ 0.37	12	↔ 0.25	9
J	Information and Communication	-0.07	15	↔ 0.12	9	↓ -0.53	24	↔ 0.04	16	↔ 0.08	13
20	Manufacture of chemicals etc.	-0.08	16	↔ -0.78	19	↔ -0.46	12	↔ 0.71	8	↔ 0.23	11
A	Agriculture, forestry and fishing	-0.10	17	↔ -0.76	18	↔ -0.42	11	↔ -0.23	18	↑ 1.01	2
29-30	Manufacture of vehicles, other transport equipment etc.	-0.26	18	↔ -0.70	17	↔ -0.46	12	↔ -0.13	17	↔ 0.24	10
19	Manufacture of refined petroleum products etc.	-0.47	19	↓ -0.90	21	↔ -0.46	12	↔ 0.33	14	↓ -0.86	21
47	Retail trade	-0.63	20	↓ -0.80	20	↔ -0.38	8	↓ -0.32	20	↓ -1.02	23
24-25	Manufacture of basic metals and fabricated metal products	-0.67	21	↓ -1.20	25	↔ -0.46	12	↓ -1.16	23	↔ 0.14	12
46	Wholesale trade	-0.68	22	↓ -1.00	22	↔ -0.38	8	↔ -0.29	19	↓ -1.07	24
21	Manufacture of pharmaceutical products etc.	-0.72	23	↔ -0.64	16	↔ -0.46	12	↓ -1.06	22	↓ -0.71	20
D	Electricity, gas, steam and air conditioning supply	-0.78	24	↓ -1.06	23	↑ 0.13	4	↓ -1.30	24	↓ -0.87	22
26-27	Manufacture of computer, electronic, electrical equipment etc.	-0.99	25	↓ -1.08	24	↔ -0.46	12	↓ -1.33	25	↓ -1.09	25





The arrow indicates the intensity of the direction of each sector relative to the median score of the corresponding component.

- score ≥ 75% of score range
- 50% ≤ score < 75%
- 25% ≤ score < 50%
- score < 25%

SDI Scoreboard by component; 2024

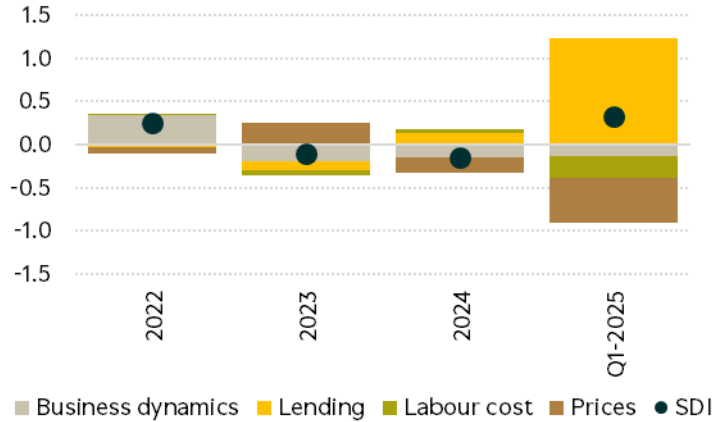
Sectors; 2024		SDI		Business Dynamics		Lending		Labour cost		Prices	
		Score	Rank	Score	Rank	Score	Rank	Score	Rank	Score	Rank
21	Manufacture of pharmaceutical products etc.	0.78	1	↑ 0.31	3	↔ -0.31	13	↑ 1.57	1	↑ 1.55	2
B	Mining and quarrying	0.48	2	↑ 0.91	1	↑ 0.94	1	↔ -0.25	10	↔ 0.32	9
26-27	Manufacture of computer, electronic, electrical equipment etc.	0.39	3	↑ 0.06	4	↔ -0.31	13	↑ 1.10	2	↑ 0.71	7
M	Professional, scientific and technical activities	0.36	4	↔ -0.72	17	↑ 0.44	7	↑ 0.17	7	↑ 1.56	1
J	Information and Communication	0.24	5	↔ -0.72	18	↑ 0.81	2	↔ -0.27	11	↑ 1.15	3
28 & 33	Manufacture, repair and installation of equipment n.e.c.	0.11	6	↔ -0.71	16	↔ -0.31	13	↑ 0.73	4	↑ 0.71	6
29-30	Manufacture of vehicles, other transport equipment etc.	0.07	7	↔ -0.29	8	↔ -0.31	13	↑ 0.67	5	↔ 0.22	10
E	Water supply; sewerage etc.	0.02	8	↑ 0.02	5	↓ -0.62	25	↔ -0.35	13	↑ 1.04	4
47	Retail trade	-0.05	9	↑ -0.23	7	↑ 0.67	3	↔ -0.55	14	↔ -0.08	12
24-25	Manufacture of basic metals and fabricated metal products	-0.14	10	↑ 0.01	6	↔ -0.31	13	↑ 0.84	3	↓ -1.11	21
A	Agriculture, forestry and fishing	-0.15	11	↔ -0.61	14	↑ 0.51	6	↑ 0.21	6	↔ -0.70	15
20	Manufacture of chemicals etc.	-0.30	12	↑ 0.40	2	↔ -0.31	13	↔ -0.34	12	↔ -0.97	18
46	Wholesale trade	-0.34	13	↔ -0.60	13	↑ 0.67	3	↔ -0.93	17	↔ -0.48	13
13-15	Manufacture of textiles, apparel and leather products	-0.36	14	↔ -0.60	12	↔ -0.31	13	↓ -1.36	24	↑ 0.83	5
D	Electricity, gas, steam and air conditioning supply	-0.39	15	↔ -0.53	9	↔ -0.30	12	↔ 0.02	9	↔ -0.74	17
31-32	Other manufacturing	-0.41	16	↔ -0.72	19	↔ -0.31	13	↔ -1.07	19	↔ 0.45	8
I	Accommodation and food service activities	-0.47	17	↓ -1.11	23	↔ 0.37	8	↔ 0.14	8	↓ -1.27	22
45	Trade and repair of motor vehicles	-0.48	18	↓ -1.29	25	↑ 0.67	3	↓ -1.45	25	↔ 0.15	11
N	Administrative activities etc.	-0.66	19	↓ -1.12	24	↔ 0.15	10	↔ -0.98	18	↔ -0.70	14
10-12	Manufacture of food, beverages and tobacco products	-0.72	20	↔ -0.59	11	↔ -0.31	13	↔ -0.70	15	↓ -1.28	23
F	Construction	-0.74	21	↓ -1.00	22	↔ 0.37	9	↓ -1.28	21	↓ -1.05	20
16-18	Manufacture of wood, paper, printing and reproduction	-0.76	22	↔ -0.55	10	↔ -0.31	13	↔ -0.85	16	↓ -1.32	24
22-23	Manufacture of rubber, plastic and other non-metallic products	-0.76	23	↔ -0.63	15	↔ -0.31	13	↓ -1.08	20	↔ -1.03	19
19	Manufacture of refined petroleum products etc.	-0.78	24	↓ -0.73	20	↔ -0.31	13	↓ -1.36	23	↔ -0.73	16
H	Transportation and storage	-0.93	25	↓ -0.98	21	↔ -0.09	11	↓ -1.30	22	↓ -1.36	25

The arrow indicates the intensity of the direction of each sector relative to the median score of the corresponding component.

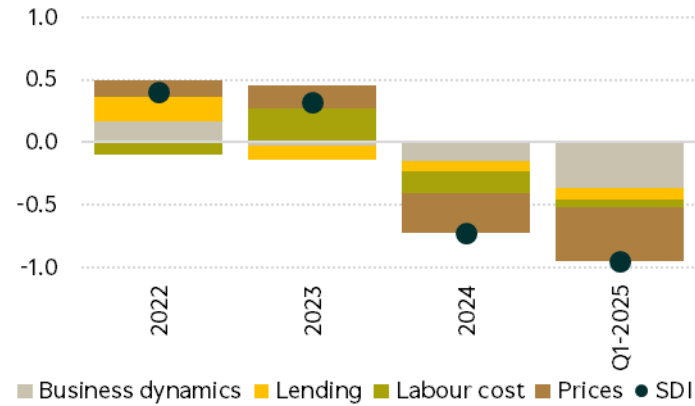
-  score ≥ 75% of score range
-  50% ≤ score < 75%
-  25% ≤ score < 50%
-  score < 25%

Contribution of each component to SDI (I)

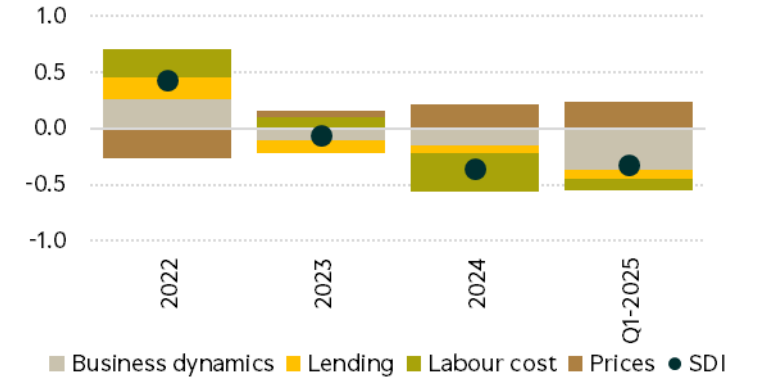
Agriculture etc.



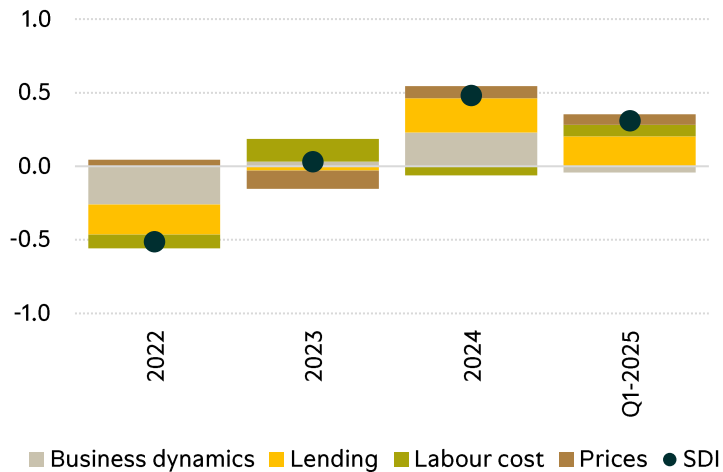
Food, beverages etc. manufacturing



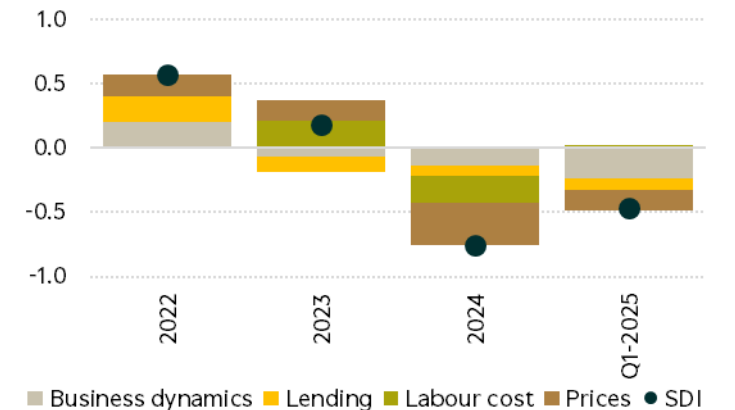
Textiles, apparel etc. manufacturing



Mining & quarrying



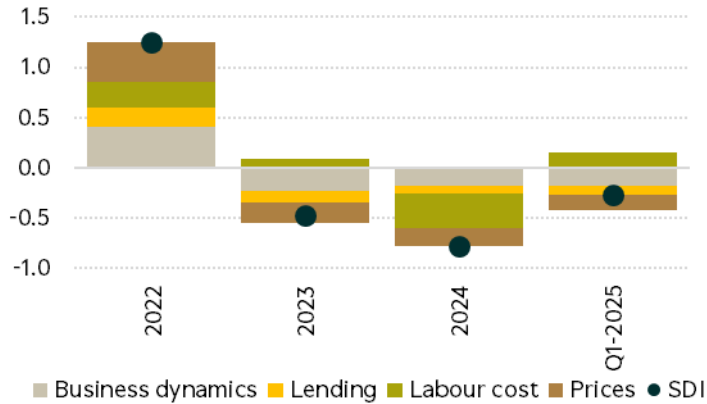
Wood, paper etc. manufacturing



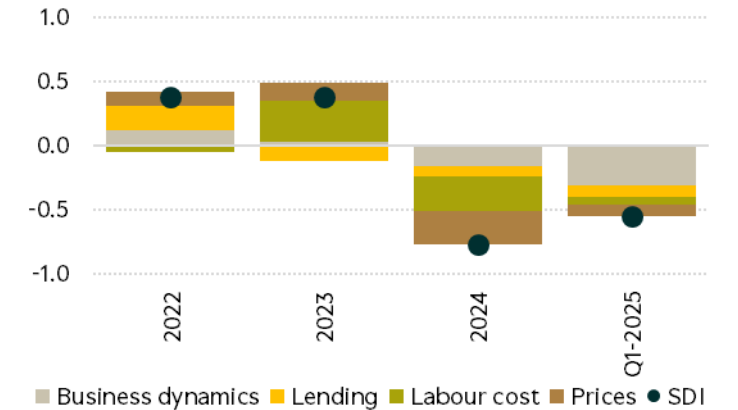
* The presented level of each component is the weighted contribution to SDI

Contribution of each component to SDI (II)

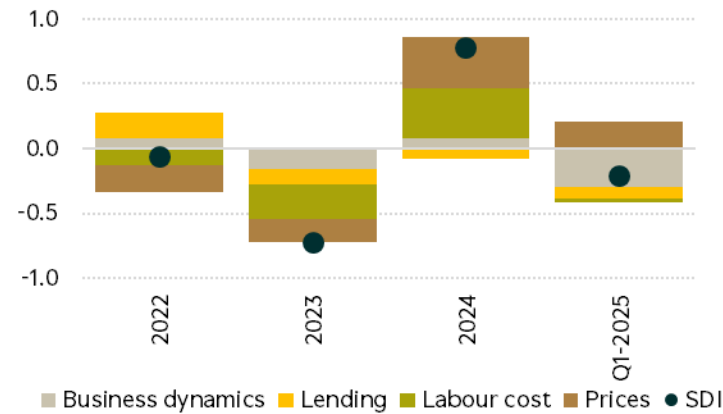
Refined petroleum products manufacturing



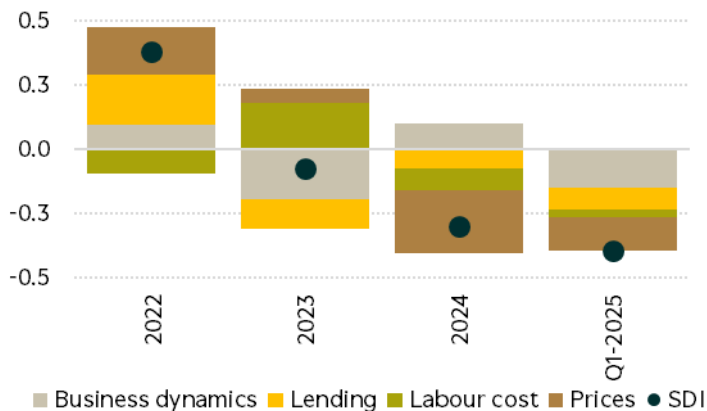
Plastic & other non-metallic manufacturing



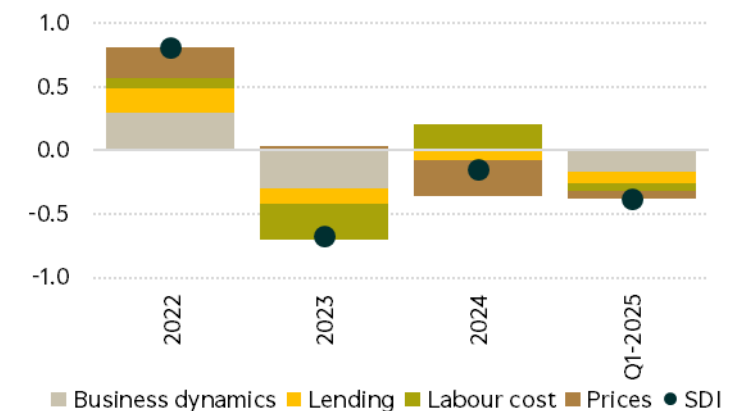
Pharmaceuticals manufacturing



Chemicals manufacturing



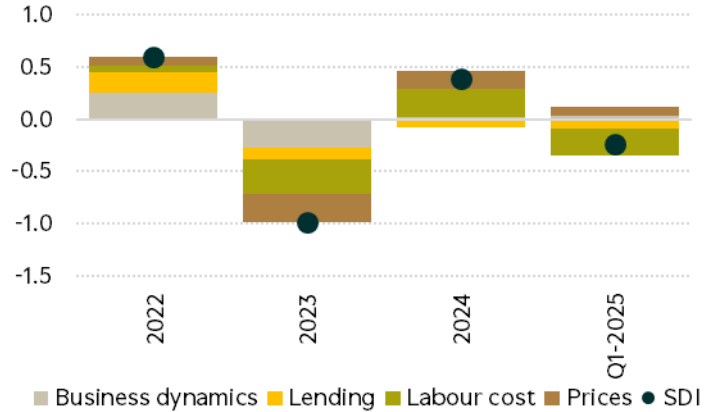
Metals & metal products manufacturing



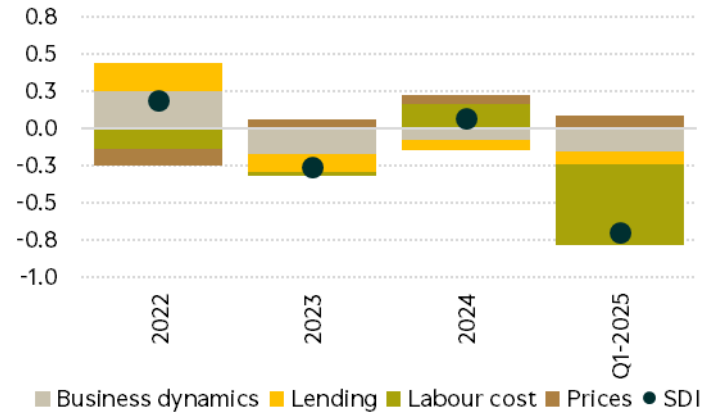
* The presented level of each component is the weighted contribution to SDI

Contribution of each component to SDI (III)

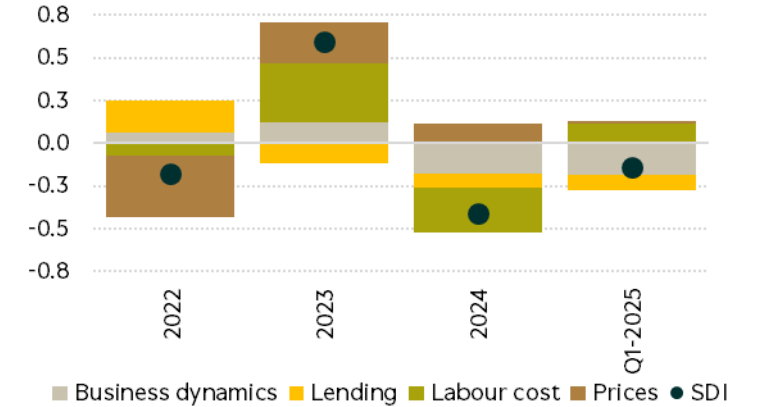
Electronic, electrical equipment manufacturing



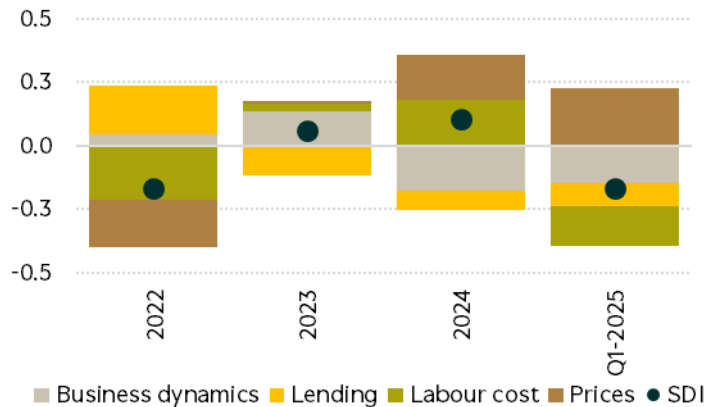
Vehicles, other transport equipment manufacturing



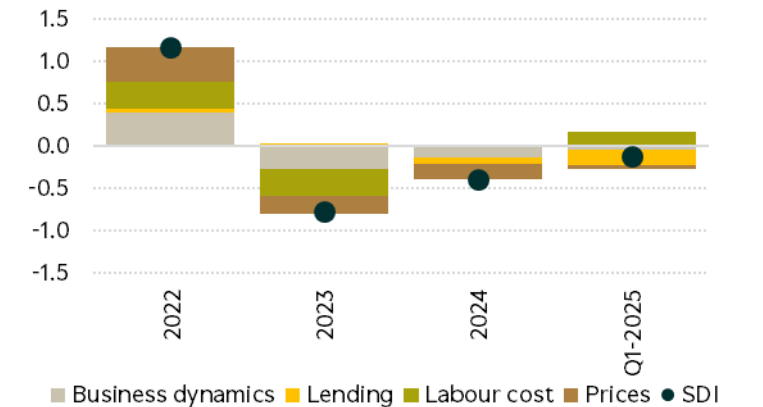
Other manufacturing



Manufacture, repair of equipment



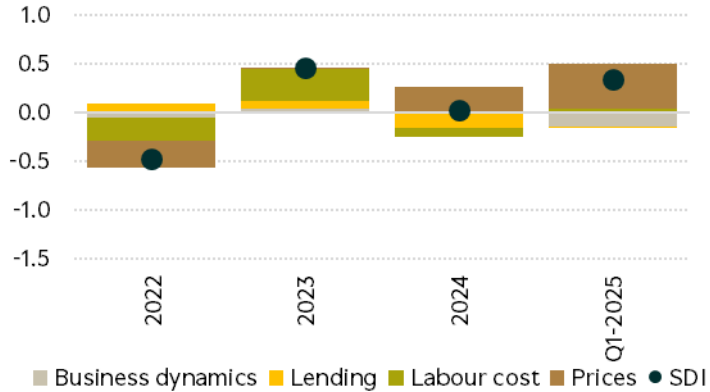
Electricity, gas etc.



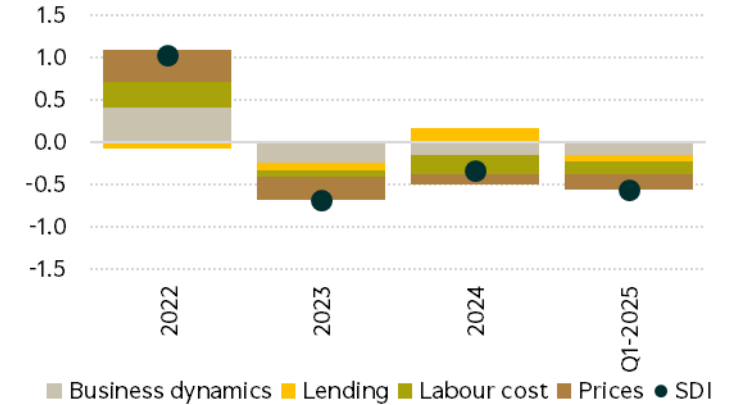
* The presented level of each component is the weighted contribution to SDI

Contribution of each component to SDI (IV)

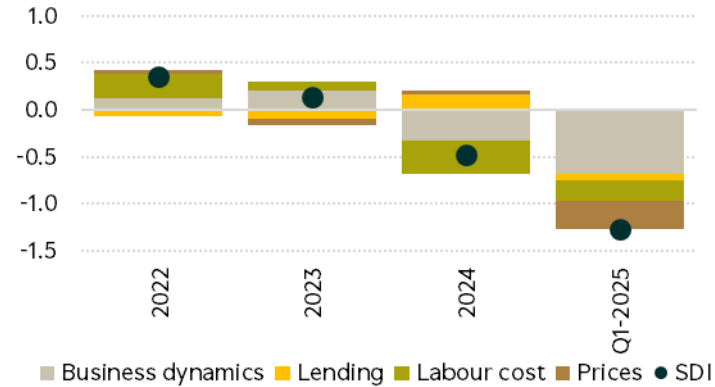
Water supply; sewerage etc.



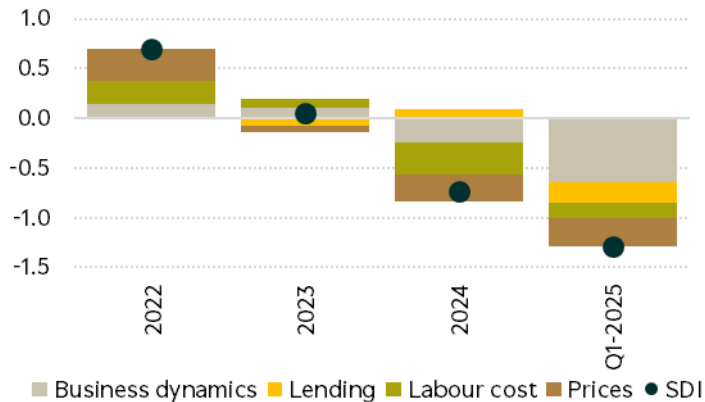
Wholesale trade



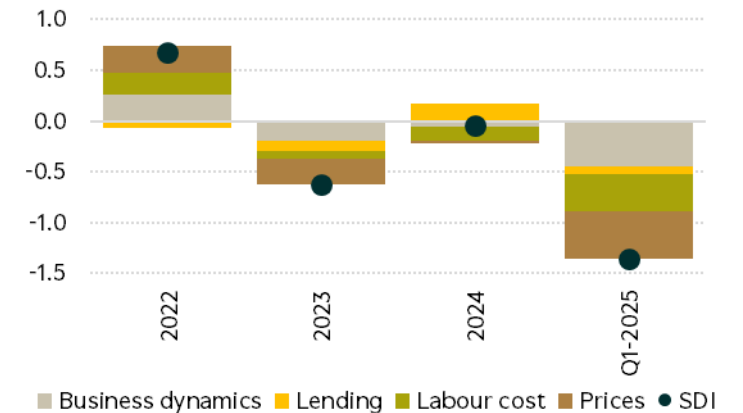
Trade & repair of vehicles



Construction

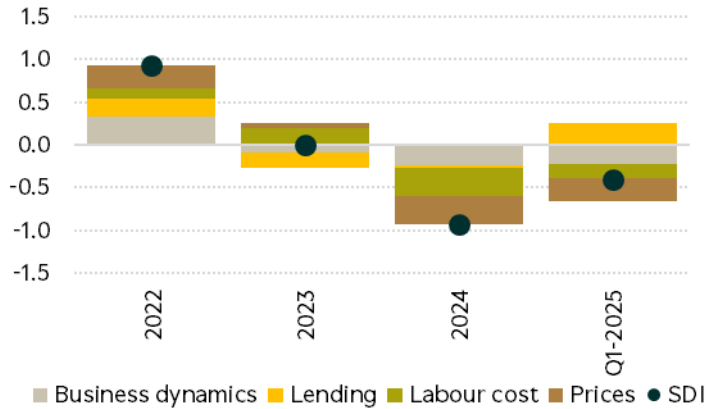


Retail trade

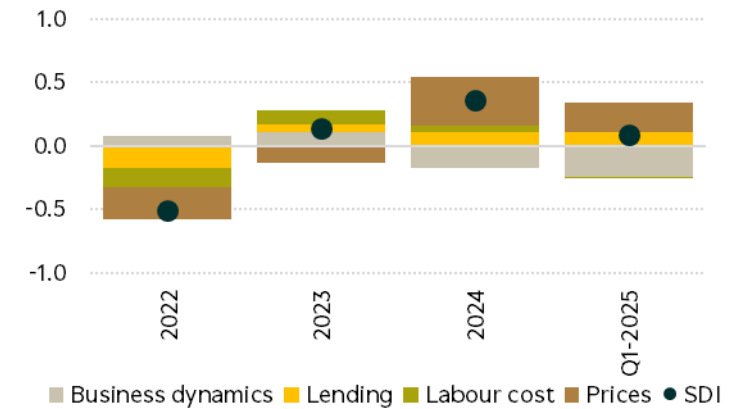


Contribution of each component to SDI (V)

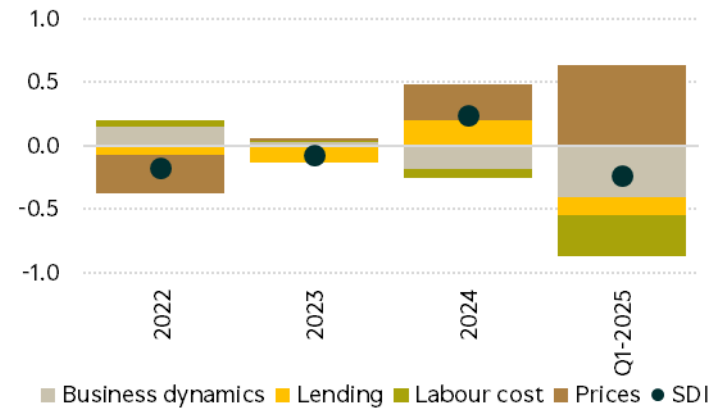
Transportation & storage



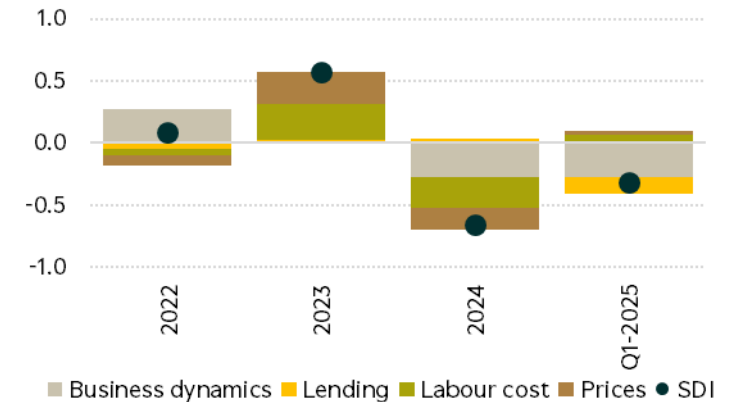
Professional, scientific activities etc.



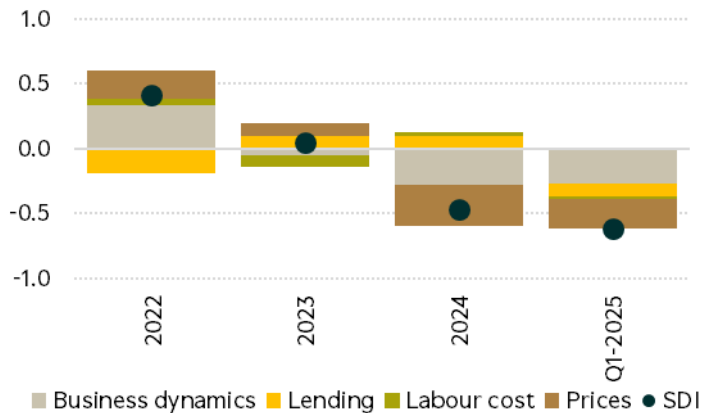
Information & Communication



Administrative activities etc.



Accommodation & food service



* The presented level of each component is the weighted contribution to SDI

Economic Research & Investment Strategy

Lekkos, Ilias	Lekkosi@piraeusbank.gr	Chief Economist
Papioti Liana	Papiotie@piraeusbank.gr	Secretary

Greek & Sectoral Economics (GREC) Research Team

Vlachou, Paraskevi	Vlachoupar@piraeusbank.gr	Economist, Senior Manager
Staggel, Irini	Staggelir@piraeusbank.gr	Head of Economic Research GREC, Director

Contact details:

Tel.: +30 2103288187

Website: <https://www.piraeusholdings.gr/el/oikonomiki-analisi-ependitiki-stratigiki>

Bloomberg Ticker: {PBGR<GO>}

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