

ADVANCE COPY

What drives firms' investment in climate change?

Evidence from the 2022-2023 EIB Investment Survey



What drives firms' investment in climate change?

Evidence from the 2022-2023 EIB Investment Survey



What drives firms' investment in climate action? Evidence from the 2022-2023 EIB Investment Survey © European Investment Bank, 2023. All rights reserved.

About the EIB Investment Survey (EIBIS)

The EIB Group Survey on Investment and Investment Finance is a unique, annual survey of 13 500 firms. It comprises firms in all EU Member States and the United Kingdom, as well as a sample of US firms that serves as a benchmark. It collects data on firm characteristics and performance, past investment activities and future plans, sources of finance, financing issues and other challenges that businesses face. Using a stratified sampling methodology, EIBIS represents firms across all EU members and the United States, as well as across firm size classes (micro to large) and four main sectors. It is designed to build a panel of observations to support time series analysis, observations that can also be linked to firm balance sheet and profit and loss data. EIBIS has been developed and is managed by the Economics Department of the European Investment Bank (EIB), with support for development and implementation provided by Ipsos MORI. For more information see: http://www.eib.org/eibis.

About this publication

This is a report of the EIB Economics Department. The data source for this report is the EIB Investment Survey (EIBIS) 2021. Results are weighted by industry group (sector), firm size-class and country. The methodology of the EIBIS survey is available at: https://www.eib.org/en/about/economic-research/surveys-data/about-eibis. Contact: eibis@eib.org.

About the EIB Economics Department

The EIB Economics Department provides economic analyses and studies to support the European Investment Bank in its operations and in defining its positioning, strategy and policy. Director Debora Revoltella heads the department and its team of 45 economists. economics@eib.org www.eib.org/economics

Main contributors to this publication

Fotios Kalantzis (lead author) and Francesco Cimini.

Disclaimer

The views expressed in this publication are those of the authors and do not necessarily reflect the position of the European Investment Bank.

To accommodate scheduling limitations, this publication has not undergone standard EIB copyediting and proofreading.

For further information on the EIB's activities, please consult our website, www.eib.org. You can also contact our InfoDesk, info@eib.org.

Published by the European Investment Bank. Printed on FSC® Paper.

print: QH-04-23-403-EN-C ISBN 978-92-861-5539-0 doi: 10.2867/395409 pdf: QH-04-23-403-EN-N ISBN 978-92-861-5537-6 doi: 10.2867/048422 eBook: OH-04-23-403-EN-E ISBN 978-92-861-5538-3 doi: 10.2867/396884

Contents

Introduction1
High energy prices are taking a toll on EU firms2
The energy crisis is pushing firms to invest in energy efficiency3
More firms acknowledge physical risks, but few invest in resilience4
As firms address the transition, they have mixed views about the prospects it brings5
Firms are stepping up climate action despite challenges6
Conclusion and policy implications7
References8
Appendix9
Annex 1 – Country scoreboards10
Annex 2 – Country dashboards

Introduction

The European economy is experiencing significant turbulence as recurring crises reverberate across all EU countries, their economies and business operations. From 2020, shocks ranging from the COVID-19 pandemic to the Russian invasion of Ukraine have disrupted supply chains and destabilised European prices and energy markets. Price volatility and uncertainty have reached multidecade highs and risk derailing the post-pandemic recovery. At the same time, climate change is still the most pervasive global challenge. Extreme weather events are on the rise. Any delay in tackling the climate issue may trigger sudden and irreversible damage to the planet. Faced with this difficult business environment, firms are constantly called upon to confront new challenges and come up with innovative solutions.

The disruption of energy supplies caused by the war in Ukraine has proven particularly challenging for European firms. Extremely high energy prices significantly alter firms' costs, particularly for energy-intensive industries such as food, paper, chemicals and metals. Less energy-intensive industries also face hardship, as the increase in prices is not only limited to energy but has rapidly extended to other markets, creating inflationary pressures.

Together with these short-term challenges, climate change represents the most significant long-term threat for European companies. A recently published report by the Intergovernmental Panel on Climate Change (IPCC) points to the "unprecedented scale of recent change across the climate system," the increasing frequency of extreme climate events, and the necessity of taking immediate action (IPCC, 2021). In Europe alone, extreme weather events caused over €145 billion in economic losses from 2012 to 2022. Over the same period, climate-related economic losses increased around 2% annually (European Environment Agency, 2022). At the same time, the likelihood of a disorderly transition to green energy is increasing, particularly since the Ukraine war.

The two crises – energy and climate – are closely interrelated and highlight the importance of a swift transition to a sustainable European economy. Although energy price spikes may call for short-term support measures, climate change demands that Europe embraces the green transition in the longer term.

The involvement of the European Union and its members in the green transition will be crucial, as they are able to design new policy tools and channel funds appropriately. At the same time, firms are called on to play a pivotal role. By investing in climate adaptation and mitigation measures, especially energy efficiency, firms can protect themselves from the increased frequency of extreme climate events, reduce energy costs and take further action to achieve net-zero emissions. Thus, it is important to take a closer look at how firms are responding to this highly uncertain and rapidly changing business environment.

This report draws from data collected for the <u>EIB Investment Survey 2022-2023</u>. It examines the willingness of European firms to address climate change in the current context of the energy crisis. First, it presents the answers provided by firms across the European Union to a set of questions on energy and climate change. Then, it goes more in-depth by providing firms' answers in each EU country.

Debora Revoltella

Director, Economics Department

European Investment Bank

High energy prices are taking a toll on EU firms

Before the Russian invasion of Ukraine on 24 February 2022, EU countries were strongly dependent on Russia for energy supplies. The war sparked questions about the resilience of Europe's energy system to a drop in the energy supply from Russia and on Europe's capacity to transform and diversify supplies. The rush to secure resources led to a significant surge in energy prices in all EU countries during 2022.

Nevertheless, the European Union responded quickly to the urgency to transform its energy system through energy savings, diversify energy supplies and accelerate the roll-out of renewable energy, which by the end of 2022 calmed the rise in energy prices.

Faced with this difficult situation, 82% of EU firms expressed concerns about energy prices. Around 60% of businesses consider energy costs to be a major impediment, compared to 31% in the United States. The security of European energy supplies remains uncertain, which could result in future price volatility.

82% of EU firms say energy costs were either a major or minor obstacle to investment in 2022. The gap between EU and US firms citing energy costs as a major obstacle is almost 30 percentage points. Energy cost as an obstacle (% of firms) 100% 50% 0% US EU ■ Major and minor • Major only

Large and small firms are equally affected

On average in the European Union, the share of large firms and small and medium firms that were concerned about energy costs was the same in 2022.



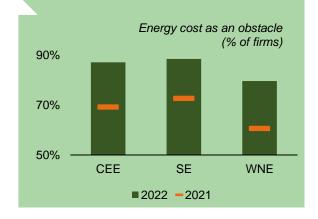
+18 pp*

is the change from 2021 to 2022 in the share of EU firms that perceive energy costs to be a major or minor obstacle. In the United States the number rose 15 percentage points.

* percentage points

Southern Europe

is the region with the highest share of firms that say energy costs are impeding investment (88%), followed by Central and Eastern Europe (CE) and Western and Northern Europe (WNE).



A common challenge for everyone

Dispersion in energy cost concerns among EU countries dropped from 2021 to 2022, suggesting that the energy crisis is felt across the board.

70%



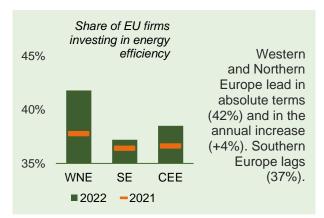
of energy-intensive manufacturers cite energy costs as a major barrier to investment. Energy costs are weighing on their ability to compete.

The energy crisis is pushing firms to invest in energy efficiency

Energy efficiency means using less energy to perform the same task. It represents one of the key pillars of the Energy Union, the EU framework for achieving more sustainable, affordable and secure energy. The energy crisis has made energy efficiency investments particularly attractive for businesses.

In the EIB Investment Survey (EIBIS), companies were asked whether they invest in energy efficiency and to what extent. Around 40% of European firms invest in energy efficiency. The share rose from 2021, but it is still below pre-pandemic levels. In Europe, the average share of investments devoted to energy efficiency is around 10%. Firms in Western and Northern Europe, energy-intensive manufacturing and large firms lead in energy efficiency.

Firms revive efforts to save energy About 40% of EU firms invested in energy efficiency in 2022. 50% 40% 2018 2019 2020 2021 2022



10% is the average share of investments that EU firms devote to energy efficiency vs. 6% in the United States.

Uncertainty is diluting firms' incentive to invest in energy efficiency

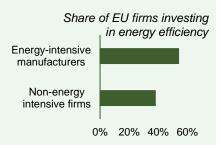


Firms with energy cost concerns are 8 percentage points more likely by to invest in energy efficiency.

... But if they consider **uncertainty** to be a barrier as well as energy costs, the probability of investing in energy efficiency decreases by **4 percentage points.**

Energy intensity matters for investments in energy efficiency

54% of energy-intensive manufacturers invest in energy efficiency vs. **38**% of firms that are not energy intensive.



Large firms are first in line 51% of large firms invest in energy efficiency, while only 31% of small firms do. 51% 51% 51%

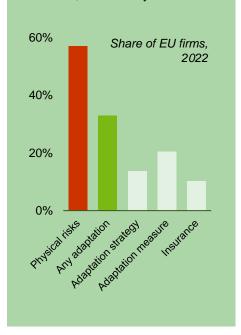
More firms acknowledge physical risks, but few invest in resilience

The progressive increase in global average temperatures gives rise to extreme weather events that can potentially threaten businesses. According to a recent report published by the United Nations Office for Disaster Risk Reduction, there has been a "staggering rise" in the number of such events in the past 20 years, and most of those events can be attributed to climate change.

Companies were asked whether extreme climate events, also called physical risks, were affecting their business activities. They were also asked whether they have invested in various forms of adaptation to better cope with these risks. Notably, almost 60% of European firms report facing physical risks, while only 33% of them have taken at least one action to protect their business from those risks.

24 pp

is the gap between the share of EU firms facing physical risks and the share of firms taking at least one climate action. EU firms favour adaptation strategies and measures, followed by insurance.



Most EU and US firms are concerned about physical risks

A similar share of EU and US firms are concerned about the physical impact of climate change.



57%



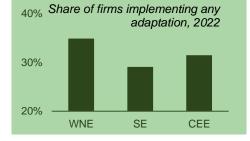
Southern Europe

is the region where firms feel more exposed to physical risks.



Southern Europe lags on adaptation

Despite suffering significantly from physical risks, few Southern European firms invest in adaptation.



As firms address the transition, they have mixed views about the prospects it brings

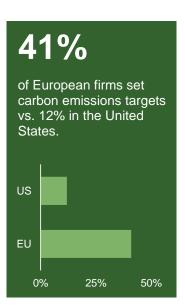
The European Commission presented the European Green Deal with the aim of limiting the increase in global average temperatures to well below 2°C compared to pre-industrial levels, as set forth in the 2015 Paris Agreement, The green deal, which was introduced in March 2020, sets a target of reaching net-zero emissions by 2050.

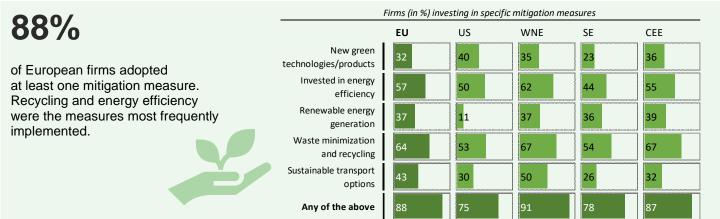
The ambitious target will require the strong involvement of firms. The EIBIS for the first time provides detailed insight on firms' mitigation strategies. It finds that 88% of EU firms have undertaken some sort of action to mitigate the impact of climate change.

Not only are firms called upon to play a pivotal role in ensuring the transition, they also have to adapt to a rapidly changing business environment. European firms have mixed views about the impact of the climate transition on their business. While 29% of them are optimistic about the transition, around 32% are pessimistic.

Risks abound, as do opportunities More EU firms see the transition as an opportunity than their US counterparts (+8 percentage points). Only firms in Central and Eastern Europe see the transition more as a risk than as an opportunity. View on the green transition (% of firms) 20% 60% 80% 100% ΕU US WNE SE CEE ■ Opportunity ■ No impact Risk

Energy-intensive firms feel under pressure 41% of energy-intensive manufacturers see the green transition as a risk vs. 31% of firms in non-energy intensive sectors. View on the green transition (% of firms) Energy-intensive manufacturers Non-energy intensive firms 0% 50% 100% Opportunity No impact Risk





Firms are stepping up climate action despite challenges

The COVID-19 pandemic and the Russian invasion of Ukraine have pushed uncertainty in the European Union to the highest levels in decades. Uncertainty is detrimental to investment, and green investment is no exception. As the EIBIS shows, the incentives companies have for investing in climate action because of higher energy costs are outweighed by growing incertitude, leading to suboptimal investment.

Despite challenges, European firms are showing resilience. Over the last year, the share of European firms investing in climate has increased by 10 percentage points, reaching 53% on average. The increase has been particularly pronounced in regions such as Central and Eastern Europe (+15 percentage points) and in small and medium enterprises (SMEs) (+11 percentage points). Energy-intensive manufacturers have a stronger appetite for climate investments than non-energy intensive firms: 48% of them are currently investing. while 57% are planning to invest.



+10 pp

is the difference between the share of firms that invested in climate measures in 2022 and the previous year.

Going green is the only way

	Non-energy intensive firms		Energy-intensive manufacturers	
Invest in climate	43%		48%	
Plan to invest in climate	50%		57%	

More than half of energy-intensive manufacturers invested in climate measures and plan to continue investing in such measures.

Uncertainty weighs on climate investments Likelihood of investing in climate +8 pp Firms worried about energy costs and uncertainty invest less. Firms concerned about energy costs invest more.

EU firms are fuelling the climate transition

More than half of European firms are investing in climate or planning to do so. Firms in Western and Northern Europe are investing the most in climate, while firms in Central and Eastern Europe plan to invest the most.



Conclusion and policy implications

The current energy crisis poses major challenges to European companies. In early 2022, almost two years after the onset of the COVID-19 pandemic, the European economy was beginning to recover strongly. The Russian invasion of Ukraine, however, plunged European firms into uncertainty. Faced with multiple challenges, ranging from geopolitical instability to a strong surge in inflation, many firms said energy point to high energy prices as a major factor hampering investments. The same patterns are found across continents, sectors and countries. This energy crisis differs from past ones in that the strong interconnection between markets has resulted in global repercussions.

Firms are looking for tools to mitigate the impact of energy price increases and greater volatility, putting energy-saving technologies at the top of their agenda. The EIBIS for 2022 shows that the rise in the share of firms engaging in climate action (including energy efficiency) accelerated in 2021, a post-pandemic rebound that is expected to continue, based on the share of firms with future plans to invest. Among sectors, energy-intensive manufacturers are facing strong energy cost challenges and are investing in energy efficiency and climate measures to remain competitive. It is, however, energy supply firms that are embracing the transition to the highest degree, with 78% of them now investing in climate measures.

However, high uncertainty is weighing on firms' climate investment decisions. The current economic environment is marked by considerable risks, including decelerating demand and tighter financing conditions. Energy prices continue to display great volatility, reflecting fluctuations in supply and demand, and inflating concerns about the future as the war in Ukraine continues. The EIBIS shows that high uncertainty dampens investment in energy efficiency by 4 percentage points. This impact is even higher when considering investments in climate.

In parallel, EU firms realise that climate change is no longer a distant reality. Some 57% of EU firms have experienced economic losses and supply disruptions from extreme weather. To protect against physical risks, firms are mainly investing in technological solutions and changing processes to increase resilience. A lower share of firms prefers to buy insurance to cover potential losses. Yet, 67% of EU firms are not investing in any adaptation measures.

Most firms focus more strongly on mitigation measures. Some 88% of European firms have implemented at least one mitigation measure compared to the low 33% of firms that have invested in adaptation measures. Waste management, recycling and energy efficiency are their preferred investments. Besides concerns about energy costs, firms are investing because they worry about climate change and are under pressure to set carbon targets.

As the United States recommits to its own green transition and dedicates significant resources, Europe needs to double down on its target of net-zero emissions by 2050. Enhancing investment for the net-zero transition calls for coordinated policies, reducing barriers to investment, pooling resources and preserving and strengthening the cohesion of the EU single market.

References

EEA, **2022**: Climate related economic losses by type of event.

European Investment Bank, 2023: <u>Investment Report 2022/2023: Resilience and renewal in Europe</u> – Chapter 6: "<u>Green transition and the energy crisis</u>". Published on February 28, 2023. ISBN: 978-92-861-5506-2 (PDF/EN). DOI: 10.2867/307689.

IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S.L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M.I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T.K. Maycock, T. Waterfield, O. Yelekçi, R. Yu, and B. Zhou (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 3–32, doi:10.1017/9781009157896.001.

UNDRR, **2020**: <u>Human cost of disasters – An overview of the last 20 years (2000-2019).</u> Published on October 12, 2020.

Appendix

1. The questionnaire

Below is an extract of the EIBIS questionnaire from the 2022 edition. Being an extract, please note that the questions may have been asked in a different order. Also, comparisons with previous survey waves should take into account that the wording of some of the questions has changed.

Question 1 – Thinking about your investment activities, to what extent are energy costs and uncertainty about the future an obstacle? Is it a major obstacle, a minor obstacle or not an obstacle at all?

Question 2 – What proportion of the total investment in the last financial year was primarily for measures to improve energy efficiency in your organisation?

Question 3 – Think about the impact of climate change on your company, such as losses due to extreme climate events, including droughts, flooding, wildfires or storms or changes in weather patterns because of progressively increasing temperature and rainfall. What is the impact, also called physical risk, of this on your company?

Question 4 – Has your company developed or invested in any measure to build resilience to the physical risks posed by climate change?

Question 5 – Have you invested or are you planning to invest to tackle the impact of weather events and to help reduce carbon emissions?

Question 6 – What impact do you expect that this transition to stricter climate standards and regulations will have on your company over the next five years?

Question 7 – Does your company set and monitor targets for its own greenhouse gas (GHG) emissions?

Question 8 – Is your company investing or implementing any measure to reduce greenhouse gas (GHG) emissions?

2. Definitions

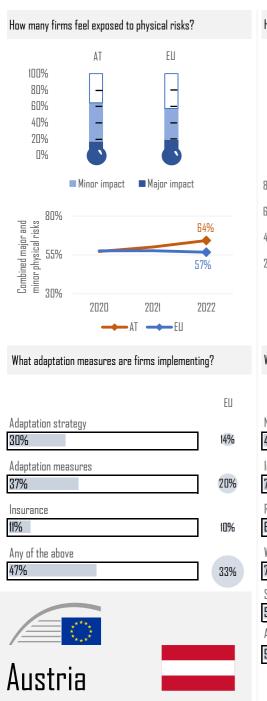
The following industries are considered to be energy-intensive: food, pulp and paper, basic chemicals, refining, iron and steel, non-ferrous metals (primarily aluminium) and non-metallic minerals (primarily cement).

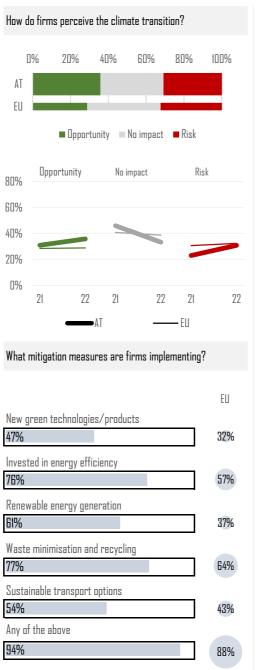
Instead, non-energy-intensive sectors include all other sectors of the economy except for electricity, gas, steam and air conditioning supply.

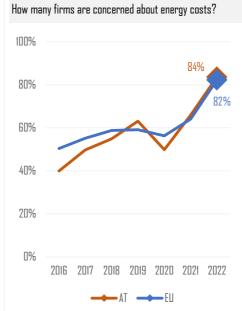
WNE stands for Western and Northern Europe; CEE stands for Central and Eastern Europe while SE stands for Southern Europe.

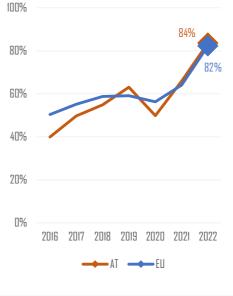
Annex 1 – Country scoreboards

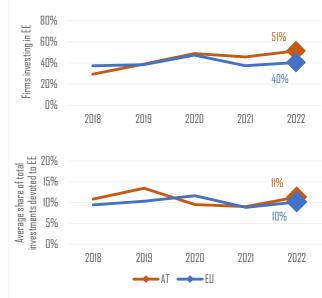
Annex 2 – Country dashboards

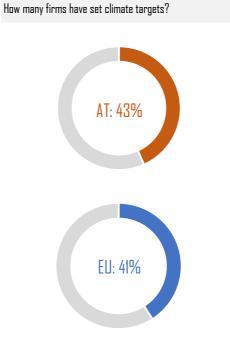


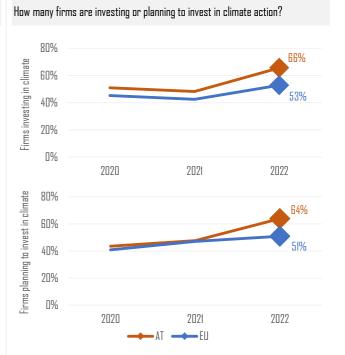




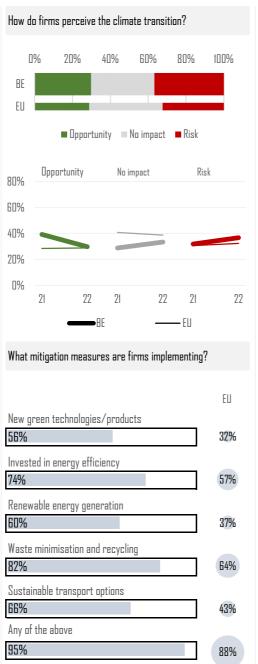


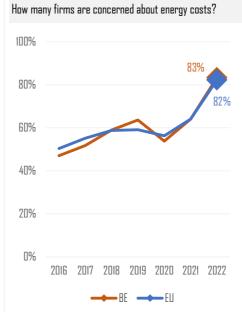




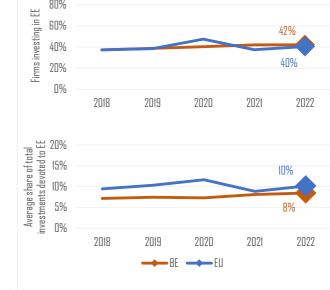


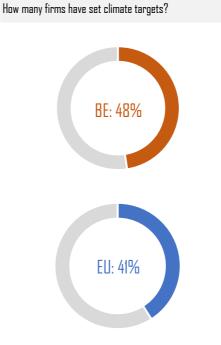


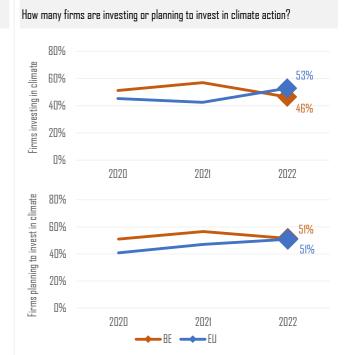


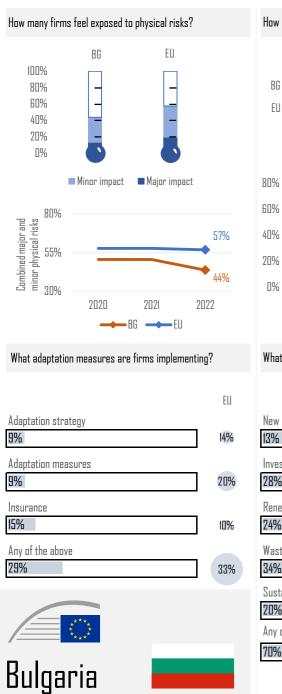


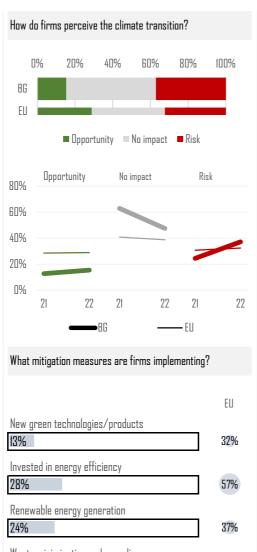


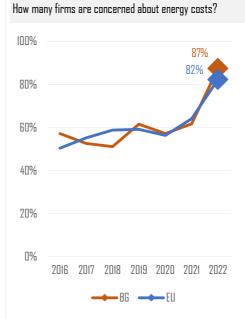


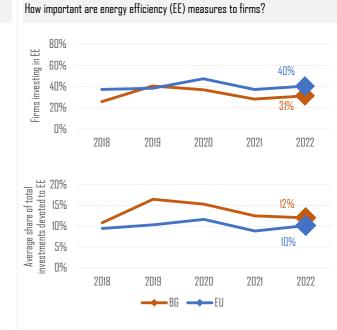


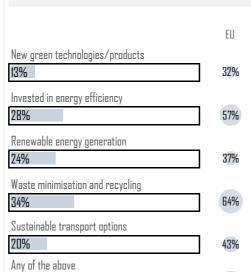


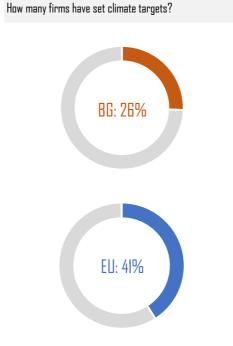


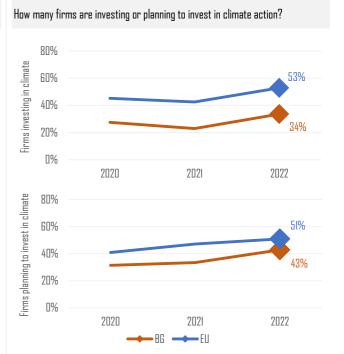




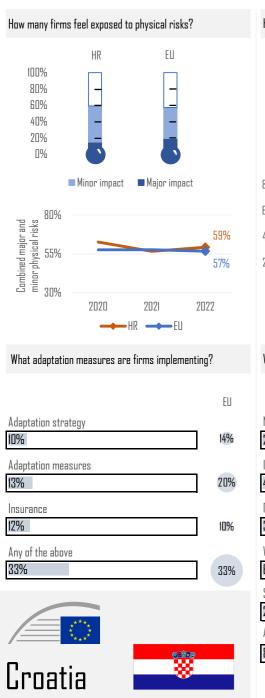


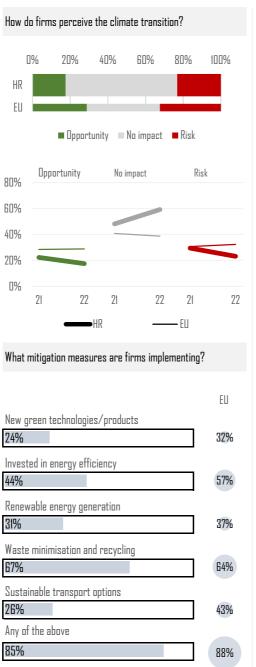


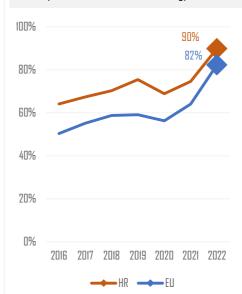




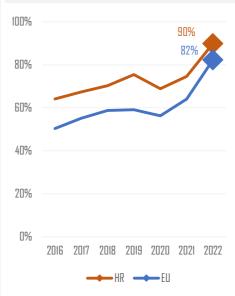
88%

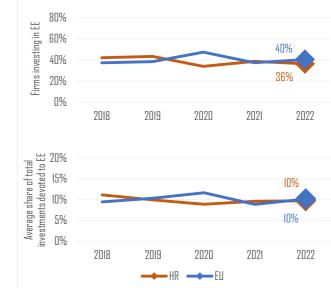


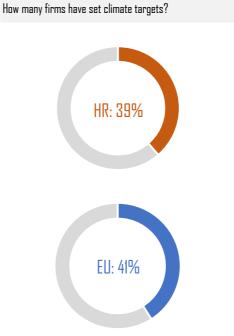


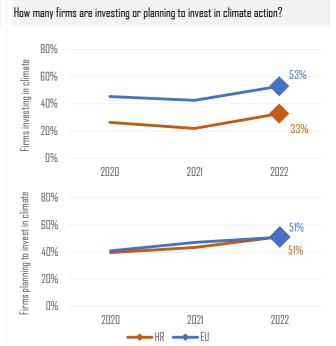


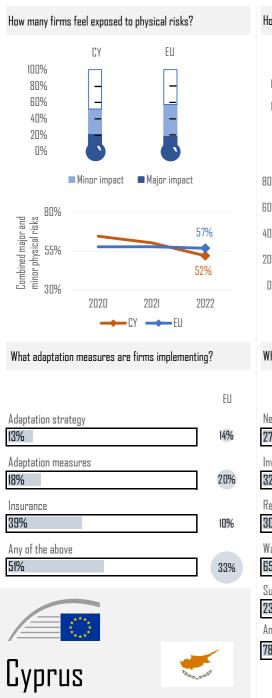
How many firms are concerned about energy costs?

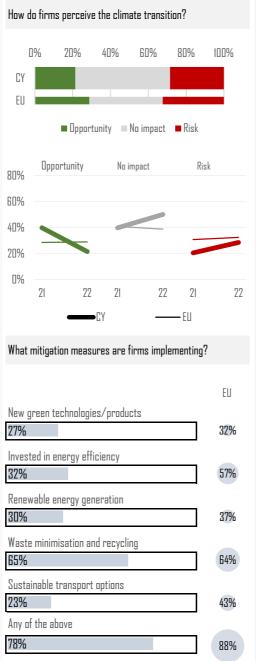


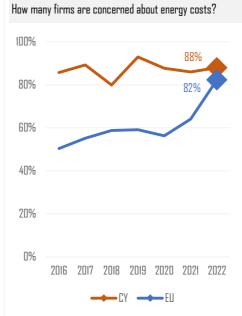


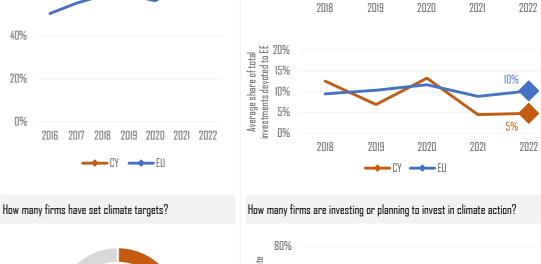












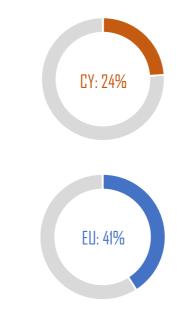
Firms investing in EE

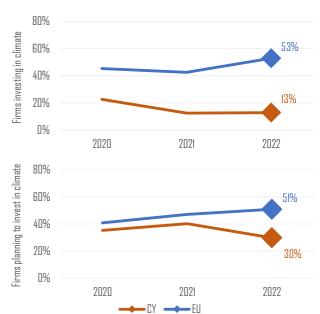
60%

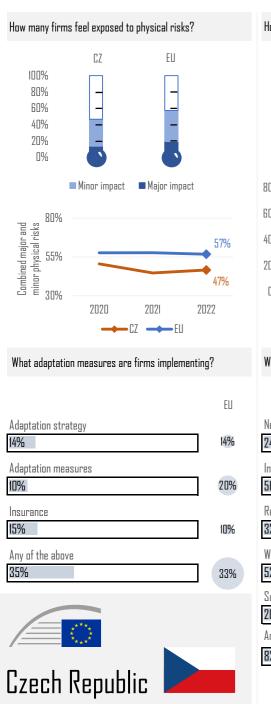
40%

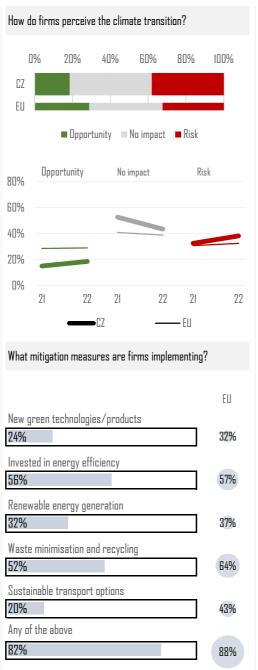
20%

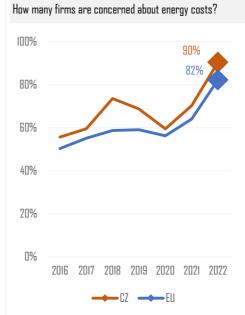
0%

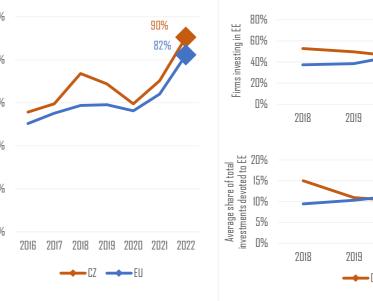


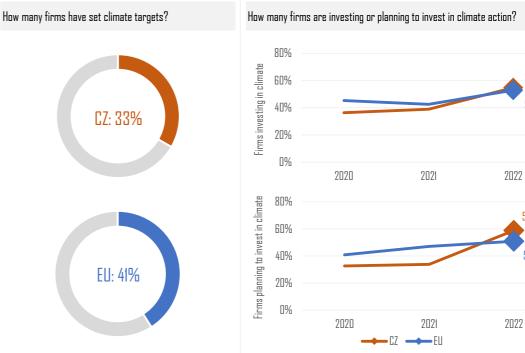




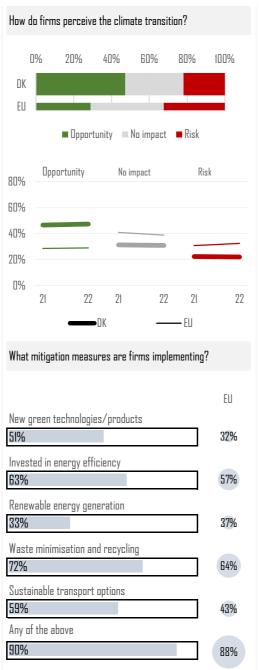


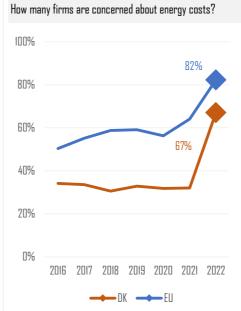


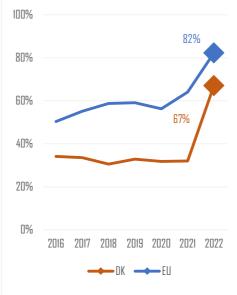


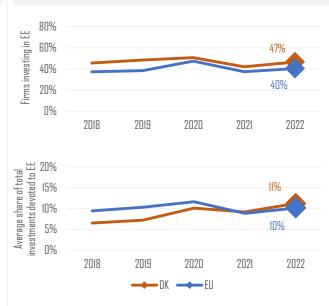


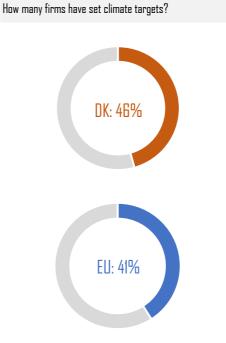


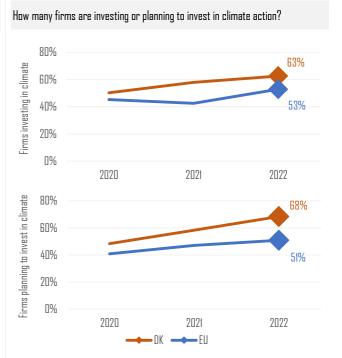


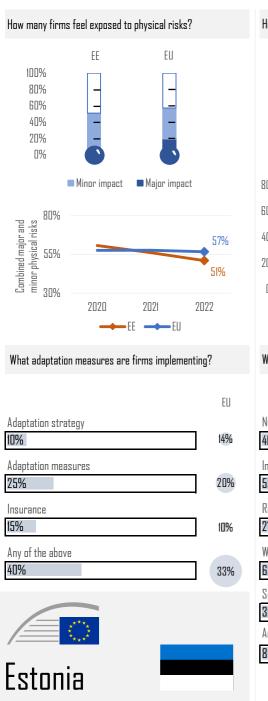


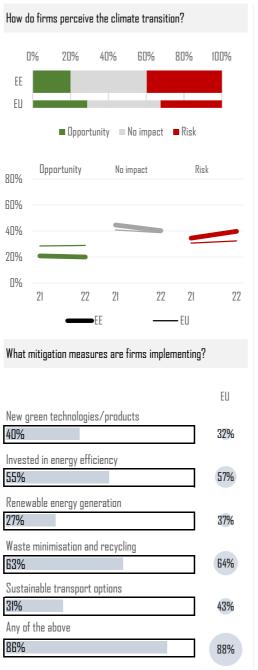


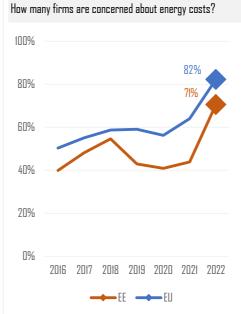


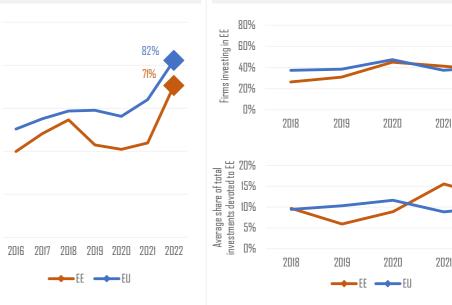


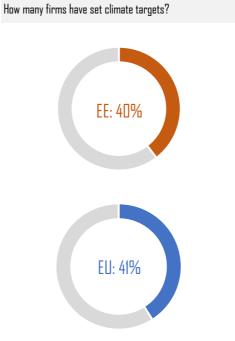


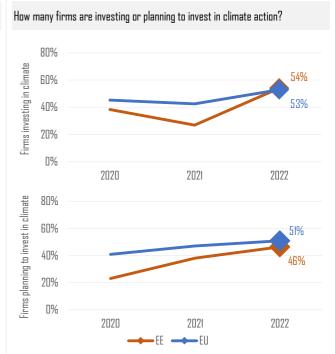






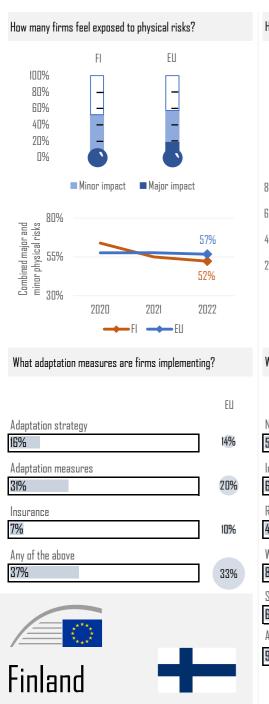




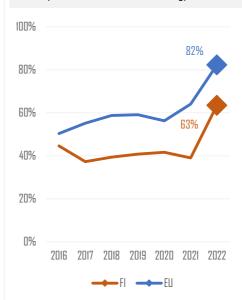


2022

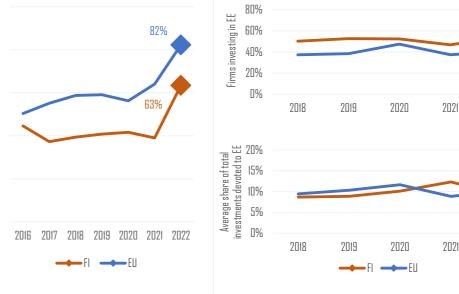
2022







How many firms are concerned about energy costs?



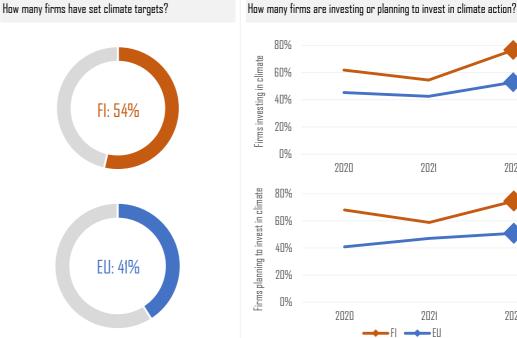
How important are energy efficiency (EE) measures to firms?

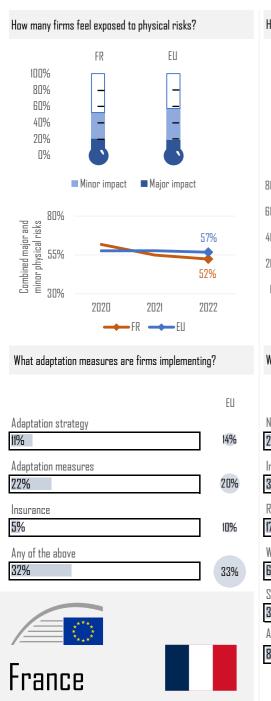
2022

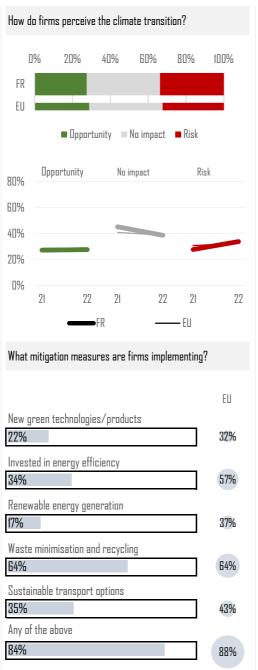
2022

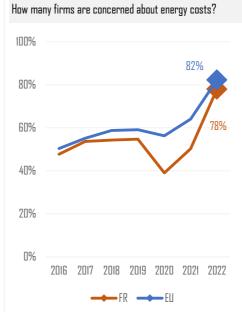
2022

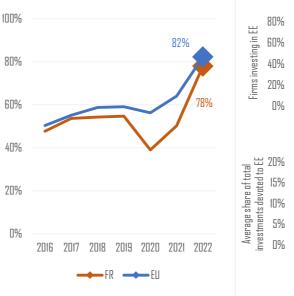
2022

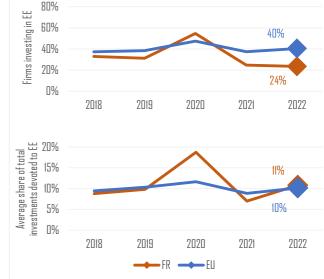


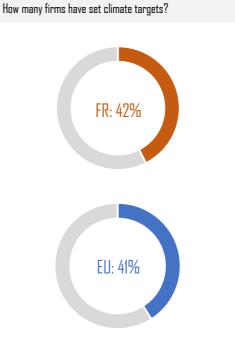


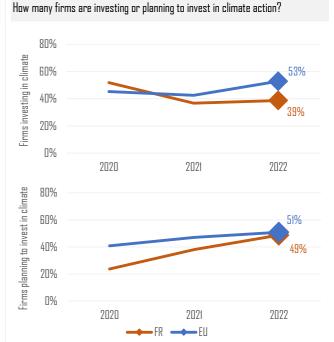


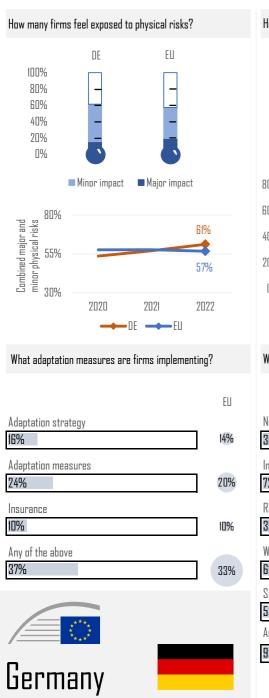


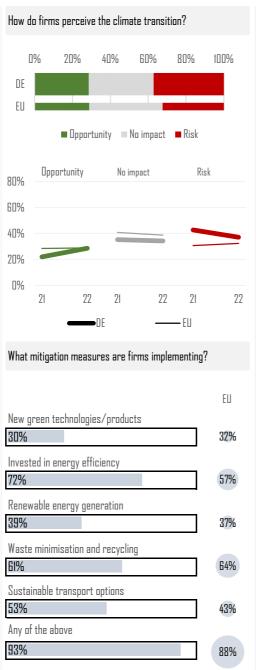


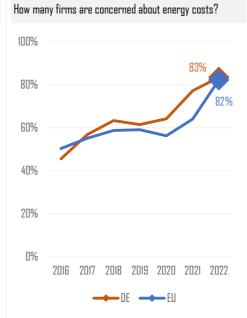


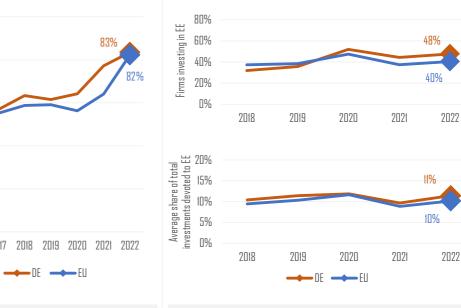


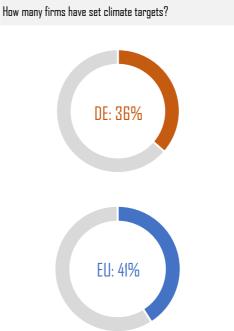


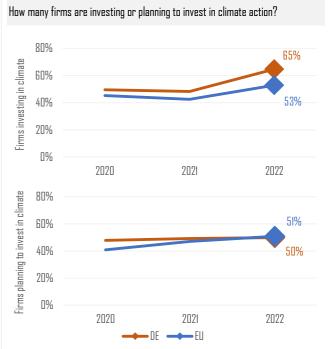


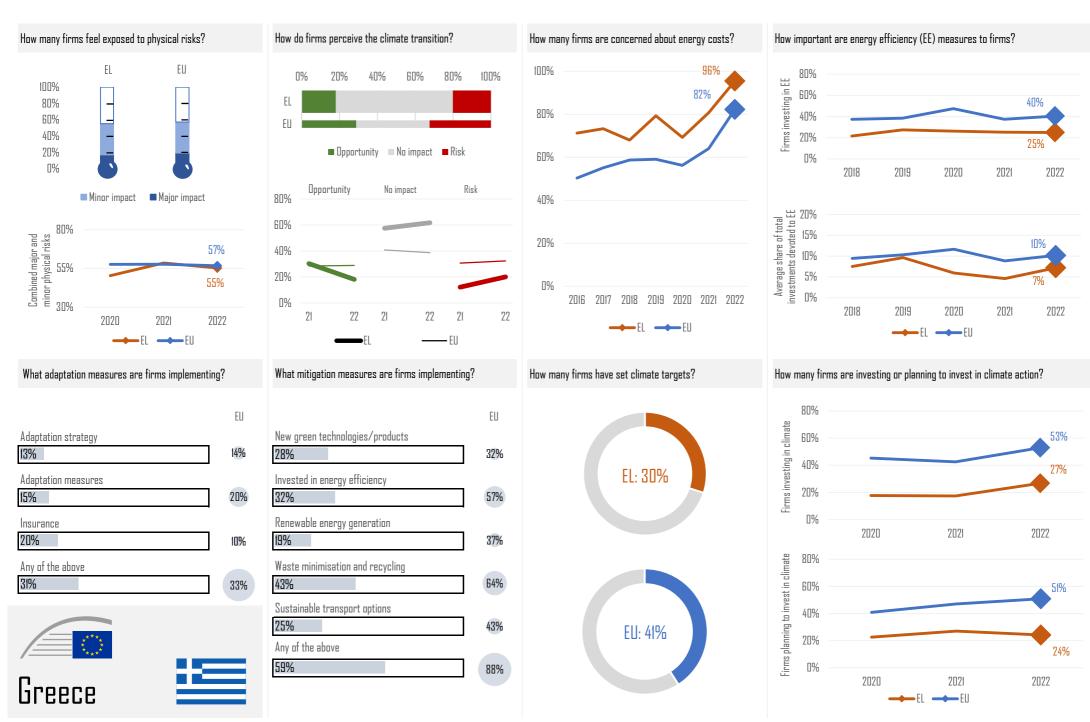


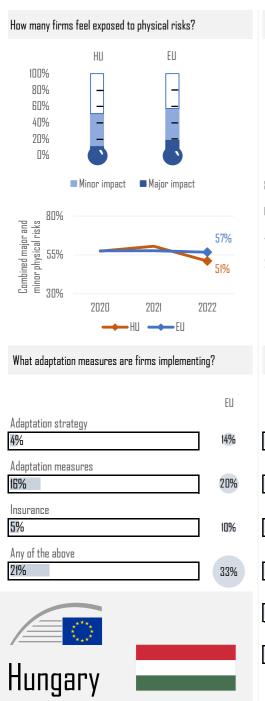


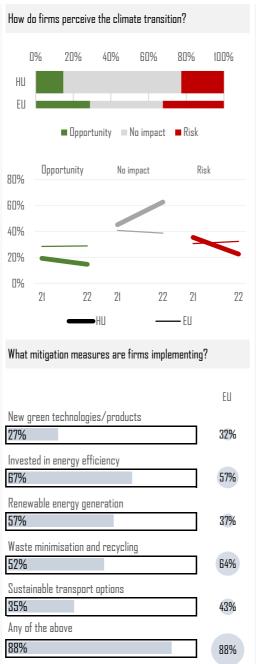


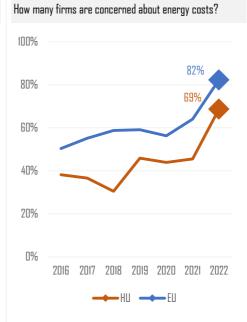


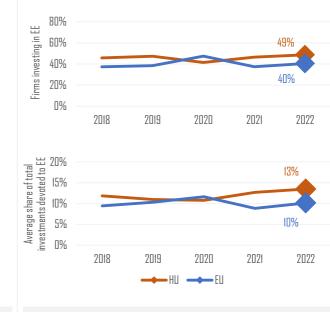


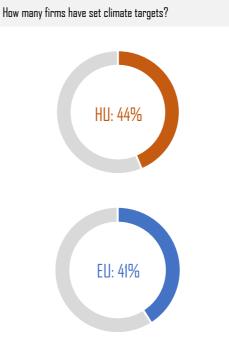


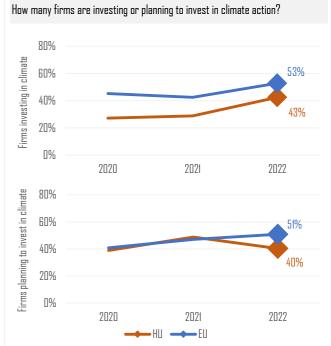


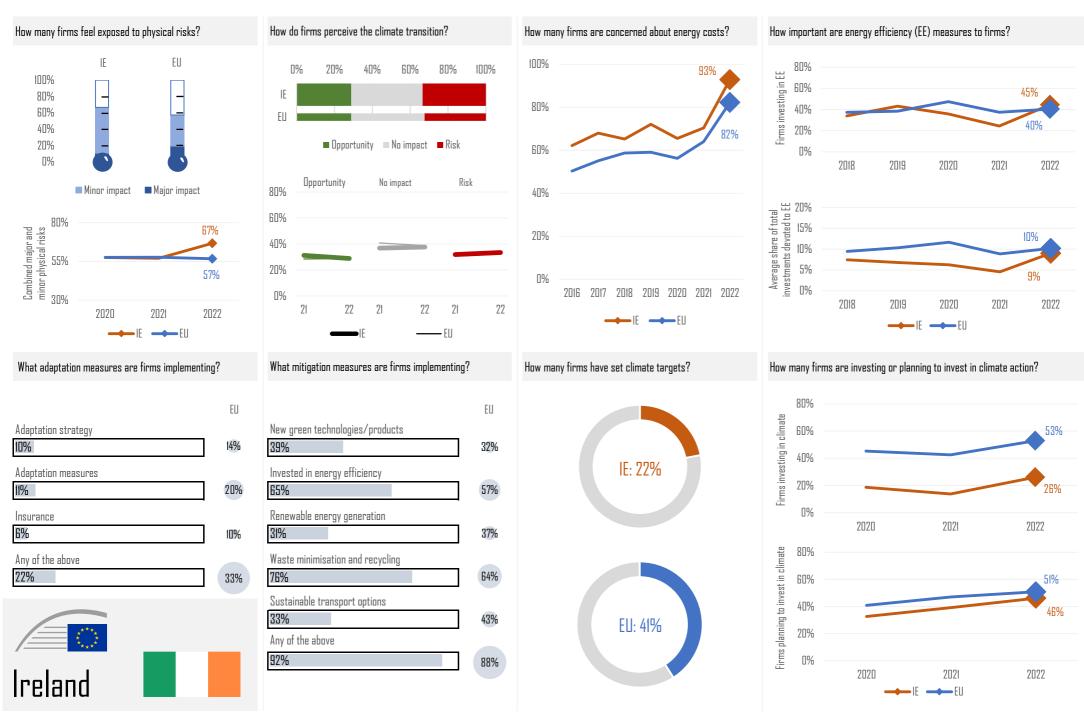


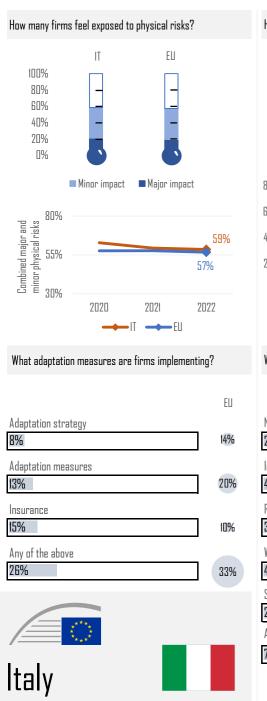


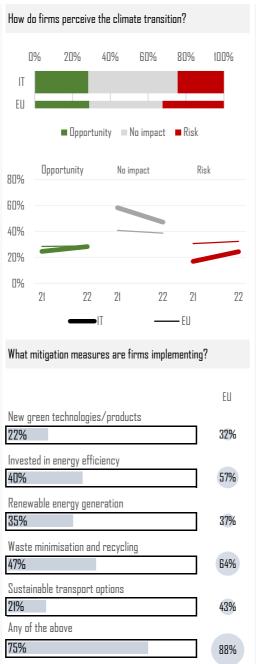


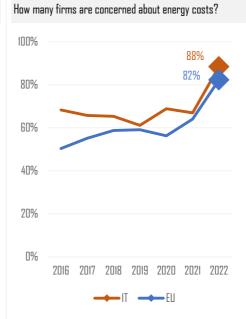


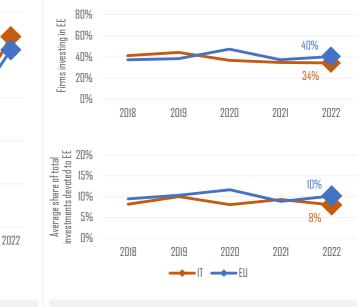


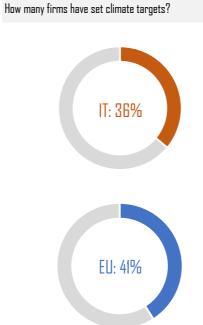


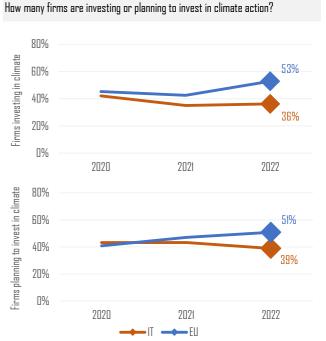


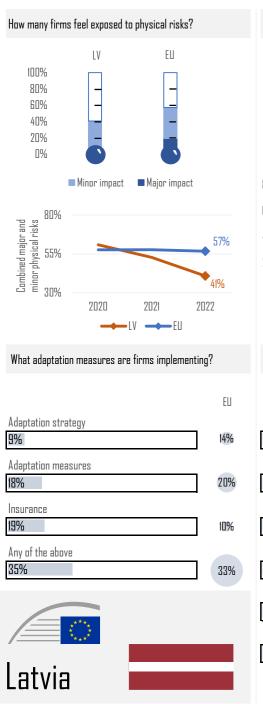


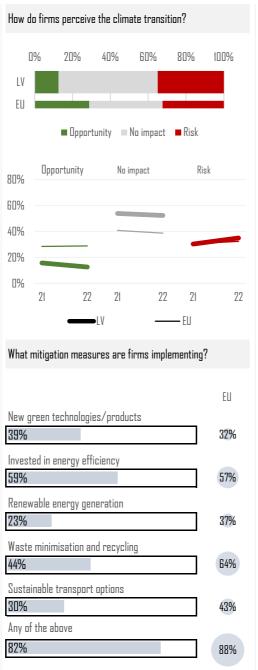


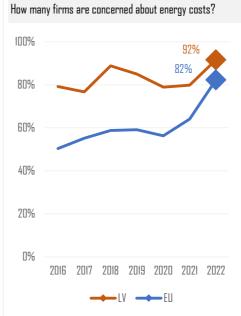


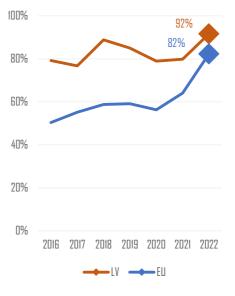


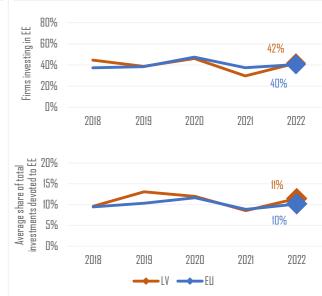


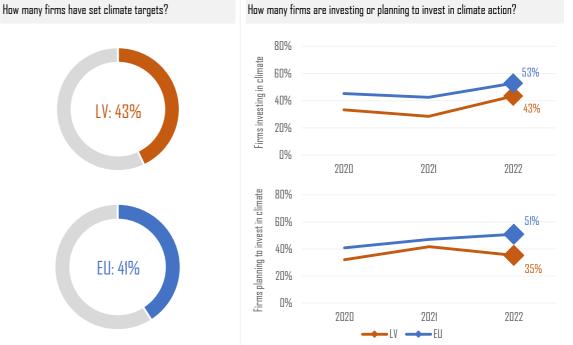


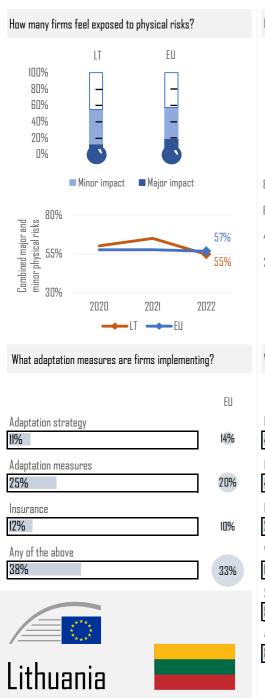


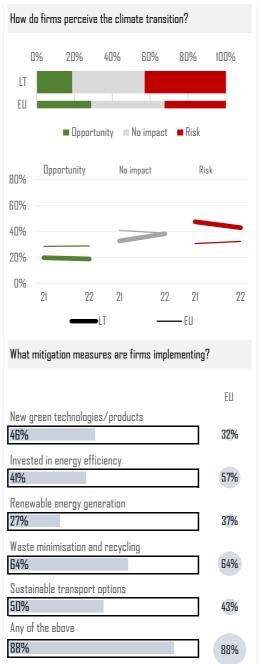


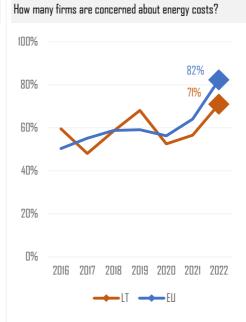


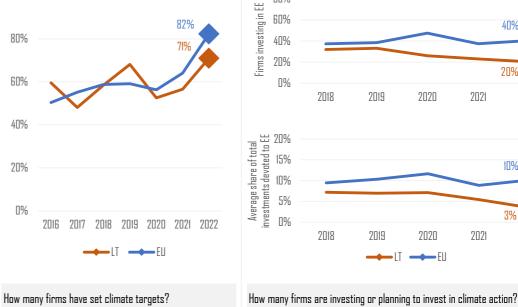


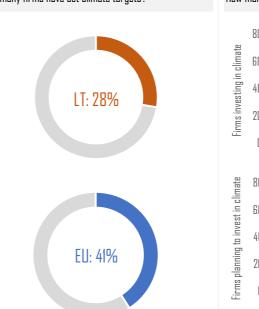


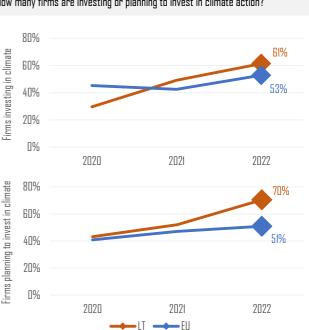






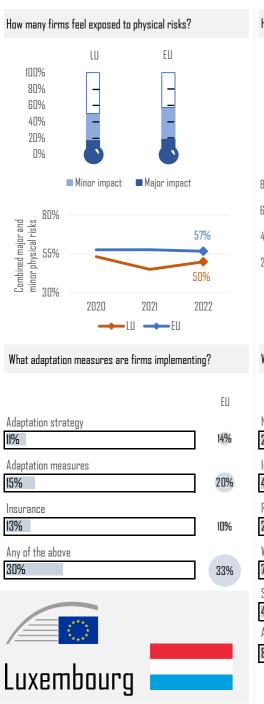


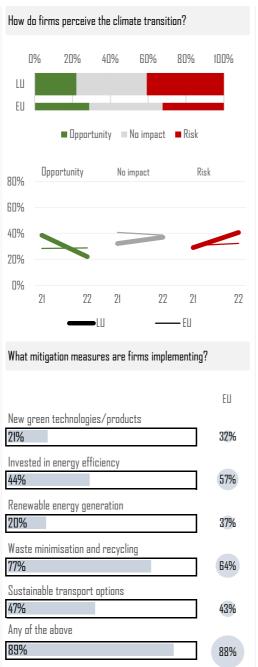


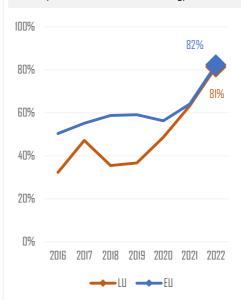


2022

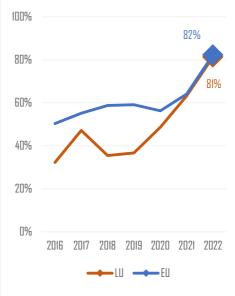
2022

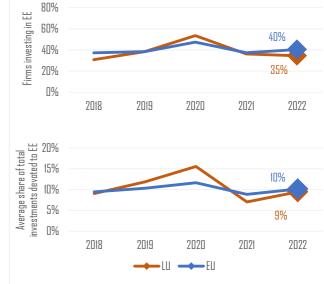




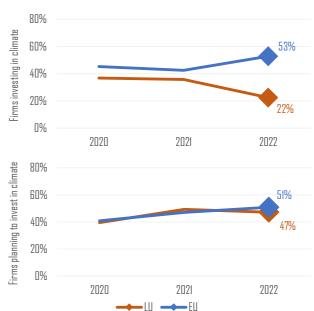


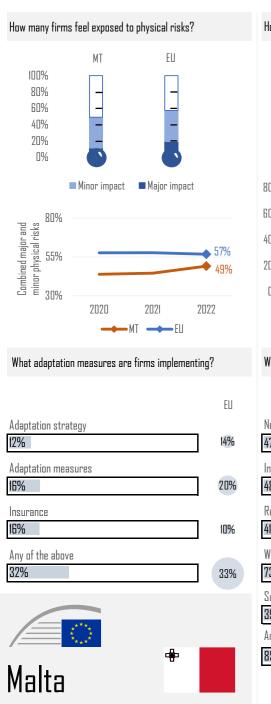
How many firms are concerned about energy costs?

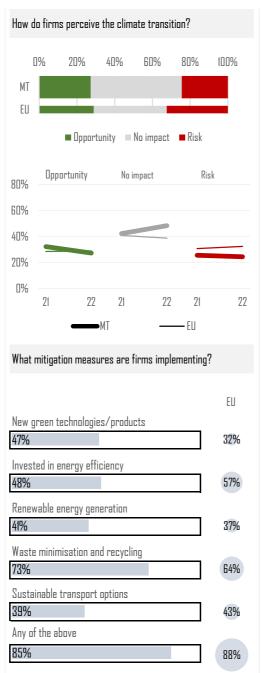


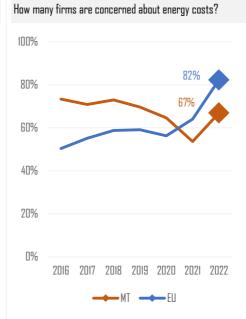


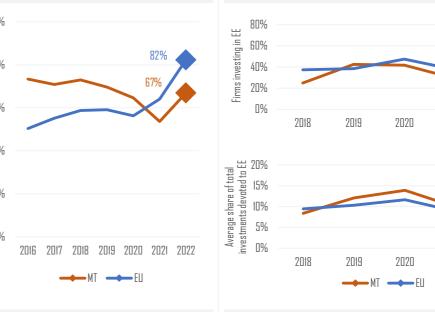


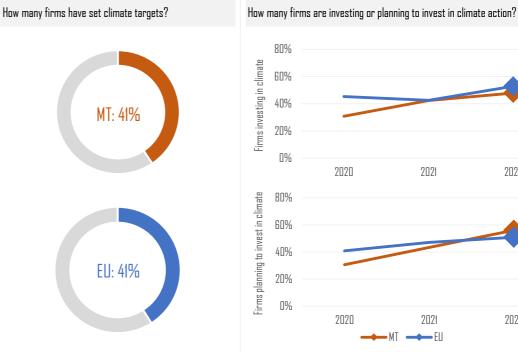


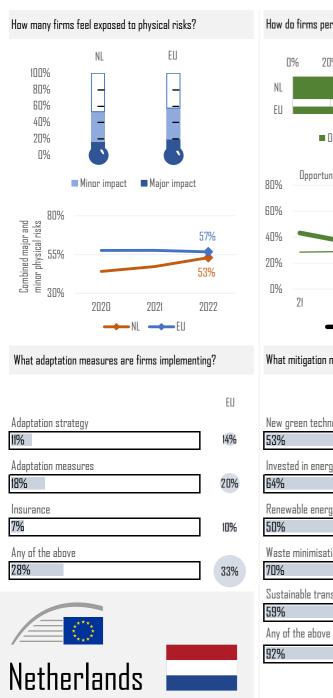


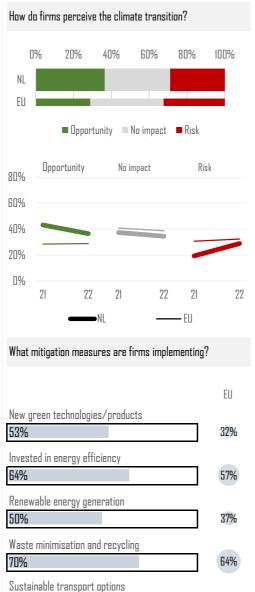


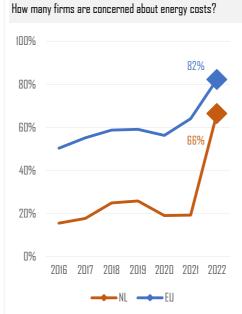


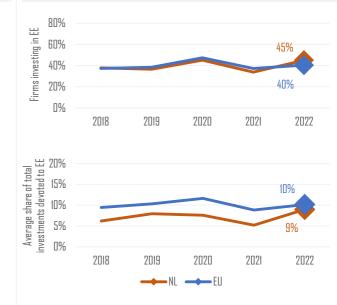


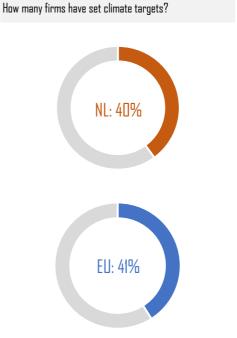


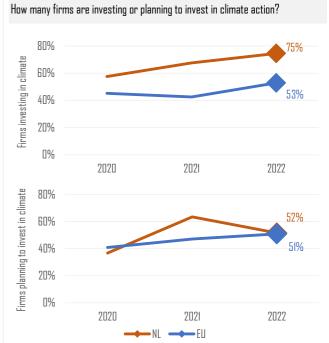




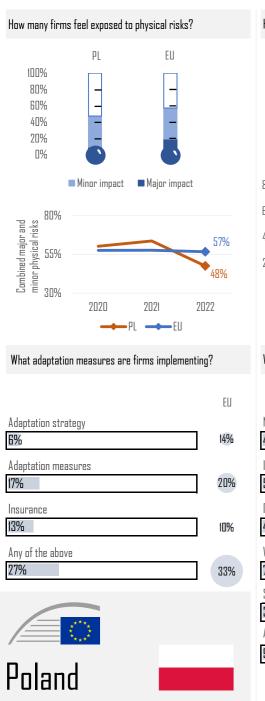


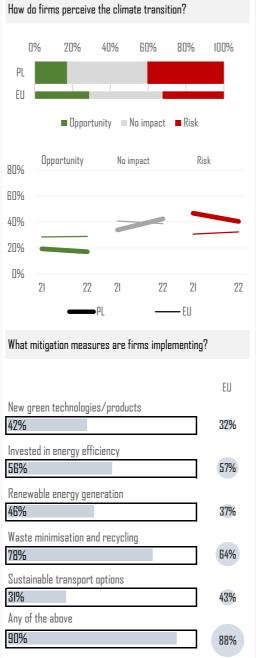


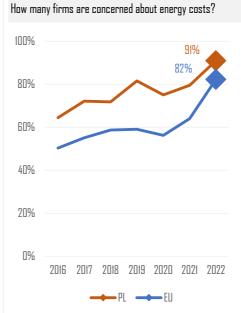


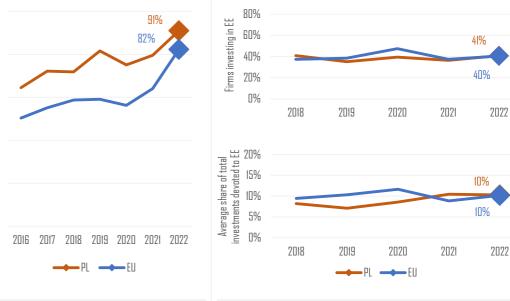


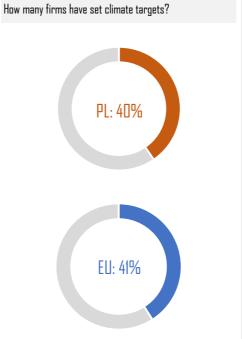
88%

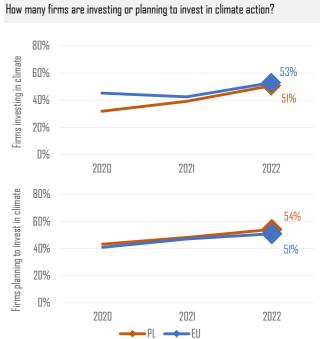


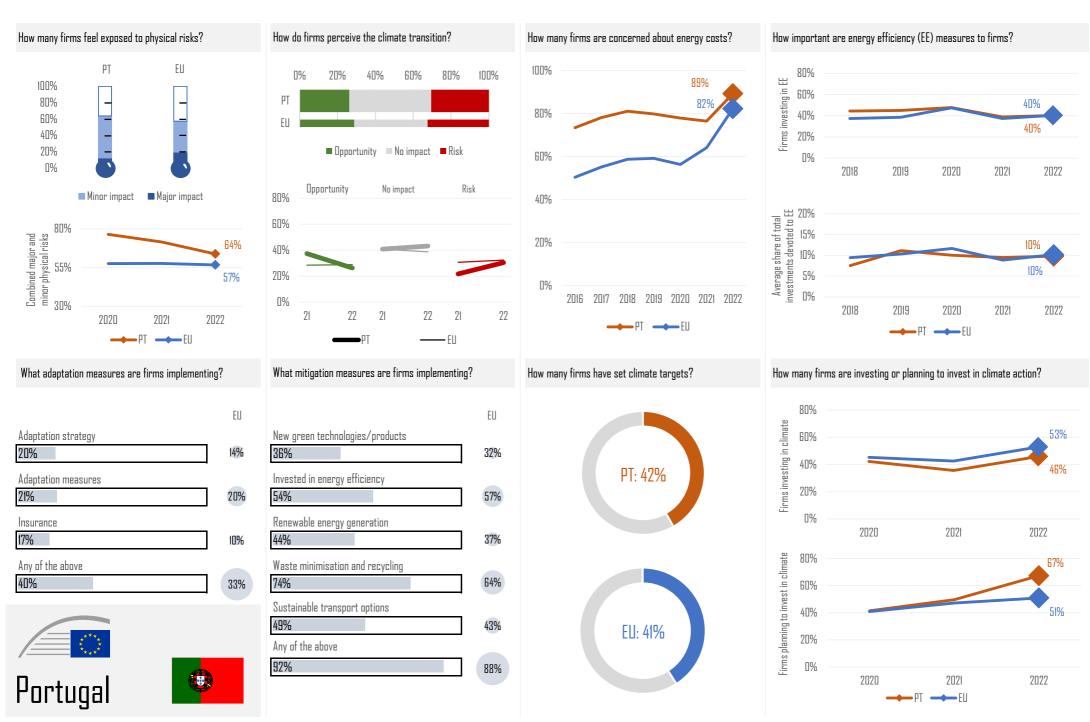


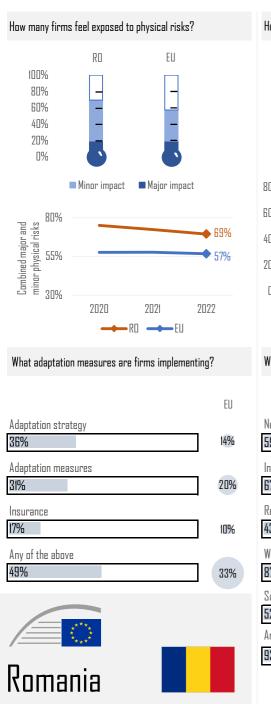


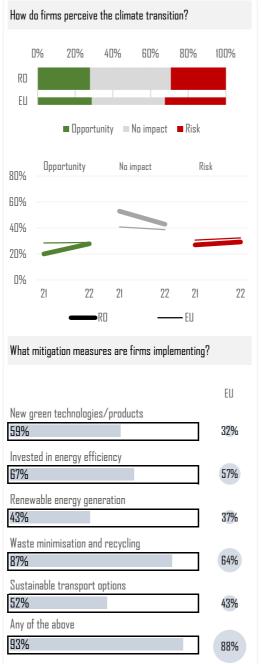


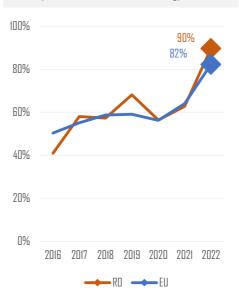




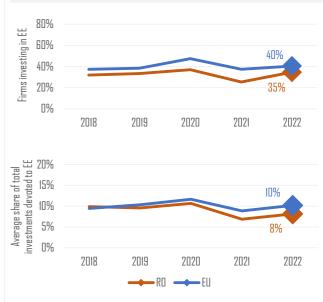


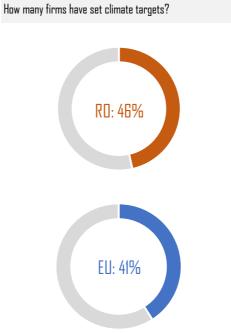


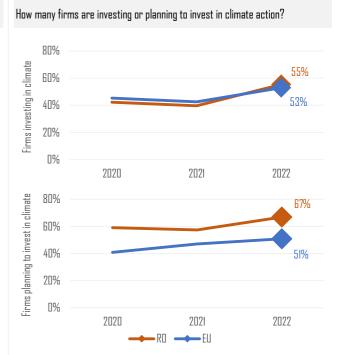


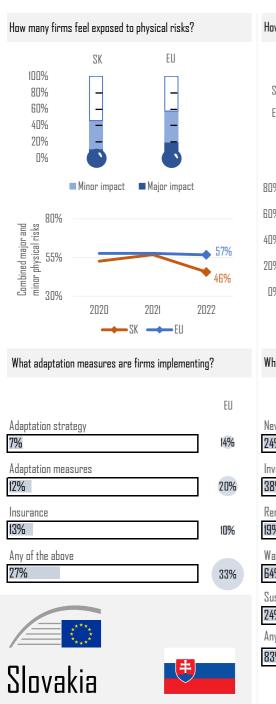


How many firms are concerned about energy costs?

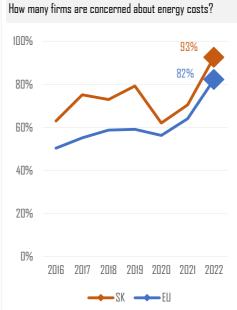


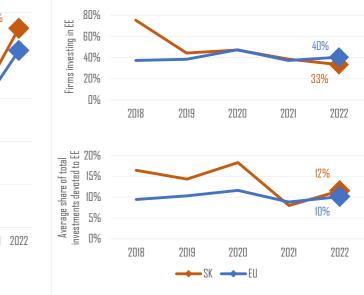


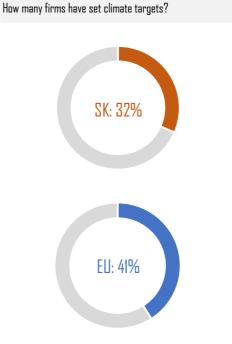


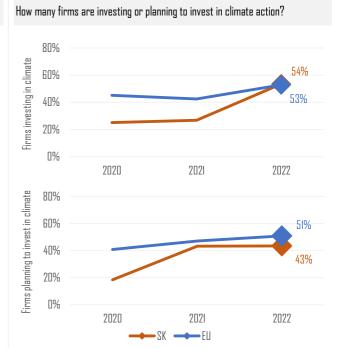


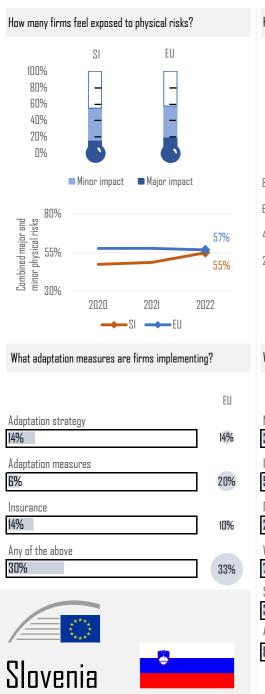




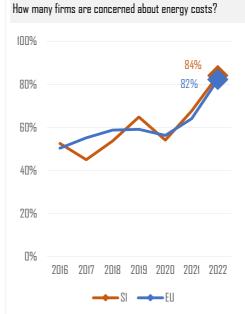


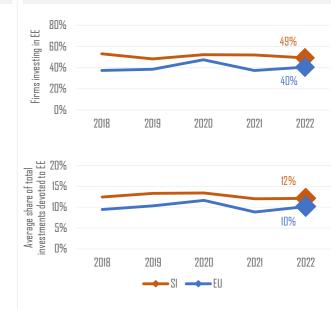


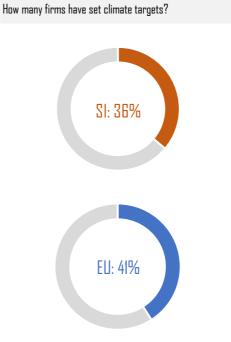


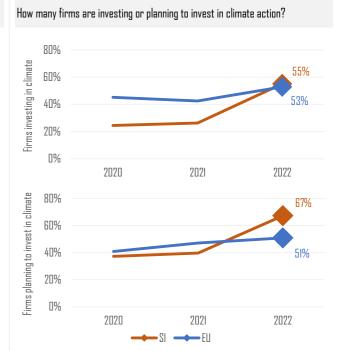


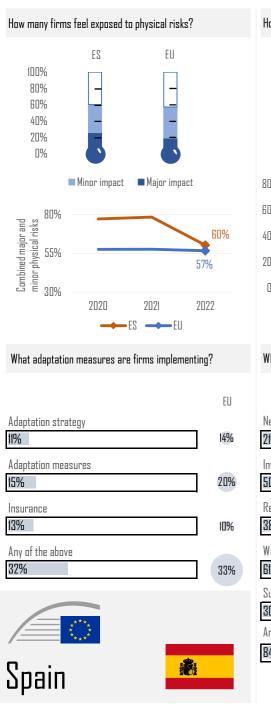


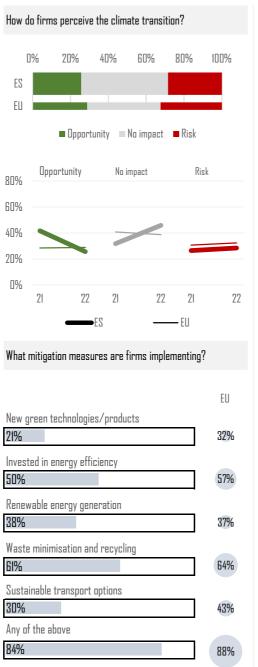


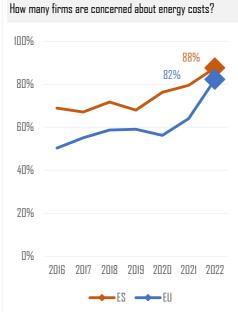


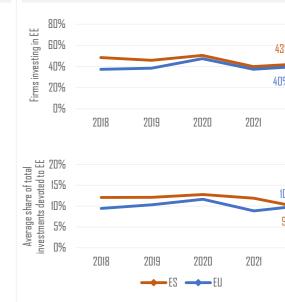






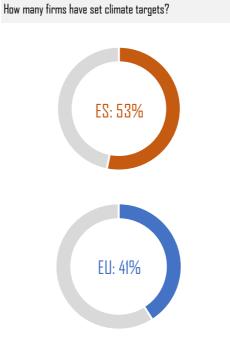


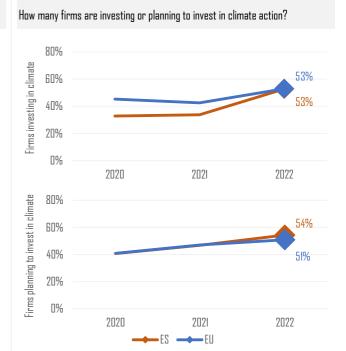


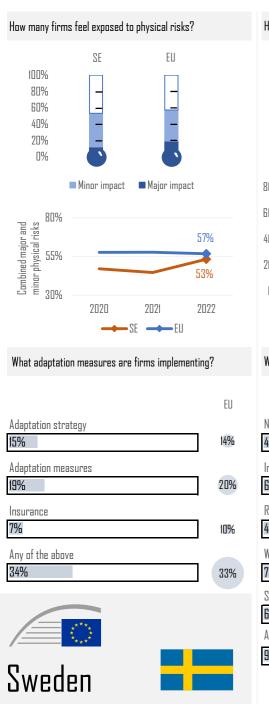


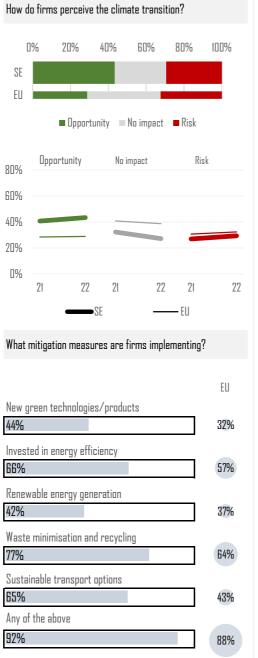
2022

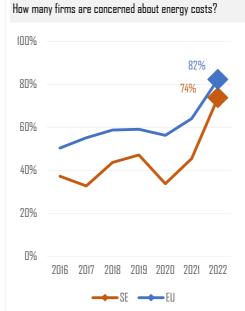
2022

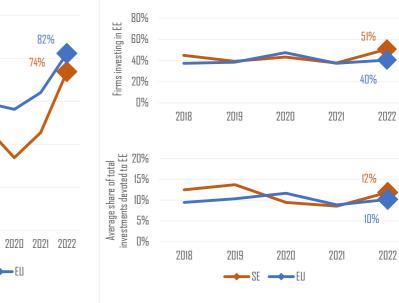


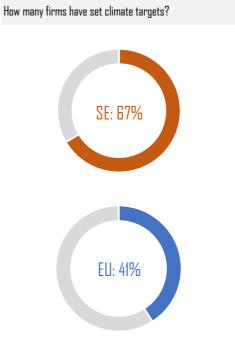


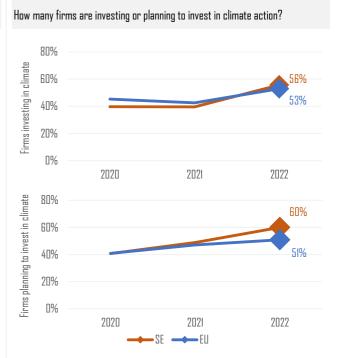












What drives firms' investment in climate change?

Evidence from the 2022-2023 EIB Investment Survey



Economics Department economics@eib.org www.eib.org/economics

European Investment Bank 98-100, boulevard Konrad Adenauer L-2950 Luxembourg +352 4379-22000 www.eib.org – info@eib.org

print: ISBN 978-92-861-5539-0 pdf: ISBN 978-92-861-5537-6 eBook: ISBN 978-92-861-5538-3