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EVALUATION

of the

Joint Harmonised EU Programme of Business and Consumer Surveys

{SWD(2024) 28 final}

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Glossary

Term, abbreviation or acronym	*Meaning or definition*
API	Application Programming Interface
AT	Austria
BCI	Business Climate Indicator
BCS	Business and consumer surveys
BE	Belgium
BG	Bulgaria
BVAR	Bayesian Vector Autoregression
BLS	Bank Lending Survey
CAPI	Computer-Assisted Personal Interviewing
CATI	Computer-Assisted Telephone Interviewing
CAWI	Computer-Assisted Web Interviewing
CES	Consumer Expectations Survey
CPI	Consumer Price Index
CY	Cyprus
CZ	Czechia
DE	Germany
DG ECFIN	Directorate-General for Economic and Financial Affairs
DG FISMA	Directorate-General for Financial Stability, Financial Services and Capital Markets Union
DIW ECON	Consulting Company of the German Institute for Economic Research
DK	Denmark
DSGE	Dynamic Stochastic General Equilibrium
EA	euro area

EC	European Commission
ECB	European Central Bank
EE	Estonia
EEI	Employment Expectations Indicator
EL	Greece
ES	Spain
ESI	Economic Sentiment Indicator
EU	European Union
EUI	Economic Uncertainty Indicator
FI	Finland
FR	France
FSSS	Financial Services Sector Survey
GDP	Gross Domestic Product
HICP	Harmonised Index of Consumer Prices
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MIDAS	Mixed-data sampling
MK	Republic of North Macedonia
MNE	Multinational Enterprise
MT	Malta
NL	Netherlands

OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PL	Poland
PMI	Purchasing Managers' Index
PT	Portugal
RMSE	Root Mean Squared Error
RO	Romania
RS	Serbia
SE	Sweden
SI	Slovenia
SME	Small and Medium-sized Enterprise
SK	Slovakia
TR	Türkiye
UK	United Kingdom
UN	United Nations
VAR	Vector Auto Regression
VEC	Vector Error Correction
VDMA	German Mechanical and Plant Engineering Association

1. INTRODUCTION

1.1 Purpose and scope of the evaluation

Under the Joint Harmonised EU Programme of Business and Consumer Surveys (BCS Programme) monthly business and consumer surveys are carried out in all EU Member States and five candidate countries (Bosnia and Herzegovina, Ukraine and Moldova, which were granted candidate status in 2022, are not covered). The data gathered provide quasi real-time information on various aspects of economic sentiment among business managers and consumers and are widely used both inside the Commission and by external parties, such as the European Central Bank (ECB), economic research institutes, the media, market participants, etc. The surveys are carried out nationally by partner institutes of the Commission, which receive grants covering up to 50% of the costs incurred for the implementation of the surveys.

The Commission is committed to evaluating proportionately all EU spending and non-spending activities that are intended to have an impact on society or the economy with a view to supporting organisational learning, as well as transparency, accountability and efficiency in the allocation of resources. The last comprehensive evaluation of the BCS Programme was completed in 2012 and, since then, the programme has been subject to a number of important changes. This evaluation of the BCS Programme therefore covers the period from 2012 to 2021.

The aim of the evaluation is to assess the degree to which the BCS Programme has achieved its objectives by using the Better Regulation criteria of effectiveness, efficiency, coherence, EU added value and relevance. Several specific evaluation questions were associated with each evaluation criterion. The answers to these questions guided the evaluation study and fed the conclusions and lessons learned from each evaluation criterion.

This Commission evaluation is supported by an external evaluation study. The study was conducted from June 2022 to March 2023, with data collection activities (stakeholder interviews, online questionnaire and literature review) completed in October 2022. **The study's methodological approach relies on four pillars:**

1. a thorough desk research, focussing on previous evaluation reports, economic analyses and research using the survey data generated by the BCS Programme (both from the Commission's Directorate-General for Economic and Financial Affairs (DG ECFIN), as well as academia) and other outlets for the data, such as newspaper articles;
2. a stakeholder consultation targeting the various types of users of the data (institutional users, academia, economic journalists, etc.) as well as the producers of the data (i.e. the Commission's national partner institutes conducting the surveys). In total, 91 stakeholders (out of 269 contacted) participated in semi-structured interviews and 51 (out of 111 contacted) completed an online survey[1];

[1] More information on the stakeholder consultation can be found in Annex V.

3. quantitative analysis examining how accurately and reliably the survey data collected by the BCS Programme capture economic developments in the Member States and candidate countries;
4. triangulation of the evidence gathered via the three preceding methods to distil answers to DG ECFIN's evaluation questions.

Some limitations were experienced during the preparation of the external study and, consequently, the completion of the Commission's evaluation. Those included the lack of external evaluations of the BCS Programme not mandated by the Commission and, for some specific stakeholder groups, a rather low participation rate in the consultation. While such limitations had a bearing on the quality of some analyses conducted in the evaluation, the main conclusions presented in this report can be regarded as sufficiently robust and reliable as a basis for reflections on the BCS Programme. Limitations and mitigating factors are elaborated on in Annex II.

2. WHAT WAS THE EXPECTED OUTCOME OF THE INTERVENTION?

2.1 Description of the intervention and its objectives

According to the Treaty on the Functioning of the European Union, the Commission shall contribute to informing the EU authorities, Member States and the various economic agents on the economic situation at both national and Community level. The concrete objective derived from this obligation is the assessment of the business cycle, for the EU as a whole and across Member States, in a timely and sufficiently frequent way. To allow meaningful cross-country comparisons and aggregation for the EU and the euro area (EA), the information should be compiled based on harmonised concepts and a harmonised methodology in all countries.

In response to these requirements, the Commission set up a programme in 1961 for the implementation of business surveys in the Member States according to a common methodology. While business tendency surveys deliver results which are less exact than official statistics (e.g. on Gross-Domestic Product or Industrial Production), they can be produced much faster than official data and hence allow users to have an early idea of where Member State economies and the EU/euro area economy as a whole are heading.

The sectoral coverage of the BCS Programme has continuously expanded and today includes manufacturing, services, retail trade, construction, as well as consumers. From 2006 to 2023, the programme also comprised a Financial Services Sector Survey (FSSS)[2]. The geographic scope of the BCS Programme has been regularly widened to include new Member States as well as new candidate countries. The programme currently covers all 27 EU Member States and five EU candidate countries (Albania, Montenegro, Republic of North Macedonia, Serbia and Türkiye)[3].

The implementation of the BCS Programme relies on inputs from the Commission as well as national partner institutes. The Commission defines a key set of harmonised methodological features[4] of the surveys, namely a catalogue of harmonised survey questions to be asked to business managers/consumers, a common timetable for the surveys and a list of best practice for the conduct of business and consumer surveys,

[2] Based on the results of the stakeholder consultation conducted by the external contractor, DG ECFIN decided to discontinue the financial services sector survey. The survey was for the last time conducted in March 2023.

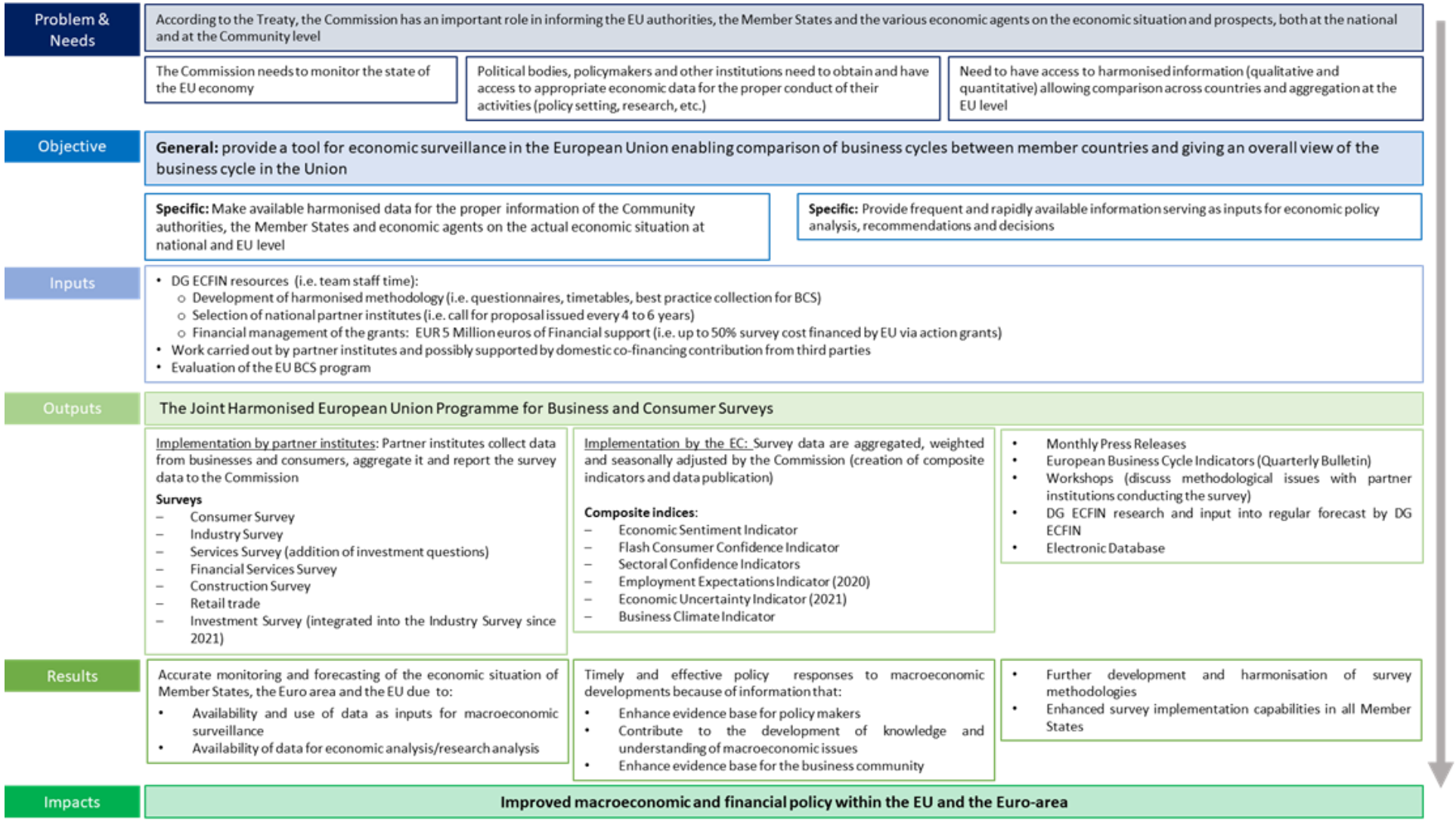
[3] The integration of candidate countries into the BCS Programme at an early stage is necessary to provide reliable and comparable data to follow their economic situation and to guarantee the production of accurate EU aggregates once these countries become members of the EU.

[4] The harmonisation of the surveys is only partial as, apart from the harmonised questionnaire and harmonised timetable, partner institutes have discretion in the specific design of the data collection and sampling. This includes, for example, the possibility of adding questions other than those harmonised by the EC in order to capture some countries' specificities. Partner institutes also decide on other methodological aspects, such as the sample design and the sample size, whereby they are encouraged to follow the Commission's 'list of best practice for the conduct of business and consumer surveys'.

which surveying institutes are encouraged to follow. Every 4 to 6 years, it launches a call for proposals to select national partner institutes to conduct the surveys on its behalf. The work of the partner institutes is supported by grants covering up to 50% of the institutes' survey-related costs. The total amount of grants paid by the Commission for the BCS Programme amounts to about 5 million EUR per year. At the end of each month, the Commission summarises the survey results mainly through composite (national and EU/EA) indicators, which are disseminated via dedicated press releases and a website where they can be downloaded free of charge.

The task of the partner institutes is to conduct the monthly fieldwork and submit the collected data to the Commission for further processing and dissemination. In a number of cases, the work of the partner institutes is supported by complementary national co-financing from public contributions, membership fees, sponsorships and/or data sales.

Figure 1: Intervention logic of the BCS Programme



Source: Deloitte and DIW Econ

2.2 Point(s) of comparison

The benchmark / point(s) of comparison to evaluate the BCS Programme cannot be the situation as it was before the programme was first implemented, in 1961. Over the past 60 years, the economic and political environment, the knowledge needs and the information basis have changed radically. This evaluation therefore uses different benchmarks, namely relevant academic literature, comparable survey programmes and the identified information gaps.

3. HOW HAS THE SITUATION EVOLVED OVER THE EVALUATION PERIOD?

Since the completion of the last evaluation in 2012, the main features of the BCS Programme have remained broadly unchanged, with the most important changes related to the addition of new composite indicators and harmonised survey questions. This section starts with a detailed description of the current set-up of the programme, which is, in the following, complemented by an overview of the most significant changes over the period 2012-21.

3.1 Current state of play

The BCS Programme currently covers all 27 EU Member States and five EU candidate countries (Albania, Montenegro, Republic of North Macedonia, Serbia and Türkiye)[5] and encompasses five sectoral surveys focussing on the (manufacturing) industry, services, retail trade, construction and consumers. The surveys are carried out at national level by public and private partner institutes, such as central banks, research institutes or private market research firms.

In total, around 135,000 businesses and 32,000 consumers are surveyed across the EU every month. The sample size varies across countries and sectors.

The business surveys provide information on a wide range of variables that are useful to monitor cyclical developments, such as expectations with respect to output, selling prices and employment. There is a number of questions which are identical across surveys, as well as some sector-specific questions, for instance, on the current level of order books in industry, or the expected orders placed with suppliers in retail trade. Nearly all survey questions are of a qualitative nature, with respondents asked to categorise past or expected developments in a given variable (e.g. production) as "increase", "no change", "decrease" and current levels as "too large", "adequate", "too small". However, there are also some quantitative questions, e.g. the percentage of capacity utilisation in industry and services. Most of the questions are asked on a monthly basis, but a few additional questions are added every quarter to the surveys in industry, services and construction. Furthermore, there are bi-annual questions on firms' investment activities in industry and services.

The consumer survey covers monthly and quarterly questions on households' financial situation, the general economic situation, including prices and unemployment, intentions about saving and major purchases as well as perceived economic uncertainty.

For the vast majority of survey questions, the responses of the firms/consumers are summarised in so-called balances, i.e. the difference between the percentages of respondents giving positive and negative replies to a given survey question[6].

[5] The BCS Programme does not (yet) include Bosnia and Herzegovina, Ukraine and Moldova, which were granted candidate status in 2022.

[6] In order to allow analysts and researchers to quantify the survey results using methods other than the balance statistics, detailed results by answer categories are provided online on DG ECFIN's BCS website.

However, there are also a few questions where the responses are condensed into percentages (e.g. the share of firms reporting their production to be constrained by specific factors or the average capacity utilisation).

The Commission also produces a number of composite indicators, which summarise the information emanating from a selection of particularly pertinent survey questions, namely:

- **Sectoral confidence indicators:** These indicators are arithmetic means of the respondents' assessments on selected economic developments in the different sectors, as well as among consumers.
- **Economic Sentiment Indicator (ESI):** The ESI draws on the results from all the business surveys and from the consumer survey. Roughly speaking, the ESI can be viewed as a summary of the five sector-specific confidence indicators.
- **Business Climate Indicator (BCI):** The BCI is based on balances calculated from the questions on production trends in recent months, order books, export order books, stocks and production expectations in the industry survey. The indicator serves as a timely composite indicator for the manufacturing sector in the EA and can therefore be seen as a complement to the industrial confidence indicator.
- **Employment Expectations Indicator (EEI)**: Since 2020, the EEI has summarised managers' employment plans in the four business sectors surveyed (industry, services, retail trade and construction) and thus provides a timely indication of expected changes in dependent employment.
- **Economic Uncertainty Indicator (EUI):** Since 2021, the EUI has helped track the development of economic uncertainty within the EU. The indicator is a weighted average of the answers to the questions in the four business surveys and the consumer survey on the difficulties of predicting the future economic situation.

To get a more granular view of developments in the different sectors of the economy, the results for the industry, services, retail trade and construction survey are not only available at aggregate level, but also broken down by sub-sectors[7]. For the consumer survey, the results are categorised according to income, occupation, employment regime (part versus full-time), education level, age and gender.

The monthly BCS results are disseminated via a press release on the penultimate working day of each month. In the particular case of the Consumer Confidence Indicator, which traditionally attracts a lot of media attention, the results at the aggregate EU and EA levels are published already one week earlier in a flash release (around the 20th of each month). In addition to the press releases, DG ECFIN offers all survey data (i.e. the historic time-series including the latest data-point) for free-of-charge download on its website. A sub-set of the same data is also made available in Eurostat's database. Finally, every three months, DG ECFIN publishes the 'European Business Cycle Indicators' (EBCI), which is a report focussing on quarterly developments in the survey

[7] The sub-sectors correspond to the "branches" defined by the Statistical classification of economic activities in the European Community, NACE Rev. 2.

data[8] and zooming in into specific topics with descriptive analysis using the survey data (so-called 'special topics').

3.2 Evolution over the evaluation period

Whilst the main features of the BCS Programme have remained unchanged during the period covered by the evaluation, changes have occurred. A comprehensive list of all changes to the BCS Programme since 2012 is included in Annex VI. The most important changes introduced by the Commission include:

- **adaptation of survey questions**: Introduction of new questions on capacity utilisation in services (2012), uncertainty (2021) and a change from quantitative to qualitative questions on the investment plans of industry, as well as extension of the investment survey to the services sector (2021);
- **methodological adjustments**: Revision of the Consumer Confidence Indicator (2019), country weights used to calculate the EU and EA aggregates have been revised in cases where countries joined or left the programme, changes in the seasonal adjustment procedure (2022);
- **introduction of new indicators**: the Employment Expectations Indicator (2020) and the Economic Uncertainty Indicator (2021);
- **inclusion of new countries in EU/EA aggregates**: Croatia was included in the EU aggregates (2013) and Latvia (2014), Lithuania (2015) and Croatia (2023) were included in the EA aggregates. Furthermore, partially missing data from Ireland were back-casted for the period 2008 to 2016. The historical values as well as the country weights were revised accordingly (2019). The UK data was removed from the EU aggregates (Construction in 2019 and all other aggregates in 2020) following the UK's exit from the EU.
- **Financial Services Sector Survey (FSSS)**: Based on, inter alia, the results of the stakeholder consultation conducted by the external contractor (see section 4.3. for more details), the Commission decided to discontinue the FSSS in 2022. The survey was for the last time conducted in March 2023.

[8] Focussing on quarterly developments in the survey data allows to abstain from month-to-month volatility and often helps to better identify meaningful business cycle signals.

4. EVALUATION FINDINGS (ANALYTICAL PART)

4.1. To what extent was the intervention successful and why?

Main conclusions of this section

The data generated by the BCS Programme are

- timely, frequently updated and harmonised
- used by a wide array of users
- highly correlated with and thus useful to forecast GDP
- not replaceable by cheaper indicators (e.g. based on big data) without lowering quality
- based on a methodology which is coherent across countries/surveyed sectors
- complementary to other EU and private survey programmes

The BCS Programme could be improved by

- enhancing the documentation of the underlying methodology
- offering users alternative ways to download the data
- simplifying administrative procedures for participating institutes and more efficient communication with the Commission on administrative matters

In answering the question, the performance of the BCS Programme has been assessed on the basis of the evaluation criteria of effectiveness, coherence and efficiency. Applied to the BCS Programme,

- "effectiveness" describes the programme's track record in meeting its stated objective, namely to provide a (timely, frequently updated and harmonised) tool for economic surveillance in the EU, enabling comparison of business cycles between the Member States and giving an overall view of the business cycle in the Union;
- "efficiency" looks at the costs of the programme and compares them to its benefits. Furthermore, it inquires whether there are potential alternative approaches to monitoring the economy at lower cost;
- "coherence" depicts the extent to which the programme was:
    - internally consistent, i.e. between the different countries and sectors covered by it;
    - externally consistent, i.e. complementing information available at EU or national level.

Effectiveness in providing a tool for economic surveillance:

The BCS Programme was and remains effective in providing timely, frequently updated and harmonised data for economic surveillance in the EU Member States and candidate countries, as well as the EU and EA as a whole. Interviews with stakeholders indicate that academic researchers and economic and market analysts consider the survey data generated by the programme as an important tool for monitoring the current state of the economy. Furthermore, the forward-looking survey questions (i.e.

inquiring respondents' expectations) were highlighted as helpful for predicting the future course of the economy. In the online survey conducted by the external contractor, all surveyed users reported that the EU BCS data are an essential input for monitoring and now-/forecasting of economic developments in their country.

BCS data are often quoted in the media, publicly available economic analyses, as well as academic articles. Google lists 1,920 results for the year 2022 when searching for "Economic Sentiment Indicator", while Google Scholar, a search-engine tapping academic outlets, shows 150 publications citing the sentiment indicator in 2022.

Quantitative analysis confirms the accuracy and reliability of the BCS data as a gauge of economic developments in EU Member States and candidate countries, as well as in the EU/EA as a whole. As reported in Table 1, the correlation between the programme's headline index, the Economic Sentiment Indicator (ESI), and real GDP growth (year-on-year) is consistently above 0.5 in all countries except Bulgaria. In 13 countries (42%), the contemporaneous correlation is at least 0.7, implying a particularly strong correlation between the ESI and real GDP growth. Furthermore, for 28 countries (85%), the correlation is highest when relating the indicator for a given month to real GDP growth one month later (=lag 1) or two months later (=lag 2). This implies that the ESI leads real GDP growth and is therefore particularly useful for forecasting economic developments.

Table 1: Cross-correlations between the ESI and real GDP growth

	lag 3	*lag 2*	*lag 1*	*lag 0*
AT	0.58	0.71	0.69	0.62
BE	0.56	0.73	0.73	0.69
BG	0.45	0.50	0.43	0.35
CY	0.73	0.84	0.86	0.86
CZ	0.63	0.72	0.73	0.73
DE	0.67	0.67	0.66	0.66
DK	0.53	0.66	0.61	0.57
EA19	0.64	0.79	0.79	0.75
EE	0.69	0.74	0.74	0.73
EL	0.76	0.79	0.84	0.84
ES	0.58	0.73	0.72	0.65
EU27	0.65	0,80	0.80	0.76
FI	0.77	0,80	0.81	0.78
FR	0.45	0.61	0.63	0.59
HR	0.64	0.76	0.76	0.75
HU	0.58	0.70	0.72	0.68
IE	0.64	0.68	0.72	0.73
IT	0.54	0.66	0.78	0.74
LT	0.59	0.60	0.58	0.58
LU	0.45	0.50	0.52	0.54
LV	0.59	0.65	0.65	0.64

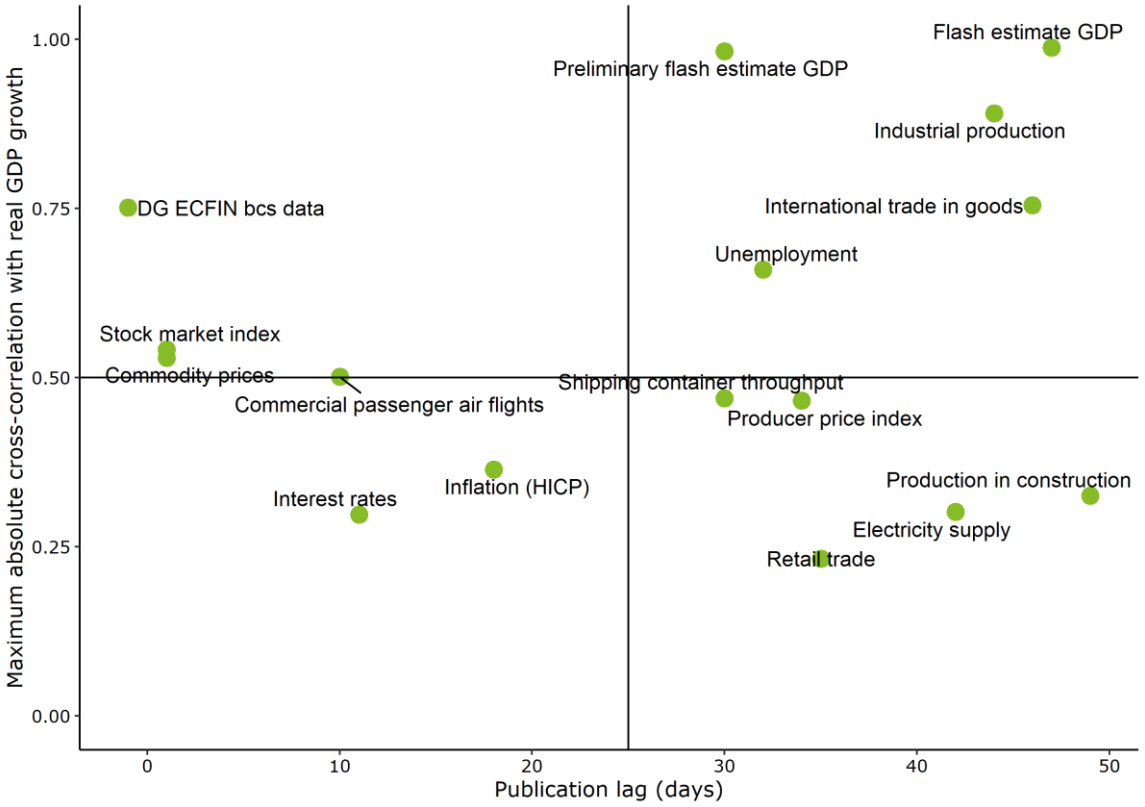
MK	0.24	0.62	0.63	0.62
MT	0.68	0.83	0.81	0.71
NL	0.74	0.85	0.83	0.79
PL	0.54	0.63	0.64	0.68
PT	0.61	0.75	0.81	0.76
RO	0.65	0.73	0.73	0.70
RS	0.25	0.59	0.68	0.58
SE	0.60	0.67	0.67	0.64
SI	0.62	0.74	0.71	0.66
SK	0.55	0.69	0.62	0.62
TR	0.65	0.70	0.67	0.71
UK	0.57	0.67	0.68	0.66

Note : Lag "x" means that the indicator's value in a given month is correlated with the value of GDP "x" month/s later.
Sample sizes: AT, FI, SE (n= 327, Oct 1995-Sep 2022), BE, DE, DK, EL, FR, IE, NL (n= 456, Jan 1985-Sep 2022), BG, CY, LT, LV, PL (n= 260, May 2001-Sep 2022), CZ (n= 336, Jan 1995-Sep 2022), EA19 (n= 384, Jan 1991-Sep 2022), EE (n= 312, Jan 1997-Sep 2022), ES, PT (n= 439, Jun 1986-Sep 2022), EU27 (n= 265, Dec 2000-Sep 2022), HR (n= 212, May 2005-Sep 2022), HU (n= 359, Feb 1993-Sep 2022), IT (n= 515, Jan 1980-Sep 2022), LU (n= 252, Jan 2002-Sep 2022), MK (n= 128, May 2012-Sep 2022), MT (n= 242, Nov 2002-Sep 2022), RO (n= 228, May 2001-Sep 2022), RS (n= 116, May 2013-Sep 2022), SI (n= 322, Mar 1996-Sep 2022), SK (n= 285, Apr 1999-Sep 2022), TR (n= 188, May 2007-Sep 2022), UK (n= 432, Jan 1985-Dec 2020).
Source: Estimates by DIW Econ.

The high correlations of BCS data with GDP are particularly striking when seen in the context of their timely availability. As Figure 2 illustrates, there are alternative indicators which track GDP growth even better (e.g. industrial production in the upper right quadrant), but they are not as timely as the BCS data. Among the indicators that are, like the BCS data, most timely (i.e. closer to the y-axis of the graph), none are as highly correlated to GDP as BCS data[9]. 93% of the stakeholders queried through online questionnaires agreed that the BCS data are timely enough.

[9] The only exception are HCOB's Purchasing Managers' Indices (PMIs), which are comparable to the BCS data in terms of their timeliness and correlation with GDP, but have a more limited geographical and sectoral coverage.

Figure 2: Publication lags and cross-correlations with GDP growth for selected indicators



Note: Publication lag = Publication delay with respect to the reference period of the indicator. For example, the publication lag of the producer price index indicates the delay in publication with respect to the month to which the producer price index refers. Maximum absolute cross-correlation = Maximum absolute value of monthly data of the current quarter with real GDP growth (y-o-y). Sample size: n = 106 (Mar 1996 – Sep 2022) except for Flash Estimate correlations (n = 32, Sep 2014 – Jul 2022)

Source: Estimates by DIW Econ.

Alternative computations of the Economic Sentiment Indicator (ESI) do not significantly improve its capacity to track GDP growth. The ESI is a composite indicator that combines the replies to a fixed set of questions from all four business surveys and the consumer survey, weighted by the importance of sectors and, when it comes to the EU/EA aggregate ESI, the share of each Member State in EU/EA gross value added. The survey questions used are a mixture of backward- and forward-looking questions, as well as appraisals of the current situation (see Figure 3). The external study undertook testing for alternative computations of the EU ESI based on different survey questions, with a focus on either *expectations* or the assessment of the *current* situation. This work did not yield significantly better results in terms of correlation to economic activity (see Figure 3).

Figure 3: Cross-correlations between GDP growth and different ESIs

Note: Sample size: EU-27 (n = 106, Nov 2013-Sep 2022)
Source: Estimates by DIW Econ.

The BCS data are a reliable source to forecast short-term economic developments at Member State and Community level. In the context of the external study, the contractor estimated, for every country, two forecasting models[10] for GDP growth, one with and one without survey data. As shown in Table 2, thanks to the forward-looking information content of the BCS data, the models incorporating survey data in addition to other statistical data yield consistently[11] lower forecast errors (measured by the root-mean squared errors (RMSEs)). Barring Austria and Belgium, the reductions of the RMSEs are considerable, reaching up to 43% (Latvia).

[10] The models are similar to the ones used by Behrens, Pierdzioch, and Risse (2018) and Kholodilin and Michelsen (2019).

[11] France is the only exception among the countries analysed.

Table 2: RMSEs for forecasting models with and without EU BCS data

	only statistical data	*statistical data and BCS data*	*forecast improvement*[12]
AT	0.0318	0.0297	-6.60%
BE	0.0331	0.0304	-8.16%
CZ	0.0407	0.0282	-30.71%
DE	0.0293	0.0255	-12.97%
DK	0.0255	0.0147	-42.35%
EA-19	0.0352	0.0311	-11.65%
EE	0.0681	0.0410	-39.79%
EL	0.0526	0.0445	-15.40%
ES	0.0489	0.0423	-13.50%
FI	0.0378	0.0251	-33.60%
FR	0.0386	0.0400	3.63%
HU	0.0450	0.0356	-20.89%
IE	0.0695	0.0480	-30.94%
IT	0.0423	0.0345	-18.44%
LU	0.0372	0.0314	-15.59%
LV	0.0699	0.0396	-43.35%
NL	0.0280	0.0223	-20.36%

Note: Sample sizes: n = 306 (Mar 1997-Sep 2022): DE. n = 170 (Jul 2008-Sep 2022): FR. n = 130 (Nov 2011-Sep 2022): FI. n = 110 (Jul 2013-Sep 2022): AT, BE, DK, EA19, EE, EL, ES, IE, IT, LU, LV. n = 106 (Nov 2013-Sep 2022): CZ, HU, NL. Insufficient data for AL, BG, CY, HR, LT, ME, MK, MT, PL, PT, RO, RS, SE, SI, SK, TR, UK.

Source: Estimates by DIW Econ.

While the quality of BCS data was not disputed, the replies to the online questionnaire of partner institutions and data user groups highlighted room for improvement in data dissemination. 44% of the respondents agreed that EU BCS data are easily accessible and available in an understandable form and only 7% disagreed. Feedback received during the consultation provided a number of concrete suggestions on how to improve dissemination on the DG ECFIN website:

- **offering the download of the data in other formats than EXCEL** to enable frequent users of the data to automatically download and process the data, as well as **offering filter options** to locate specific time-series more easily;
- **standardising the change log** accompanying every downloadable EXCEL file in line with 'best practice' (changes should be listed in reverse chronological order and their reasons, as well as their impact on data-quality should be explained);

[12] The forecasting performance is measured as the percentage change in the RMSE when the EU BCS data are combined with the statistical data compared to when only statistical data are used in the model. A negative sign indicates an improvement in the forecasting performance when using the BCS data.

- **regularly updating the national metadata sheets[13] and questionnaires** which can be downloaded on DG ECFIN's BCS website.
- For more inexperienced/infrequent users of the data one could investigate:
    - the feasibility of providing **more information in the monthly press releases on why certain indicators moved up/down;**
    - **making the methodological user guide more user-friendly** by providing examples for analyses that can be conducted with the BCS data.

Many users indicated that the Eurostat website offers a more user-friendly approach to disseminating EU BCS data.

Efficiency:

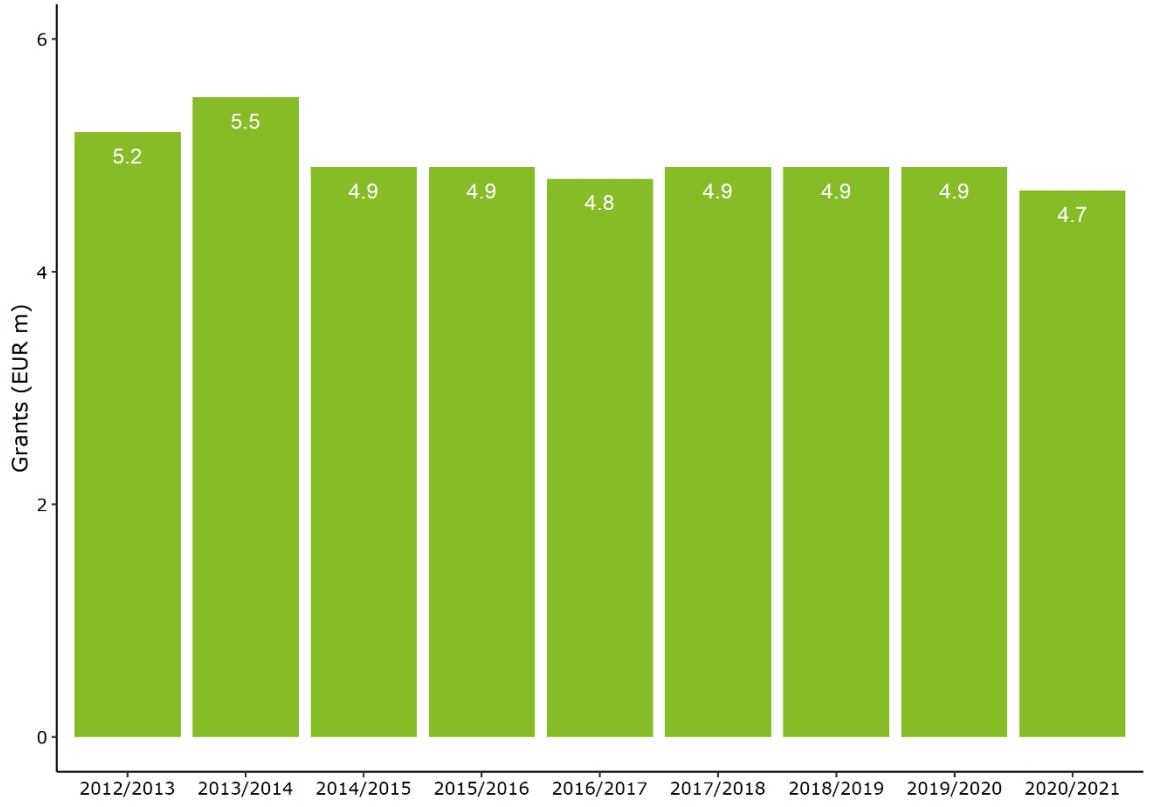
While the benefits of the BCS Programme are difficult to quantify in financial terms, a qualitative assessment suggests that they are substantial, have been stable over the evaluation period and, in all likelihood, significantly exceed the annual cost of the programme. First of all, 100% of the users consulted via an online questionnaire in the context of the external study agreed that the BCS data constitute an essential input for monitoring and now-/forecasting economic developments in their country. Secondly, the user-base is quite broad, spanning from institutional users such as the ECB, over private users (mainly banks and insurances), to academia and media representatives. Third, the programme provides harmonised survey data for a total of 32 European countries, as well as the EU/EA as a whole. The closest alternative to the BCS data are HCOB's Purchasing Managers' Indices (PMIs), which offer harmonised data only for eight European countries and, importantly, with a more limited sectoral coverage (only manufacturing and services) and without sub-sectoral breakdowns.

Over the period 2012-21, the Commission paid, on average, 5.2 million EUR per year in grants to the partner institutes participating in the BCS survey[14]. The grants are awarded to partner institutes selected on the basis of a call for proposals which takes into account, inter alia, the cost effectiveness of the proposed action. As shown in Figure 4, the annual amounts remained fairly stable throughout the period observed. At the same time, the core output of the programme has remained stable, while benefitting from some innovations, such as new survey questions and indicators being added. Considering an average year-on-year inflation of 1.2% in the EU over the evaluation period, this altogether hints at some efficiency gains in the programme. These might stem from reorganisations in the partner institutes, changes in the deployed survey modes (e.g. more use of online surveying), effective ex-ante and ex-post financial controls exercised by the Commission, technical support by the Commission, etc.

[13] The national metadata sheets provide information on how the BCS surveys are conducted in the different countries (e.g. whether the surveys are conducted by phone, online, or differently, how many responses are collected each month, whether the answers of the respondents are weighted to optimise their representativeness).

[14] 193,000 EUR thereof were spent on the centralised Financial Services Sector Survey.

Figure 4: Annual nominal cost (grants) of the BCS Programme 2012-21



Source: Compiled by DIW Econ based on cost data for the period 2012-2021 provided by DG ECFIN

A literature review by the external contractor, in combination with the results of the stakeholder consultation, concluded that innovative and cheaper approaches to understand the business cycle based on big data come with too many technical limitations and could therefore not replace survey data. First of all, these data are very often incomplete in the sense that they do not cover the entire economy. Online information on prices, for instance, is only available for a sub-set of goods and services offered in an economy. Second, the data tend to be very volatile which obscures the economically relevant signals contained in the data. Third, the availability and quality of online information differs across Member States, making it hard to develop indicators allowing for meaningful cross-country comparisons. Finally, the data tend to be backward-looking, i.e. allowing to understand past economic developments but not to predict future ones.

For consumer surveys, the external study concluded that no unequivocal recommendation could be made for partner institutes to replace interviewer-based survey modes (currently deployed by 94% of them) by cheaper self-administered techniques, such as online questionnaires. While the available literature shows the

social desirability bias to be smaller in web-surveys[15], the opposite seems to apply to non-response bias[16]. Furthermore, there is conflicting evidence with respect to whether web-surveys or interviewer-based surveys produce higher response rates[17]. In the stakeholder consultation, a number of partner institutes expressed their reservation against web surveys, invoking inter alia a possible decline in response rates, and thus lower representativeness of survey results.

In terms of the financial administration of the programme, the stakeholder consultation showed divided views. While a number of partner institutes seem to appreciate recent changes aimed at simplification, such as the submission of a budget based on average unit costs per staff category and a flat-rate for administrative costs and, as a consequence, lighter reimbursement procedures, several partner institutes reported problems. As the amounts indicated in the simplified budget must be based on costs incurred in the past, they cannot incorporate inflation, which is particularly problematic in the current high-inflation context. Furthermore, partners regret that, whenever they add a non-harmonised survey question to their questionnaire, the share of the survey costs reimbursed by the Commission decreases, since the Commission applies a ratio to partners' total survey costs to ensure that only costs related to the harmonised questions benefit from EU co-funding. While showing awareness of the limitations set by the EU Financial Regulation, several of the Commission's partner institutes were calling for (further) simplification of cost estimation and paperwork and improving the efficiency of communication between the Commission and its partners on financial/administrative matters, e.g. through the use of a centralised communication platform for the exchange of knowledge on financial-administrative aspects of the programme.

Coherence:

The BCS Programme has a high degree of *internal* coherence. First of all, across countries, a detailed analysis of a representative sample of national questionnaires by the external contractor showed the harmonised survey questions to be correctly translated into the national languages. The few deviations found are for idiomatic reasons. Secondly, across the four sectoral surveys, the set of harmonised survey questions is not identical, but has a sufficient degree of coherence. All sectoral surveys feature a question on price and on employment expectations, as well as developments in output. The presence of some sector-specific questions (e.g. the stock of finished products in industry or the expected orders placed with suppliers in retail trade) is justified by the different ways in which the sectors operate.

The BCS Programme is also externally coherent, i.e. with respect to other EU survey programmes, such as the ECB's Consumer Expectations Survey (CES), as

[15] See Felderer, Kirchner, & Kreuter (2019), Kreuter, Presser, & Tourangeau (2008), Braunsberger, Wybenga, & Gates (2007).

[16] See Felderer, Kirchner, & Kreuter (2019), Mackeben & Sakshaug (2022).

[17] Higher response rates for interviewer-based surveys are found by United Nations (2015), Jäckle, Lynn, & Burton (2015), Felderer, Kirchner, & Kreuter (2019), while lower response rates by Olson, et al. (2021), Mackeben & Sakshaug (2022).

well as comparable private survey programmes. The CES is a monthly online panel survey of consumers, which was piloted in 2020. As the CES only covers a sub-set of EA countries, results from the Commission's consumer survey are a valuable complement, this even more so as the CES has a focus on quantitative and the Commission survey on qualitative questions. When compared to the Purchasing Managers' Index (PMI), which is one of the most widely used indicators of business sentiment, the BCS Programme is, again, a useful complement, offering full coverage of EU Member States, a broader sectoral scope, which includes retail trade, construction and, importantly, sentiment among consumers, sub-sectoral breakdowns of the survey results, as well as different time-horizons of the survey questions[18]. By contrast, the Commission's Financial Services Sector Survey (FSSS) turned out to provide little additional information compared to the ECB's bank lending survey and was therefore, also with a view to the external coherence of the BCS Programme, discontinued in March 2023 (see section 4.3. for additional reasons for the termination of the FSSS).

When effectiveness, efficiency and coherence are all taken into account, the overall assessment of the BCS Programme over the period 2012-21 is positive. The analysed evidence shows that the BCS Programme provides timely, frequently updated and harmonised data for economic surveillance in the EU Member States and candidate countries, as well as the EU and EA as a whole. It could, however, profit from a few changes aiming to make the data-dissemination more user-friendly. The BCS Programme is assessed as efficient in terms of value for money. The grants are awarded to partner institutes selected on the basis of a call for proposals which takes into account, inter alia, the cost effectiveness of the proposed action. Over the period 2012-21, the annual grants paid by the Commission to the partner institutes in exchange for collecting the survey data have remained broadly unchanged, implying that they even decreased in real terms. This hints at further efficiency gains in the programme. While the financial administration of the programme is perceived as cumbersome by a number of partner institutes, there is widespread understanding of the constraints posed by the EU Financial Regulation. Furthermore, the BCS Programme is externally coherent, serving as a valuable complement to similar EU and private survey programmes. While the internal coherence analysis shows some potential limitations, the evidence suggests that the level of cross-sectoral comparability is fully sufficient.

[18] The PMI asks how the indicators have changed this month compared to the previous month, while the BCS survey questions focus on the last/next 3 months, the last/next 12 months and the current situation.

4.2. How did the EU intervention make a difference and to whom?

Main conclusions of this section

The main added value of the BCS Programme is that it ensures

- the presence of business and consumer surveys in all EU Member States
- a high degree of harmonisation of the surveys across countries, allowing for meaningful cross-country comparisons and generation of EU/EA aggregates

The main value added of an EU-funded BCS Programme is that (i) it ensures there are business and consumer surveys in all EU Member States and (ii) there is a high degree of harmonisation in surveys across countries which allows for meaningful cross-country comparisons and the generation of EU/EA aggregates. Indeed, as regards harmonisation, the preceding analysis on internal coherence has concluded that the programme ensures high cross-country comparability of the resulting survey results. It acts as an important tool for monitoring the current state of the economy, covering a wide geographic spread in a consistent manner. The surveys thus provide a timely, robust, reliable and comparable source of data to track and forecast economic developments across the EU, euro area, as well as in individual Member States and candidate countries.

The added value of the programme accrues to a variety of different actors, namely the economic press and, in particular, news agencies specialised in economic news, economists in public institutions such as the ECB and in the private sector using the data to track and forecast economic developments, as well as academia, which harness the data for economic research. Ultimately, the data also benefit policy-makers whose decisions are informed by the above-mentioned forecasts and research.

As shown in the stakeholder consultation conducted for the external study, the vast majority of the users of BCS data believe they result from an EU rather than a national effort (70% vs. 15%). The BCS Programme thus has a high degree of EU visibility. The perception seems to be largely determined by the way users source the data: if they are downloaded from DG ECFIN's or EUROSTAT's website, they are taken for 'EU'data, the opposite holding true if they are taken from the website of the national partner institutes.

4.3. Is the intervention still relevant?

Main conclusions of this section

The BCS Programme continues to be relevant since

- the survey questions focus on relevant economic concepts
- it produces new data at sufficient frequency (monthly)
- competing data sources are inferior in terms of frequency, timeliness or (sub)sectoral/country coverage

The BCS Programme could be rendered more relevant by

- discontinuing the FSSS which is not widely used (Commission abolished the survey in March 2023)
- occasionally including harmonised *ad hoc* questions on topical issues in the surveys
- reporting the survey results along additional classifications

In spite of a number of potentially competing data-sources having emerged in recent years, the BCS Programme remains unique and highly relevant. First, EUROSTAT's introduction in 2016 of a preliminary flash estimate of (EU/EA) GDP, which gets released already 30 days after the reference quarter, did not render the BCS data obsolete. The BCS data are still published more frequently (monthly instead of quarterly) and in a timelier manner (by the end of the respective reference month) than national accounts data. Hence, they provide first indications about economic developments in a given quarter as of the end of its first month, when the release of the preliminary flash is still three months away. Importantly, the survey information is not only available at total, but also at sectoral and sub-sectoral level, while the preliminary flash GDP estimate is only available at the aggregate level. Second, the relevance of the BCS data is unaffected by the presence of alternative cross-sectoral survey programmes and, in particular, the well-known Purchasing Managers' Index (PMI). In contrast to the latter, the BCS Programme has a complete coverage of the EU Member States and provides information on additional sectors, namely construction, retail trade and consumers.

The continued relevance of the BCS data also showed in the online consultation conducted in the context of the external study. 100% of the participating data-users, as well as 91% of the partner institutes agreed/strongly agreed that "the programme is still relevant in the light of recent progress in accelerating the release of important statistical data, such as EU/euro area GDP (preliminary flash estimate) and the availability of alternative short-term indicators (e.g. big data)".

Deviating from the core of the BCS Programme, the Financial Services Sector Survey (FSSS) was found to be redundant. During the stakeholder consultation, none of the interviewed users of the BCS data could provide feedback on the FSSS, since they did not use FSSS data at all. This finding was corroborated by DG ECFIN when consulting with colleagues working on monetary/financial matters in-house, in DG FISMA and the ECB for their awareness and use of the FSSS. Several central and

commercial banks have now developed their own financial sector surveys, which are tailored to their specific needs, and, hence, reported to have no use for the FSSS. The same stakeholders also highlighted that information provided by the financial sector is highly sensitive and firms operating in the sector are, in general, reluctant to share it with external parties. Given its apparent ineffectiveness, the Commission decided to discontinue the FSSS. The survey was for the last time conducted in March 2023.

According to the online consultation, there is broad agreement among data-users (89%) and the partner institutes (96%) that the harmonised survey questions featuring in the BCS Programme focus on relevant economic concepts. The addition of a harmonised question on capacity utilisation in services (2012), as well as a question on the perceived level of uncertainty in all surveyed sectors (2021) seem to have further enhanced the relevance of the programme. However, the partner institutes consulted highlighted the trade-off between the additional information brought about by new survey questions and a possible dampening effect of a longer questionnaire on response rates. If a question was to be added in the current economic context, the stakeholder consultation indicates that it should be a follow-up to the question on factors limiting production/activity in industry/construction which would allow to explore whether reported shortages of materials are due to disruptions in the supply chains or other reasons.

The surveying frequency of the BCS Programme, with the bulk of questions asked monthly (and a few additional ones every three months or bi-annually), appears appropriate in the light of the United Nations Handbook on Economic Tendency Surveys. The online survey conducted in preparation of the external study showed 100% of the users and 87% of the partner institutes to be satisfied with the surveying frequency. Stakeholder interviews furthermore highlight that increasing the frequency of the surveys would increase the response burden on participants and, hence, risk lower response rates. Furthermore, a higher frequency is associated with a likely increase in volatility, which makes the data harder to interpret. The consultation of media representatives, moreover, indicates that the press only has limited interest in more frequent updates of the survey data. The only frequency increase advocated by some of the partner institutes is to render the (few) harmonised quarterly questions monthly, the rationale being a simplification of the survey process with only one version of the questionnaire, rather than different ones, depending on the month.

The sectoral reporting of the business survey data (industry, services, retail trade and construction) meets users' needs. 96% of the consulted users consider the current classification of results appropriate. Importantly, many users cautioned that replacing the current classification scheme by a new one should be avoided since it would require overhauling the existing forecasting models. Nevertheless, a few stakeholders argued that the current classification could be complemented by an additional one following the EC industrial ecosystem approach. The idea of the latter is to group players operating in the same value chain, which implies, inter alia, that service providers and suppliers may be

mixed[19]. As advanced by the proponents of such an additional classification scheme, it would not only allow for different economic analyses, but might also be more intuitive/understandable to the general public.

The level of disaggregation at which the survey results can be accessed[20] is considered appropriate by 89% of the participants in the online consultation. As regards the business surveys, a common view is that a finer breakdown of the results would result in very small samples (i.e. there would only be very few responding firms per category) and, as a consequence, very volatile time-series and statistically non-significant results. Additionally, a more detailed breakdown could raise confidentiality issues as the totality of the information (country, activity sub-sector, company size) might make it possible to identify the responses of individual firms.

Allowing for ad hoc questions on topical issues to be added on a temporary basis could make the BCS Programme more relevant. As highlighted by the stakeholder consultation, ad hoc questions are currently a non-harmonised activity (i.e. conducted in individual countries only, on the initiative of individual partner institutes and without any EU co-funding). The current framework partnership agreements already allow for EU-funded ad hoc questions. The decision whether to ask harmonised ad hoc questions or not and, in particular, their number should take into account the trade-offs highlighted above, between additional relevant information and the potential negative effect of a longer questionnaire on response rates.

The relevance of the BCS Programme is underscored by the fact that it has become an international reference for survey programmes around the world, as evidenced by Table 3 which lists countries having, at least partially, adopted the methodology underlying the BCS Programme.

[19] "Mobility, transport, automotive" is an example of such an ecosystem, combining, inter alia, logistics enterprises and car manufacturers. More information on the EC ecosystem approach can be found in the Commission's 2020 Communication on a New Industrial Strategy for Europe.

[20] For the business surveys: two-digit level of the EC classification of economic activities (NACE, Rev. 2); for the consumer survey: along a number of socio-demographic characteristics such as age, income or gender.

Table 3: Overview of adoption of the European Commission's business and consumer survey methodology, in whole or in part

Region	*Countries*
Europe	EU-27 & UK, EU candidate countries (Albania, Montenegro, Republic of North Macedonia, Serbia, Türkiye), Georgia, Kosovo, Norway, Russia, Switzerland, Ukraine
Americas	Brazil, Canada, US, Chile
Africa	South Africa
Asia	China, Indonesia, Israel, India, Japan, South Korea
Asia & Oceania	Australia, New Zealand

Source: Deloitte and DIW Econ

5. WHAT ARE THE CONCLUSIONS AND LESSONS LEARNED?

5.1. Conclusions

The overall assessment of the BCS Programme along the criteria of effectiveness, efficiency, coherence, value added and relevance is very positive.

The programme has so far been effective in providing timely, frequently updated and harmonised data for economic surveillance in the EU Member States and candidate countries, as well as the EU and EA as a whole. The data are widely used by academic researchers and professional economists to monitor and now-/forecast economic developments. They are also frequently cited in the media. The survey data generated by the programme are highly correlated with GDP and provide a significant benefit in forecasting models. While the quality of the data generated by the BCS Programme is undisputed, there is room for improvement in respect of their dissemination, namely in terms of enhanced documentation of the programme's methodology and the ways in which the survey data can be downloaded.

The BCS Programme has been efficient with its substantial benefits to a wide user-base in all likelihood significantly exceeding the annual cost of the programme. In the online consultation conducted by the external contractor, 100% of the participating users agreed that the BCS data constitute an essential input for monitoring and now-/forecasting economic developments in their country. There is no scope for replacing the survey data by cheaper indicators based on big data approaches, as the latter come with too many technical limitations, such as an incomplete coverage of the economy, substantial short-term variation obscuring the economically relevant signal, etc. Similarly, in the context of the consumer surveys, moving from the currently dominating survey modes (phone and face-to-face) to cheaper online surveying is not advisable since online surveys are associated with a higher non-response bias and there is conflicting evidence in the literature on whether they produce higher or lower response rates than interviewer-based surveys. In the stakeholder consultation, a number of partner institutes expressed their reservation against web surveys due to the risk of lower response rates. At the level of the financial administration of the BCS Programme, the Commission's partner institutes showed awareness of the limitations set by the EU Financial Regulation. At the same time, there seems to be room to further simplify cost estimation and paperwork and improve the efficiency of communication between the Commission and its partners on financial/administrative matters, which should be further reflected upon.

The programme has a high degree of internal coherence, i.e. across countries and economic actors surveyed. The programme is also externally coherent, i.e. with respect to other EU as well as private survey programmes, capturing complementary aspects of economic developments and filling geographic and sectoral gaps in the other programmes.

The EU value added of the programme is such that it allows for meaningful cross-country comparisons and the generation of EU/EA aggregates. The surveys provide a timely, robust, reliable and comparable source of data to track and forecast economic

developments across the EU, euro area, as well as in individual Member States and candidate countries.

The BCS Programme remains relevant in spite of a number of potentially competing data-sources having emerged in recent years. In particular, EUROSTAT's introduction of a preliminary flash estimate of EU/EA GDP, which gets released 30 days after the reference quarter, did not render the BCS data obsolete, as the latter continue being more timely and provide a (sub-)sectoral breakdown. By contrast, the financial services sector survey turned out to be little known to potential users and was therefore discontinued in March 2023. According to the stakeholder consultation, the harmonised survey questions of the BCS Programme focus on the most relevant economic concepts and the monthly frequency of the programme is appropriate. To render the programme even more relevant, the Commission might consider additional classifications along which to report the survey results as well as ways of facilitating the occasional inclusion of harmonised ad hoc questions on topical issues in the surveys.

5.2. Lessons learned

The above-mentioned conclusions provide a basis for further reflection, but there are also a number of concrete 'lessons learned' based on feedback received to stakeholder consultation which could be acted upon in the future.

1. ***Data dissemination:*** To improve the effectiveness of the data dissemination on the DG ECFIN website, a variety of improvements could be considered:
    a. ***offer the download of the data in other formats than EXCEL*** to enable frequent users to automatically download and process the data, as well as ***offering filter options*** to locate specific time-series more easily;
    b. ***regularly update the national metadata sheets and questionnaires*** which can be downloaded on DG ECFIN's BCS website;
    c. ***standardise the change log*** accompanying every downloadable data-file to bring it in line with 'best practice' (changes should be listed in reverse chronological order and their reasons, as well as their impact on data-quality should be explained);
    d. ***make the methodological user guide*** available on the BCS website ***more user-friendly*** by providing examples of analyses that can be conducted with the BCS data;
    e. inquire the feasibility of providing ***more information in the monthly press releases on why certain indicators moved up/down***.
2. ***Easing the administrative burden of the programme:*** To lower the time and effort that partners have to invest to ensure compliance of their annual budgets and final financial statements with the programme's financial guidelines and the EU Financial Regulation, a variety of adjustments could be considered, including:
    a. ***create a centralised communication platform for the exchange of knowledge*** on financial-administrative aspects of the programme;
    b. ***further simplify cost estimation and paperwork*** *for the administration of the programme.*

3. ***Coverage of the programme***[21]***:*** To ensure the BCS Programme remains relevant, the following adjustments could be considered:
    a. ***fostering the use of harmonised ad-hoc survey questions*** on topical issues, taking into account the trade-off between additional relevant information and the potential negative effect of a longer questionnaire on response rates;
    b. ***introducing a supplementary classification scheme of business survey results based on the Commission's ecosystem approach***, which groups together players operating in the same value chain.

[21] Based on the results of the stakeholder consultation conducted by the external contractor, DG ECFIN decided to discontinue the FSSS. The survey was for the last time conducted in March 2023.

ANNEX I. PROCEDURAL INFORMATION

In 2021, the Commission's DG ECFIN took the initiative for a new evaluation of the Joint Harmonised EU Programme of Business and Consumer Surveys (BCS Programme). The initiative aimed to fulfil the Commission's commitment to evaluate proportionately all EU spending and non-spending activities that are intended to have an impact on society or the economy with a view to supporting organisational learning, transparency and accountability and the efficient allocation of resources. With the last evaluation completed in January 2012, the new evaluation focussed on the implementation of the BCS Programme from 2012 to 2021. The Decide planning entry for the evaluation is PLAN/2021/11500, with the evaluation roadmap running between 30 July 2021 and 27 August 2021, to seek wider feedback.

In line with the requirements set out in the 2021 Commission Better Regulation Guidelines, the evaluation considered the criteria of effectiveness, efficiency, coherence (both internally and with respect to comparable EU and private survey programmes), EU value added and relevance. The exercise relies primarily on an external independent study commissioned by the Commission in May 2022 and concluded in May 2023. In order to ensure validity, the analysis and conclusions of the external study are based on the evidence obtained using several evaluation methods (desk research focussing on a wide variety of relevant documents, a targeted stakeholder consultation using both semi-structured interviews and online questionnaires, a quantitative analysis to evaluate the quality of the survey data generated by the programme, as well as thorough triangulation of the evidence gathered via the different evaluation methods). A number of limitations were experienced during the preparation and completion of the study. Annex II provides a detailed overview of these shortcomings, together with the mitigation strategies adopted.

The lead DG to carry out and manage the evaluation has been DG ECFIN. DG ECFIN also chaired the inter-service group (ISG) that was set up to manage the external evaluation. Apart from DG ECFIN, the ISG comprised representatives of other Commission services (the Secretariat General, the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, as well as EUROSTAT). The ISG had the responsibility to:

a. Establish the Terms of Reference (ToR);
b. Facilitate the evaluator's access to the information needed;
c. Advise, monitor and comment on the work undertaken by the external contractor.

The call for tenders was launched in December 2021 and five applications were received. Following the verdict of an evaluation committee, the specific contract to undertake the external evaluation was awarded to a consortium led by Deloitte under Framework Contract number 2018/RTD/A2/OP/PP-07001-2018 - Lot 2. Besides Deloitte, the consortium included DIW ECON. The total amount paid under this specific contract was EUR 146,800.00 covering all tasks executed.

A kick-off meeting, where the ISG and the external contractor discussed the deliverables and the evaluation methods, took place in May 2022. Meetings on the inception and interim reports were held in, respectively, June 2022 and September 2022.

Throughout the evaluation process, unit A3 of DG ECFIN, which is in charge of the BCS Programme, provided support to the contractor by responding to requests for clarification, facilitating access to relevant documents, etc. and closely monitored the quality of the information and analysis used to inform the external report.

The draft final report was first submitted in October 2022. Subsequently, the report was revised seven times, before a final version was approved in May 2023.

At the conclusion of the external study, the ISG completed a quality assessment of the final report. According to the assessment, the study addressed all key issues as required in the Terms of Reference, although some of the underlying analysis lacked depth (This was addressed in the SWD). The evaluator provided all requested deliverables in line with the work plan. Some of the deliverables required several iterations before the quality was acceptable to the ISG. The assessment concludes that the report is broadly satisfactory and can be approved on that basis.

ANNEX II. METHODOLOGY AND ANALYTICAL MODELS USED

This annex presents the methodological approach to the meta-evaluation study which underpins the SWD. It describes the design of the methodology, the tools used for data and information gathering and the results obtained. It also provides insights on the limitations encountered during the study and the mitigation strategies adopted.

Evaluation design

The methodology of the evaluation study was designed to respond to (i) the evaluation questions detailed in the Terms of Reference (ToR) for the evaluation and (ii) the evaluation criteria as laid down in the Better Regulation Guidelines. It rested on three pillars:

1. Participatory and inclusive data collection and analysis through a stakeholder consultation (deploying semi-structured interviews and an online questionnaire);
2. A mixture of qualitative input (obtained mainly through a desk research of relevant literature/publications and stakeholder input) and quantitative input (gained through econometric analyses assessing the quality of the survey data generated by the programme); and
3. Triangulation, i.e. the information and data collected from a range of different sources using a range of methods collectively provides answers to DG ECFIN's evaluation questions.

Tools for information gathering, results obtained, limitations and mitigation strategies

This section presents the methodological tools used by the external contractor to collect the information and data required to produce the external study. It furthermore details, for each methodological tool, the limitations which were experienced during the completion of the independent study and, hence, the preparation of the Commission's evaluation.

Desk-research

Methodology

A comprehensive literature review was conducted to obtain an overview of the current state of discussion and research on the BCS Programme. The different steps of the process are described below.

First, based on the evaluation questions defined in relation to the evaluation criteria of effectiveness, efficiency, coherence, EU added value and relevance, a range of literature databases were identified that might provide relevant literature:

- Google Scholar is an internet search engine that indexes the full text or metadata of scientific literature in a variety of publication formats and disciplines;

- IDEAS is one of the largest bibliographic databases on economic research topics covering more than 4 200 000 research articles;
- EconBiz is a research portal for economics and is operated by the ZBW - Leibniz Information Centre for Economics.

In order additionally to obtain a representative overview of the grey literature[22] and the opinions and assessments of politicians and the media on the programme and on specific evaluation questions, the search was extended to general search engines (Google in particular). Subsequently different keywords relating to the BCS Programme and the evaluation criteria were used to screen the relevant databases and sources. The list of keywords was extended using buzzwords from the specific evaluation questions. The resulting list of documents was further extended with Commission documents on the BCS Programme, including papers and presentations from the EC workshops on current developments in business and consumer surveys as well as specific working papers and studies, all of which were available on DG ECFIN's website.

Next, duplicates and documents that could not be assigned to an author or institution were removed from the list of documents. In total, some 120 EC documents (workshop documents, working papers, reports and user guides) and about 200 external publications (peer-reviewed articles, external assessments, grey literature) were included in the subsequent in-depth analysis.

Finally, the results of the literature review were cross-checked with the findings from the stakeholder interviews, the online questionnaire and the quantitative analysis.

Robustness and Limitations

There were several potential risks and limitations to the robustness of the results derived from the review of the EU BCS documentation, evaluation reports, and EC and external research. These – and corresponding mitigation actions – are listed in the Table A2.1.

[22] Grey literature refers to materials and research produced by organisations outside of the traditional commercial or academic publishing. It includes reports, working papers, government documents and evaluations.

Table A2.1: Risks and mitigation actions during the desk research

Type of literature	Risk	Potential Impact	Occurred	Mitigation measure
EC & external sources	Lack of available reliable literature	High	Yes	• Using several bibliographic databases (Google Scholar, IDEAS, EconBiz) and different search terms. • Extending the scope of the research to multi-disciplinary literature with similar questions/problems and to grey literature
EC & external sources	Drawing wrong conclusions due to equal weighting of information obtained	Medium	Yes	• Subjecting the findings obtained from the literature to critical evaluation using the results of the stakeholder consultations. • Repeatedly discussing the insights gained within the team.
External sources	False conclusions due to biased literature selection and lack of representativeness of the information collected	High	No	• Using several bibliographic databases (Google Scholar, IDEAS, EconBiz) and different search terms. • Establishing clear research questions early on and developing a detailed plan on how to answer each question. • Subjecting the findings obtained from the literature to critical evaluation using the results of the stakeholder consultations.

Source: Deloitte and DIW Econ

Two particular risks did materialise in the course of the desk research for the evaluation of the BCS Programme.

First, due to the specific nature of some of the evaluation questions to be addressed, the body of available literature was sparse for some questions. For example, the literature research did not provide much evidence on the impact on the effectiveness and relevance of the BCS Programme of changes in the methodology. In addition, the limited amount of empirical evidence on the cost reduction potential of different survey methods is ambiguous. As a consequence of a limited range of available sources, there was a risk that false conclusions would be drawn or that no conclusive assessment would be possible. To mitigate these risks, the scope of the literature review was broadened to the

grey literature, such as working papers, evaluations and summary papers (white papers) to screen for additional suitable evidence. Lastly, the triangulation with the results of the stakeholder interviews, the online questionnaire and the quantitative analysis served as a mitigation measure that made it possible to assess the findings from the literature review critically and close the gaps in the literature available.

Second, the evidence was ambiguous for some evaluation questions. For example, some country-specific studies report a weak BCS forecasting performance for specific countries, while other studies emphasise the added value of the EU BCS data for forecasting economic developments in the EU. This poses the risk of drawing false conclusions or of being unable to draw any definite conclusions. To address these risks, ambiguous findings from the literature were discussed within the project team. In addition, the results of the stakeholder online questionnaire and the quantitative analysis served as a reference point for validating the findings from the literature. Where the ambiguity of the results could not be resolved, the contradictory findings were expounded transparently and potential avenues for future research were outlined.

In conclusion, although for some of the evaluation questions, the relevant literature was limited or ambiguous, an extended search and triangulation with the results from the stakeholder consultations and quantitative analysis were able to mitigate the risk of drawing false conclusions. The results derived from the desk research can thus be considered robust.

Stakeholder Consultations

One of the main challenges of the stakeholder consultations was to be sure of covering the wide geographic coverage of the programme and obtaining feedback from all stakeholder groups.

When establishing the consultation strategy, several elements were identified as potential risks for interviews and surveys as data collection tools. These risks fell into two categories:

- stakeholders might not want to participate in data collection activities and, therefore;
- the data obtained might be biased (i.e. the results would only capture the insights of stakeholder groups that were more likely to participate) and might not cover the geographical scope.

To mitigate these risks, the project team established a dynamic and flexible process to contact and schedule interviews with all targeted stakeholder groups. This process was based on three main pillars:

- First, a thorough stakeholder mapping was conducted, which was enriched by inputs provided by interviewees (during interviews stakeholders were asked to identify potential interviewees who were aware of the programme and might be willing to contribute to the consultation process).
- Second, a tracking system was put in place to monitor reminders to be sent to different stakeholders every two weeks and to keep track of their responses, especially for the least represented stakeholder groups.

- Finally, for the interviews, the project team adapted the interview content, format and duration to the availability and needs of stakeholders.

To capitalise on every interaction with stakeholders, online questionnaires were systematically sent as a follow-up to the interviews. As a result, the project team managed to extract as much information as possible from each interview and gathered quantitatively comparable answers from all stakeholder groups (51% of the interviewees completed the survey).

Table A2.2: Risks and mitigation actions by data collection tool

Data collection tools	Risk	Potential Impact	Occurred	Mitigation measure
Online questionnaire	Low response rate to survey	High	Yes	• Extending the consultation period to ensure a sufficient number of replies. • Monitoring the response rate and sending reminders to boost participation. • Receiving feedback from all groups and verifying that the responses and concerns were consistent across stakeholder groups.
Online questionnaire and interviews	Low or lack of stakeholder engagement in the data collection activities	High	Yes	• Using the accreditation letter from DG ECFIN to increase the chance of stakeholder response. • Asking interviewees and DG ECFIN to provide the team with contacts who were already aware of the programme and would be interested in collaborating with this evaluation.

Source: Deloitte and DIW Econ

Table A2.3: Risks and mitigation actions by stakeholder group

Stakeholders	Risk	Potential impact	Occurred	Mitigation measure
Private sector	Low or lack of engagement of stakeholder group in the data collection activities		Yes	• Putting a full confidentiality process in place, including individual non-disclosure agreements to encourage companies to participate. • Making use of the Deloitte

Stakeholders	Risk	Potential impact	Occurred	Mitigation measure
companies and media		High		network, when possible to encourage companies to participate. • Verifying that feedback had been received from different private companies to obtain a variety of responses, following up on contacts proactively if there appeared to be gaps.
All	Limited time to participate in interviews	Medium	Yes	• Remaining flexible and proposing several different slots to accommodate the diaries of the different stakeholders. • Extending the consultation period to collect feedback from under-represented groups (economic press) and always proposing that they send the team their answers in writing and completing the survey when they were not available for an interview.
All	Contacting someone not in a position to provide information	High	Yes	• Liaising with DG ECFIN to ensure that the right representatives of stakeholder groups were contacted for both the surveys and interviews. • Ensuring that when the contact was not the right one, the team always managed to get in touch with someone within the organisation who could answer our questions.
All	Limited knowledge of the topic	High	Yes	• Ensuring our contact was the right person to reply to our questions. • Sharing the interview guides with stakeholders before the interviews to allow them to have available the necessary information on the objectives of the interview and the type of insights the team needed from them. • Stakeholder answers have been weighted giving more relevance to stakeholders with higher

Stakeholders	Risk	Potential impact	Occurred	Mitigation measure
				experience using the programme data or working in the programme.
All	Limited ability to provide relevant data or information	High	Yes	• Preparing targeted interview guides allowed asking the right questions to the right people. • When not able to provide relevant information to a specific question, stakeholders were asked to tell the team what prevented them from answering the question and, if possible, to provide the team with the contact details of a colleague who could answer the question. • Inquiring stakeholders about qualitative information or narratives, as a substitute for data or hard information.

Source: Deloitte and DIW Econ

Despite all the above, the level of stakeholder engagement with the data collection was low or very low, for some stakeholder groups. The stakeholder response rates were low for interviews (34% of all stakeholders contacted agreed to an interview) and very low for the online questionnaire (15% of the stakeholders only contacted for the survey completed the online questionnaire and 52% of the stakeholders responded the online questionnaire after the interview)).[23]

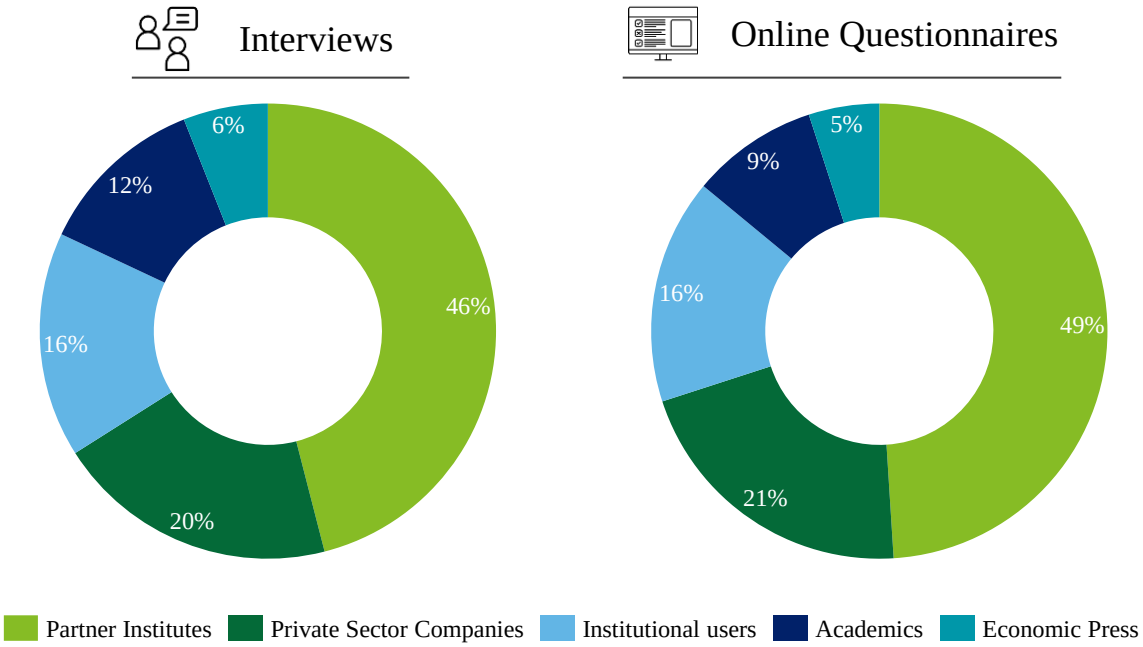
Despite the low participation rates, the project team managed to cover all the stakeholder groups even though partner institutes are the stakeholder group most represented. Almost 50% of the feedback and data obtained from the interviews and online questionnaire represented the point of view of the partner institutes, with the remaining 50% representing the point of view of a range of EU BCS data user groups (i.e. private sector companies, institutional users, academics and economic press). This representation of the stakeholders was not by design, as participation in these activities was purely voluntary. A higher representation of partner institutes is the result of the higher interest of this stakeholder group in participating in this evaluation.[24] The main limitation of the data is

[23] One factor that could explain the low stakeholder participation rate is the project timeline i.e. the consultation took place mainly during the summer (i.e. June, July, and August).

[24] To obtain more participation from under-represented users (e.g. media and private sector companies from sectors other than the financial sector) the consultation period was extended until the end of October for these groups, but this nevertheless did not bring adequate representation of these groups.

the under-representation of private sector companies outside the financial sector and especially of users from the economic press.

Figure 5: Coverage of interviews and online questionnaires, by stakeholder groups



Source: Deloitte and DIW Econ

In terms of geographic coverage, 28 countries were covered with both data collection tools: 24 of the 27 Member States were covered (Bulgaria, Cyprus and Portugal were *not* covered); only two of the five candidate countries were covered (Türkiye and Serbia). The UK and Switzerland were also covered.

The online questionnaire allowed the study team to collect quantitatively comparable answers and some qualitative responses to open questions which allowed to complement the qualitative insights gathered during the interviews. To that end, two separate interview guides and online surveys were prepared for partner institutes and users. Users were mainly asked how they use the programme data. Partner institutes were asked about operational aspects of the programme and also replied to questions on the use of the programme data, as some of them use the EU BCS data as research institutes or national statistical agencies, and/or could provide inputs on behalf of national users who buy their EU BCS national data or have reached out to them with questions on the programme data.

To address any issue of bias when analysing the information gathered, the stakeholders' responses were triangulated with the results of the desk research and literature review, and weighted taking into account question topics and stakeholder experience with the data/ programme. In other words: 1) interview and survey responses were triangulated and contrasted with the results of the literature review and quantitative analysis, and 2) for each question, the stakeholders' experience with the programme and data as well as their knowledge of the issue were taken into account. By knowing the background of the

respondent, it was easy to assess, especially for the technical questions, which feedback was more relevant.

In summary, despite the low participation rate of some stakeholder groups in both interviews and surveys, information from all stakeholder groups was collected to match the geographical coverage of the programme. The results and conclusions of the stakeholder consultation were therefore considered to be robust as, on the one hand, responses were triangulated to avoid and clarify any discrepancies, and on the other, answers were weighted taking into account the stakeholder's experience with the programme/data and their knowledge of the topic of the questions.

Quantitative Analysis

Methodology
The quantitative analysis was structured into the following activities:

- Activity 1: Determining the aim and scope of the analysis
- Activity 2: Data preparation
- Activity 3: Bivariate analysis
- Activity 4: Multivariate analysis
- Activity 5: Meta-analysis and other quantitative evaluations
- Activity 6: Alternative aggregation procedures of the data
- Activity 7: Summary and visualisation.

Activity 1 determined the aim and scope of the analysis, which was followed by data preparation (Activity 2). While Activities 3 and 4 focused on the predictive and explanatory power of the EU BCS data relative to other leading indicators, Activity 5 used the results of the previous steps to find correlates, e.g. between certain methodological features of the surveys and the quality of the data generated by the surveys. Activity 6 specifically corresponded to Question 3 of the evaluation matrix (Could the ability of the data to capture economic developments be enhanced through different aggregation techniques?). Activity 7 summarised and comprehensively visualised the findings.

Activity 1: Determining the aim and scope of the analysis
The main goal of the quantitative analysis was to assess whether the EU BCS survey data accurately captures economic developments in the EU Member States and candidate countries. There was a particular focus on whether the survey data can be used to nowcast and forecast real GDP growth and HICP-based inflation. However, that left the question of which other variables should be included in the nowcasting and forecasting models. The study team therefore scanned the now- and forecasting literature to identify current best practices. Due to the increased use of machine learning methods in now- and forecasting, the team also scanned the literature for applications of machine learning methods, such as ensemble and shrinkage estimators, to the forecasting of (economic) time series data. The review of the literature focussed on numerical forecasting since these are the forecasting methods most commonly used by academics and professional economists. The literature on turning point and recession forecasts was thus beyond the scope of the quantitative analysis. Table A2.4 summarises the meta information of the literature reviewed.

Table A2.4: Literature search: Literature on now- and forecasting

Number of papers reviewed	129
Areas	Papers on forecasting: 84 Papers on nowcasting: 59 Papers using survey-based indicators: 101
Models used	Dynamic Factor models VAR, VEC, BVAR MIDAS DSGE models Machine learning models (e.g. Random forest, LASSO)
Data used	Papers usually use data for the US, UK, the euro area and Japan. US data are by far the most often used, due in part to the data availability. Data sets use up to 400 variables depending on data availability
Key aspects of the literature	Most studies on now- and forecasting use dynamic factor models due to the short time series. The benefits of mixed frequency BVAR models are often highlighted in this context. The number of papers using machine learning methods is growing.

Source: Deloitte and DIW Econ

Activity 2: Data preparation

The baseline data set for the evaluation of the EU BCS survey data consisted of two key variables of interest: quarterly real GDP and monthly HICP inflation. The data was complemented by all available data produced by the programme at a monthly frequency. In addition, all macroeconomic data available at the monthly frequency was added. The data spanned all 27 Member States plus the five candidate countries. For the majority of countries, the EU BCS series were available from January 1985 onwards. Data on economic sentiment, industrial and construction confidence for DE, DK, FR, IT, LU, NL were available from January 1980 onwards. The variable selection for the data set followed the standard practice in the literature (Carriero, Galvao, & Kapetanios, 2019; Angelini, Camba-Mendez, Giannone, Reichlin, & Rünstler, 2011). Data were taken from Eurostat and downloaded via Eurostat's API using R's Eurostat library. EU BCS data that is not available via Eurostat, such as the sub-sector EU BCS data, was downloaded manually from the ECFIN website in June 2022. The seasonally adjusted data series were used; the financial services sector data were the only exception since they only exist unadjusted due to the short time series. However, to fit the rest of the data set the team used a simple AR-based de-seasonalisation procedure to avoid data loss. In addition to the data available on Eurostat, the team used the RWI Container Throughput Index (RWI, 2022); national stock market indices were taken from OECD. For the countries for which such data was available, price indices from The Billion Prices Project (Cavallo & Rigobon, 2016)were used as a real-time measure for inflation. Since the data is by and

large non-stationary, the study team generated year-on-year (log-) differences of the data where appropriate. Table A2.5 summarises the data sets and the relevant transformations.

Table A2.5: Data series and their transformations

Variable	Differenced	Log	Frequency	Source
Real GDP	X	x	Q	Eurostat
Harmonised consumer price index	X	x	M	Eurostat
Construction confidence indicator			M	Eurostat
Construction development of orders			M	Eurostat
Construction employment expectations next 3 months			M	Eurostat
Construction price expectations in 3 months			M	Eurostat
Building activity development over the past 3 months			M	Eurostat
Factors limiting construction activity – demand			M	Eurostat
Factors limiting construction activity – labour			M	Eurostat
Factors limiting construction activity – financial			M	Eurostat
Factors limiting construction activity – material			M	Eurostat
Factors limiting construction activity – none			M	Eurostat
Factors limiting construction activity – other			M	Eurostat
Factors limiting construction activity – weather			M	Eurostat
Industry confidence indicator			M	Eurostat
Industry assessment of export order-book levels			M	Eurostat
Industry assessment of order-book levels			M	Eurostat
Industry assessment of the current level of stocks of finished products			M	Eurostat
Industry production development observed over the past 3 months			M	Eurostat
Industry employment expectations over the next 3 months			M	Eurostat
Industry selling price expectations over the next 3 months			M	Eurostat
Industry production expectations over the next 3 months			M	Eurostat
Services confidence indicator			M	Eurostat
Services business situation development over the past 3 months			M	Eurostat
Services evolution of demand over the past 3 months			M	Eurostat
Services evolution of employment over the past 3 months			M	Eurostat
Services expectation of the demand over the next 3 months			M	Eurostat
Expectations of employment over the next 3 months			M	Eurostat
Services expectations of prices over the next 3 months			M	Eurostat
Consumer confidence indicator			M	Eurostat
Consumer statement on financial situation of household			M	Eurostat
Consumer major purchases at present			M	Eurostat

Variable	Differenced	Log	Frequency	Source
Consumer savings at present			M	Eurostat
Consumer general economic situation over last 12 months			M	Eurostat
Consumer general economic situation over next 12 months			M	Eurostat
Consumer financial situation over next 12 months			M	Eurostat
Consumer major purchases over next 12 months			M	Eurostat
Consumer price trends over next 12 months			M	Eurostat
Consumer savings over next 12 months			M	Eurostat
Consumer financial situation over last 12 months			M	Eurostat
Consumer price trends over last 12 months			M	Eurostat
Consumer unemployment expectations over next 12 months			M	Eurostat
Retail confidence indicator			M	Eurostat
Retail current stocks			M	Eurostat
Retail business expectations over the next 3 months			M	Eurostat
Retail employment expectations over the next 3 months			M	Eurostat
Retail expected order over the next 3 months			M	Eurostat
Retail expected sales over the next 3 months			M	Eurostat
Other financial services business situation previous 3 months			M	Eurostat
Other financial services confidence indicator			M	Eurostat
Other financial services demand previous 3 months			M	Eurostat
Other financial services employment previous 3 months			M	Eurostat
Other financial services expected demand next 3 months			M	Eurostat
Other financial services employment expectations next 3 months			M	Eurostat
Financial services business situation previous 3 months			M	Eurostat
Financial services confidence indicator			M	Eurostat
Financial services demand previous 3 months			M	Eurostat
Financial services employment previous 3 months			M	Eurostat
Financial services expected demand next 3 months			M	Eurostat
Financial services employment expectations next 3 months			M	Eurostat
Financial intermediation business situation previous 3 months			M	Eurostat
Financial intermediation confidence indicator			M	Eurostat
Financial intermediation demand previous 3 months			M	Eurostat
Financial intermediation employment previous 3 months			M	Eurostat
Financial intermediation expected demand next 3 months			M	Eurostat
Financial intermediation employment expectations next 3			M	Eurostat

Variable	Differenced	Log	Frequency	Source
months				
Insurance business situation previous 3 months			M	Eurostat
Insurance confidence indicator			M	Eurostat
Insurance demand previous 3 months			M	Eurostat
Insurance employment previous 3 months			M	Eurostat
Insurance expected demand next 3 months			M	Eurostat
Insurance employment expectations next 3 months			M	Eurostat
Economic sentiment indicator			M	Eurostat
Gross wages capital goods sector	x	x	M	Eurostat
Hours worked capital goods sector	x	x	M	Eurostat
Employment capital goods sector	x	x	M	Eurostat
Production capital goods sector	x	x	M	Eurostat
Domestic turnover capital goods sector	x	x	M	Eurostat
Foreign turnover capital goods sector	x	x	M	Eurostat
Total turnover capital goods sector	x	x	M	Eurostat
Gross wages consumer goods sector	x	x	M	Eurostat
Hours worked consumer goods sector	x	x	M	Eurostat
Employment consumer goods sector	x	x	M	Eurostat
Production capital goods sector	x	x	M	Eurostat
Domestic turnover consumer goods sector	x	x	M	Eurostat
Foreign turnover consumer goods sector	x	x	M	Eurostat
Total turnover consumer goods sector	x	x	M	Eurostat
Gross wages durable goods sector	x	x	M	Eurostat
Hours worked durable goods sector	x	x	M	Eurostat
Employment durable goods sector	x	x	M	Eurostat
Production durable goods sector	x	x	M	Eurostat
Domestic turnover durable goods sector	x	x	M	Eurostat
Foreign turnover durable goods sector	x	x	M	Eurostat
Total turnover durable goods sector	x	x	M	Eurostat
Gross wages gas/electricity sector	x	x	M	Eurostat
Hours worked gas/electricity sector	x	x	M	Eurostat
Employment gas/electricity sector	x	x	M	Eurostat
Production gas/electricity sector	x	x	M	Eurostat
Gross wages energy sector w/o gas and electricity	x	x	M	Eurostat
Hours worked energy sector w/o gas and electricity	x	x	M	Eurostat
Employment energy sector w/o gas and electricity	x	x	M	Eurostat

Variable	Differenced	Log	Frequency	Source
Production energy sector w/o gas and electricity	x	x	M	Eurostat
Domestic turnover energy sector w/o gas and electricity	x	x	M	Eurostat
Foreign turnover energy sector w/o gas and electricity	x	x	M	Eurostat
Total turnover energy sector w/o gas and electricity	x	x	M	Eurostat
Production energy sector w/o gas and electricity	x	x	M	Eurostat
Gross wages intermediate goods sector	x	x	M	Eurostat
Hours worked intermediate goods sector	x	x	M	Eurostat
Employment intermediate goods sector	x	x	M	Eurostat
Production intermediate goods sector	x	x	M	Eurostat
Domestic turnover intermediate goods sector	x	x	M	Eurostat
Foreign turnover intermediate goods sector	x	x	M	Eurostat
Total turnover intermediate goods sector	x	x	M	Eurostat
Gross wages manufacturing	x	x	M	Eurostat
Hours worked manufacturing	x	x	M	Eurostat
Employment manufacturing	x	x	M	Eurostat
Production manufacturing	x	x	M	Eurostat
Domestic turnover manufacturing	x	x	M	Eurostat
Foreign turnover manufacturing	x	x	M	Eurostat
Total turnover manufacturing	x	x	M	Eurostat
Gross wages mining	x	x	M	Eurostat
Hours worked mining	x	x	M	Eurostat
Employment mining	x	x	M	Eurostat
Production mining	x	x	M	Eurostat
Domestic turnover mining	x	x	M	Eurostat
Foreign turnover mining	x	x	M	Eurostat
Total turnover mining	x	x	M	Eurostat
Gross wages non-durable goods sector	x	x	M	Eurostat
Hours worked non-durable goods sector	x	x	M	Eurostat
Employment non-durable goods sector	x	x	M	Eurostat
Production non-durable goods sector	x	x	M	Eurostat
Domestic turnover non-durable goods sector	x	x	M	Eurostat
Foreign turnover non-durable goods sector	x	x	M	Eurostat
Total turnover non-durable goods sector	x	x	M	Eurostat
Gross wages water industry	x	x	M	Eurostat
Hours worked water industry	x	x	M	Eurostat
Employment water industry	x	x	M	Eurostat

Variable	Differenced	Log	Frequency	Source
Price index capital goods	x	x	M	Eurostat
Price index consumer goods	x	x	M	Eurostat
Price index durable goods	x	x	M	Eurostat
Price index electricity	x	x	M	Eurostat
Price index gas	x	x	M	Eurostat
Price index energy w/o electricity and gas	x	x	M	Eurostat
Price index high-tech manufacturing	x	x	M	Eurostat
Price index intermediate goods	x	x	M	Eurostat
Price index low-tech manufacturing	x	x	M	Eurostat
Price index manufacturing	x	x	M	Eurostat
Price index mid-tech manufacturing	x	x	M	Eurostat
Price index mining	x	x	M	Eurostat
Price index non-durable consumer goods	x	x	M	Eurostat
Producer price index industry	x	x	M	Eurostat
Number of construction starts	x	x	M	Eurostat
Production index construction	x	x	M	Eurostat
Production index civil engineering	x	x	M	Eurostat
Gross wages construction	x	x	M	Eurostat
Hours worked construction	x	x	M	Eurostat
Employment construction	x	x	M	Eurostat
Production construction	x	x	M	Eurostat
Number of construction starts – residential	x	x	M	Eurostat
Number of construction starts excl. community housing	x	x	M	Eurostat
Cost index construction	x	x	M	Eurostat
Input prices construction	x	x	M	Eurostat
Labour cost construction	x	x	M	Eurostat
Output prices construction	x	x	M	Eurostat
Turnover hospitality	x	x	M	Eurostat
IT/communication turnover	x	x	M	Eurostat
Turnover real estate sector	x	x	M	Eurostat
Turnover transportation	x	x	M	Eurostat
Hospitality Services	x	x	M	Eurostat
Gross wages hospitality	x	x	M	Eurostat
Hours worked hospitality	x	x	M	Eurostat
Employment hospitality	x	x	M	Eurostat
Gross wages IT/communication	x	x	M	Eurostat

Variable	Differenced	Log	Frequency	Source
Hours worked IT/communication	x	x	M	Eurostat
Employment IT/communication	x	x	M	Eurostat
Gross wages real estate sector	x	x	M	Eurostat
Hours worked real estate sector	x	x	M	Eurostat
Employment real estate sector	x	x	M	Eurostat
Gross wages transportation	x	x	M	Eurostat
Hours worked transportation	x	x	M	Eurostat
Employment transportation	x	x	M	Eurostat
Retail turnover	x	x	M	Eurostat
Gross wages retail	x	x	M	Eurostat
Hours worked retail	x	x	M	Eurostat
Employment retail	x	x	M	Eurostat
Consumption brown coal	x	x	M	Eurostat
Consumption diesel	x	x	M	Eurostat
Consumption electricity	x	x	M	Eurostat
Consumption fuel	x	x	M	Eurostat
Consumption kerosene	x	x	M	Eurostat
Consumption motor spirit	x	x	M	Eurostat
Consumption natural gas	x	x	M	Eurostat
Imports crude oil	x	x	M	Eurostat
Imports electricity	x	x	M	Eurostat
Imports natural gas	x	x	M	Eurostat
Production diesel	x	x	M	Eurostat
Production electricity	x	x	M	Eurostat
Production motor spirit	x	x	M	Eurostat
Production natural gas	x	x	M	Eurostat
Energy total supply	x	x	M	Eurostat
Stock market index	x	x	M	OECD
Crude oil prices (Brent)	x	x	M	EIA
Extra-euro area exports capital goods	x	x	M	Eurostat
Extra-euro area exports consumer goods	x	x	M	Eurostat
Extra-euro area exports intermediate goods	x	x	M	Eurostat
Extra-euro area exports total	x	x	M	Eurostat
Extra-euro area imports capital goods	x	x	M	Eurostat
Extra-euro area imports consumer goods	x	x	M	Eurostat
Extra-euro area imports intermediate goods	x	x	M	Eurostat

Variable	Differenced	Log	Frequency	Source
Extra-euro area imports total	x	x	M	Eurostat
Government bond yield (10 years)	x		M	ECB
Money market rate (3 months)	x		M	ECB
Overnight money market rate	x		M	ECB
Unemployment total	x		M	Eurostat
Real effective exchange rate (broad concept)	x	x	M	Eurostat
Industrial import price index	x	x	M	Eurostat
Container throughput	x	x	M	RWI
Industrial production	x	x	M	Eurostat
Number of air passengers carried	x	X	M	Eurostat
Number of commercial flights	X	X	M	Eurostat

Source: Deloitte and DIW Econ

Activity 3: Bivariate analysis

The bivariate analysis of the EU BCS data proceeded in two steps:

1. First, the team analysed the dynamic cross-correlations of the Economic Sentiment Indicator with log differences in real GDP and of 12-months-ahead price expectations with the log differences of the HICP.
2. Second, the team ran bivariate Granger causality tests between the real GDP and HICP variables and the relevant EU BCS series.

In both cases, the monthly EU BCS data, monthly HICP data and quarterly real GDP data were used. For the cross-correlation analyses, quarterly real GDP data was treated as a monthly variable in the last month of the quarter in order to conduct the analysis at the monthly frequency. For example, quarterly real GDP in the first quarter of the year was used as an observation for real GDP in March. The next observation of real GDP in June is then GDP in the second quarter. For the Granger causality tests, the analysis was performed at the quarterly frequency, so quarterly averages were calculated for the EU BCS data.

The key performance indicators for these two procedures are the magnitude of the correlation coefficient between real GDP and lagged values of the EU BCS data, and a significant F-test for the Granger causality test. Both tests were conducted for all available series of the EU BCS data across all countries and their corresponding EA and EU aggregates.

Activity 4: Multivariate analysis

For the multivariate evaluation of the quality of the EU BCS data, the study team estimated a forecasting model using all available data. The analysis was conducted at the quarterly frequency, with quarterly averages calculated for the monthly EU BCS data. The models were run separately for all available countries and the EA. A random forest model was chosen for this exercise. While MIDAS or dynamic factor models are used by most authors for this type of estimation, recent studies have shown that ensemble methods or shrinkage estimators perform equally well in terms of their forecasting

performance. Moreover, using machine learning models allows the researcher to be agnostic about the variables that enter the model without the risk of over-fitting.

To evaluate the forecasting power of the EU BCS data, the study team first ran a model for each country using all available data and secondly a model excluding the EU BCS data. To evaluate the predictive power, the root-mean-squared errors (RMSEs) of both models were compared. Hence, if the RSME of the model using the EU BCS data is smaller than the RMSE of the model without the EU BCS data, then the EU BCS data adds valuable information to the model.

Activity 5: Meta-analysis

This step used the metadata to explain differences in the forecasting performance across countries and sectors. The approach used was to take the Granger causality tests and the contemporaneous correlations between the sectoral confidence indicators and log real GDP growth for each country. In the case of the Granger causality tests, a dummy variable was constructed that is 1 if the particular confidence indicator Granger causes real GDP growth and 0 otherwise and then used the classified metadata as explanatory variables of the model. The variables created from the model and their data transformations are summarised in Table A2.6. The model was estimated using OLS including country fixed effects. The evaluation metric here was whether or not a specific factor, such as sample size or sampling procedure had a significant positive or negative impact on the Granger causality.

Table A2.6: Metadata tested as explanatory variables for forecasting performance

Variable	Type	Transformation
Number of weighting factors	Numeric	
Sampling method	List of dummy variables	
Type of partner institute	List of dummy variables	
Non-response treatment	List of dummy variables	
Sample size	Numeric	Log
Population size	Numeric	Log
Fieldwork period	Numeric	Log
Type of interview	List of dummy variables	

Source: Deloitte and DIW Econ

Activity 6: Alternative aggregation procedures of the data

This step explored alternative ways of aggregating the EU BCS survey data and constructing confidence indicators and evaluated their impact on the forecasting performance of the BCS indicators.

First, composite indicators across sectors were compared qualitatively based on their proportion of forward/backward-looking and contemporaneous questions to see how far deviations between sectoral indicators could be explained by the different focus of the questions. Second, alternatives to simple unweighted averages to construct the sectoral confidence indicators were investigated.

In addition, based on the information given in the programme User Guide, the study team constructed two alternative versions of the ESI, namely one that was only forward-looking and one that was only backward-looking, and then compared their cross-correlations with log real GDP growth.

Activity 7: Summary and Visualisations

In the last activity of the quantitative analysis, the results were summarised and visualised so that the main results of the analysis could easily be understood by the reader of the evaluation report.

Robustness and limitations

In the quantitative analysis, there was the possibility of robustness issues arising from spurious results, model misspecification and data limitations.

The risk of spurious results may particularly arise for cross-correlations and Granger causality tests. For example, the observed strong correlation between real GDP growth and the ESI may be spurious if both variables are correlated with a third factor that drives the observed correlation, even though the true correlation between the two variables is zero. However, this is a highly unlikely case since the ESI and the sectoral confidence indicators aim to capture expectations about the observed current state of the economy. Standard macroeconomic models constantly highlight the importance of expectations for macroeconomic outcomes. Therefore, the results are considered to be reliable.

In transforming the variables for the model specifications, the study team followed closely standard practices in the academic literature. A potential issue that remained regarding the bivariate models was that the relationship between e.g. real GDP growth and economic sentiment might be non-linear and thus simple linear models might not suffice to capture the relationship between economic sentiment or confidence and the outcome variable. This could be a potential explanation for why the relationship between real GDP growth and economic sentiment in a few countries is rather weak. On the other hand, the meta-analysis showed that several structural factors of the programme are able to explain significant parts of the differences. Moreover, the multivariate random forecast models were able to address potential non-linearities between EU BCS-based variables and real GDP growth and inflation respectively.

In terms of sampling, the team conducted robustness tests, such as excluding recessionary periods and the COVID-19 crisis where necessary. This applies particularly to the results of the multivariate forecasting models. In general, by virtue of their construction, multivariate random forecast results can be considered more robust than the bivariate models. Similarly, one of the important features of random forecasts is that the model and variable selection are purely data-driven and consist of the "most optimal specification" given the training sample. Therefore, the results are considered as more reliable than models in which the specification of the model is chosen subjectively.

In terms of data limitations, it needs to be pointed out that the covariates for the meta-regressions were constructed from the 2016 metadata publicly available on the EU BCS website and augmented by changes documented in the downloadable Excel data sets. These observations constitute a snapshot of the current state of play at a particular point in time, while the dependent variables are the outcome of bivariate time series models over a longer horizon. Hence changes in the collection of the EU BCS data, and thus

changes in the relationship between EU BCS data and economic aggregates may not be fully reflected in the metadata on the right-hand side of the model. Furthermore, in the multivariate analysis of the forecasting performance, several countries were omitted from the estimation of the forecasting model because there were not enough data points for a consistent estimation.

While some evaluation questions, such as '*Have changes to the programme enhanced its effectiveness?',* would have lent themselves to quantitative investigation, this could not be done due to the lack of data from before the changes. Similarly, answers to questions such as the '*Coherence of the survey across countries'* had to be based on potentially outdated questionnaires shown on the DG ECFIN website.

In summary, the results of the quantitative analysis can be considered robust in most cases. In the case of a few questions, however, no data were available or the data were insufficient, implying a need for cautious interpretation of the empirical findings as highlighted in the corresponding sections of the report. Table A2.7 illustrates the risks in the quantitative analysis of the data collection tools and the mitigation measures that were taken.

Table A2.7: Risks and mitigation actions during the quantitative analysis

Data collection tools	Risk	Potential Impact	Occurred	Mitigation measure
Correlation Analysis	Spurious correlation	High	No	• Comparing correlation results to studies from the literature and triangulating bivariate results with multivariate analysis.
Multivariate Analysis	Model mis-specification & sampling issues	High	No	• Choosing modelling approaches that reflect the current state of research. • Applying a data-driven specification and variable selection to rule out subjective specification errors. • Comparing and testing the quantitative results against results from the literature, where available. • Conducting different model specifications to provide a robustness check of the findings.
Multivariate Analysis	Lack of data or poor data quality	Medium	Yes	• Estimating forecasting model only for those countries for which sufficient data are available for consistent estimation

Source: Deloitte and DIW Econ

ANNEX III. EVALUATION MATRIX AND, WHERE RELEVANT, DETAILS ON ANSWERS TO THE EVALUATION QUESTIONS (BY CRITERION)

This annex provides a detailed overview of the evaluation matrix used for the evaluation study. It was developed by the external contractor, as a framework for the independent assessment in line with the ToR. The matrix assigns each evaluation question outlined in the ToR to the relevant evaluation criteria and serves as general framework for the applied methodology.

Table A3.1: Evaluation questions matrix

Question	Judgement Criteria	Indicators	Information/Data Source
Q1. How successful was the programme in achieving the objective of providing data for economic surveillance in the European Union enabling to compare business cycles between Member States and giving an overall view of the business cycle in the Union? *Q2.* How accurately and reliably do the survey data collected by the programme capture economic developments in the Member States and candidate countries?	• Extent to which the BCS data is used to nowcast and forecast the business cycle • Usefulness of the BCS data for monitoring and predicting business cycle fluctuations • Accuracy and reliability of BCS data for capturing economic developments in Member States and Candidate Countries	• Cross Correlations between BCS indicators and real GDP growth and HICP-based inflation • Use cases and evaluation of the BCS data in the literature • Survey question: "The BCS data are an essential input for the monitoring and now/forecasting of economic developments in our country?"	• Desk research (academic literature, policy literature) • Quantitative analysis[25] • Stakeholder interviews • Online questionnaire
Q3. Could the ability of the data to capture economic developments be enhanced through different aggregation techniques?	• Extent to which alternative aggregation methods have better tracking performance of economic developments in EU and candidate countries	• Comparison of cross-correlations of existing indicators and alternative indicators (based on alternative aggregation) with real GDP growth • Evaluation of alternative aggregation methods in the literature	• Desk Research (User guide, Academic Literature, Documentation of other Survey Institutions) • Quantitative analysis

[25] A quantitative analysis of the use of BCS data based on counts of citations was not meaningful because observed citations are a noisy measure of actual use of the data and because of a lack of a meaningful benchmark.

Q4. Are the data timely enough?	• Perception of timeliness of data by users • Timeliness of BCS data compared to other indicators	• Survey question: "Are the EU BCS data timely enough?" • Evaluation of timeliness in literature • Comparison of publication lag and cross-correlations between alternative indicators / BCS data and real GDP growth/HICP inflation	• Desk research • Quantitative analysis • Stakeholder interviews • Online survey
Q5. How useful are they for nowcasting/forecasting relevant economic variables?	• Accuracy of nowcasts/forecasts for predicting economic developments	• Granger Causality Test between BCS ESI indicator and real GDP • Comparison of root mean squared forecasting errors (RMSE) of multivariate forecasting model with and without BCS indicator • Use of BCS data for forecasting as reported in stakeholder consultation • Evaluation of forecasting accuracy of BCS data in academic literature	• Desk research (academic literature) • Quantitative analysis • Stakeholder interviews
Q6. Are data disseminated in a clear and understandable form?	• The degree to which BCS data are accessible and understandable for the users • Availability of relevant information for expert users	• Survey questions: "Do you think the data from the BCS Programme is easily accessible and presented in an understandable way?" "How do you usually access the survey data related to your country?" & "How do you usually access the survey data?" • Comparison to best practices of data dissemination	• Desk research (Press Releases, programme Webpage) • Stakeholder interviews • Online questionnaire
Q7. Are there sufficient supporting metadata and guidance for users?	• The degree to which metadata are comprehensive, up-to-date and easily accessible	• Survey Question “Are the metadata and guidance for users sufficient and understandable?" • Comparison to best practices for metadata	• Desk research (User Guide, Methodological guidelines, Reference metadata on methodology and quality, programme Webpage) • Stakeholder interviews • Online questionnaire
Q8. Has the programme enhanced the capabilities of partner institutes, for example	• Partner institutions' assessment of whether the BCS Programme has improved their	• Documented perception of the partner institutes in the literature	• Desk research (Workshop documents)

through knowledge sharing?	capabilities.	• Survey Questions " In your opinion does the BCS Programme enhance partner institutes' capabilities (e.g., reporting) and contribute to the development of new indices and products?" & "Which capabilities would you say are enhanced?"	• Stakeholder interviews • Online questionnaire
Q9. Has the programme created methodological spillovers?	• The degree to which BCS methodology is referenced in other trend surveys and best practice examples.	• Documented references to the methodology of the BCS Programme	• Desk research (academic literature, policy literature)
Q10. Have changes to the programme's methodology and coverage enhanced its effectiveness?	• Impact of programme changes on the effectiveness of the BCS Programme.	• Impact assessments in the literature • Assessments of specific changes by different stakeholders	• Desk research (academic literature, workshops documents) • Stakeholder interviews
Q11. To what extent was the design, implementation, and financing of the programme appropriate? Have changes improved its appropriateness?	• programme design, implementation and financing in line with best practices • programme design, implementation and financing well-justified and adaptive to issues encountered • programme changes had a discernible impact	• Evaluative judgment of the programme's budget and administration • Comparison of the programme's design and implementation with best practices (e.g. UN/OECD Handbook on BCS)	• Desk research (academic literature, policy literature) • Quantitative analysis • Stakeholder interviews • Online questionnaire
Q12. What are the cost and benefits of the BCS for different stakeholders?	• Quantitative or qualitative figures/estimation of costs and benefits	• Evolution of the costs and benefits of the BCS Programme over time • Evaluation of Cost & Benefits from users and Partner Institutes	• Desk research (previous programme evaluation, Financial Transparency System, Budget figures provided by DG ECFIN) • Stakeholder interviews
Q13. What is the simplification, cost and burden reduction potential?	• Qualitative assessment of potential cost or burden reductions	• Self-assessment of stakeholders • Stakeholders' narrative of potential reductions • Feasibility of potentially cost reducing methods according to the academic literature • Cost reduction when compared to best practice implementation	• Desk research (academic literature, programme meta data on methodology and quality) • Stakeholder interviews • Online questionnaire

Q14. Could alternative approaches to monitoring the economy in (quasi) real-time, such as big data analysis, have achieved the same benefits at less cost, or greater benefits at the same cost?	• Costs and benefits of alternative indicators for predicting economic developments	• Evaluation of alternative indicators in the literature • Stakeholders' assessment of alternative indicators	• Desk research (academic literature, policy literature) • Stakeholder interviews
Q15. To what extent is the financial administration of the programme, namely through the annual award of grant agreements and reimbursement based on incurred costs under multi-year framework partnership agreements efficient?	• The extent to which the financial administration of the programme is considered efficient.	• Evaluative judgment of the programme administration	• Desk research (academic literature, policy literature) • Stakeholder interviews
Q16. To what extent is the programme still relevant? *Q17.* Given the programme's aim to provide quasi real time information on the state of the EU and EU candidate economies, is the programme still relevant in the light of recent progress in accelerating the release of important statistical data, such as EU/euro-area GDP (preliminary flash estimate), and the availability of alternative short-term indicators?	• Extent to which the BCS surveys offers unique benefits compared to other surveys and indicators	• Timeliness of alternative indicators • Geographical coverage of the alternative indicators • Stakeholders' assessment of the relevance of the BCS Programme • Survey Question: "The programme is still relevant in the light of recent progress in accelerating the release of important statistical data, such as EU/euro-area GDP (preliminary flash estimate), and the availability of alternative short-term indicators (e.g., big data)."	• Desk research (academic literature, press releases, web pages) • Stakeholder interviews • Online questionnaire
Q18. Do the survey questions used in the BCS Programme focus on the most relevant economic issues or could the programme benefit from additional or modified questions and could some of the questions be dropped from the survey?	• Programme has no gaps with regards to what would be useful for stakeholders • Programme has no unused parts with regards to the needs of stakeholders	• Comparison of programme content with the needs of stakeholders	• Desk research (academic literature, policy literature) • Stakeholder interviews • Online questionnaire
Q19. Is the surveying frequency (monthly for	• Assessment whether the surveying frequency	• Survey Question: "Would you say the surveying	• Desk research (academic

most questions, quarterly for some) appropriate?	is appropriate	frequency (monthly for most questions, quarterly for some) is appropriate?" • Users' assessment of survey frequency in interviews	literature, policy literature) • Stakeholder interviews • Online questionnaire
Q19a. In your view, does the Financial Services Sector Survey complement other data provided by other financial services surveys?	• Assessment of the usefulness of the Financial Services Sector Survey and its complementary value in view of other financial services surveys	• Survey Question: "The Financial Services Sector Survey is complementary to other data (e.g.., other financial services surveys /indicators or additional financial services forecast)?" • Users' assessment of usefulness in interviews	• Stakeholder interviews • Online questionnaire
Q20. Does the sectoral aggregation of the survey results meet users' needs, or should different aggregates be introduced?	• Assessment of whether the current sectoral aggregation of the results is appropriate for users' needs • Assessment of whether other aggregates would be more useful	• Survey Question: "Does the sectoral aggregation of the survey results (industry, services, retail trade, construction, consumers) meet user needs?" • Users' assessment of sectoral aggregation in interviews	• Stakeholder interviews • Online questionnaire
Q21. Is the disaggregation of the results in terms of sub-sectors and consumer categories sufficient/appropriate?	• Extent to which disaggregation is appropriate for research / analytical purposes and for monitoring economic developments	• Survey Question: "Is the disaggregation of survey results in terms of sub-sectors and consumer categories sufficient?" • Users' assessment of disaggregation in interviews	• Stakeholder interviews • Online questionnaire
Q22. In particular, are microdata on individual businesses' responses needed for up-to-date statistical analysis?	• Extent to which microdata are needed for up-to-date statistical analysis	• Survey Question: "Would public access to the microdata on individual businesses' responses significantly improve up-to-date statistical analysis of economic developments?"	• Desk research (programme documentation) • Stakeholder interviews • Online questionnaire
Q23. Is there capacity to adapt to very specific needs in particular moments, as was the case during the COVID pandemic? Is there a way in which ad-hoc survey questions could be introduced more rapidly / with less administrative burden?	• Extent to which the programme has adapted to specific needs, for example, by adjusting the survey collection methodology, introducing ad-hoc survey questions, or by producing ad-hoc reports on specific issues • Availability of new mechanism for swift introduction of ad-hoc survey questions in surveys	• Survey Question: "How do you evaluate the programme capacity to adapt to very specific needs in particular moments, as was the case during the COVID-19 pandemic?" • Partner institutes' assessment in interviews	• Stakeholder interviews • Online questionnaire

Q24. Has the programme or survey methodology been adopted in third countries?	• Adoption of the BCS methodology in third countries	• Documented references to the methodology of the BCS Programme in tendency surveys in third countries	• Desk research
Q25. Have changes to the programme's methodology and coverage enhanced its relevance?	• Degree to which changes in the programme's methodology and coverage enhanced its relevance	• Survey Question: "The introduction of the Employment expectations Indicator (2020) and Economic Uncertainty indicator (2021) have had a discernible impact on the programme and its outputs?"	• Desk research • Stakeholder interviews • Online questionnaire
Q26. To what extent is the programme coherent internally, i.e., between the different sectoral surveys and between the different countries? Are possibly identified incoherencies justified?	• Coherence between of surveys across countries and across sectors.	• Differences in (national) survey questionnaires across countries • Differences between sectoral surveys and sectoral confidence indicators in terms of the time horizon to which the survey questions refer • Assessment of differences by partner institutes in interviews	• Desk research (national questionnaires, User Guide) • Stakeholder interviews • Online questionnaire
Q27. How appropriate are differences between the sectoral surveys in terms of the survey questions asked and the selection of the questions entering a sector's overarching confidence indicator?	• Extent to which the differences across sectors are appropriate	• Survey question: "The differences between the sectoral surveys in terms of the survey questions asked (e.g. expected demand in services has no matching question in industry survey) and the selection of the questions entering a sector's overarching confidence indicator (e.g. services confidence includes a question on past developments, while industry confidence features only questions reg. current/expected situation) are appropriate" • Comparison of sectoral developments between existing sectoral indicators and alternative indicators	• Desk research (national questionnaires, User Guide) • Stakeholder interviews • Online questionnaire

		which use the same survey questions in all surveyed sectors[26]	
Q28. What is the degree of complementarity of the BCS Programme with other EU survey programmes, for instance with the ECB's Consumer Expectations Survey and the Bank Lending Surveys, as well as comparable private/national surveys?	• Assessment of the usefulness of the BCS Programme and its complementary value in view of other EU survey programmes	• Evaluative judgment of the complementarities • Survey question: "The BCS Programme is complementary with other EU survey programmes, for instance with the ECB's Consumer Expectations Survey and the Bank Lending Surveys, as well as comparable private/national surveys?"	• Desk research (academic literature, policy literature) • Stakeholder interviews • Online questionnaire
Q29. What is the additional value of a harmonised EU survey programme compared to existing national economic tendency surveys?	• Benefits of harmonised BCS Programme compared to other existing tendency surveys	• Assessment of benefits of BCS Programme and other surveys in the literature • Assessment of benefits by users in interviews	• Desk research (academic literature, policy literature) • Stakeholder interviews
Q30. How prevalent are the data generated by the BCS Programme in discussions and analyses of short-term economic developments in the EU/euro area and other (cross-sectoral) economic analyses?	• Assessment of the prevalence of the EU BCS data for the analysis of short-term economic developments	• Prevalence in the media measured by Google search results • Citations in academia measured by Google Scholar citations • Use of BCS data in the private sector as reported in interviews	• Desk research (academic literature, policy literature) • Stakeholder interviews
Q31. Is the connection between national and EU level survey results accurately perceived by stakeholders? Is the survey perceived as a national or an EU effort in member states or candidate countries?	• Extent to which stakeholders are fully aware of the EU-level programme and how national surveys are part of it	• Survey Question: "In your opinion, is the survey perceived as a national or an EU effort in member states or candidate countries?"	• Desk research (academic literature, policy literature) • Stakeholder interviews • Online questionnaire

[26] Another way of addressing the question would be to impose the structure of one sectoral indicator (e.g., Industry) on another (e.g., Services) and then see whether any differences in the development of sectoral indicators become smaller. Unfortunately, this test is not feasible because, for example, there are no current-looking questions in the monthly survey in the service sector.

Answers to the evaluation questions

Effectiveness

Q1/Q2: The frequent use of the BCS data in the media and in academic research as well as the quantitative results indicate that the BCS Programme provided robust data that allowed for reliable monitoring of economic developments and business cycles in the EU Member States and candidate countries. This assessment was also shared by stakeholders, who indicated that EU BCS data made an important contribution to monitoring and forecasting economic developments in their country.

Q3: According to the literature review, the ability of the EU BCS data to capture economic developments could potentially be improved by data-driven aggregation methods and machine-learning techniques in a statistically significant way. However, these methods would lead to frequent changes in the weights; the resulting retrospective changes in the time series of the indicators would be difficult to communicate to users. Moreover, the Economic Sentiment indicator already provides valuable information for monitoring economic developments in the EU, as evidenced by the strong correlations between the ESI and real GDP growth shown above.

Q4: The available academic literature, as well as the results of the stakeholder consultation and quantitative analysis, concur that the EU BCS data have been more timely than other leading indicators of GDP, while offering a high degree of correlation with the target variable. This combination made them particularly useful for monitoring the real economy in the EU-27. In the case of inflation, by contrast, the advantage of timeliness was less pronounced for the EU BCS data on price expectations because of the early availability of flash estimates of inflation.

Q5: The academic literature, stakeholders and our own quantitative analysis all conclude that the EU BCS data have been useful for nowcasting and forecasting real economic variables. However, both the academic literature and our own quantitative analysis show that there has been some heterogeneity in the predictive power of the EU BCS data across EU Member States.

Q6/Q7: Stakeholders provided mixed feedback concerning the dissemination of the BCS data. Less than half the users (44%) stated that the EU BCS data were easily accessible and available in an understandable form, while only 8% of users explicitly disagreed with this statement. Users suggested that dissemination could be made more user-friendly by offering search and filter options and additional download formats other than Excel. Furthermore, the huge majority of stakeholders (85%) stated that the supporting material of the BCS Programme was understandable and sufficient. Nevertheless, there is still room for improvement in the supporting material, including more didactic information in the User Guide, better reporting of changes and updating metadata and questionnaires.

Q8: The stakeholder consultations and the review of relevant supplementary material suggest that the intervention has led to an exchange of knowledge between DG ECFIN and the partner institutes as well as knowledge transfer among the partner institutes themselves. This could, however, be rendered even more effective if the annual workshops focussed more on the practical aspects of running survey programmes.

Q9: The programme has created substantial methodological spillovers and will most likely continue to serve as a methodological benchmark for other business and consumer surveys around the world.

Q10: The changes to the BCS Programme in 2012-2021 should improve the BCS Programme in terms of its effectiveness in tracking and monitoring economic developments in EU countries. First, a number of changes were made that are justified by the previous evaluation of the BCS Programme. Second, several changes at the EU level - which were not based on the previous evaluation - were made only recently, so their effectiveness cannot yet be assessed. However, the fact that these changes were based on thorough ex ante evaluations and were positively assessed by stakeholders suggests that these changes should improve the effectiveness of the BCS Programme. Third, several country-level changes (e.g. the switch to online survey methods) may have had unintended negative consequences (e.g. on response behaviour), but were necessary in response to demographic change and to save costs.

Efficiency

Q11: Taking into account findings from the desk research *and partner institutes' views collected in the stakeholder consultation,* the design, implementation and financing can be considered appropriate overall. While the changes to the design have increased the programme's effectiveness (as evidenced by ex post evaluations), a concern shared by a significant number of partner institutes relates to the administrative procedures surrounding the co-funding of the programme. Several institutes said that they would appreciate if those procedures could be simplified, while acknowledging that complex procedures were necessary to ensure full transparency vis-à-vis the taxpayer.

Q12: The evidence shows that EU spending on the BCS Programme was overall stable in recent years. At the national level, however, some differences can be observed. While grants increased for some countries, other countries received less funding from the EC over time. The reasons behind these trends (such as cost reduction due to reorganisation, technical progress, enhanced financial control) are beyond the scope of this evaluation. Although the benefits of the BCS Programme are hard to quantify, this evaluation finds that the BCS Programme has offered substantial benefits to its users in the media, private sector, academia and among policy-makers across Europe. The EU BCS data have been an essential input to monitoring and forecasting economic developments across European countries. Compared to other existing indicators and surveys, the BCS Programme offered the unique advantage of a broader sectoral and geographic scope. In addition, publication of EU BCS data was more timely and more frequent than other indicators, which made them particularly useful for policy-makers who need information on economic developments before official data are available.

Q13: The analysis shows that the digitalisation of survey data collection processes by using the CAWI method offers cost reduction potential. However, there is still conflicting evidence on the effects of CAWI methods on response rates, as well as measurement error and non-response bias, which seems to be one of the reasons why only 14 % of institutes currently deploy CAWI methods (fully or partially in a mixed method) in the consumer surveys. Arguably, a clearer verdict by the academic literature

in favour of web surveys would be a precondition for a recommendation to shift towards that data collection mode. In the administrative sphere, several partner institutes identified cost reduction potential, e.g. by reducing the number of cost factors to be reported.

Q14: Big data approaches offer promising new avenues for tracking the economy in real-time. However, big data approaches cannot offer the same benefits as the EU BCS data (e.g. they cannot cover the whole economy, while at the same time providing sector- and activity-specific breakdowns) and should thus be considered as a complement to the EU BCS data rather than a substitute.

Q15: Although the current financial administration of the programme received mixed feedback from partner institutes during the interviews, partner institutes understand that DG ECFIN does not have much leeway to modify administrative processes. However, they believe that more efficient communication through a centralised platform for the exchange of information on administrative aspects of the programme would help lighten the administrative burden. A shared platform would allow partner institutes to learn from each other's experiences (i.e. to see the EC's answers to other partner institutes) and to exchange knowledge, methodologies and information with other partner institutes.

Coherence

Q26: The EU BCS surveys have been implemented coherently across countries and differences identified in the questionnaires across countries have been of minor concern. This assessment was also shared by partner institutes in the stakeholder consultations. The different uses of past-, present- and future-oriented questions in the sectoral confidence indicators have a potential impact on the predictive power of those indicators and on their comparability, which, however, turns out to be minor (see answer to question Q27).

Q27: Based on the judgment of the users and partner institutes as well as theoretical arguments from the literature, it can be concluded that the differences in the questions asked in sectoral surveys and selected for the sectoral confidence indicators are appropriate. While the overall development of the sectoral indicators is not affected by the selection of different questions across sectors, they account to only a small extent for the differences observed in the development of the sectoral indicators in recent decades. However, since economists and policy makers are not per se interested in the differences in the long-term averages of the sectoral indicators, but rather in the movements of the indicators over time, the effect identified here on the differences between sectoral indicators is irrelevant, and it is reassuring that the correlations between the actual and alternative indicators are very strong, showing that they move closely together.

Q28: The BCS Programme complements other survey programmes. The programme complements the ECB bank lending survey by covering more countries in Europe and by providing a broader overview of the current situation in the financial services sector, which goes beyond bank lending conditions. The EU BCS surveys complement the ECB Consumer Expectations Survey by providing long historic time series on qualitative

consumer sentiment that can be usefully combined with the much shorter quantitative time series from the CES. The EU BCS surveys also complement the PMI in terms of the time horizons of the survey questions and in terms of the geographic coverage, as the programme covers more countries in Europe while the PMI covers countries on other continents. In addition, the PMI is better suited for tracking quarter-on-quarter economic growth, while the ESI is best suited for tracking the development of economic activity on a year-on-year basis.

Q29: According to the stakeholder consultation, the BCS Programme, in comparison to existing national economic tendency surveys, brings additional value to the market, namely the comparability of its data between countries and sectors, the consistency of its data, and its ability to provide harmonised input on the future of the economy at the EU level.

EU added value

Q30: The EU BCS data have been used widely by the press, academia and the private sector to monitor, discuss and analyse short-term economic developments.

Q31: The stakeholder consultation results provide evidence that among users the predominant perception is that the data is the result of an EU-wide effort. Evidence from partner institutes is that EU endorsement is key to positive perceptions. In particular, it seems that the EU-funded nature of the programme lends extra credibility to the data.

Relevance

Q16/Q17: The EU BCS data remains relevant as an early indicator of economic developments in the EU Member States. Compared to flash estimates, the programme data has offered the advantages of timeliness, a higher frequency and a broader sectoral coverage. The broader sectoral coverage as well as a broader geographic coverage has also been the main advantage of the EU BCS data compared to the PMI.

Q18: The feedback obtained from the stakeholder consultation supports the hypothesis that the BCS Programme focuses on the most important economic questions. While both partner institutes and users would appreciate additional questions on specific topics, best practice recommends having questionnaires that are as user-friendly and short as possible in order not to increase the response burden, which in turn might compromise the quality of the data. While deleting questions to make room for new survey questions could be a solution, the stakeholder consultation highlighted that this would need to be based on a careful analysis, as questions currently appearing irrelevant might gain importance in a changing economic environment.

Q19: In the light of the results of the stakeholder consultation, as well as the impact that a higher surveying frequency could have on the quality of the data and the general public's interest in the EU BCS data, the conclusion can be drawn that the current surveying frequency is appropriate. A higher surveying frequency would not add much value to analyses. Instead, private sector users would appreciate the quarterly questions being moved to monthly frequency. Some partner institutes also agree with this as it would decrease their burden of having different versions of the questionnaires; while

they do not foresee a risk of this compromising response rates and the quality of the data, it would however imply a higher response burden.

Q19a: It is not possible to determine whether the FSSS complements data provided by other financial services surveys. The feedback received from the BCS Programme users shows that the FSSS is not relevant to them as it is not integrated in most users' analyses. Potential users of the FSSS acknowledged that they prefer to construct their own indices and use the other sectoral BCS Programme surveys to provide further input/context to their financial stability analyses. Given the low usage and the users' preference for other similar surveys, discontinuation of the FSSS could be considered.

Q20: The current sectoral aggregation of the survey results meets users' needs. Some suggestions for improvements were voiced in the stakeholder consultations, such as taking an ecosystem approach to the aggregation of the EU BCS data. However, this would pose a risk to the integrity of the data and time series as current ones would be replaced by the new ones. There might be a case for coverage of all NACE sectors across the surveys. This would ensure full coverage of all sectors, while users interested in an ecosystem approach would build ecosystem indicators on their own, based on their needs.

Q21: For the vast majority of users, the current level of disaggregation of the results in terms of sub-sectors (i.e. 2-digit level) and consumer categories (income, age, etc.) is appropriate.

Q22: The information gathered from the stakeholder consultation showed that microdata on individual businesses' responses would open the door to research topics of interest to academics, private sector users and institutional users. Interested researchers can in principle turn to the national data-collecting partner institutes and negotiate the terms of the usage of the data as the EC does not have access to partner institutes' business survey microdata. The majority of partner institutes requested additional compensation should the EC want to have access to those survey results for centralised dissemination. The risk that sharing business microdata might pose to response rates, as explained by partner institutes, might be mitigated by publishing the microdata with a two- or three-year delay, even though this might not provide relevant information for private sector users. Considering the unwillingness of some partner institutes to share business microdata and the expected budgetary impact of any decision to share microdata as part of the programme, a change to the current contractual set up is not considered appropriate.

Q23: Most partner institutes considered that they have the capacity to adapt to very specific needs at particular moments. For the particular case of ad hoc questions, it seems that partner institutes are unaware of the existence of a specific clause on ad hoc questions in the applicable Framework Partnership Agreements. The Commission should raise awareness of this clause so that it could, jointly with the partner institutes, explore the practical details of the provision, inter alia how to coordinate the content of the (harmonised) ad hoc questions and how to reimburse the partner institutes.

Q24: The BCS Programme was initially launched by the EC to harmonise business and consumer surveys across the EU Member States to be able to monitor and forecast economic developments across Member States and at the aggregate EU level. Over time,

the programme became a reference for business and consumer surveys around the world. The OECD and EU have supported other countries in adopting the programme system.

Q25: Tentative evidence from the literature and the stakeholder consultation suggests that the introduction of the EUI has improved the relevance of the BCS Programme by responding to the increasing need to monitor developments in the perceived uncertainty of consumers and businesses.

ANNEX IV. OVERVIEW OF BENEFITS AND COSTS AND, WHERE RELEVANT, TABLE ON SIMPLIFICATION AND BURDEN REDUCTION

Table A4.1: Overview of costs and benefits identified in the evaluation

		Citizens/Consumers		Businesses		Administrations		Partner institutions	
		Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Costs									
Direct compliance costs	**Recurrent**	N/A		N/A		The EC granted € 5 159 222 in total on average per year. • € 4 966 667 for grants for the BCS Programme. • € 192 556 for the FSSS. • The amount ranged across countries from € 30 442 to € 386 468.	The Commission supported the activities of the partner institutions with action grants, which were limited to a maximum of 50% of the total cost of the surveys. The figures are average values for the period 2012/13-2020/21.	The annual costs for the implementation of the BCS Programme amounted to € 10 718 662 for the national partner institutes.	Due to country-specific factors, there are considerable differences between country-specific costs. The costs are average values for the period 2005-2010 and are based on the last evaluation of the BCS programme from 2012.
Benefits									
Direct & Indirect benefits		Although it is difficult to quantify the benefits of the programme in monetary terms due to the fact that there is no comparable fee-based programme, this evaluation found that the BCS Programme offers substantial qualitative benefits to its users in the media, the private sector (e.g. banks), academia and among policy-makers. Firstly, the online survey showed that 100% of the surveyed users considered the EU BCS data to be an essential input for							

		monitoring and now-/forecasting of economic developments in their country. Secondly, the EU BCS data are frequently used by academic researchers to monitor and forecast GDP and inflation as well as for other analytical purposes. The usefulness of the EU BCS data for monitoring and forecasting GDP and inflation was also confirmed in the quantitative analysis conducted by the external contractor. Thirdly, the BCS Programme offers important advantages compared to other existing indicators: the publication of the EU BCS data is more timely and more frequent (monthly). Furthermore, when compared to other survey programmes, the BCS Programme has a broader sectoral and geographic scope, thereby providing a comprehensive and comparable overview of business cycle developments across European countries and sectors. It is therefore an essential point of reference for economic policy in the EU and beyond.

Table A4.2: <u>Potential</u> simplification and burden reduction (savings)								
	Citizens/Consumers/Workers		Businesses		Administrations		Partner institutions	
	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment	Quantitative	Comment
Digitalisation of the data collection process								
Type: recurrent					Increasing the digitalisation of the data collection process offers cost reduction potential. In order to quantify precise savings effects, further research is needed on differences in data quality and response rates of different data collection methods.			
Reducing administrative burdens in the financing process								
					Suggested improvements include a reduction in the number of cost factors that need to be reported, e.g. by eliminating separate reporting for each survey, and standardising certain cost factors that are only adjusted in the event of methodological changes. In order to quantify the exact savings effects, further research is needed that addresses specific accounting issues.			

ANNEX V. STAKEHOLDERS CONSULTATION - SYNOPSIS REPORT

This annex presents an outline of the consultation strategy adopted for the external study. The annex details the objectives of the strategy adopted, the stakeholders and tools identified, and its final dissemination.

Objectives

The consultation strategy followed the indications provided by the Commission's Better Regulation Tool #54.

The specific goals of the consultation activities were to:

1. Collect additional data on the implementation of the BCS Programme at the level of the Member States and candidate countries, as well as the use of the data by the various types of stakeholders;
2. Engage with stakeholders involved in the collection of the survey data (i.e. the Commission's partner institutes) and the various stakeholders using the data in their daily work;
3. Cross-check and validate the preliminary findings based on the desk-research and quantitative analysis.

In order to ensure transparency and engagement, the process followed the standards and methods set out in the Better Regulation Guidelines. The various consultations complied with the Terms of Reference (ToR) and the following evaluation roadmap[27].

Identified stakeholders and tools

The stakeholders targeted by the consultation activities were, on the one hand, the Commission's partner institutes both in their role as data producers (they do the actual survey work and send the collected data to the Commission for further processing and dissemination) and as users (a number of partner institutes use the BCS data themselves to inform economic forecasts, conduct topical economic analyses, etc.). On the other hand, the consultation targeted a wide array of different users of the data, namely:

- Institutional users, i.e. public EU bodies (e.g. the European Central Bank, specific units in DG ECFIN, as well as other Directorates-General of the Commission);
- Private sector users harnessing the data for macro-economic forecasting and economic analyses (mainly the research departments of commercial banks) or to inform an industry-specific outlook (e.g. business associations representing a specific sector of the economy);
- Academics using the data for economic research;
- The (economic) press regularly reporting on releases of BCS data (represented by both news agencies and newspapers).

[27] The evaluation roadmap ran between 30 July 2021 and 27 August 2021.

The consultation strategy employed two different consultation tools, following the ToR provisions and agreement with DG ECFIN, namely stakeholder interviews and an online questionnaire.

Stakeholder interviews

The stakeholder interviews were semi-structured in nature, meaning that guidelines and a set of the questions were produced for the interviewers to follow but a level of flexibility was maintained to allow new ideas to be discussed depending on the interlocutor. The interview guides were sent to the respective interviewees before the scheduled interview to contextualise the call and give the interviewees the possibility to prepare the feedback they wanted to highlight. The interviews were conducted using videoconferencing software, such as Zoom, Skype for Business or Microsoft Teams. The interviews were conducted over a period of 15 weeks (11 July-21 October 2022).

Online questionnaire

The purpose of the online questionnaire was twofold. First of all, as time was limited during the above-mentioned interviews (one hour) and some interviewees provided very detailed feedback, some interviews did not cover all the questions included in the interview guide and all the aspects of the programme. In such cases, the online questionnaire served as a follow-up which interview participants were asked to fill in in order to capture their answers to questions which could not be raised in the interview. Second, by asking questions like "Do you agree that…", the online questionnaire allowed to capture quantitative data on the appraisal of the BCS Programme which could usefully complement the qualitative data collected via the interviews. The bulk of the online questionnaires sent were destined to the stakeholders having completed a stakeholder interview, but some invitations to participate in the online survey were also sent to other stakeholders. The online consultation was conducted over the same period as the stakeholder interviews, i.e. over 15 weeks (11 July-21 October 2022).

Final outreach and delivery of the consultation

A. Stakeholder interviews

A total of 269 stakeholders, across all groups, were contacted for an interview. The overall response rate was just under 40% (including negative responses). A total of 91 interviews were conducted with private sector users, institutional users, press and academics, and partner institutes.

Table A5.1: Stakeholder interview key performance indicators

	Partner Institutes	**Private sector users**	**Institutional users**	**Press**	**Academics**	**Total**
Stakeholders contacted	68	72	66	20	43	**269**
Weekly reminders sent	7	10	7	10	7	N/A

	Partner Institutes	Private sector users	Institutional users	Press	Academics	Total
Response rate[28]	78%	40%	42%	25%	42%	39%
Negative responses as share of responses	15%	37%	43%	20%	56%	40%
Interviews conducted[29]	**45**	**19**	**15**	**4**	**8**	**91**

Source: Deloitte and DIW Econ

An overview of the stakeholders which participated in the interviews is provided in Table A5.3.

B. Online questionnaire

A total of 111 stakeholders across all groups were contacted to complete the online questionnaire. The overall response rate was 45%, i.e. a total of 50 respondents provided feedback through the online questionnaire, across all stakeholder groups.

Table A5.2: Online questionnaire key performance indicators

	Partner Institutes	Private sector users	Institutional users	Press	Academia	Total
Stakeholders contacted only for the online questionnaire	2	0	15	0	3	20
No. of responses from online questionnaire-only stakeholders	0	0	3	0	0	3
Response rate of online questionnaire-only stakeholders	0%	0%	33%	0%	0%	15%
Weekly reminders sent	7	10	7	10	7	N/A

[28] Includes negative responses

[29] Includes stakeholders who sent their feedback in writing due to unavailability for a live interview. The number of interviews does not correspond to the number of interviewed partner institutes but to the number of interviewed stakeholders, i.e. in some instances multiple stakeholders were interviewed within the same organisation to cover different aspects and elements of the BCS Programme. Stakeholders from different departments of the same organisation had different uses for the data. In some countries, there were two partner institutes carrying out different surveys of the BCS Programme. In the case of the economic press, journalists from the same newspaper were interviewed as they were covering the BCS Programme in different countries.

	Partner Institutes	Private sector users	Institutional users	Press	Academia	Total
Online questionnaire sent after interviews	45	19	15	4	8	91
Number of responses from stakeholders after interviews	23	10	5	3	6	47
Response rate of stakeholders after interviews	51%	53%	33%	75%	75%	52%
Total number of responses to the online questionnaire	23	10	9	3	6	51
Overall response rate	49%	53%	27%	75%	55%	45%

Source: Deloitte and DIW Econ

Table A5.3 lists the stakeholders which filled in the online questionnaire and/or participated in the stakeholder interviews.

Table A5.3: Organisations participating in the consultation

Organisation name	Interview (Y/N)	Online questionnaire (Y/N)
Academics		
CIRET	Y	N
Research Institute of Industrial Economics (Sweden)	Y	N
KOF Swiss Economic Institute	Y	Y
Netherlands Bureau for Economic Policy Analysis	Y	Y
The Vienna Institute for International Economic Studies	Y	N
University of Zagreb	Y	Y
Institutional User		
DG ECFIN Country Desk Croatia, Spain	N	Y
DG ECFIN Country Desk Estonia, Latvia, Lithuania, Netherlands	Y	Y
DG ECFIN Country Desk Ireland	Y	Y

DG ECFIN Country Desk Portugal	Y	Y
DG ECFIN Country Desk Romania	Y	Y
DG ECFIN Unit B3	Y	N
DG EMPL	Y	Y
DG GROW	Y	N
ECB	Y	Y
Eurostat	Y	N
Central Banks		
Bank of Finland	Y	N
Bank of Latvia	Y	Y
Croatian National Bank	Y	N
National Bank of Belgium	Y	N
Partner Institutes		
Bank of Ireland	Y	N
Central Statistical Bureau of Latvia	Y	Y
Confederation of Finnish Industries	Y	Y
Czech Statistical Office	Y	Y
Data Collect s.r.o.	Y	Y
EMCS Malta	Y	Y
Foundation for Economic and Industrial Research, Greece	Y	Y
GfK SE	Y	Y
GfK Spółka z ograniczoną odpowiedzialnością, Poland	Y	Y
GKI Economic Research, Hungary	Y	Y
Institut National de la Statistique et des Etudes Économiques, France	Y	N
Ipsos GmbH, Germany	Y	Y
Ipsos Market, Media and Public opinion research, Ltd, Croatia	Y	Y
Ipsos, Belgium	Y	N
Istituto Nazionale di Statistica (ISTAT), Italy	Y	Y
Latvian Facts, Ltd.	Y	N
Leibniz Institut für Wirtschaftsforschung an der	Y	N

Universität München e.V., Germany		
Lithuanian Department of Statistics	Y	Y
National Institute of Statistics of Romania	Y	Y
Österreichisches Institut für Wirtschaftsforschung, Austria	Y	N
Simple Lógica Investigación, S.A., Spain	Y	N
Statistics Denmark	Y	N
Statistical Office of the Republic of Serbia	Y	Y
Statistical Office of the Republic of Slovenia	Y	Y
Statistical Office of the Slovak Republic	Y	Y
Statistics Finland	Y	Y
Statistics Poland	Y	N
The Malta Chamber of Commerce, Enterprise and Industry	Y	N
Turkish Statistical Institute	Y	N
Economic press and news agencies		
DG ECFIN Unit A4	Y	Y
Reuters	Y	Y
Private Sector		
Berenberg Economics	Y	N
BNP Paribas	Y	N
Czech Banking Association	Y	N
German Association of Machinery Producers	Y	N
ING Think	Y	Y
JP Morgan	Y	Y
Luminor Group	Y	Y
Union investment	Y	N

Source: Deloitte and DIW Econ

Results of the consultation

This section presents the results of the completed consultation activities.

- **Do you think EU BCS data is timely enough? Is the surveying frequency (monthly for most questions, quarterly for some) appropriate?**

INTERVIEWS	
Users	**Partner Institutes**
• The data is **timely enough as it is available online immediately when a press release comes out**. The survey frequency is good for most respondents. However, some users indicated that speeding up publication would be good. • Some remarks were made on frequency during the interviews: **even though the monthly frequency is fine under normal circumstances, a significant number of users said that the current times of crisis require a higher frequency**. At such times, weekly frequency could be better; however, there is a general concern that this could compromise the quality of answers and response rates. • A majority of respondents said that **quarterly questions should be moved to a monthly basis if possible**, especially due to heightened uncertainty since 2020. • Users from the press did not request additional data or a higher frequency as too much data could be overwhelming and the interest from users would not be high enough to have more frequent reports on the surveys. • Some users remarked that the publication time is irregular from one month to the other.	• The questionnaires are very short and most of the respondents are used to them. Consequently, most partner institutes consider that the frequency is appropriate as it is, both from their and the respondents' perspective. • A **higher frequency than monthly would impose too much of a burden on the respondents and would compromise the response rate** (i.e. respondents need to understand why they have to answer frequently, and it would be complicated to justify a shorter responding period from the partner institutes' perspective). • **Some partner institutes have decided to ask all questions every month to render the processes easier rather than having different versions of the survey for different times of the year**. Since there are not many quarterly questions, this does not add much of a burden for respondents.
ONLINE QUESTIONNAIRE	
• 93% of respondents said that the EU BCS data is timely enough while 7% indicated that it is not. • 100% of users said that the surveying frequency is appropriate.	• 87% of partner institutes said that the surveying frequency is appropriate while 13% did not agree.

Source: Deloitte and DIW Econ

- **Do you think the EU BCS data are disseminated in a clear and understandable form? Are there sufficient supporting metadata and guidance for users?**

INTERVIEWS	
Users	**Partner Institutes**
• The dissemination is **clear and straightforward enough for expert users**. A majority of users pointed out particularly that the communication of the programme is overall satisfactory compared to other survey programmes. • Academics and other expert users pointed out that it is not possible to serve all target groups. In particular, non-expert users might need more guidance. In this instance, a **more practical focus**, rather than the current methodological focus would be helpful as well **(e.g. provide examples of how to use the data)**. • Private companies have **data providers**, mostly DataStream, Ava and MacroBond. Most users access the	• The programme follows a standard dissemination strategy, which is satisfactory. • The clarity of the information might depend on the target audience as it is largely understood by researchers. However, **the general media does not usually deep dive into the data as the raw presentation of the data might be more challenging for them**. Many partner institutes pointed out that guidelines and supporting documentation are targeted at stakeholders that are already users of the data. **The general public might need more detailed guidance**. • A majority of partner institutes pointed out that the **visibility of the data and the programme could be**

data from the DG ECFIN website or Eurostat website.
• Many users across all stakeholder groups pointed out that the **format of the data could be improved on the DG ECFIN website to enable easier automisation and updating of data sets**. The current format requires a lot of manual work and is not very user-friendly.
• Most expert and academic users suggested that key features to be integrated would be **a search function and filters to avoid having to search for specific data manually**. Many users said that the Eurostat website is more user-friendly in its presentation and that it would be beneficial if the two websites could be harmonised for a better user experience that would require knowledge of only one set of functionalities. Others suggested that Eurostat disseminate the data directly for more efficient communication.
• Integrating all the data and aggregates in the Eurostat datasets was also mentioned as a potential improvement. To get around this, a few users access the data through data aggregator websites which provide the data in better format for free (for example DB Nomics). A few users also receive the data directly from national statistical offices.
• Some expert users pointed out that **the metadata has not been updated since 2016.** Adapting metadata to have a more practical approach to the data would be much appreciated by users.
• Users from the press suggested that the press releases do not provide much-added value as they merely describe what is in the data. **It would be more interesting for these users to have more context and for the press releases to be usable by journalists as quotes.** In particular, more context as to why an indicator has changed or evolved would be needed.
• Overall, a significant number of users across all stakeholder groups said that the **visibility of the programme could be improved.**
• Users provided some improvement suggestions:
  ◦ Improve the presentation of the data
  ◦ make a search function available for particular data series
  ◦ have all the data synchronised in Eurostat
  ◦ make the User Guide more practical in how the data can be used
  ◦ make use of AI to create a chatbox to help users find their way.
	improved by communicating more on the practical use of the data sets. Making the platform more user-friendly would also help in that regard.
	• One partner institute said that the PMI (Purchasing Managers' Index) has a better communication strategy than the BCS Programme, which means that it also has better visibility for the general public and for use and promotion of its data.
	• Some partner institutes suggested that the Excel database should remain available but a more user-friendly presentation should also be provided. In particular, filters and a search bar to easily and quickly find information on a specific indicator or variable would be appreciated.
	• Multiple partner institutes mentioned that some users might need more guidance, as it depends on the target group.
	• Partner institutes remarked that on the DG ECFIN website, metadata at country level is outdated (last update was 2016).

ONLINE QUESTIONNAIRE	
• 44% of respondents agreed the data from the BCS Programme is easily accessible and presented in an understandable form, while 48% provided no answer and 7% disagreed. • 11% of respondents indicated that they access the data directly through the national data provider, 52% access it through the EU BCS website of DG ECFIN and 22% through the Eurostat website. Others indicated that they access the data through the ECB Statistical Data Warehouse or private data providers such as Haver or Macrobond. • 85% of users indicated that the metadata and supporting documentation provided are sufficient and appropriate, while 11% disagreed and 4% did not provide an answer.	• This question was not asked in the partner institutes' online questionnaire.

Source: Deloitte and DIW Econ

- **In your opinion does the EU BCS enhance partner institutes' capabilities and contribute to the development of new indices and products? Which capabilities were enhanced? How could the BCS Programme be modified to improve knowledge sharing?**

INTERVIEWS	
Users	**Partner institutes**
N/A	• For a majority of partner institutes, being part of this programme is **a good credential, which allows them to have more visibility in the market**. This can help them secure new contracts as well. • Several partner institutes indicated that the BCS Programme is **not particularly demanding methodologically** so in that sense it does not enhance their capabilities (i.e. usual processes for other surveys). • Some partner institutes pointed out that the **methodology and required coverage of the programme is quite rigid and does not allow for much innovation**, but they do not perceive it as a barrier. Instead, **the rigidity allows harmonisation across geographies and stability for long time series**, and these are the most important aspects of the programme. • The **diversity of partner institutes participating in this programme is an added value in learning different uses of the data and sharing experience on technical issues**. This is particularly appreciated during the annual workshop. • Multiple partner institutes indicated that having a centralised platform at the EC level would help knowledge sharing. This should be an interface through which the EC and partner institutes could communicate, for example on changes of the methodology or addition of questions. Even though the annual workshop is very helpful, it remains very academic and the number of participants prevents sharing on a more practical level. Such a platform, or more regular workshops, would help in this regard.
ONLINE QUESTIONNAIRE	
• This question was not asked in the users' online questionnaire.	• 95% of respondents indicated that the BCS Programme enhances partner institutes' capabilities and contributes to the development of new indices and products, while 5% indicated that it does not.

Source: Deloitte and DIW Econ

- **To what extent was the design, implementation and financing of the programme appropriate? Have changes improved its appropriateness and efficiency?**

INTERVIEWS	
Users	**Partner institutes**
N/A	• Some countries have specific teams who take care of the administrative and financial parts, so the financing and design of the programme is not a problem for them. Some countries see some improvements from the past, especially in terms of the **paperwork burden.** • Multiple countries identified an issue in the move from "traditional" financing (i.e. via a call for proposals through which DG ECFIN selected one partner institute and then cover the full amount) to the

	current partnership agreement (i.e. annual award through a grant agreement) where, since 2021, there has been a unit cost per staff category which did not allow for correction for any labour cost inflation suffered after the COVID-19 pandemic in 2020 as unit costs are calculated on the basis of historic payroll data and thus refer to staff costs incurred during the reference year 2020 (i.e. the financial management was considered inefficient as the summary of costs did not reflect the actual costs incurred, but rather those that would have been incurred if salaries had not changed since 2020. • Several countries pointed out that the **administrative paperwork is very time-consuming and was more efficient in the past.** • All partner institutes are now requested to estimate the costs in a very detailed manner, in terms of labour costs, telephone, etc. This has to be based on a previous reference year to develop a detailed estimation of costs. At the end of the period, they have to justify the actual working time spent by the different staff categories. This works when the economy is stable, with low inflation, as there are no major changes in salaries. However, the costs are currently significantly affected by salary increases and high inflation rates. • Overall, **the recent changes have been criticised by several partner institutes**. The financial design is rigid and does not help their innovative capacity. Indeed, when questions are added, the funding grant goes down. • Multiple partner institutes indicated that having a centralised platform at the EC level would help the programme management be more efficient. An interface in which the EC and partner institutes could communicate, for example on changes in the methodology or the addition of questions would help communication between the partners (see above) and could also be used for administrative purposes.
ONLINE QUESTIONNAIRE	
• This question was not asked in the users' online questionnaire.	• 52% of respondents answered that the changes in the design of the programme have improved its efficiency while 48% said that they have not.

Source: Deloitte and DIW Econ

- **Do you have a use for the FSSS? If yes, in your view, does the Financial Services Sector Survey complement other data provided by other financial services surveys?**

INTERVIEWS	
Users	**Partner institutes**
• **None of the users interviewed through stakeholder consultations were able to provide feedback on the FSSS as they did not have a use for it**. Stakeholders consulted on this question included national central banks, private sector companies, academics and researchers as well as institutional users. • Some central banks and commercial banks pointed out that **they have developed their own internal financial surveys** tailored to their specific needs, which rendered the FSSS redundant for them. However, they mentioned that **their analysis is**	• The partner institute responding to this survey **did not have visibility on the users of the data**, but shares the two reports produced each year with the panel of respondents to keep them engaged. This respondent mentioned that **giving more visibility to the data would provide encouragement to respondents.** • Partner institute is aware of reports produced and sold by private companies based on the data. Partner institutes **does not have visibility on similar potential competing products on the market**.

complemented by the five other surveys in the BCS Programme which provide a forward-looking perspective to their financial stability analysis and help them assess the risks from the macro environment and sectoral credit risks. • These stakeholders also pointed out that information provided by the **financial sector is highly sensitive and that financial companies are hesitant about sharing information**. Having full control and visibility of the context of the survey, the questions asked and the profiles of the respondents were identified as key elements for making the data reliable enough for users' needs, and having all the relevant information available for accurate analysis.	
ONLINE QUESTIONNAIRE	
• Responses to the online questionnaire confirmed these insights as 37% of respondents answered "Do not know" to the question of whether the FSSS complements other data provided by other financial services surveys, while 18% "Agreed" or "Strongly Agreed". 44% of respondents did not answer as the question was included in the survey after it had been launched.	• This question was not asked in the partner institutes' online survey.

Source: Deloitte and DIW Econ

- **Does the sectoral aggregation of the results meet your (users) needs? Should different aggregates be introduced? If that's the case which ones do you consider the most useful?**

INTERVIEWS	
Users	**Partner Institutes**
• The sectoral aggregation is **good as such, as it follows the official classification from the European statistical offices**. • Some users voiced specific opinions during the interviews: **some questions are not asked across all sectors** (e.g. capacity utilisation is asked for industries and services but not construction), which can limit the coverage of the questions. A few users did not consider these differences justified. • Most academics and other expert users said that the sectoral aggregation **should not be changed too quickly as most models are based on this type of structure** and it would add a burden for researchers and other users. • **Some users pointed out that classifying industries by product types is not always the most useful for economic interpretation.** • Most users said that if any changes were to be implemented, **sample size should be taken into consideration**, especially for small countries, as a small sample size would compromise the results.	• A large majority of partner institutes said that the sectoral aggregation is good as such, as it follows the official classification from the European statistical offices. • Some partner institutes pointed out that the **services aggregate could be further broken down** as it is too broad. • One partner institute pointed out that **some industries are misclassified:** 45-2 (Casting of steel/Maintenance and repair of motor vehicles/Maintenance and repair of motor vehicles) and 45-3 (Casting of light metals/sales of motor vehicles and accessories/wholesale trade of motor vehicle parts and accessories/retail of motor vehicle parts and accessories).
ONLINE QUESTIONNAIRE	
• 96% of respondents said that the sectoral aggregation of the survey results is appropriate, the remaining 4% did not provide an answer.	• This question was not asked in the partner institutes' online questionnaire.

- **Is the disaggregation of the results in terms of sub-sectors and consumer categories sufficient/appropriate?**

INTERVIEWS	
Users	**Partner Institutes**
• The disaggregation is **enough as it is for forecasting**. • Expert users voiced an interest in having sub-sectoral data with disaggregation that goes beyond the NACE two-digit level but they understood that this would be difficult to implement in practice. • Expert users and academics said that **microdata would be of more interest than further disaggregation** by ECFIN so that each user could aggregate/disaggregate the data as needed. • Some expert users, mainly from the private sector, asked for specific changes, such as separation of the shortage of materials and equipment as factors limiting building activity in the construction and industry surveys, further differentiation between traditional and e-commerce, and separation of SME and MNE data. In particular, services is too broad a categorisation and should be further broken down. Some users pointed out that some services (e.g. hospitality or banking) are prevalent in some countries but not in others. A further breakdown of services would therefore be useful. • Other users remarked that further disaggregation of investment and expected investment would be interesting for forecasting. The interest is mainly in knowing where the expected investments are directed (internal (e.g. staff, machinery, R&D) / external (e.g. acquisition of other companies))	• Partner institutes had received **no negative feedback from users so far**. They had received requests from clients for more regional disaggregation, which they cannot provide. • Some partner institutes suggested **classifying aggregates at the letter level rather than at a double-digit level**. • **Partner institutes in most countries said that disaggregating results below the 2-digit level would not be useful** as it would increase noise and the sample size would be too small.
ONLINE QUESTIONNAIRE	
• 89% of respondents considered that the disaggregation of survey results is sufficient while 11% indicated that further disaggregation would be needed.	• This question was not asked in the partner institutes' online questionnaire.

Source: Deloitte and DIW Econ

- **How far is access to the microdata of EU BCS needed for up-to-date statistical analysis? In light of repeated requests from researchers to get access to the micro-data underlying the business survey, would you be willing to share that microdata with the Commission for dissemination?**

INTERVIEWS	
Users	**Partner Institutes**

• **A majority of users considered that the programme should be as open as possible with its data collection and data publication to enrich research projects**. This includes the publication of microdata.
• Growing uncertainty increases the need and case for access to microdata. **If access to microdata cannot be granted, academic users said that 3-digit level data would be very valuable**.
• Microdata would be useful to: **study how the price expectation/inflation expectation is created** (i.e. how expectations are formed); **analyse shortages in the labour market for skilled workers; pinpoint a moment and the direct impact of a shock** (i.e. impact of business behaviour); **build experimental models** (regression type models and multivariable
	• Some partner institutes **do not want to share the microdata** as they have agreements with the respondents not to share that information.
	• A majority of partner institutes said that if access to microdata were to be granted, **the contract between partner institutes and the European Commission should state that and the partner institutes should be compensated for providing it.**
	• A significant number of partner institutes formulated some concerns about this and made the following points:
	  ◦ Access and use should be granted only to researchers
	  ◦ The data provided by the survey is sensitive as it provides insights into companies' economic

analysis). • Some users suggested that anonymised microdata would not be useful as it defeats the purpose of having access to microdata. Indeed microdata would be most useful if it were complemented by the context of the respondents. Anonymised data would therefore not be as useful. However, users understand that non-anonymised data cannot be provided.	situation, their expectations and indirect insight into their strategy. **Providing access to microdata could affect response rates as companies could become reluctant to provide that information**. • All partner institutes said that any microdata should be anonymised, but many pointed out that this might not be enough, especially in certain smaller sectors and countries, where it would still be possible to identify respondents. • One partner institute suggested **publishing the microdata with a time lag of 2-3 years** rather than current microdata to avoid the pitfalls cited above. • Partner institutes in some countries have already implemented an application process for users to request access to microdata.
ONLINE QUESTIONNAIRE	
• 59% of respondents "Agreed" or "Strongly Agreed" that access to microdata would improve up-to-date statistical analysis of economic developments. 19% of respondents "Disagreed" or "Strongly Disagreed" while 22% answered "Do not know".	• This question was not asked in the partner institutes' online questionnaire.

Source: Deloitte and DIW Econ

- **Is there a capacity to adapt to very specific needs in particular moments, as was the case during the COVID-19 pandemic? Is there a way in which ad-hoc survey questions could be introduced more rapidly/ with less administrative burden? Would you have a concrete idea how what an easy system for including ad hoc questions could look like?**

INTERVIEWS	
Users	**Partner institutes**
• N/A	• Partner institutes' answers to this question were quite divided and diverse. • Some partner institutions expressed the view that there is no capacity for this as it is too complex. It implies new requirements and agreements in the contract as the current administrative and financial burdens are too rigid to allow this flexibility. • **Obtaining reliable information would be more difficult as new questions would need to be tested first and respondents might not respond given the unexpected additional burden**. If the set of questions were too long, there would be a risk of this compromising the response rate. Any change would be costly to implement and the quality of the questions and their insights would have to take priority to ensure the integrity of the data rather than adding a new question rapidly. • Others were undecided and said that introducing ad-hoc questions when surveys are conducted online should not be a problem, but more time and resources would be needed for printed surveys. • Finally, some partner institutes did consider that there is the capacity to add ad-hoc questions. • **Some countries have already implemented solutions for respondents to identify ad-hoc factors that influence their business decisions**. One country has adapted one of the questions on identification of factors limiting economic activities. The question lists a few factors and respondents can also click "other". If they do that, they have to write down the factor. In the period leading up to this study, many answered war,

	inflation or COVID-19. This approach allows new factors to be identified, but does not require addition of a new question.
ONLINE QUESTIONNAIRE	
• This question was not asked in the users' online questionnaire.	• 61% of respondents answered that it would be possible to adapt rather quickly with little administrative burden or very quickly with almost no administrative burden. The remaining 39% indicated that adaptation would either be rather slow or very slow, with a considerable to very large administrative burden.

Source: Deloitte and DIW Econ

- **What is your perception about the effort needed to take the programme forward? Is the connection between national and EU survey results accurately perceived by stakeholders? Is the survey perceived as a national or an EU effort in member states or candidate countries***?*

INTERVIEWS	
Users	**Partner institutes**
• The users' perception of the programme **largely depends on how they access the data**. If they receive the data directly from national statistical offices and only use their national data, they view the surveys as a national effort. When users access the data through the DG ECFIN website or Eurostat and make use of the entire data to compare data between countries, it is clear to them that it is an EU-wide effort. • **Where national statistics institutes did not have similar data before the programme, it is clearer that it is a European Commission programme**. In some countries, such as Germany, where similar indices were already provided by national statistical offices, the perception is that this is now a joint effort. • A majority of users, across all stakeholder groups, highlighted that the strength of the programme is **cooperation in data collection and data publication which enables comparability at EU scale.**	• From the partner institutes' point of view, **it does not appear that users pay attention to this**. In some countries, respondents to the surveys think that it is a local initiative, even though it is clearly communicated that it is funded by the EU. • In countries where the Business and consumer surveys were already provided before the BCS Programme, users might think that there are two separate surveys and not understand that they are part of the same programme. • A number of partner institutes indicated the feedback they received is that when users are aware that the programme is funded by the EU, they are not interested in knowing more as they consider the EC a reliable data source, and it is that which matters to them most.
ONLINE QUESTIONNAIRE	
• 15% of respondents answered that the survey is perceived as a national effort, while 70% indicated it is perceived as an EU effort. The remaining 15% answered "Do not know".	• 43% of respondents answered that the survey is perceived as a national effort, while 43% indicated it is perceived as an EU effort. The remaining 13% answered "Do not know".

Source: Deloitte and DIW Econ

ANNEX VI. CHANGES IN THE BCS PROGRAMME SINCE 2012

Table A6.1: Overview of changes in the BCS Programme since 2012

Year	Changes to the BCS survey
2012	**Introduction of new question on capacity utilisation in the services survey.**
2013	The Italian partner institute (ISTAT) introduces some methodological improvements in sampling and survey techniques.
	German services data revised to be fully in line with the NACE rev.2 statistical classification of economic activities.
	Croatia included in the EU aggregate. Historical values, as well as country weights, revised accordingly.
2014	**Latvia joined euro area on 1 January 2014 and was included in euro area aggregates**.
2015	Revision of Romanian investment survey data between 2011 and 2015.
	Change of partner institutes in Serbia and Türkiye.
	Lithuania joined the euro area on 1 January 2014 and was included in the euro area aggregates.
	Portuguese consumer data based on a new sample. For the back-casting of the series, the two samples were collected simultaneously between November 2014 and October 2015.
	Revision of the Bulgarian data for the five investment surveys conducted between March/April 2013 and March/April 2015.
	British partner institute (CBI) updated the sampling weights for the industry, investment, retail and services surveys in line with changes in officially available data from various UK government sources.
	Historical consumer survey series for Ireland revised from 2003 to 2015 for questions 1, 2, 4, 7, 8 and 10).
2016	Correction of discrepancies between partner institute (ISTAT) and DG ECFIN data for the industry, services, building and retail trade surveys.
	Consumer categories PR0 to PR9 discontinued Europe-wide.
	Due to a revision of the breakdown by occupation of the respondents as of May 2016, time series corresponding to consumer categories PR0 to PR9 discontinued until further notice.
	Statistics Portugal publishes the results for the services, construction, industry and trade surveys based on new samples and sampling frames.
	Change of partner institutes in Ireland and Montenegro.
	Correction of Slovenian investment structure data for the two aggregates Food and beverages industry (FOBE) and Consumer goods (CONS) for 2013, 2014 and 2015.
	In October 2016, French partner institute (INSEE) modified the industry capacity

	utilisation data (Q13) back to October 2004 to correct a break in the series introduced by the questionnaire harmonisation in 2004.
	Correction of data for Q10 of the Swedish industry survey (at total level).
	Correction of Dutch data for the industry, retail trade and services surveys between January and June 2016.
	Correction of French data for the services survey between January 2013 and May 2016, with significant revisions mostly for three NACE2 sub-sectors (56, 68 et 96).
	French partner institute (INSEE) introduced a modification of the secondary weights used when computing the industry survey balances.
2017	Revision of the design of the Dutch consumer survey.
	Change in weighting procedure in Türkiye.
	Revision of Italian data for services due to the inclusion of sub-sectors 75 and 90 to 96.
2018	Revision of past data for Germany back to 1991, reflecting changes in the aggregation of firm-level data and the inclusion of late responses implemented by the data provider (Ifo Institute).
	Revision of question 2 of the construction survey on factors limiting building activity in France.
2019	European aggregate recalculated and UK data excluded after the UK construction survey was halted in November 2019.
	Ireland included in the European aggregates. Historical values, as well as the country weights, revised accordingly. Country weights used to calculate the EU and the euro area aggregates updated.
	Structural change in the way consumer data is collected in Finland and Germany.
	Change of partner institute in Austria.
	Revision of the Consumer Confidence Indicator.
	Correction of Hungarian data for question 8 of the industry survey on factors limiting activity.
2020	Temporary changes in survey modes due to **COVID-19**. Containment measures resulted in lower response rates than usual. The partner institutions took different approaches to dealing with non-response, which led to several revisions.
	All EU aggregates calculated on the basis of 27 Member States (i.e. excluding the UK, which withdrew from the EU on 31 January 2020). Historical values of EU series revised accordingly.
	Structural change in the way consumer data is collected in Sweden.
	Correction for a change in several questions on order books and stocks in the industry, construction and retail trade surveys in Denmark in 2014 in order to harmonise them with the BCS Programme guidelines.
	Starting year of the standardisation window used for the construction of the ESI changed to 2000.

	Launch of an 'Employment Expectations Indicator' (EEI), which condenses the employment expectations in industry, services, retail trade and construction into a composite indicator.
2021	Factors limiting production (Q2) revised for Belgium.
	Revisions of Equipment & Material (F5) and other factors (F6) as factors limiting production (question Q2) for Finland and France.
	Following the introduction of a new sampling method and weighting procedure, time-series related to the Turkish services, construction survey back-casted for the period until December 2020.
	Misallocation in Latvian data of survey results from answers to the categories BUIL Q2 remedied.
	Introduction of the survey-based Economic Uncertainty Indicator.
	Country weights used to calculate the EU and the euro area aggregates updated.
	Back-cast conducted of the Slovenian time series most affected by the change in the consumer survey collection method in 2016.
	Revision of the weighting scheme of the Italian consumer survey.
	Change from quantitative to qualitative questions in the investment survey (DG ECFIN, 2022)
	Revision of factors limiting production (Q8) for Portugal
	Revision of Equipment & Material (F4) as a factor limiting production (question Q8) for Belgium, Finland and France. Revision of Other factors (F5) as factors limiting production (Q8) for Belgium and Finland.
	Revised weighting scheme introduced for the answers to the financial services sector survey.
2022	**Change in seasonal adjustment procedure and revision of affected data.**
	Revision of factors limiting production (Q8) for Czechia, Denmark, Italy, Hungary, Montenegro and Sweden.
	Correction of the French industry survey results for “shortage of material and/or equipment” (Q8-F4) for October 2021.
2023	**Discontinuation of the Financial Services Sector Survey (FSSS)**

Source: Deloitte and DIW Econ