Box I.2.1: New survey-based measures of economic uncertainty

Starting with the Great Financial Crisis of 2007-2009 and reinforced by the ongoing COVID-19 crisis, the concept of economic 'uncertainty' has received increased attention from economic analysts and policy makers. Given its dampening effect on firms' investment and hiring decisions, as well as consumer spending, [1] it is a key variable for explaining and forecasting economic growth.

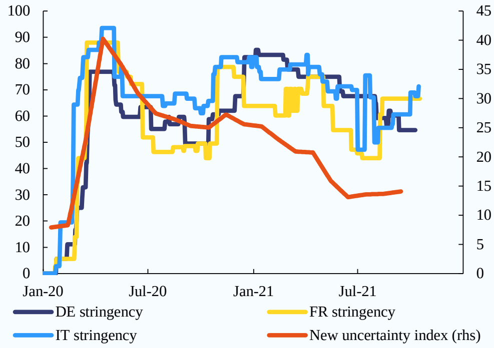
As uncertainty is not directly observable, economists have so far resorted to different proxies to measure it, the most popular ones including measures of dispersion of economic agents' views on the economic outlook, [2] indicators based on forecast errors, and indicators tracking uncertainty by text mining news articles in the press (e.g. the World Uncertainty Index or the Economic Policy Uncertainty Index). [3]

The European Commission has enriched the toolbox available to policy makers for monitoring economic uncertainty by embedding a new, direct measure of uncertainty in its Joint Harmonised EU Programme of Business and Consumer Surveys (BCS) on a regular monthly basis, starting from May 2021. Data for previous months is available for some Member States and sectors from a testing phase, allowing for the calculation of an EU uncertainty index as from April 2019.

The new survey question asks managers and consumers to indicate how difficult it is to make predictions about their business situation or household finances, respectively. Enquiring the deviation of possible economic outcomes around a central expectation, this new measure of uncertainty is conceptually different from the existing composite indicators of 'sentiment' and 'confidence' which are derived from survey results, and which aim to capture the central expectation itself.

Preliminary results show that the new uncertainty measure evolved broadly in line with the stringency of the government-mandated restrictions to activity put in place to contain the spread of the COVID pandemic (see Graph 1). It peaked at the height of the first wave of the pandemic, when unprecedented lockdown measures were enacted.

Graph 1: **EU uncertainty and Oxford stringency indices**



Source: European Commission, University of Oxford

The second wave of the pandemic in autumn/winter 2020 created a smaller increase in uncertainty than the first one, as the containment measures enacted were no longer unprecedented, and managers and consumers had gained some "experience" living with them. What is more, the breakthrough development of vaccines in late 2020 and the prospect of mass vaccination campaigns served to anchor managers' and consumers' expectations about the outlook.

In spite of its gradual decrease over the last 1½ years, uncertainty remained, in September, above pre-pandemic levels. This seems plausible, taking into account that the pandemic health threat is still lingering, on the continent but also beyond, especially where vaccination rates have remained low so far. Moreover, the long-term impact of the pandemic crisis on the economy is still difficult to gauge.

(1) See e.g. the discussion in Bloom, N., Bond, S., and Van Reenen, J. (2007), "Uncertainty and investment dynamics", Review of Economic Studies, Vol. 74, No 2, pp. 391-415; Meinen P., Roehe O. (2017): "On measuring uncertainty and its impact on investment: cross-country evidence from the Euro area", Eur Econ Rev 92, pp. 161–179, Bloom, N. (2009), "The Impact of Uncertainty Shocks", Econometrica, 77(3), pp. 623-685; Gieseck, A. and Largent, Y. (2016), "The Impact of Macroeconomic Uncertainty on Activity in the Euro Area", Review of Economics, vol. 67, no. 1, pp. 25-52; Ghirelli, C., Gil, M., Pérez, J.J. et al. (2021), "Measuring economic and economic policy uncertainty and their macroeconomic effects: the case of Spain", Empirical Economics 60, pp. 869–892.

(2) Bachmann, R., Elstner, S., and Sims, E. R. (2013) "Uncertainty and economic activity: evidence from business survey data", American Economic Journal: Macroeconomics, 5, 217–49.

(3) Baker, S. R., Bloom, N., and Davis, S. J. (2016), "Measuring economic policy uncertainty. The Quarterly Journal of Economics", 131(4): pp. 1593–1636.

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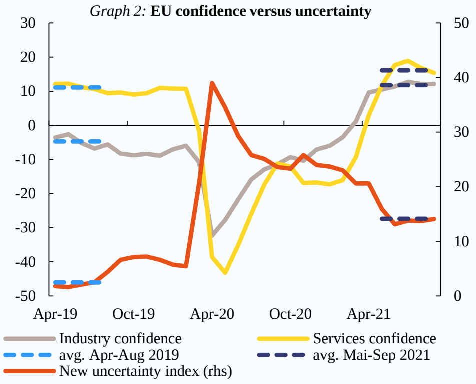
Box (continued)

Since 2019, uncertainty has been negatively correlated to developments in 'confidence' (see Graph 2). Thus, rising uncertainty has generally coincided with negative developments in confidence/the economy. However, the new survey-based measure of uncertainty is more than a simple mirror image of the existing indicators of confidence. This can be illustrated by the fact that by summer 2021, confidence in all surveyed business sectors had strongly rebounded to levels significantly above those in spring/summer 2019. [4] By contrast, uncertainty in summer 2021 remained well above its level two years ago.

Graph 2: **EU confidence versus uncertainty**



The sectoral breakdown of the new indicator points to intuitive cross-sector and cross-branch differences: services and retail trade experienced stronger increases and more protracted uncertainty than industry, and uncertainty in consumer-facing services has been dissipating at a much slower pace than in activities fit for 'home-officing', such as computer programming, consultancy and related activities.

From a conceptual point of view, the new survey-based indicator has the advantage that it is based on answers of firms and consumers about the foreseeability of future economic developments, and is thus a genuine and direct measure of perceived uncertainty. A comparison with a selection of existing measures of uncertainty in European Commission (2021) [5] suggests that the new indicator follows broadly the same trend but is less volatile and identifies changes in economic uncertainty at an early stage.

The new measure has the additional advantage that it can provide for a breakdown of business uncertainty by sectors and branches, or, for consumers, by socio-economic groups. It will be key in monitoring the vulnerability of the EU economies to future economic shocks.

(4) Average confidence in the EU in the period April-August 2019 was -4.7 in industry and 11.1 in services. In May-September 2021 it was up to 11.8 and 16.1, respectively.

(5) European Commission, European Business Cycle Indicators, 3rd quarter 2021, Special topic: New survey-based measures of economic uncertainty.

confirms moderation of activity in the fourth quarter.

However, *economic sentiment*, as reported in the Commission business and consumer surveys, remains upbeat. According to the flash estimate, consumer confidence dropped in October, but only moderately so, leaving it well above its pre-crisis level. By contrast, economic sentiment by business managers improved slightly in October, driven by improving confidence in services, construction and, to a lesser extent, retail trade. Confidence remained virtually unchanged in industry. Unlike the PMI indicators, which focus on activity in the month preceding the survey, the Commission indicators of economic sentiment are largely forward looking. They reflect, inter alia, expected demand, based on assessments of order books and the scarcity of stocks, which are currently at record high levels.

Overall, recent data (as well as Eurostat's preliminary flash estimate released after the cut-off date) is still consistent with another quarter of solid GDP growth in the third quarter. The fine print is set to come in lower than previously anticipated, at 2.1% in quarterly terms, as the strong growth in the second quarter would have advanced some of the rebound that was expected in the summer. Moreover, disruptions in the flow of raw material and intermediary goods and firms struggling to fill vacancies in several sectors seem to have started dampening production.

The EU economy is set to be virtually back to its pre-pandemic output level (2019-Q4) in the third quarter of this year – one quarter earlier than previously expected. It will then move onto an expansionary path in the fourth quarter, as activity in contact-intensive service sectors recovers further.