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Deep Focusing

The Expert Construction of Credible Futures in Economic Forecasting

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WORK IN PROGRESS

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Abstract

In the absence of undisputed facts and evidence, the future can only be imagined. Suspension of disbelief is crucial for imagined futures to gain sufficient traction to enable action or elicit consensus. Through the case of macroeconomic forecasting, this paper examines how expert organization establish their credibility among their peers by creating a time-based order. The investigation draws on a mixed-methods approach that combines quantitative data, interviews, and ethnographic observations. I introduce the concept of “deep focusing” to account for this three-part process: 1) breaking down the “future” into horizons based on specific issues and categories, rather than a determined period of time, 2) constructing a view of each of these horizons according to distinct, and sometimes antagonistic, principles, and 3) connecting these views to generate a cohesive continuous future, so that “the future” itself is the outcome of expert labor.

Keywords

Economic Forecasting; Imagined Futures; Suspension of Disbelief; Credibility; Expertise; Deep Focusing; Construction of Time

1. Introduction

Weather bulletin, opinion polls, psychic reading, population projections, horoscopes, economic forecasts... everyday life abounds with instances of future-telling. Their enduring success reflects the propensity to seek the guidance of professionals deemed knowledgeable in uncertainty to navigate the ontological indeterminacy of the future and align one's action with one's practical concerns. Predictive practices thus encompass a wide array of social situations – from everyday life to global warming, from elections to finance. Their audiences or clientele include households, government officials, corporate executives, etc. The kinds of expertise they rely on range from the conspicuously unscientific palm-reading to generally PhD-level climate science. Some of these predictions look forward only a few minutes (“Will it rain in one hour?”), while others address issues that lie several decades ahead (“What will the world's population be by the end of the century?”). Specifying a time horizon is a key aspect of forecasting since, unlike most other types of expertise, it *explicitly* deals with the future.

The primary obstacle facing any form of future-oriented expertise is the lack of evidence: experts' claims about the coming events can only be confirmed or disproven in hindsight. What lends credence to future expertise beforehand? Through a mixed-method inquiry of macroeconomic forecasting, this article engages with the issue. A well-established practice aimed at anticipating the evolution of key macroeconomic aggregates (such as GDP, inflation, unemployment, or deficit) for a country or a group of countries over a defined time period, economic forecasting is a case of time-related expertise which relies on a set of scientific conventions (those of economics) and regularly affects public policies and economic decisions over various time horizons (from next year's budget to multi-year investment plans). Forecasting organizations continue to wield significant influence despite frequent setbacks. This makes economic forecasting an ideal vantage point from which to observe how experts handle time.

I claim that forecasters establish their own trustworthiness by transforming “time” as a *product* of expertise instead of a constraint. In particular, they classify the layers of the future (such as short-, medium-, and long-term) using disciplinary conventions and expert categories, rather than according to their “natural” inherent properties. Using the analogy with the cinematic technique of deep focus, whereby filmmakers keep multiple spatial planes in focus simultaneously, this paper demonstrates how economic forecasters establish a sharp view of various time horizons at once: a future so immediate that it resembles the present, a vision of the long-term end of the road, and a narrative account of how events may unfold in-between. Weaving these strands of the future together grants them with authority as they create a time-based economic order. Forecasters deal with and entangle temporalities in a way that makes their claims about the future believable. Their “styles of projecting” produce credibility rather than accuracy. They divide “the future” into distinct horizons, ranging from near- to long-term, which are not specified by specific times frames but by a predefined set of concepts, issues, and ultimately areas of expertise – for instance, economists largely consider the distinction between short- and long-term to overlap with that between conjuncture and structure.

This article also shows that time is not a continuous linear variable for experts. This challenges the conventional understanding that more distant futures are more uncertain and thus less predictable. This commonsensical belief assumes that the future is increasingly exposed to disturbances with growing distance, ultimately hindering the ability to depict it with clarity. The relationship between distance and uncertainty calls for more nuance: forecasting organizations are not without resources to navigate distant futures. Focusing on these organizations, a meso-level analysis suggests two different regimes of expert authority: short-

term expertise involves consensus building across organizations, while long-term expertise, which faces a radical lack of evidence, relies on the stability of opinions within organizations. Forecasters' credibility is based not only on their capacity to generate horizon-dependent visions of the future, but also on their ability to connect them seamlessly through causal stories, thus actively constructing the future itself and providing with a key means to coordinate both within and among organizations.

The argument is developed in four steps. Applying literature from economic sociology, political economy, and STS to the case of macroeconomic forecasting, Section 2 elaborates on the notions of credibility, expertise, and temporality. It identifies suspension of disbelief in the face of uncertainty as a research gap before introducing the concept of "deep focusing" to address it. Section 3 details the empirical material and mixed-method design on which the article relies. Section 4 examines how forecasters set forth short- and long-term as qualitatively different time horizons, albeit connected to each other by the medium-term. The findings of the paper are discussed in Section 6.

2. What Makes Expert Visions of the Future Credible?

A defining feature of modernity and a prerequisite for progress (Koselleck 1981; 2004), the openness of the future allows for the imagining of anything. In theory, the possible imaginaries are unlimited, while a circular conception of time assumes that the future merely reproduces the past. It therefore stimulates creativity, but the downside is the greater emphasis it places on uncertainty. Deciphering the future and outlining how coming events are likely to unfold faces the problem of the absence of undisputed facts. The credibility of claims about the future then serves as a de facto substitute for their validity, and is a prerequisite for consensus formation and coordination. Yet, the literature in social sciences often takes suspension of disbelief for granted, especially when it turns to the realm of expertise. Bridging this research gap advocates for an organizational approach that pays attention to how experts establish their credibility among peers. The concept of "deep focusing" is then introduced to address this need.

2.1 The Expertise of Forecasting Organizations

A common starting point in the social scientific literature concerning the future is that its uncertainty undermines action (Evans 2007). Weber's canonical study of the Protestant Ethic stresses how concerns about the future motivates actions in the present, hence the importance of *certitudo salutis*, or the "certainty of salvation" for the believers in the Calvinist doctrine of predestination (Weber 2001). When information about the coming environment (about the "state of the world", as economists call it) and/or about the probable consequences of an action are missing (Dequech 2003), actors can no longer calculate or discern a rational course of action. As Keynes famously put it, in the face of uncertainty, "there is no scientific basis on which to form any calculable probability whatever. We simply do not know" (Keynes 1937, 214). Uncertainty about the future threatens the ability to form rational expectations (Muth 1961; Lucas 1972) and, ultimately, to reach optimality and efficiency. Sociological studies of uncertainty in the economy pay attention to the devices actors use to mitigate uncertainty (Karpik 2010; Granovetter 1985; Beckert 1996), and thereby restore intentional rational action (Beckert 2002).

On the other hand, the openness of the future brings imagination to the fore: If the future cannot be known, it can still be imagined. Imagination is the centerpiece of the notion of “fictional expectations” (Beckert 2013; 2016), which in recent years has triggered a rapidly growing strand of research in recent years, usually referred to as the “sociology of imagined futures” (Beckert and Suckert 2021; see Suckert 2022 for a review of literature). This strand aims to solve the theoretical puzzle of future-oriented action by studying how *would-be* rational actors behave in the face of uncertainty. In such circumstances, action relies crucially on “fictions,” that is, “present imaginaries of future situations that provide orientation in decision-making *despite* the uncertainty inherent to the situation” (Beckert 2013, 222 original emphasis). Sharing the same (or, at least, a similar enough) vision of the future, whether true or false, allows actors to coordinate by acting “as if” their common imaginary was the “future present.” Although imagined, visions of the future are not just based on cognition. Devices and instruments, some of which material like business plans (Giraudeau 2018), may generate fictional expectations. Among them, forecasting, “an institutionalized technique explicitly dedicated to the purpose of making sense of the future,” (Suckert 2022, 410) holds a special place, since forecasters fuel others’ visions of the future by expressing their own. It is a key component of forecasting organizations “soft power.” (Beckert 2021) Drawing on literary theory, Beckert reminds that the fictional nature of expectations nonetheless requires suspension of disbelief. The notions of “fictional expectations” and “imagined futures” are key building blocks of a comprehensive theoretical synthesis that covers a wide array of literature in sociology (beyond just economic sociology), political economy, and economics. As a result, it reveals some of its blind spots.

First, while ambitioning to bridge the micro-macro gap to examine the micro-foundations of capitalist dynamics, this approach focuses mainly on the micro-sociological theory of action, as reflected in the very term “fictional expectations.” This conception mirrors the notion of “projectivity” (Mische 2009), which deals with “the projective dimension of human agency” (Emirbayer and Mische 1998). In line with the classical backward-looking stance in sociology (Abbott 2016), this approach mostly conceptualizes projectivity as an individual capacity and therefore seeks to investigate how various resources bestow uneven agency upon individuals. Studying the impact of class background, socio-demographic variables, or educational and professional attainment on the experiences of the future is a prevalent approach in sociology. It is used to investigate the formation of aspirations regarding future achievement, the unequal “reach” into the future – i.e. “degree of extension of imagined futures into short, middle, and long term” (Mische 2009, 699), – as well as assumptions about the future’s actual openness or closure (Beckert and Suckert 2021, 10–11). Because they focus on the micro level of individuals, these works propose a limited analysis of the actual mechanisms by which actors coordinate, i.e. by which they ultimately share a same vision of the future.

Turning to a meso-level enables dealing with the process of coordination both between and within “promissory organizations” (Pollock and Williams 2010). This means paying attention to the fictions these organizations create, and not just the ones they influence. In the case of economic forecasting, the issue is even more acute since such organizations have long flourished. In the Gilded Age, the USDA, local association of growers, and independent forecasters all made predictions on cotton yields and prices (Pietruska 2017, chap. 1), and credit rating agencies already provided lenders with information on their borrowers to evaluate their risk of default (Carruthers 2013; 2022). From World War 1 to the Great Depression, a wide range of organizations claimed foresight of the coming economic environment, originating either from academia, like the Harvard Economic Service (HES, see Friedman 2009) or the London and Cambridge Economic Service – a collaboration between the University of

Cambridge and the London School of Economics (Cord 2017), or from business-oriented firms, like Brookmire's or Babson's (Friedman 2014). In the early 2020s, forecasting organizations are still diverse: governments, central banks, agencies, research institutes, think tanks, banks, insurance companies, and large non-financial firms all produce macroeconomic forecasts. Such an organizational diversity strongly suggests not taking their coordination for granted, since differing visions of the future may coexist, if only because organizations of differing natures may not share a same "reach." This hints at the possible difficulty to coordinate between different modes of future-making, which may amount to competing horizons and experiences of time (Tavory and Eliasoph 2013), and which differ based on the purposes of organizations – as illustrated by the differences between economic forecasters and market analysts, even when working in the same bank (Wansleben 2014).

A second blind spot of the "fictional expectations" approach relates to its emphasis on rational action: It holds an instrumental perspective on forward-looking expertise. It considers forecasts as mere instruments, or "props," economic actors rely on to build fictions: "Actors use forecasts to help them behave *as if* they know the future present, or at least important elements of it." (Beckert 2016, 217, original emphasis) In this respect, they may spread similar imaginaries among actors and facilitate their coordination. However, this perspective assumes forecasts shape actors' visions of the future rather than expressing forecasters' own visions. Likewise, it considers forecasters mostly, if not only, deal with "external audiences," such as clients, stakeholders, or the general public. This is consistent with prevailing view in the literature that emphasizes the "frontstage" (Goffman 1959; 1971) when it comes to expertise. Expert administrations are scrutinized with respect to how they intentionally cultivate their organizational reputation (Carpenter 2010) or use rhetorical techniques to convincingly draw the boundary between "science" and "policy" (Hilgartner 2000). Regarding economic forecasting, the "soft power" (Beckert 2021) of promissory organizations enable them to influence to public. For instance, through press releases and public announcements, central banks perform an "economy of words" (Holmes 2014) which ultimately strives to align public expectations with the objectives of the bank, particularly its inflation target – a process referred to as "expectations management" (Braun 2015; Velthuis 2015; Wansleben 2018). This focus on "external audiences" holds true even in situations that seemingly challenge the dichotomy between frontstage and backstage, like "regulatory dramas" when expert organizations hide information they acquired backstage from the industry they regulate to the wider public gathered frontstage (Fink 2023), or "epistemic participation," which emphasizes the contribution to expertise of what constitutes its very object – representatives of the economy in the case of macroeconomic forecasting (Reichmann 2013).

In contrast, these works overlook that the primary audience for forecasters is fellow forecasters – a feature that can be exploited to deliberately create consensus by encouraging experts to alter their opinions in response to those of others, like the Delphi technique used at RAND during the Cold War (Andersson 2018, chap. 5). It nonetheless raises the issue of coordination anew: If forecasts enable coordination among ordinary actors, what mechanisms trigger coordination among forecasters? The case of economics exemplifies it strikingly, from the reliance on rhetoric to generate compelling accounts (McCloskey 1983) to the use of models as narrative devices that lend metaphors with mathematical, or at least numerical, objectivity (Morgan 2001; 2012), from the economic barometers which were developed during WW1 (Persons 1916; Chancellier 2006a; Schwarzkopf 2022) to modern DSGE models (Colander et al. 2008; Edge and Gürkaynak 2010; Romer 2016 for a critical discussion) and common macroeconometric models (Evans 1997). It sheds new light on forecasters' extensive and sometimes conspicuous reliance on a comparatively uncontroversial form of scientific knowledge, namely economics and statistics to be found in textbooks (Carnot, Koen, and Tissot

2005; Elliott and Timmermann 2016) or research articles (Bernanke and Woodford 1997; Koenig, Dolmas, and Piger 2000; An, Jalles, and Loungani 2018; Feuerriegel and Gordon 2019 to name a few; for an overview, see Elliott and Timmermann 2008).

2.2 The Puzzle of the Suspension of Disbelief

The third blind spot of the “fictional expectations” approach concerns the suspension of disbelief. It brings the notion to the fore. This element is crucial for “fictionality”: To act “as if” imaginaries were the future present, it is necessary actors suspend disbelief. While the sociology of imagined futures acknowledges its importance, it leaves the conditions for achieving it unquestioned. This is arguably due to the implicitly functionalist stance of this approach. Since actors need fictions upon which to form their expectations, suspension of disbelief is a problem always already solved: Actors want to believe anyway. The suspension of disbelief is then practically irrelevant an issue. This would be even more true when it comes to economic forecasting, as forecasters’ academic credentials, at least MAs and often PhDs, supposedly certify their command of the tools, techniques and knowledge necessary to their tasks. By deriving their authority from their formal training and specialized knowledge, forecasters would successfully enable ordinary economic actors to suspend their initial disbelief.

This assumption overlooks that, despite their training and experience, economic forecasters can only make educated guesses about how an uncertain future will unfold. Unlike weather forecasting which also relies on a well-defined set of scientific concepts and methods and whose predictive performance improves regularly (Daipha 2012), macroeconomic forecasters have a notoriously poor track record. This has prompted scrutiny from economists (Blanchard and Leigh 2013; Laster, Bennett, and Geoum 1999) as well as sociologists (Evans 1997; Pilmis 2018). In such circumstances, suspension of disbelief cannot taken for granted without scrutiny. Besides, and most importantly, suspension of disbelief is a key challenge forecasters regularly face with their peers (Evans 1999, chap. 6), including within the same organization (Evans 2007). Forecasters do not always reach consensus on their respective visions of the future. The history of forecasting is replete with disasters caused by disbelief – economic crises, such as the Great Depression or the Great Recession, are usually preceded by forecasting failures. For example, in his posthumous *History of Economic Analysis*, Schumpeter argues that “the [Harvard Economic Service] barometer curve indicated the approaching break in 1929 clearly enough – the trouble was that the interpreters of the curve either would not believe their own methods or else would not take what they believed to be a serious responsibility in predicting depression.” (Schumpeter 2006, 1131) Regardless of its historical accuracy (as explored by Dominguez, Fair, and Shapiro 1988), Schumpeter’s account candidly bring attention to disbelief as one potential reason why forecasters did not call the downturn. Despite the magnitude of the Wall Street Crash, contemporary forecasters still predicted a quick recovery instead of a worsening depression. Most experts believed that the economy would soon recover (Galbraith 2009, chap. VIII; Friedman 2009; 2014).

Eighty years later, the subprime mortgage crisis and the ensuing Great Recession exhibit similarities to the past. The forecasters convened at the Federal Reserve Open Market Committee (FOMC) failed to notice the developing financial crisis until the economic collapse was inevitable, as they believed that the macroeconomy and finance were disconnected (Fligstein, Stuart Brundage, and Schultz 2017). It is noteworthy that one the main conclusions of the British Academy Forum on the failure to anticipate the 2008 Crisis explicitly couples disbelief, consensus, and a lack of imagination: “the failure to foresee the timing, extent and severity of the crisis and to head it off, while it had many causes, was *principally a failure of*

the collective imagination of many bright people, both in this country and internationally, to understand the risks to the system as a whole.” (Besley and Hennessy 2009, emphasis added) Skepticism is a shared trait among forecasters, which sometimes appear unwise in retrospect. Additional examples can be found in weather forecasting. Devastating storms may go unnoticed as a threat by incredulous weather forecasters, who may inaccurately interpret ground data they are not willing to believe (Fine 2007), or dismiss evidence of the formation of a second storm within two days in the same area as too unlikely to be given credence to (Dedieu 2010).

Precisely because experts are presumably more skeptical than lay people, focusing on how forecasters manage to persuade their peers to believe in their claims about the future is well-suited a strategy to bridge the research gap regarding the conditions to suspend disbelief. This requires moving back from the exoteric circles of a discipline to its esoteric circle. Experts’ suspension of disbelief may stem from their adherence to a specific paradigm, which forms the foundations of their consensus (Boumans and Martini 2014). Paradigms unravel experts’ agreement from empirical confirmation, as dominant paradigms do not vanish when faced with contradictory elements (Kuhn 1962). They can overcome these challenges either by integrating these unforeseen observations into an updated paradigm, or by expunging such “uncomfortable knowledge” (Rayner 2012). In the analysis of public policies, the concept of paradigm highlights the need for a preexisting alternative theory to make revolutions possible (Hall 1993). Not only must the dominant paradigm be challenged, as was the then-dominant Keynesianism when stagflation and mass unemployment appeared in the late 1970s and early 1980s in the UK and US, but an alternative agenda-defining theory must be available to replace it, as was neoliberalism back then. Only then can a major policy shift take place, despite the importance of local political and administrative configurations on national configurations (Hall 1989).

A shared ideological or theoretical agenda creates an a priori consensus among experts that may persist despite empirical refutation and warrant disbelief. This has led to heavy criticisms of expertise itself. Expertise would purposely narrow, if not close, the range of possible futures and hence possible actions. Scientific advice informing government decisions would be less a matter of “objective science” than of political choices, making regulatory science a fifth branch of government, as Jasanoff (1990) famously put it. In particular, economic experts would limit the alternatives available to policymakers and would advocate for market-conforming policies under the guise of value-neutral science (Thelen 2014; Hirschman and Berman 2014). Some explanations of paradigm-based consensus relate to the academic training of experts, which can account for both the homogeneity of the normative views on economics among graduates of the same alma mater (Lebaron 2000) and the heterogeneity of expert views in a cross-national perspective, either because of the national configuration of the economic institutions and the economics profession (Fourcade 2009), or the varying influence of US-style economics among local policy actors (Christensen 2017).

The paradigm approach assumes that experts consciously advocate for a specific agenda and set of policies, and are in a position to *successfully* promote the measures they support. It therefore overemphasizes the importance of high-ranking policy advisers, such as cabinet members, or council of economic advisers, who can be credited with directly impacting policies. The notion of “economic style of reasoning,” which Berman (2022) borrowed from Hacking (see for example Hacking 1992), effectively addresses the issue. It accommodates broad worldviews instead of precise agendas or a specific set of policy advice and traces how the emphasis on efficiency from a microeconomic perspective gained dominance in the US between the 1960s and the 1980s. Its spread to administrative offices subtly but decisively paved the way for neoliberal policies and the decline of progressive politics in the US. However, the

notion of “economic style of reasoning” aims at describing its dissemination from esoteric to exoteric circles –it therefore focuses on external audiences. It nonetheless encourages to investigate what attributes of forecasters’ styles contribute to the credibility of their answer to the question: Where is the economy headed?

2.3 The Concept of Deep Focusing

Regarding an activity whose purpose is to engage with the future, and which comprises more than one temporality (forecasters routinely distinguishes between the short, medium, and long-term horizons), “styles of reasoning” amount to “styles of projecting,” i.e. particular ways of grasping the future and relating it to the present. These styles of projecting facilitate coordination by establishing a set of norms and conventions, which vary according to their “reach”, i.e. the temporal horizon they project into. The conventional anchoring of expertise ultimately makes “the future” itself a product of expert labor. The “future” is not an exogenous variable for forecasters, but an endogenous outcome of forecasting. They break it down into a finite set of horizons that differ from each other in terms of methods, techniques, and concepts that experts use to delineate and recombine them. The concept of “deep focusing” accounts for the complex nexus of “styles of projecting.”

A cinematic technique that appeared in the late 1930s at the intersection of aesthetic choices following the rise of photojournalism and documentary films, and of technical advancements, such as new forms of film stocks, improved lighting equipment and lenses (Ogle 1972), deep-focus photography allows creating composition in depth, i.e. “the simultaneous arrangement of dramatically significant action and objects on several spatial planes in the frame” (Cook 2004, 321). Jean Renoir (*The Grand Illusion*, 1937; *The Rules of the Game*, 1939) and William Wyler (*Wuthering Heights*, 1939; *The Little Foxes*, 1941) experimented with the technique, which matured in Orson Welles’s *Citizen Kane* in 1941 and William Wyler’s *The Best Years of Our Lives* in 1946 (Allen and Kuhn 2009). Because the expertise of a skilled photographer is necessary for deep focus, cinematographers are often credited with its development – and among them, Gregg Toland who perfected it while working on all the aforementioned movies except those directed by Jean Renoir (Beach 2015). Deep-focus photography provides a heightened sense of cinematic realism, similar to what viewers would experience in the theater (Allen and Kuhn 2009): As movie theorist André Bazin noted, such a technique “brings the spectator into a relation with the image closer to that which he enjoys with reality.” (Bazin 1967, 35) Realism is achieved through both space and time: not only does deep focus keep all spatial planes in sharp focus, but it also restores the fundamental continuity of reality by allowing for long duration sequences, whereas classical editing breaks up the action into separate parts (Bazin 1967; Ogle 1972). Deep-focus photography stresses the *unity* of action, objects, and actors within the frame, resulting in “a unity which permits it to be defined as a shot.” (Deleuze 1986, 26)

I claim experts handle future horizons in a similar fashion as filmmakers do to achieve composition in depth. They strive for a clear view of all relevant horizons, a process I call “deep focusing” to underscore that it is a product of forecasting labor. Forecasters construct each horizon in a unique way – just as cinematographers use different lighting depending the depth of planes. The three main temporal horizons forecasters deal with (short-, medium-, and long-term) illustrate, and further clarify, the theoretical distinction between three major modes of future-making, which Tavory and Eliasoph label “protentions” (*a*), “trajectories” (*b*), and “temporal landscapes” (*c*): “(*a*) tiny specks of future that are so immediate that they enter into the way we utter the next sound, make the next move, or experience our present, as in the

phenomenological notion of ‘protention’; (b) a family of approaches that deal with temporal trajectories, where actors explicitly or implicitly treat action as part of an unfolding process with a beginning, middle, end, an emotional tone, and a cast of characters; this mode folds within it both intentional “projects” and more passive movements within culturally expected narratives; and (c) narratives that actors experience as so naturalized and built into their social institutions that they treat them as inevitable.” (Tavory and Eliasoph 2013, 911–12) Deep focusing highlights that, while temporalities are initially contentless chunks of time (Schinkel 2005), forecasters distribute them into internally consistent classes, fill them with content, and articulate them in a meaningful way that makes them more or less consensual or contested.

Deep focusing also enables bundling these elements together to create an apparently linear future, which serves as a counterpart for cinematic continuity. In the case of cinema, this requires the use of material objects, such as film stocks, plastic substances, etc. In the case of future-oriented expertise, the necessary tools comprise statistical data, models, conventions, and deliberative processes to ensure coordination within organizations – the same persons may sometimes be in charge of all the time horizons in a same horizon, but this is not always the case. In cinema, differences in the treatment of spatial planes must be invisible to the viewers; likewise, the differences between representations of time horizons remain concealed, or at least unnoticed. Deep focusing is not only about bringing separate entities together, it is about doing so without a seam. This enhances the realism and credibility of the experts’ visions of the future, and ultimately contributes to the suspension of disbelief. As a technical operation, deep focusing showcases expertise and fosters coordination between organizations.

3. Data and Material

Applying the deep-focusing framework to the case of macroeconomic forecasting, this article presents findings from a mixed-methods research. Three types of data were collected: forecasts in their published numerical forecasts, ethnographic observations of forecast production, and semi-structured interviews with forecasters. This combination of empirical materials illuminates various dimensions of expertise: One of its key outcomes, the deliberative process it entails, and the set of professional practices it relies on.

This design first aims to identify the respective blind spots and limitations of the methods used. Across the qualitative-quantitative divide, this operation too often consists of testing the representativity of the qualitative data by reference to the quantitative material, thus assuming the superiority of the latter, usually based on the sample size. Such a narrow approach overlooks the fact that different types of data offer different insights. The design adopted here intends taking into account the peculiarities of each type of data.

This research design also challenges the conventional separation between “quantitative” and “qualitative” analysis, according to which different types of data would be kept apart, even when they contribute to the same research (Timans, Wouters, and Heilbron 2019). Instead, the design draws a back-and-forth sequence that integrates the two approaches identified by Small: “(a) using either textual or small-sample (qualitative) data to interpret the results derived from large-sample (quantitative) data and (b) using large-sample (quantitative) data to test the results derived from small-sample (qualitative) data.” (Small 2011, 65) Indeed, as we will see below, one of the hypotheses drawn from the interviews is contradicted upon testing by

means of a database, necessitating a return to the interviews and observations to make sense of the unexpected outcome. The research thus follows an abductive approach (Timmermans and Tavory 2012), utilizing hypothetico-deductive and inductive analyses at different stages to produce surprising evidence that may lead to new concepts and theories.

3.1 Database

First, the paper relies on a database compiling more than 40,000 forecasts. In addition to being an important forecasting output, such numbers track the activity of forecasters and the collective dynamics of the forecasting world with great precision. They make it possible to identify the emergence of a consensus among experts and to account for its temporality. The forecasts included in the database were produced for five countries (France, Germany, Japan, the United Kingdom, and the United States) and one group of countries (the European Union), and for two variables: Gross Domestic Product (GDP) and Consumer Price Index (CPI), the latter being a common measure of inflation. The collected forecasts were made between 1999 and 2021, with most (95.7%) made between 2004 and 2017.

The data were collected from a variety of sources, with the aim of including from both the private and the public sectors organizations (see Table 1). Most of the private sector data comes from Consensus Economics - a survey that collects macroeconomic forecasts for several economies.¹ It gathers forecasts from banks, asset managers, insurance companies, research institutes, think tanks, consulting firms, rating agencies and non-financial firms. A monthly publication, “Consensus” does not match the usual quarterly or annual pace of forecast publication. In interviews, forecasters who contribute to a “consensus”-oriented survey portray their own monthly reports as minor alterations of preexisting forecasts. In order to restore the periodicity of forecasting, and to prevent their weight within the database from making all other sources negligible, “Consensus” was systematically sampled to retain issues published at the end of each quarter - that is, in March, June, September and December.² Each producer was assigned to a particular sector, according to its main activity, using the following classification:

1) Governing Bodies

1.1) *International Organizations* (IOs) - International Monetary Fund (IMF), Organization for Economic Cooperation and Development (OECD), European Commission (EC)

1.2) *Government* - Council of Economic Advisers (CEA), *Direction Générale du Trésor* (DGT, French Treasury)

1.3) *Government agencies*³ - Congressional Budget Office (CBO), INSEE (French Statistical Agency)

¹ Consensus Economics self-describes as “the world’s leading international economic survey organization (www.consensuseconomics.com/, retrieved May 2nd, 2022). Several surveys compete on the “market for consensus,” like Blue Chip Economic Indicators, the Survey of Professional Forecasters (SPF) issued by the Philadelphia Fed or the EU-centered counterpart of the latter by the ECB. Interviews support the claim that such surveys matter a lot to forecasters – almost all of whom mention it spontaneously. Access to the data from Consensus Economics were obtained in the course of project “Infogouv” within the framework of the LIEPP center of excellence (see “Acknowledgments” Section).

² Appendix A provides further details on the sources consulted to build the database.

³ “Gouvernement” and “Government agencies” differ with respect to their connection to the executive branch. None of these labels assumes either dependence or independence from any branch of government.

- 2) **Central Banks** - *Banque de France* (BdF), European Central Bank (ECB), Federal Reserve Board (Fed)
- 3) **Data providers** - rating agencies, consulting firms, etc.
- 4) **Banks and asset managers**
- 5) **Insurance companies**
- 6) **Research institute and think tanks** - *Observatoire Français des Conjonctures Économiques* (French Economic Observatory)
- 7) **Non-financial companies**

<Table 1 about here>

A forecast is characterized by a country or group of countries (6 modalities), one predicted variable (GDP growth or CPI variation), one horizon (from 2000 to 2031), one producer (among 150 different organizations) and one date of production (year-quarter format), and its value.⁴ This generic formula can be expressed as an equation, enabling the measurement of the volatility of expert opinions, either their convergence among forecasters or their stability over time, utilizing standard deviation.

$$f_{i,j,k,l,m} = f(\text{entry}_i, \text{var}_j, \text{hor}_k, \text{prod}_l, \text{date}_m)$$

with entry_i the i^{th} element in the vector of countries, var_j the j^{th} element in the vector of variables, hor_k the k^{th} element in the vector of horizons, prod_l the l^{th} element in the vector of producers (i.e., forecasters), date_m the m^{th} element in the vector of dates, and $f_{i,j,k,l,m}$ the resulting forecast value.

Although forecasters carefully read each other’s work, it is impossible to study citation networks as Shwed and Bearman (2010) did to trace scientific controversies. The method requires two conditions, neither of which is met in the case of macroeconomic forecasting. First, controversies must be easily identifiable, usually through the association of unambiguous keywords (e.g., “cancer” and “smoking”). There are few debates on clear-cut forecasting topics that can be unambiguously circumscribed by a limited set of keywords (if only because these debates are highly time-sensitive). Second, an analysis of citation networks requires the presence of a system of bibliographic references, footnotes etc., which is generally absent from forecasters’ practices, as they rarely cite each other explicitly.

3.2 Observations

Secondly, I conducted ethnographic observations in two prominent French forecasting organizations. The aim was to gain insight into the process of forecasting, accessing “backstage.” Sociologists sometimes use meeting transcripts, such as the FOMC minutes (Abolafia 2010; Fligstein, Stuart Brundage, and Schultz 2017), to gain access to decision-making within organizations. Such material is only available for organizations that keep records of their meetings and publicly release them, either for reasons of accountability and transparency, or as part of a strategic effort like expectations management in the case of central banks. In any case, these documents often present the public face of the involved organizations or, in other words, “front-stage the backstage.” (Hilgartner 2000) Observations

⁴ Per definition, once the date of production and the horizon of a forecast are known, its distance to the horizon is easily measurable in quarters.

allow researchers to witness real-time backstage processes, and gain entry into non-recordkeeping organizations, such research institutes (Evans 2007).

In the first organization, a research institute, I attended work meetings for nearly three entire forecasting rounds in 2016 and 2017, which amounts to 22 observations (around three hours each). The process of forecasting alternates solitary work and collective discussions wherein forecasts are discussed. Although the former remained invisible to me, I argue that the latter are crucial because they frequently ignite debates and controversies about the credibility of country-specific forecasts and their incorporation in the shared framework. In the same organization, I also observed debates about the newly published forecasts with fellow forecasters (two observations, two hours each), and press conferences with the media (two observations, one hour each). All members of the forecasting team were informed of my role as a sociologist and the purpose of my research.

The second forecasting organization, a government agency, routinely presents its forecasts in public the day after they are released. The presentation is attended by dozens of macroeconomic forecasters from other Paris-based organizations. The meetings consist in a brief overview of newly-published reports, followed by Q&A (five observations, one hour each). I was granted permission to attend these meetings from the agency's management after I exposed my research project. As the meetings were public, I did not disclose my position as an investigator to the attendees or presenters, unless asked. While this second set of observations did not enable me to observe forecasting in progress, it did grant me insight into situations where forecasters often voice concerns regarding the credibility of forecasts.

All in all, I conducted 31 observations, lasting around 77 hours, during which I took detailed field notes (see Table 2). I coded them inductively using Citavi software. Observations also provided me with key examples when interviewing the members of these organizations.

<Table 2 about here>

3.3 Interviews

In addition, I conducted 59 semi-structured interviews with a total of 59 individuals⁵, mostly between 2015 and 2017. Most of the forecasters were recruited using snowball sampling. This method is particularly efficient for studying tightly knit networks, such as small professional worlds, provided that entry points are multiplied and/or the recruitment chain is long enough to avoid getting stuck in one subnetwork (Heckathorn and Jeffri 2001). In this study, there were sixteen entry points, and almost one in four recruitment chains involved at least three people between the interviewer (me) and the interviewee. Once such precautions are taken, snowball sampling benefits from network effects and actors' mutual knowledge to achieve high conversion rates: here, it reaches 67% overall (see Table 3). Interview duration ranged from 34 to 179 minutes, which an average of 79 minutes.⁶

<Table 3 about here>

⁵ Three interviewees were met twice, and two were conducted with three, and two persons respectively.

⁶ Collective interviews with more than one individuals, and multiple interviews with a same person are here counted as one interview.

Most, but not all, of the interviewees were forecasters based in France: 74.6% of the interviewees were French citizens (11.9% were US citizens), and 79.7% had their offices in the Paris area⁷. The interviews centered on the forecasters' careers and work. They were conducted in either French or English. They were also coded inductively using Citavi, according to the same principles and categories that had been applied to the observations, to ensure maximum comparability between the two materials. The position, sector, and citizenship of the interviewees are provided below the quotes whenever feasible, while maintaining anonymity.

The comparison of the distribution of organizations in the interview sample and the database allows for evaluating their respective coverage. This information is accessible from the collected material, thanks to the utilization of identical coding for organizations (see Table 4).

<Table 4 about here>

The observations take into account the relative importance of interviewees from research institutes or think tanks: No less than ten members of the observed research institute were interviewed. Contrary to what the comparison with the database might suggest, forecasters from banks, insurance companies, and non-financial firms were particularly sought after, if only to compensate for the relative lack of information about them. With few exceptions (see for example Wansleben 2014), research on bank forecasters is scarce, in contrast to their counterparts in government (Fourquet 1980; Krause and Corder 2007; Terray 2017; Angeletti 2021), central banks (Braun 2015; Goutsmedt et al. 2021), or research institutes (Evans 1999; 2007; Friedman 2014; Reichmann 2013). Despite accounting for nearly half of the collected forecasts, the banking sector only represents one in seven interviews. This is due to two phenomena. One is the inclusion of "Consensus" in the database, i.e. of a source that is primarily dedicated to disseminating forecasts from a broadly defined "non-governmental" sector. Another is the relative difficulty of spotting bank forecasters to interview (when disseminated, bank forecasts are seldom signed) and persuading them to participate. Indeed, they are more prone than most to not respond or decline interview requests than most others – second only to central bankers in this regard (see Table 3). Conversely, all other sectors, with the exception of international organizations, are better represented among the interviewees than in the database.

The comparison of the two materials highlights that they do not shed exactly same light on the world of forecasting, emphasizing the value of their combination. A database a priori assigns equal weight to all the elements it contains. Thus, the weight of a given category closely reflects organizational demographics - to take a striking example, a given country typically has more than one commercial bank, but only one central bank. The seemingly egalitarian perspective obscures the hierarchies within the forecasting world. The forecasts of "governing bodies" (such as the IMF, the Council of Economic Advisers, or the Congressional Budget Office in the case of the United States) and central banks are scrutinized more closely and given de facto precedence over those of other organizations due to their purported role in shaping policies. To continue the previous example, if there is only one central bank in a given country, its "voice" tends to be much louder than that of most commercial banks.

⁷ Appendix B provides further details about interviewees and interviews.

4. Styles of Projecting Across Time

Applying the concept of deep focusing to the case of macroeconomic forecasting requires an examination of how forecasters keep each time horizon in sharp focus before bringing them together to create a seemingly unified “future”. The initial step concentrates on both the short and the long term, while the second emphasizes the role of the medium term as a connector between extreme temporalities.

4.1 Short-Term: A Time without Economics

As noted above, evidence-based consensus is not possible in the case of future-oriented expertise. Consensus is nonetheless within reach. Drawing from Koselleck’s notion that the future is “open”, one can hypothesize a correlation between consensus and the distance to the horizon. Because they are more exposed to disturbances and perturbations, more distant futures would be even more uncertain than the nearest ones: less predictable, they would generate greater disagreement among forecasters. This intuitive assumption is consistent with forecasters’ own accounts of their activities. In contrast to the much more hazardous long term, the short term would be relatively “easy” to guess. As one forecaster working in an international organization puts it, “You can’t know anything that comes after a couple of quarters.” (Itw #49)

Forecasting the next quarter is very easy

We are very capable of forecasting the next quarter. It’s very easy. Or the current quarter. At three to six months [ahead], we make excellent forecasts. [...] Well, except for what we call tail of distribution: a world war, or anything that happens and is not predictable... a political event that disrupts your analysis completely. But otherwise, you can predict very well at three to six months.

Interview #45, Economist, Bank, French, Oct. 2015

Consensus translates the idea that the future horizons pose greater challenges for forecasting into an inter-organizational perspective. Hypothesis H_1 expresses this relationship as follows: The consensus among forecasters increases as the distance to the horizon decreases. Testing H_1 by applying the forecast equation first involves grouping together *organizations* that have produced forecasts on a same date (e.g., June 2012) regarding the same variable (e.g., GDP) of a given country (e.g., the US) for the same horizon (e.g., the end of 2014). For each group, the standard deviation (in this case, across organizations) of the forecast values is then calculated. Eventually, the relationship between standard deviation and the distance to the horizon can be estimated.

Linear regression modeling unambiguously confirms H_1 . At the most aggregate level possible, Figure 1 plots the distribution of the standard deviation across forecasters as a function of distance, and models it as a highly significant regression line that explains about one-third of the observed variance. Figure 2 shows the results of systematic linear regression analyses to allow for more granularity – one of which excludes the Great Recession (i.e., forecasts with a horizon of either 2008 or 2009) to discount the sudden rise in uncertainty it may have caused. Even when controlling for the broadest possible set of variables, the consensus among forecasters grows as the distance to the horizon decreases: The standard deviation, i.e. the consensus among forecasters, steadily decreases regardless of the country, the variable or the period.

<Figures 1 and 2 about here>

The growing consensus among expert organizations reflects the amount of information they obtain and share at the time they produce their forecasts: While the complete unfolding of year y is unfathomable in January, most of it is known by December. The accumulation of statistical information contributes to the gradual convergence of the visions of the future – a process that one forecaster compares to the process of “tâtonnement” in the Walrasian auction (Itw #45). In the immediate term, forecasters rely primarily on statistical methods, with little or no consideration of economic mechanisms. As for supply, economic theories say that it is fixed in the short run, since investments take time to be effective. Forecasters also assume that demand remains largely unchanged too in the short run, e.g., they do not expect households to modify their consumption patterns or to experience dramatic changes in income overnight.

Accordingly, all forecasters need to set forth a convincing view of the near future is an overview of the present. “Nowcasting”, a notion whose portmanteau name conveys the idea that the boundaries between the present and the future are blurred, precisely aims at uncovering the present as it unfolds through a series of techniques and proxies. It highlights the ease with which experts can infer the near future from initial conditions. Experts’ description of the near-future aligns with Tavory and Eliasoph’s (2013) notion of “protention,” borrowed from phenomenology – the future is so immediate that it practically merges with the present. Looking forward first requires knowing where one is: The expert production of short-term horizons thus requires, on the one hand, a thorough knowledge of the economic indices available about the present and/or the ability to produce some and, on the other hand, a statistical proficiency to derive forecasts from the indices.

In any case, “short-term” forecasting remains primarily a matter of statistics rather than of economics. In interviews, forecasters sometimes refer to it as “pragmatic” or “empirical,” to stress its distance from theory. Regarding conjuncture survey and business cycle, they maintain that “anything goes.” Almost all of the interviewees, whether they work in insurance companies (Itw # 30) or produce statistical information themselves (Itw #9), demonstrate little concern for theoretical debates, which they consider secondary to practical considerations.

It's very empirical, without much theory, just descriptive statistics

The most modern and brilliant tools that I have seen, in the very big banks or some hedge funds which have quite advanced research teams, are what we call “nowcasting.” Nowcast is an estimate of the GDP in the current quarter – the one that has just ended or is underway. There is a whole bunch of monthly indicators, including surveys of economic actors... the most effective of which, to spot the major cyclical turning points, are the surveys in the industry – even though industry is not a very large part of the economy, that is the one that makes the cycle because of the very brutal movements of stocking, destocking, acceleration, slowing down of production, plus it has a very strong knock-on effect on the rest of the economy. So we look at all these monthly indicators. We have a few monthly indicators of household consumption, which are more or less reliable depending on the country, we have investment trends, indicators of production which are more or less advanced... With all these monthly indicators, one fills some kind of shaker (very empirical, without much theory, just descriptive statistics) and says “well, the current quarter, I think it’s at +2% annualized growth, or +1.”

Interview #30, Chief economist, Insurance company, French, Dec. 2015

For the current quarter, there's no behavior, it's just statistical analysis

In the very short term (that's basically the current quarter), we do not do too much model-based macro-analysis, we rather work on the basis of business surveys. So, there's another

department here which is in charge of the current economic situation, they are responsible for forecasting the first quarter. It's a totally different set of mechanisms and tools... Because, when the quarter is unfolding, well, we have the soft data and also some real data, like the industrial production index for the first month of the quarter, household consumption, etc. So, for the current quarter, it's more efficient to use available data and business survey data than to perform a model-based analysis. So, these are different tools: there's no behavior [from economic actors], it's just statistical analysis... a matter of statistical regularity. On average, when business surveys are at such and such a level, it means that GDP is growing at such and such a rate.

Interview #33, Chief economist, Central Bank, French, June 2016

Forecasters' treatment of the short term by forecasters mirrors their affiliation with "applied economics" – a discipline that is more interested in practical or empirical puzzles than theoretical questions. They utilize economic activity indices and business surveys, designed to gauge business and consumer "confidence" for the upcoming quarter. They apply statistical techniques to extrapolate future developments from today's situation. Forecasters construct this time horizon as a quasi-mechanical, inert outcome of the initial conditions. By constructing the near future through statistical extrapolation from the same set of economic information using similar techniques, in addition to observing and exchanging with each other, experts can reach a consensus so that the short-term appears predictable. However, it implies "de-economization" as statistical reasoning excludes economic mechanisms. Most, if not all, of the variables and mechanisms that drive economic behaviors and decisions are omitted. This accounts for the sharpness of their views of the short-term. The case of long-term forecasting contrasts sharply with the case of the short-term forecasting precisely because it brings theoretical notions to the fore.

4.2 Long-Term: An Economy without Time

Most macroeconomic forecasters, particularly those in the private sector (banks, insurance companies, etc.), limit their anticipation of the economic conditions to no more than two years. However, some of them, such as the Council of Economic Advisers or the Congressional Budget Office, produce forecasts up to ten years ahead. Given the increasing uncertainty of the future as the horizon extends, the values of longer-term forecasts are expected to cover a remarkably wide spectrum. Forecasters make similar arguments, pointing out the limitations of their own foresight. A manager of a non-financial company who uses economic forecasts for controlling purposes, after several years of producing them, jokingly summarizes this limitation.

Making forecasts more than a year ahead is completely delusional

In any case, making forecasts more than a year ahead is completely delusional. It never works [*laughing*]. [...] It's like making a fifty-year weather forecast when you can't predict the weather next week. That's because it's not the same approach. It's just as absurd to say "the growth in three years will be..." as it is to say "I'll tell you what the weather will be like in three years". I don't have a clue [*laughing*]... So I don't really believe in that.

Interview #42, Manager, Non-Financial Company, Apr 2017

The long term is therefore a horizon for which imagination is one of the few resources available to forecasters. Imagination overcomes uncertainty and compensates for the lack of knowledge. While in the short run imagination is constrained by the vast and growing amounts of data available, in the long run it can be given free rein. From an intra-organizational perspective, expert opinion is expected to become less stable as distance increases. Hypothesis

H₂ articulates the relationship as follows: The more distant the future, the more prone a forecaster is to change her own views of it.

Testing H₂ by applying the forecast equation first involves grouping together *dates* on which a same organization (e.g., the Fed) has produced forecasts regarding the same variable (e.g., GDP) of a given country (e.g., the US) for the same distance to the horizon (e.g., two years ahead). For each group, the standard deviation (in this case, over time) of the forecast values is then calculated. As for H₁, the relationship between standard deviation and the distance to the horizon can be estimated.

<Figure 3 about here>

The test results in an unequivocal and surprising rejection of H₂. Both Figures 3 and 4 illustrate a negative linear relationship between the standard deviation and the distance to the horizon, even after distinguishing between organizations based on the length of time they engage with. “Long-term organizations,” namely the Congressional Budget Office, the Council of Economic Advisers, the European Central Bank, or the Federal Reserve produce forecasts for horizons that extend at least three years ahead, while most others do not produce forecasts that reach beyond two years. Whether the analysis focuses on these long-term organizations, excludes them, or does not differentiate between organizations, the result remains unchanged: The further out the future, the less likely forecasting organizations are to alter their views of it.⁸ Although the long term is uncertain and unfathomable, by the forecasters’ own admission, its general contours change remarkably little over time, as if it were clearer than the short term. Paradoxically enough, the long term is both uncertain and without doubt. This contradicts the hypothesis of short-lived visions of the long term: On the contrary, the further away the horizon, the more persistent the vision.

<Figure 4 about here>

One possible explanation for this phenomenon emphasizes that long-term visions of the future may not be altered in the absence of events of significant and enduring magnitude, whose rarity would justify the stability of forecasters’ views. While information about the short term flows, its alleged scarcity about the long term would hardly justify changing experts’ views. However, this premise about the ontology of the economy raises the objection that large-scale macroeconomic disruptions may be more common than assumed. Forecasters regularly address issues with potentially severe macroeconomic consequences in the long run. During my ethnographic observations, I witnessed a number of such events: The aftermath of the Great Recession and of the sovereign debt crisis in the late 2010s, the European migrant crisis (early 2015), the Chinese economic slowdown (summer 2015), the Volkswagen emissions scandal (September 2015), the Paris attacks in November 2015, the lifting of the international sanctions against Iran (June 2016), the Brexit referendum and the subsequent negotiations between the United Kingdom and the European Union (July 2016), the election of Donald Trump as 45th president of the United States (November 2016), the French presidential and legislative elections (spring 2017), the new set of international sanctions against Iran (November 2018), and the Covid pandemic (March 2020). The forecasters examined them in detail with respect to their impact on trade, consumption, public finances, credit, oil prices, labor market conditions, and industrial production.

⁸ This result has been checked and confirmed at an even more detailed level where organizations are no longer grouped by activity, but considered one by one (see Appendix E).

Another explanation for the stability of forecasters' visions of the long-term future pertains to their own behavior, in a way reminiscing of the economic study of their biases (Laster, Bennett, and Geoum 1999). Forecasters' will to maintain their own credibility would justify their reluctance to change their views too quickly, since a versatile expert would exhibit either a lack of the understanding of the economic mechanisms or a concerning tendency to overreact to any additional piece of information. All in all, opinions would prevail over a largely missing information, so much so that forecasters would seemingly commit much of their reputation in the long run. This interpretation convincingly explains why forecasters adhere to their visions of the long term unless some information compels them to do so. Yet, it leaves unquestioned the formation of their long-term visions and their diversity. Consistent with the notion of deep focusing, the persistence of visions of the distant future is related to the forecasters' methods for keeping them in focus.

Whatever its meaning in terms of duration, forecasters construct the "long term" as a temporal horizon that is paradoxically devoid of time. The long term differs from the short term in the categories forecasters use to deal with it. In the latter case, forecasters borrow from statistical expertise, whereas in the former, the expertise draws primarily from mainstream economics. Specifically, forecasters represent the long run as a "horizon of expectation" (Koselleck 2004, chap. 14) where economic structures prevail, which mostly calls for mainstream economic models and concepts. Reminiscent of economics textbooks, concepts like potential output or GDP, NAIRU, or the Solow growth model are building blocks of the economic future in the long run. The level of economic activity that forecasters consider "normal" – and for which potential output, potential GDP, or potential GDP growth are the most common proxies – is critical to long-term forecasting. Supply drives the vision of the economy in the long run: "The amount of real GDP attainable if the nation's labor and capital were employed at maximum sustainable rate, [potential output] serves as the [CBO]'s primary long-term measure of economic activity." (Arnold 2018, 15). Over the course of business cycles, activity presumably fluctuates around its "normal" level before eventually returning to it. Forecasters consider durable deviations from the potential to be impossible: It would violate the laws of economics. Within forecasting organizations, chief economists often remind their colleagues that such laws must not be violated and make sure all the representations of the future within the team are consistent.

There's no way growth stays two points above the potential for years

During the meeting, the Spanish GDP forecasts for the current year and the next are discussed. As usual, the chief economist moderates and questions the country specialist, based on the accounts s/he sent prior to the meeting. They are displayed on the screen for all to see. Pointing to a particular row, he immediately notes: "What's happening is *this!* [*original emphasis*] Whereas the sum of the shocks was extremely positive [last year], it is now zero. What's complicated with Spain is that you [the country expert] put a very low potential, and holding a growth two points above your potential for several years... [*He nods to mean "no way"*] So your potential is probably miscalculated." The search for the origin of the problem then goes on for a few more minutes.

Field notes, Research Institute, Feb. 23rd, 2017

If Q does not get to Q*, then we need to talk

My job [as a chief economist] is basically [...] making sure that the PCE forecast is consistent with the investment forecast, is consistent with the inflation forecast, is consistent with the unemployment forecast. And so I can talk about the details of how I do it, but it's essentially an iterative process. [...] So the way the process works is: each analyst provides a set of inputs to the main model. The main model reads them in, solves, and then spits out a result. So there's 900 some variables in the model. So there will be a database sitting on a public folder, a shared folder. And each analyst then runs a set of diagnostics. They will look at the

results, see if they're happy with it, because when the investment analyst changes his inputs, that will affect GDP, which will then feed back into PCE, so on and so forth, right? So you got the simultaneity going on. I'll be doing the same thing. I'll be looking for inconsistencies. We have certain relationships. I have certain relationships that I'm looking for, that I know... to make sure aren't getting knocked out of line. First things first, if Q does not get to Q* [within ten years] then we need to talk [*laughing*], right? So that's just an obvious example of an inconsistency that I might need to stamp out.

Interview #46, Chief Economist, Government Agency, US, Apr 2023

“Potential” heavily relies on modeling the supply side of the economy, which involves three main variables: capital, labor, and technical progress, as posited by the Solow growth model (Solow 1956). Although “structural reforms” aim to improve potential GDP and output (for example, by increasing the workforce) and shocks can affect it (e.g., the impact of the 2015 European migrant crisis on the demographics of the German workforce), it changes only gradually over time. Overall, forecasters construct the long term as a largely abstract future, as a horizon in which economic structures are freed from cycles, and from which time is largely absent – accordingly, some forecasters prefer the term “projections” to “forecasts” to label the result of their expertise on the long term. The long term derives its clarity from the process by which forecasters construct it - a future that is fixed and determined by supply. As a mere expression of the structure of the economy, which forms a stable horizon toward which the economy will tend in a manner reminiscent of the law of gravity, the long term matches the definition of a “temporal landscape” as “narratives that actors experience as so naturalized and built into their social institutions that they treat them as inevitable.” (Tavory and Eliasoph 2013) Although 21st-century methods are much more sophisticated than those prevalent in the early 20th century, such as Warren Person’s Index of business conditions (Persons 1916; 1919b; 1919a) or economic barometers (Chancellier 2006a; 2006b; Schwarzkopf 2022), the underlying conception of a stable economic order remains the same. Forecasters’ depictions of the long-term future are all the more compelling and convincing since it is perceived as both unavoidable and unreachable.

One thing to know is the logic of cyclical evolution

There is one thing you have to know when you work on the economic conjuncture, that is the logic of cyclical evolution. The endogenous cycle theory tells us that, if there is no shock, the economy behaves in a certain way along a cycle. It reproduces the same behavior in each cycle. Why does this happen? Because... what is a cycle? It is the deviation from potential growth. What does this mean? That from the moment we deviate from this [level of] growth, we are building a whole series of tensions and imbalances that will rise to the point where a market economy (I’m talking about market economy, of course) will find itself in a phase of stalemate that will lead to a recession where these imbalances and tensions will be resolved, adjusted, and reduced in order to eventually (once the purification is done) start again. So we know this. We also know that the Welfare State, which is more or less developed in various countries, may cushion the cycle. We also know that these cyclical developments can be completely disrupted by an external shock. We know that.

Interview #12, Economist, Bank, Italian, May 2017

The use of abstract economic notions allows forecasters to keep the future in sharp focus, by deriving it from their own assessment of the structures of the economy in the present and their understanding of the “maximum sustainable rate” the economy can attain in the future. But it also explains the lack of consensus among forecasters about the long run: Each forecaster holds a clear vision of the long term, but these visions often differ from each other. The uncertainties surrounding the measurement of decidedly theoretical, and thus unobservable, concepts such as potential GDP or output are so great that multiple

interpretations can coexist. To quote an early advocate of the notion, “potential output is at best an uncertain estimate and not a firm, precise measure.” (Okun 1962, 1)

Estimating the “normal” or “potential” functioning of the economy is precisely where forecasters’ imagination lies. All forecasters embrace the categories of economics, which enable them to coordinate. They may nonetheless hold very different views of the economic potential, depending on how they assess the labor market conditions, the evolution of productivity (which translates technical progress or innovation into macroeconomic terms) or the stock of capital. As a result of a mixture of calculations and judgments (Callon 1998; Callon and Muniesa 2005), the estimates tend to be consistent and largely time-insensitive.

It can vary but we don’t expect it to vary

In a given quarter, the evolution of unemployment and growth, etc., is subject to a lot of uncertainty. But over several years, we start to see major trends, and that’s when we can start to infer what’s going on... where are we in relation to the potential? Are we far from it? Are we not? It can vary, but we don’t expect it to vary... as we see these things as structural, we don’t expect that, overnight, there will be a durable one-point change in the potential growth rate because... well, for that to happen, there would have to be a huge shock and, typically, it’s perhaps the shock that there has been on the British economy [due to the Brexit]. But we’re not going to assert it like that: We need to analyze it, etc., to check.

Interview #19, Economist, Research Institute/ Think Tank, French, Nov 2016

There is as much potential growth as there are economists to estimate it

On the potential growth, we had a bit of a fight [with other economists, during a public debate I attended], because we had an estimate based on a very simple logic... But, yes, there is as much potential growth as there are economists to estimate it. It’s not an impression: it’s a reality. [...] For me, potential [GDP] growth is not at 1.8 as [these other economists] claim, but rather at 1.1.

Interview #6, Chief economist, Research Institute/ Think Tank, French, Mar 2017

Forecasters practice deep-focusing by using various methods and categories to build equally sharp visions of different timeframes. The short term focuses on statistical methods and empirical issues; the long term centers on purely abstract notions derived from economics. As for expertise, short- and long-term are two exact opposites, which explains the observed trends: an inter-organizational consensus emerges as the distance to the horizon decreases; and the intra-organizational vision of the distant future is more persistent than that of the shorter-term future. The distinction between these two horizons is not quantitative but qualitative – it does not stem from their alleged “nature” (the quantum of time they encapsulate) but in the expert categories used to treat them. Yet, the deep-focusing framework not only accounts for the sharpness of their depiction, but also for their unity and coexistence.

4.3 Medium-Term: Time for Some Action

In filmmaking, deep focus techniques artificially create a continuity between various spatial planes. By bringing foreground and background together with equal clarity, it establishes a meaningful connection between them. In forward-looking expertise, different horizons are constructed according to different principles, and creating their seamless unity means entangling them into a coherent whole. This dual requirement accounts for the role of the medium-term in macroeconomic forecasting: bridging the gap between the short- and the long-term to perform the unity of the future while remaining a temporality of its own. Because

of its position as an intermediate stage, it first provides a narrative of how the future will unfold on the way from “now” to “later,” thus delineating a “trajectory” as Tavory and Eliasoph (2013) define it. The medium-term intertwines temporalities to tell the story of an economy that, despite disturbances, moves smoothly from the present to an unreachable horizon. It borrows parts of its credibility from the temporal boundaries it links, and in turn places them in a comprehensive storyline with a beginning (the current conjuncture in the short-term) and an end (the cycles-free structures in the long term).

In addition to the presumed credibility of their starting and ending points, trajectories gain credence from their internal consistency. A crucial step to join together all temporalities, consistency stems from the practices of forecasting. Although the same persons, or at least the same teams, are in charge of all the forecast horizons that an organization considers, establishing a coherent scenario that encompasses them all requires coordination. Its implementation relies on shared framework, notions, and deliberation. National accounting identities serve as a framework for reasoning, even in the absence of proper econometric models, as is often the case in banking, asset management, or insurance companies. Narratives carry more weight when told in the language of national accounting (Carruthers and Espeland 1991). Besides communicating with fellow forecasters in other organizations, national accounting principles also safeguard against major inconsistencies when forecasters set out a scenario based on a three-term logic (“if x and y happen, then z is expected to happen”). They inform forecasters’ cognitive categories and take a material dimension as spreadsheets, models or tables, whether for personal use or as a prop for collective deliberation.

My little accounting equations

I belong to a forecasting school [*laughing*] that doesn’t model much [...]. I am more into the hypothesis and scenario-building approach. Say, if I think productivity will improve and jobs will be created, that means that I am going to have growth at some point. But where will this growth come from? What can explain this growth? Can it come from exports? Well, yes, because we’re also told that world is going to improve, that competitiveness is improving in my country [“my” refers to “the country s/he is in charge of”], so this country can win market shares. At the end of the day, you need figures. Well, growth is a sum of many little things. That’s when econometrics can be useful, to help confirm intuitions over short forecast horizons. What we have here is a set of equations, not a general equilibrium model where, if you touch something, it’s reflected in the whole model. I don’t have that in my equations: they are independent from each other: they are like little accounting equations. For example, if I see a rise in my consumption by 3 points, that my wages (which amount to 90% of households’ income) are increasing too, and that, at the same time, my savings rate is falling, then I say to myself “something is gone. When are the savings gone? Something’s wrong here.”

Interview #7, Economist, Bank, French, Apr 2017

Discussing Tables

As soon as the meeting begins, a table is projected onto a large screen for everyone to see. It bears the title “Macroeconomic Forecasts Framing” and the date “September 2015.” Its rows expose the impact on growth of a series of external factors or shocks (competitiveness, oil prices, fiscal policy, Chinese slowdown...) and a series of variables (potential growth, output gap, etc.) quarter by quarter from 2015 Q3 to 2017 Q4 (in columns). Debates focus on the compatibility of the different boxes, on the possible abrupt breaks from one quarter to the other, etc. The table remains on display as long as the discussion goes. When moving to the next topic, a new table, titled “Accounts,” is projected: it details the GDP of a European country (consumption, investment, exports, imports...) and presents a few other macroeconomic variables (consumer price index, unemployment, deficit, etc.). A similar table is displayed for each country about which forecasts are produced until the end of the meeting.

The medium-term joins all temporalities through the establishment of scenarios, i.e. trajectories whose compliance to a number of conventions ensure consistency at every moment in time. Such trajectories combine all layers of the future (short-, medium-, and long-term) into one. As mentioned above, this unified future is oriented towards a long-term horizon which, although abstract, represents some “ideal” economic conditions. Bringing it back to the near future and the present makes it a benchmark against which to gauge the current economic situation. The notion of “gaps” entails such comparison between temporalities, which contributes to bind them together. “Gaps” are conventional measures of the differences between the economy’s actual performance and its potential, usually in terms of output. An indicator of cyclical fluctuations, the “output gap” by definition gradually narrows (“closes” in economic jargon) as the economy approaches its long-run trend. At shorter horizons, it fuels a critical diagnosis of the current state of the economy that outlines its trajectories, enables making sense of it, gives it a direction and, ultimately, makes it consistent.

“Gaps” are not only a building block of a coherent economic trajectory, they also point to the specificities of the medium-term as a temporal horizon in its own rights. While neither the short nor the long term leave much room for agency, the medium-term is the time when decisions, behaviors and actions matter. Narratives concentrate on achieving a goal or avoiding a disaster, explore how actors behave to attain them and interact with each other, and outline the likely outcome. By linking different temporalities through comparison, a concept like “output gap” entails a description of the economy as “depressed” or “overheating,” and “optimistic” or “pessimistic” views of the economy. Each of these diagnoses calls for a particular course of action that forecasters, depending on their theoretical affiliations, may advocate or try to guess. Accounting for behavior is arguably the key forecasting issue with respect to the medium-term. In economic terms, it involves both demand-side and supply-side mechanisms – which further contribute to connect temporalities.

On the one hand, demand-side mechanisms focus on economic drivers household consumption, government spending, and business investment. The expertise of forecasters is then aimed at anticipating their evolution, whether through modeling or by gathering information from representatives of the economy (Reichmann 2013) or other experts (Evans 2007) – an exchange of information within the world of forecasting that contributes to the coordination of organizations. Primarily connected to the short-term, the medium-term is then conceived as a temporality in which actors’ expectations, decisions, and responses to their environment, to exogenous shocks, or to any kind of disturbance matter. Accurately guessing the behavior of economic actors, especially the behavior of “large” actors such as governments or central banks, is crucial to connecting the dots from the present to the future. This is particularly obvious after events of a large magnitude such as the Brexit referendum, when anticipating what investors, households, and public institutions will do becomes a hot topic. But this is also true in normal times.

Potential growth has some importance for economic policy

Policy focuses a lot on the short run, but potential growth has some importance for economic policy as well because... there was this conversation last year, in the spring, about whether we were overheating. There, the potential growth had a certain importance. [...] It has some relevance for economic policy because, if we are overheating, it has a consequence. We saw this last year when we discussed this. If you have a positive output gap, it recommends more conservative policies than if you have a negative output gap. So this is also important.

Interview # 4, Senior official, Government, German, Feb 2019

We must find out which scenario is the Central bank's

About three months after the Brexit referendum took place, the UK expert and the Chief economist argue about the expected policy reactions. The Chief economist mentions “the textbooks and what’s in them” to deduce what the Bank of England (BoE) will likely do: “My hunch is they keep low [interest] rates because their [price] elasticities [of exports] are very low and Brexit has a very negative impact on growth.” They both argue over the value of the elasticities: 0.6 or 0.2? The Chief economist claims: “I think the BoE doesn’t have 0.6 in mind, but 0.2. Then, Ok, they choose to support activity and not fight inflation. Then you understand what they’re doing.” The UK expert mentions s/he has retrieved forecasts from other organizations, notably one based in the UK. The chief economist notices that this organization revised its forecasts in a way consistent both with an elasticity of 0.2 and with the BoE reaction. The UK expert explains why s/he finds it embarrassing: “If we have 0.2 now (but that’s what we’re gonna say), everything we say about competitiveness, wages, trade, and growth doesn’t add up anymore.” The chief economist disagrees: “On the contrary, this is perfectly coherent. It happens very slowly through prices, for sure, but it is not incoherent. Then, we must endogenize the reaction of the central bank according to the scenarios. Because the central bank holds a scenario. As for us, you display both scenarios [each for which elasticity value], but we must find out which one is the central bank’s. This one shall be our own central scenario, and the other is our variant.”

Field notes, Research Institute, Sept. 26th, 2016.

On the other hand, supply-side mechanisms emphasize actions that could potentially affect the economy’s long-term potential, e.g., structural policies aimed at increasing the potential through labor market reforms. The results of such actions would affect the long-term outlook, gradually and slightly modifying the end of the trajectory. To impact economic potential, actions must induce long-lasting, if not permanent, changes in behavior that take for economists to confirm. Assessing a new behavioral trend that would influence this potential requires long time series, so that, ironically, changing the long-term future means delving deep into the past. Sometimes, assessing the true long-term consequences of changes in behavior justifies shifting the focus to the distant past.

Assessing the longer-term effect of the Covid pandemic

The bounce back was ultimately swifter than anybody had expected, so we now have a level of GDP that's as high as anybody was projecting pre-Covid, we have fully bounced back. The labor force participation of prime age workers has fully bounced back. Now, the labor force participation rate of older people (and it may be 60 and over) took a big hit and it has not come back. The overall labor force participation rate has now come back normal, but that's not an even normal: the participation rate of prime age workers has more than rebounded and the participation rate of older workers seems to have permanently suffered. [...] There's a paper by Doug Almond, a study of the 1919 flu pandemic, and he showed that children who were born during the pandemic had lifetime lower incomes than the cohorts around, perhaps because of damage to the development of the fetus during gestation. I mean, that would be the model. Are we going to find out 20 years from now that babies who were born during the pandemic or maybe children who missed a year of schooling when they're in first and second grade... are they going to be hurt? That's the sense in which I'm worried about the long-term implications of the pandemic. For the next year or so, long Covid may be an issue, but over the longer long term, the effect is on whether the human capital development of the children who were not educated during the pandemic will suffer or not.

Interview #47, Chief economist, Government Agency, US, June 2023

Deep focusing accounts for the pivotal role of the medium-term for forward-looking expertise. First, it represents a temporal horizon that is not reducible to either the short- or the long-term. It carries a peculiar set of issues and, in particular, brings economic action and behaviors to the fore. Secondly, it introduces continuity between all the temporal horizons that forecasters focus on, and thereby decisively creates “the future” as a unified entity. Finally, deep focusing emphasizes that temporal horizons do not refer to a particular quantum of time

but are qualitatively different because they are based on different areas of expertise and are therefore ultimately incommensurable. Ultimately, forecasters create a time-based economic order, whose apparent unity conceals that the fact that its construction requires the mobilization of different conceptions (see Table 5).

<Table 5 about here>

5. Discussion and Conclusion

The case of macroeconomic forecasting demonstrates that experts do not treat the object of their expertise as an entity independent of their analysis, but rather as a product of their expertise. In particular, they do not consider time as a continuous variable but renders it discrete. The future can then be classified according to its alleged horizon. Like the cinematic technique used by filmmakers to keep various spatial planes in focus at once in order to dramatically connect them and thereby achieve greater realism, deep focusing enables experts to build precise visions of different time horizons and connect them in a seamlessly unified time frame, thereby achieving greater credibility. Deep focusing involves three operations. It first differentiates time horizons and categorizes the future into a finite number of classes (e.g., short, medium, and long term), each defined by the nature of the phenomena and issues at stake within it rather than by its length or duration. Second, a clear and coherent vision of each horizon must be produced using specific techniques and tools in the expert’s toolkit. For macroeconomic forecasting, this includes gathering economic information, applying supply and demand economics, and using econometrics. Finally, to achieve deep focus, it is essential to connect these horizons to generate a continuous and consistent future, making the disparate principles behind its construction invisible, which amounts to institutionalizing and naturalizing a future *reality*. The concluding remarks discuss these findings to suggest promising leads for further research on coordination both between and within organizations, as well as on forward-looking practices.

The argument I lay out in the paper emphasizes the professional norms, standards, and conventions of this world, i.e. what forecasters have in common. Accordingly, it makes little distinction between forecasters and may overstate their homogeneity, especially from a cross-national perspective. In particular, the de facto prevalence of the “French” material may have implications. As Fourcade (2009) noted, “engineers-economists” were key to the development of the economics profession in France, and they remain so in the early 21st century. Whether in the public or private sectors, positions as “chief economists” are more often than not held by former students of the country’s most prestigious engineering schools (namely, *École Polytechnique* and *ENSAE*).⁹ As members of what Bourdieu (1996, 180–83) refers to as the “state nobility,” engineers-economists do not undergo the same background and training as PhDs in economics: They assert their superior expertise in statistics and a correspondingly more relaxed relationship to economic theories, which might allow a particular “style of reasoning” and “projecting” that would be shared among most prominent French macroeconomic forecasters. On the other hand, it is noteworthy that the accounts of interviewees overwhelmingly share most of their features, regardless of their citizenship,

⁹ For example, among the French citizens interviewed, 36.4% attended both *École Polytechnique* and *ENSAE*. This proportion rises to 46.2% if the scope is narrowed to those who hold positions as “chief economist.”

location or education. Whether born and educated in France, Germany, Ireland, the United States or the Netherlands (see Appendix B), forecasters share a common understanding of economic mechanisms, providing further evidence that economics is a global profession (Fourcade 2006). This local-global dilemma calls into question the degree of coordination between forecasting organizations, which echoes the role of the administrative sphere, in addition to that of economics, when it comes to understanding the adoption of public policies (Hall 1989).

The concept of deep focusing outlines two forms of coordination of forward-looking expertise – between and within organizations respectively – which mirror two ways to handle the future and cope with its uncertainty. Specifically, it provides insights into at least three phenomena. First, the formation of expert consensus about short-term issues, which makes them look oddly unimaginative. This highlights the limited scope of the concept of “fiction” as it pertains to experts (and possibly to lay people). To maintain credibility, fictions should not rely too heavily on imagination: Although forecasting centers on fiction, imagination is not profitable here. Secondly, deep focusing explains the peculiarities of the visions of the long term, both their divergence across organizations and their stability within organizations. A commonality of conventions and a shared toolkit does not mean that experts have identical views of the object. The lack of information about the distant future leaves room for experts’ opinions, and their credibility depends in part on their reluctance to change their views. Finally, deep focusing accounts for one of the channels through which experts’ theoretical affiliations operate in the absence of consensus or of an explicit agenda, or despite their apparent withdrawal from decision-making. Experts’ opinions about a structural abstract long-term future constrain how the present is qualified, and decisively shape the trajectory leading from the present to the distant future. Even if indirectly, it thereby favors a particular course of action, advocating for the use of certain levers and prohibiting others. This horizon-coordination nexus may be found in other instances of forward-looking expertise, even though they do not rely on the same areas of expertise. Nevertheless, the distinction between inert short-term conditions, an abstract long-term horizon and a medium-term where agency prevails may be observed beyond the case of macroeconomic forecasting – in the case of time-focused expertise and maybe even in individual action in the face of uncertainty.

Such an investigation implies questioning the boundaries between temporal horizons. There is indeed no precise telling when “the present” and “the near term” begin, nor is it possible to identify with certainty the lower and upper limits of the “medium term”, and so on. The boundaries are even blurrier because they vary from organization to organization, based primarily on their core activities, imperatives, and objectives. Many forecasters would identify the next semester as the boundary of the “short term” but would debate about the lower boundary of the “long term”: is it two or five years ahead, for example? Many would argue about calling a period five years or more ahead as “medium-term,” as the CBO does (Arnold 2018, 8). In the energy industry, any period up to five years ahead is considered short because corporate investments have a lifespan of more than “sixty years” (Interview #43). Financial markets demand prompt action, so a few days seems far in the future to forecasters working in the banking industry (Interview #23). Forecasters may claim that economic conditions will be back to normal and return to their long-term trend in two or thirty years, depending on whether the interviewee works at an asset management firm (Interview #56) or in an insurance company (Interview #54). It is all the more striking that macroeconomic forecasters use similar language and methods when referring to the principles that govern time horizons, even if they define them differently in relation to the organizations they belong to and to the practical concerns they deal with. Experts may not draw the boundaries between time horizons in the same way but they ascribe the same properties to them, and accordingly analyze them

according to similar principles. Rather than thinking of specific temporalities as requiring a particular kind of action (e.g., so-called “conjunctural” issues would require immediate government action), the relationship should then be thought of the other way around – short-term government action frames its object as “conjunctural.”

In line with the notion of its linearity (Koselleck 2004), time can be seen as a quantity whose chronological position would exhaust all its meaning. Its distribution along a continuum according to its distance from “the present” would suffice to fully qualify it – past on one side, future on the other, and similar duration (e.g., one year) would have the same meaning regardless of their position on the timeline. The case of economic forecasting shows that experts introduce major disruptions when dealing with time with respect to its *alleged* qualities (rather than as a consequence of any observed phenomenon, such as a full-scale revolution being considered *ex post* as the starting point of a new historical era). These qualities relate to a defined set of issues, concepts, and theories that make them practically incommensurable. It refutes the idea that openness, distance and uncertainty of the future necessarily come together. Forecasters’ enduring visions of the long-term future are not only a practical response to its uncertainty, which would justify modifying them sparingly, it is also a consequence of the construction of a closed future – an inescapable yet unreachable horizon. The long-term future may be both uncertain *and* closed.

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Tables and Figures

Table 1 - Database Outlook

Source	Organizations	Type	Countries	Timespan	N	%
Consensus Economics	139 orgs.	Various	All	2004-2017	32,580	81.4
World Economic Outlook	IMF	IO	All	2000-2021	1,391	3.5
European Economic Forecast	EC	IO	All	2004-2021	1,214	3.0
OECD Economic Outlook	OECD	IO	All	2004-2021	1,165	2.9
Budget and Economic Outlook	CBO	Gvt Agency	US	1999-2021	833	2.1
Perspectives pour l'économie	OFCE	Research Inst.	All	2004-2021	729	1.8
ECB Staff Projections	ECB	Central Bank	Euro area	2004-2021	496	1.2
Notes de conjoncture	INSEE	Gvt Agency	All	2004-2021	437	1.1
Summary of Econ. Projections	Fed	Central Bank	US	2004-2021	384	1.0
RESF (or "HCFP's opinion")	DGT	Government	All	2006-2021	377	0.9
Econ. Report of the President	CEA	Government	US	2004-2020	292	0.7
Prévisions économiques	BdF	Central Bank	France	2015-2021	130	0.3
Total					40,028	100.0

Table 2 - Details of Ethnographic Observations

Organization	Date	Forecast	Nature	N Obs.	Approx. hrs
Research Inst.	Sep 2015	Q3 2015	Work Meeting	2	6
Research Inst.	Feb - Mar 2016	Q1 2016	Work Meeting	5	15
Agency	Mar 2016	Q1 2016	Presentation	1	1
Research Inst.	Apr 2016	Q1 2016	Press Conf.	1	1
Research Inst.	Apr 2016	Q1 2016	Debate	1	2
Research Inst.	Aug - Sep 2016	Q3 2016	Work Meeting	8	24
Agency	Oct 2016	Q3 2016	Presentation	1	1
Research Inst.	Oct 2016	Q3 2016	Debate	1	2
Research Inst.	Oct 2016	Q3 2016	Press Conf.	1	1
Agency	Dec 2016	Q4 2016	Presentation	1	1
Research Inst.	Feb - Mar 2017	Q1 2017	Work Meeting	7	21
Agency	Mar 2017	Q1 2017	Presentation	1	1
Agency	Jun 2017	Q2 2017	Presentation	1	1
Total				31	77

Table 3 - Conversion Rates of Interviewees by Sector

	Requests	Responses	Agreements	Interviews
International Organizations	5	5	5	5
Government	4	4	4	4
Government Agencies	7	7	7	7
Central Banks	22	16	8	7
Data Providers	3	3	3	3
Banks & Asset Managers	19	11	10	9
Insurance Companies	4	3	3	3
Research & Think Tanks	19	18	17	17
Non-Financial Companies	3	3	3	3
Other	2	1	1	1
Total	88	71	61	59

Table 4 - Organizational Distribution of Empirical Material

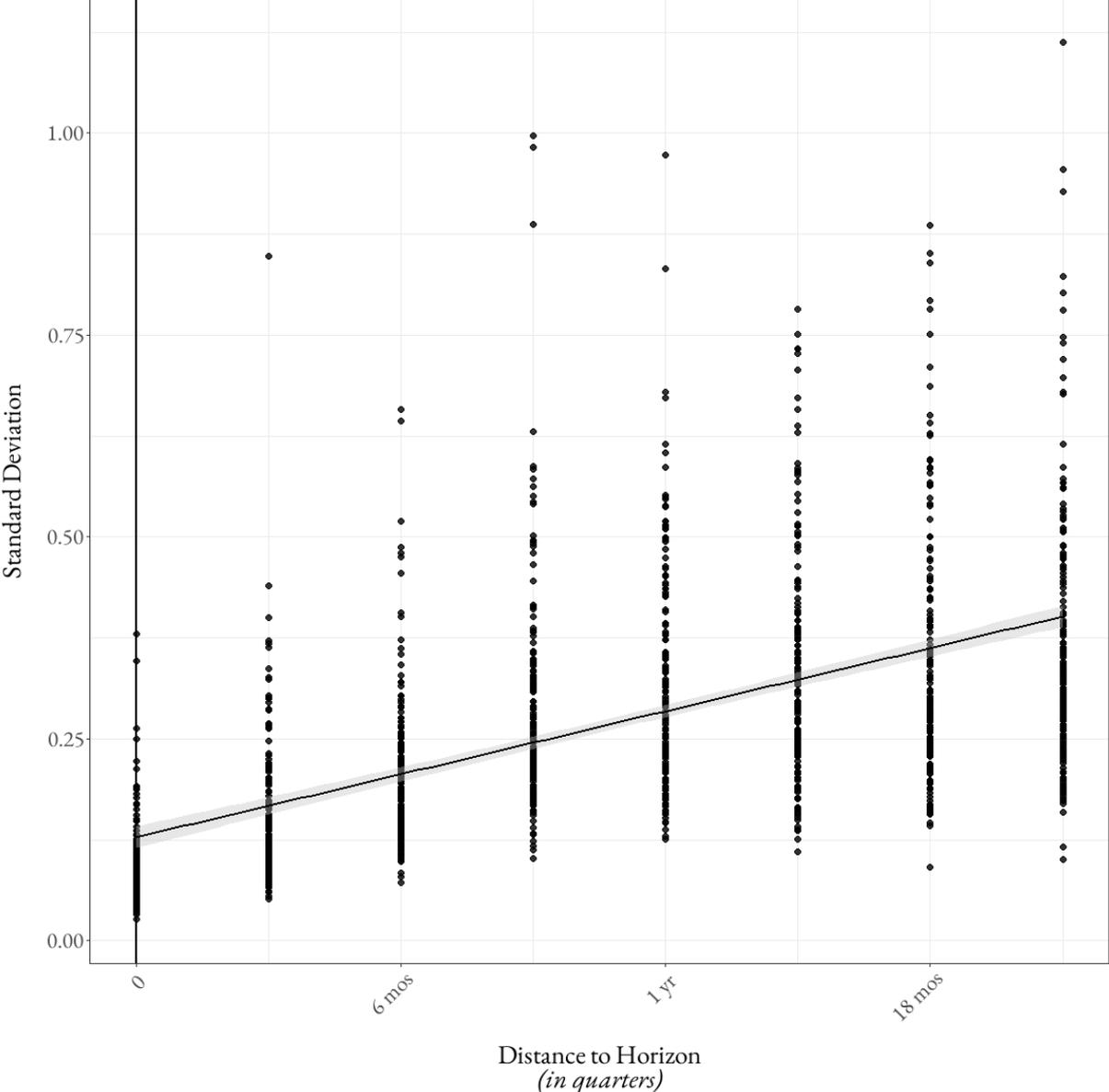
	Database		Interviews	
	N	%	N	%
Governing Bodies	5,709	14.3	18	30.5
<i>International Organizations</i>	3,770	9.4	5	8.5
<i>Government</i>	669	1.7	4	6.8
<i>Government Agencies</i>	1,270	3.2	9	15.3
Central Banks	1,010	2.5	7	11.9
Research & Think Tanks	6,815	17.0	15	25.4
Data Providers	4,794	12.0	3	5.1
Banks & Asset Managers	19,424	48.5	9	15.3
Insurance Companies	848	2.1	3	5.1
Non-Financial Companies	1,428	3.6	3	5.1
Other	0	0.0	1	1.7
Sum	40,028	100.0	59	100.0

Table 5 – The Expert Construction of Time Horizons

Horizon	Issue for Forecasting	Areas of Expertise	Drivers	Temporal Experiences
Short-Term	Guessing the Present	Statistics	Inertia	Protentions
Medium-Term	Accounting for Behavior	Economics	Action and its Outcomes	Trajectories
Long-Term	Uncovering Economic Structures	Mainstream-Leaning Economics	Abstract Horizon	Temporal Landscapes

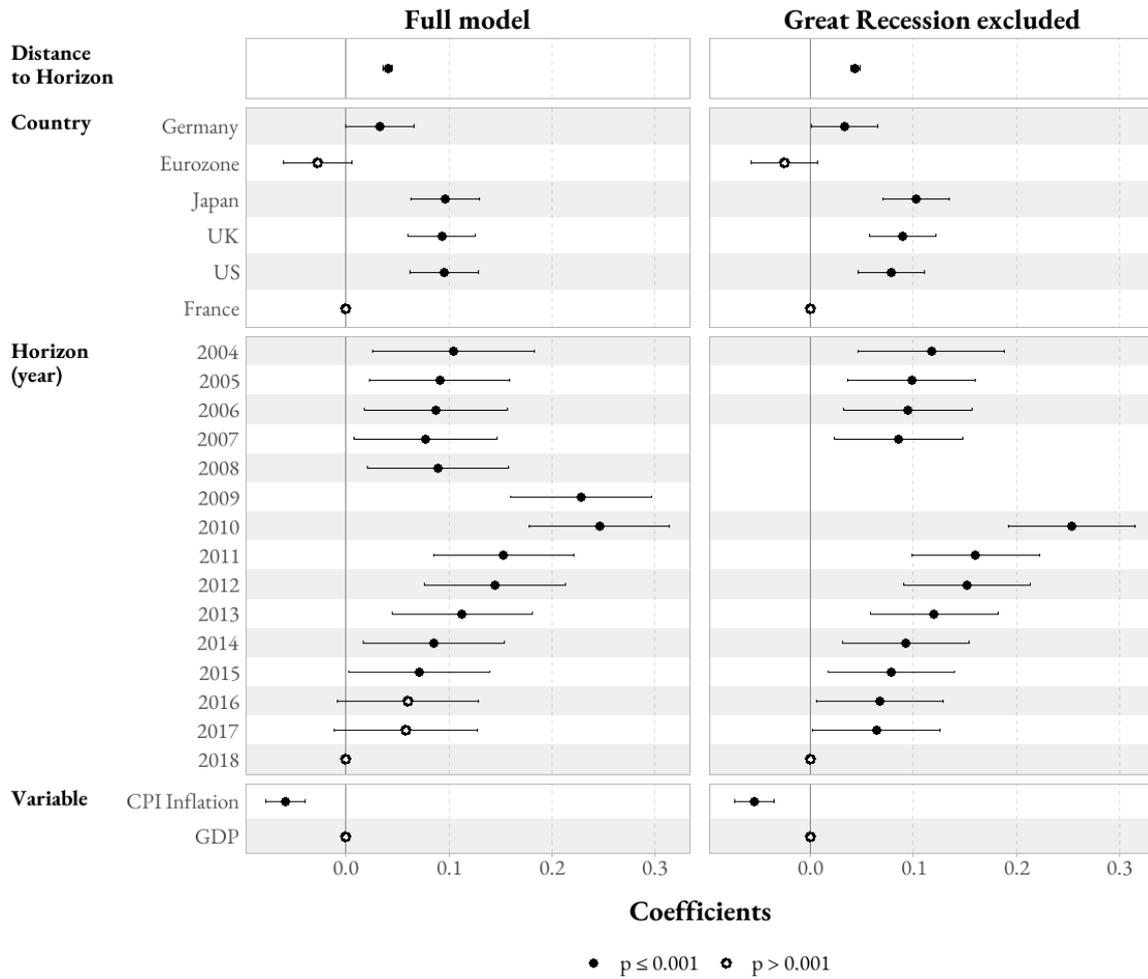
Note: “Temporal Experiences” are adapted from I. Tavory and N. Eliasoph (2013)

**Figure 1 – Uncertainty and Forecasters’ Consensus.
Scatterplot and Regression Line**



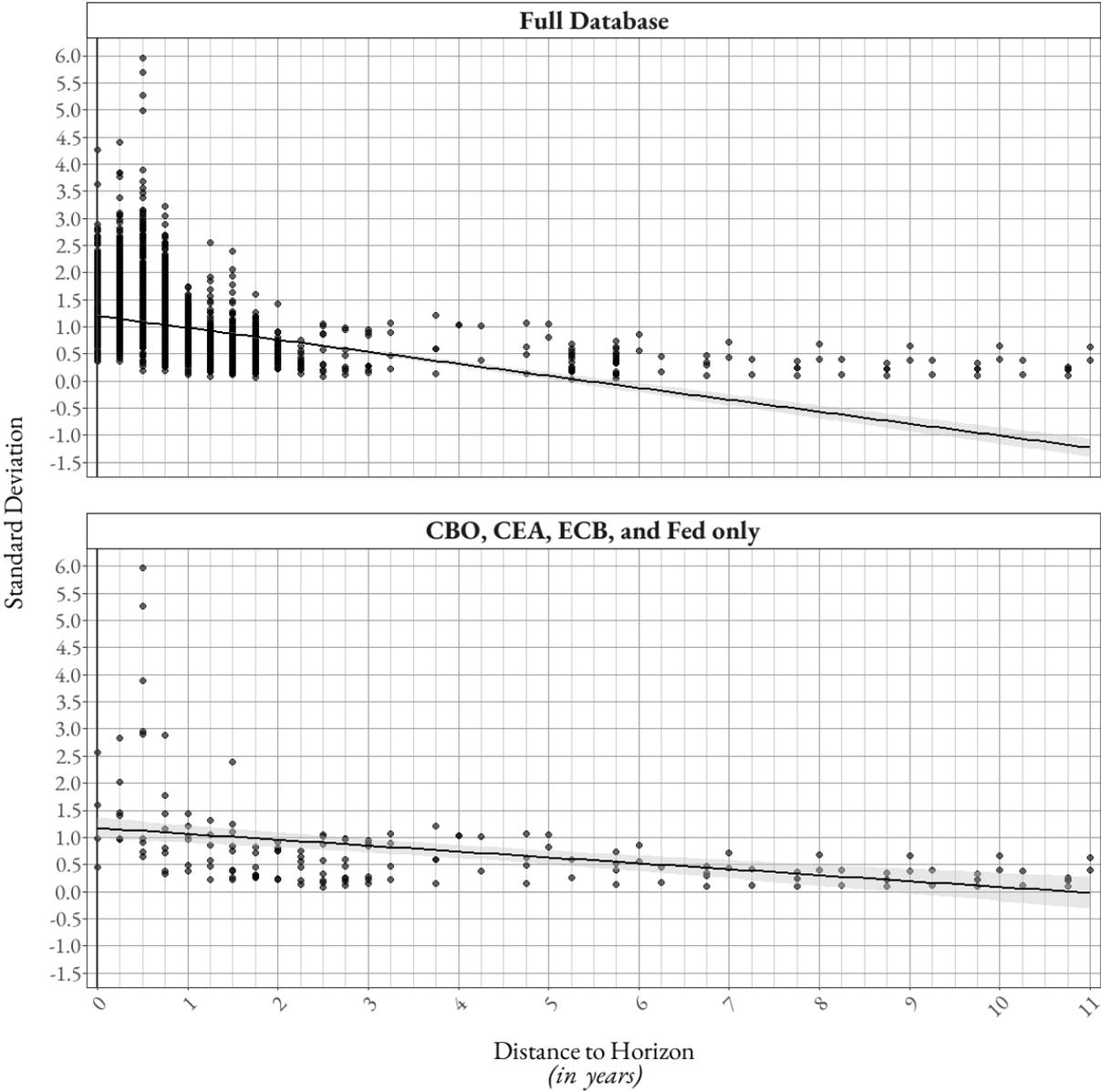
Source: Forecasts Database.
Note: Regression line with 95% CI (OLS method).
Equation: $sd = 0.039 \times \text{distance} + 0.128$ ($p=0$, $R^2=0.311$)

**Figure 2 – Uncertainty and Forecasters’ Consensus.
Regression Models**



Source: Forecasts Database.
Note: OLS method. Full results of the regression model are in Appendix C.
Distance to the Horizon is in quarters.

**Figure 3 – Forecasting Organizations and the Long Term.
Scatterplot and Regression Line**

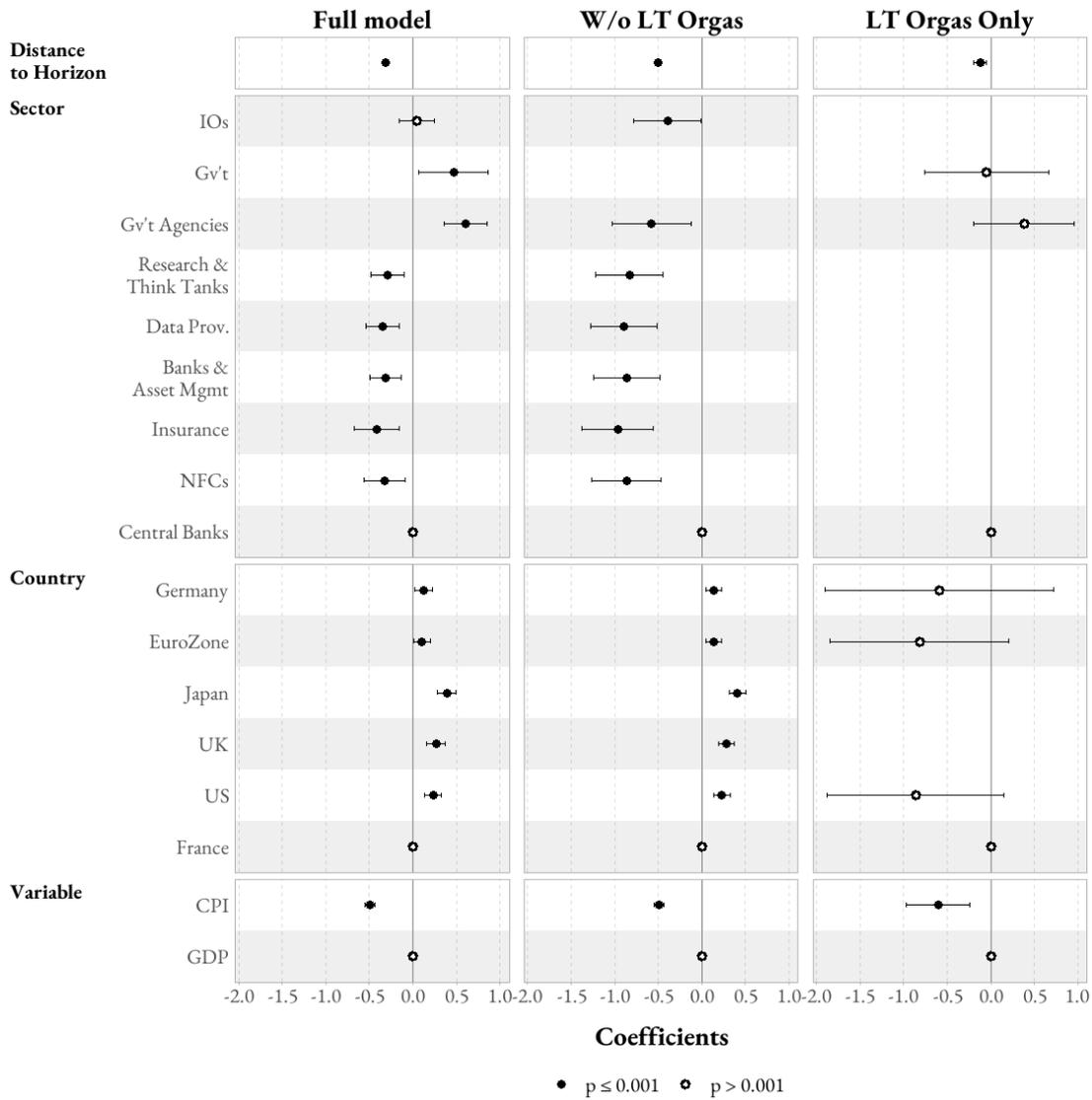


Source: Forecasts Database.

Note: Regression line with 95% CI (OLS method).

Equations: $sd = -0.221 \times \text{distance} + 1.204$, ($p=0$, $R^2=0.17$) (Full Database)
 $sd = -0.109 \times \text{distance} + 1.175$, ($p=0$, $R^2=0.17$) (CBO, CEA, ECB and Fed only).

**Figure 4 – Forecasting Organizations and the Long Term.
Regression Models**



Source: Forecasts Database.
Note: OLS method. Full results of the regression model are in Appendix D.
Distance to the Horizon is in years.

Appendices

Appendix A - Forecasts Database Sources

Appendix A displays the name of the source, the years and months of publication, and the organization(s) and number of forecasts involved. Each forecast was assigned a quarter according to the month of its publication, with the objective of respecting the pace of forecasts production.

- Therefore, November, December and January form the 4th quarter of a year
- February, March and April form the 1st quarter,
- May, June and July form the 2nd,
- finally, August, September and October form the 3rd.

Forecasts produced in January of year y are regarded as forecasts from the 4th quarter of year $y-1$. Besides, from 2009 to 2011, the Fed published its Fall forecasts in November, followed in 2010 and 2011 by another set of forecasts in January. Accordingly, *in the case of the Fed only*, “November” forecasts are considered belonging to the 3rd quarter. Once these corrections are introduced, no information is lost when shifting from a monthly to a quarterly perspective.

Source	Orgs.	Year	Months	N Forecasts	Total
Consensus Economics	141 organizations	2004	Mar, Jun, Sep, Dec	2,488	
		2005	Mar, Jun, Sep, Dec	2,472	
		2006	Mar, Sep, Dec	1,804	
		2007	Mar, Jun, Sep, Dec	2,402	
		2008	Mar, Jun, Sep, Dec	2,392	
		2009	Mar, Jun, Sep, Dec	2,254	
		2010	Mar, Jun, Sep, Dec	2,296	
		2011	Mar, Jun, Sep, Nov	2,266	
		2012	Mar, Jun, Sep, Dec	2,333	
		2013	Mar, Jun, Sep, Dec	2,441	
		2014	Mar, Jun, Sep, Dec	2,458	
		2015	Mar, Jun, Sep, Dec	2,531	
		2016	Mar, Jun, Sep, Dec	2,524	
		2017	Mar, Jun, Sep	1,919	
World Economic Outlook	International Monetary Fund (IMF)	2000	May, Sep	48	
		2001	May, Oct, Dec	71	
		2002	Apr, Sep	48	
		2003	Apr, Sep	47	
		2004	Apr, Sep	48	
		2005	Apr, Sep	47	
		2006	Apr, Sep	48	
		2007	Apr, Oct	47	
		2008	Apr, Oct	71	
		2009	Apr, Oct	72	
		2010	Apr, Jul, Oct	74	
		2011	Apr, Jul, Sep	74	
		2012	Apr, Oct	72	
		2013	Apr, Oct	72	
		2014	Apr, Oct	72	
		2015	Apr, Oct	72	
		2016	Apr, Oct	72	
2017	Apr, Oct	72			
2018	Apr, Oct	72			
2019	Jan, Apr, Oct	66			
2020	Jan, Apr, Jun, Oct	80			
2021	Apr, Jul	46		1,391	
European Economic Forecast	European Commission (EC)	2004	Mar, Oct	60	
		2005	Mar, Nov	60	
		2006	Apr, Nov	60	
		2007	Feb, May, Sep, Nov	76	
		2008	Feb, May, Sep, Nov	76	
		2009	May, Sep, Nov	68	
		2010	Feb, May, Sep, Nov	76	
		2011	Feb, May, Nov	68	
		2012	May, Nov	60	
		2013	Feb, May, Nov	84	
		2014	Feb, May, Nov	84	
		2015	Feb, May, Nov	84	
		2016	Feb, May, Nov	84	
		2017	Feb, May, Nov	84	
2018	Feb, Apr, Jul, Nov	58			
2019	Feb, Apr, Jul, Oct	54			
2020	Feb, Apr, Jun, Nov	54			
2021	Feb, Jul	24		1,214	

Source	Orgs.	Year	Months	N Forecasts	Total
OECD Economic Outlook	Organization for Economic Cooperation and Development (OECD)	2004	Jun, Dec	60	
		2005	Jun, Dec	60	
		2006	Jun, Dec	60	
		2007	Jun, Dec	60	
		2008	Jun, Sep, Dec	66	
		2009	Mar, Jun, Sep, Nov	90	
		2010	May, Nov	60	
		2011	May, Nov	60	
		2012	May, Sep, Nov	65	
		2013	May, Sep, Nov	65	
		2014	May, Sep, Nov	72	
		2015	Mar, Jun, Sep, Nov	84	
		2016	Feb, Jun, Sep, Nov	84	
		2017	Mar, Jun, Sep	48	
		2018	Nov	36	
2019	Mar, May, Sep, Nov	81			
2020	Mar, Jun, Sep, Dec	72			
2021	May, Sep	42			
					1,165
Budget and Economic Outlook	Congressional Budget Office (CBO)	1999	Jan	11	
		2000	Jan, Jul	22	
		2001	Jan, Aug	22	
		2002	Jan, Aug	22	
		2003	Jan, Aug	22	
		2004	Jan, Sep	22	
		2005	Jan, Aug	22	
		2006	Jan, Aug	44	
		2007	Jan, Aug	44	
		2008	Jan, Sep	44	
		2009	Jan, Mar, Aug	66	
		2010	Jan, Aug	44	
		2011	Jan, Aug	44	
		2012	Aug	22	
		2013	Feb	22	
		2014	Jan, Feb, Aug	66	
		2015	Jan, Aug	44	
		2016	Jan, Aug	44	
2017	Jun	22			
2018	Jan, Apr, Aug	68			
2019	Jan, Aug	46			
2020	May, Jul	26			
2021	Feb, Jul	44			
					833
Perspectives pour l'économie	Observatoire Français des Conjonctures Économiques (OFCE)	2004	Mar, Apr, Jun, Sep, Oct, Dec	44	
		2005	Mar, Apr, Jun, Sep, Oct, Dec	44	
		2006	Apr, Sep	38	
		2007	Mar, Sep	48	
		2008	Mar, Sep	46	
		2009	Mar, Sep	48	
		2010	Mar, Sep	44	
		2011	Mar, Sep, Dec	60	
		2012	Mar, Sep	46	
		2013	Mar, Sep	51	
		2014	Mar, Sep	42	
		2015	Mar, Sep	55	
		2016	Mar, Sep	55	
		2017	Mar, Sep	55	
2019	Oct	30			
2020	Oct	12			
2021	Apr	11			
					729
ECB Staff Projections	European Central Bank (ECB)	2004	Jun, Sep, Dec	14	
		2005	Mar, Jun, Sep, Dec	18	
		2006	Mar, Jun, Sep, Dec	18	
		2007	Mar, Jun, Sep, Dec	18	
		2008	Mar, Jun, Sep, Dec	18	
		2009	Mar, Jun, Sep, Dec	18	
		2010	Mar, Jun, Sep, Dec	18	
		2011	Mar, Jun, Sep, Dec	18	
		2012	Mar, Jun, Sep, Dec	18	
		2013	Mar, Jun, Sep, Dec	18	
		2014	Mar, Jun, Sep, Dec	24	
		2015	Mar, Jun, Sep, Dec	24	
		2016	Mar, Jun, Sep, Dec	54	
2017	Mar, Jun, Sep, Dec	54			
2018	Mar, Jun, Sep, Dec	54			
2019	Mar, Jun, Sep, Dec	54			
2020	Mar, Jun, Sep, Dec	38			
					496

Source	Orgs.	Year	Months	N Forecasts	Total			
Notes de conjoncture	Insee	2021	Mar, Jun, Sep	18	437			
		2004	Mar, Jun, Oct, Dec	29				
		2005	Mar, Jun, Oct, Dec	31				
		2006	Mar, Jun, Oct, Dec	25				
		2007	Mar, Jun, Oct, Dec	30				
		2008	Mar, Jun, Oct, Dec	28				
		2009	Mar, Jun, Oct, Dec	25				
		2010	Mar, Jun, Oct, Dec	30				
		2011	Mar, Jun, Oct, Dec	30				
		2012	Mar, Jun, Oct, Dec	25				
		2013	Mar, Jun, Oct, Dec	32				
		2014	Mar, Jun, Oct, Dec	32				
		2015	Mar, Jun, Oct, Dec	32				
		2016	Mar, Jun, Oct, Dec	39				
		2017	Mar, Jun, Oct	23				
		2019	Dec	12				
		2020	Jul, Sep, Oct, Nov, Dec	8				
		2021	Jul, Sep	6				
		Summary of Economic Projections	Federal Reserve Board (Fed)	2004		Apr	1	384
				2007		Jan, Oct	14	
2008	Jan, Apr, Jun, Oct			25				
2009	Jan, Apr, Jun, Nov			26				
2010	Jan, Apr, Jun, Nov			26				
2011	Jan, Apr, Jun, Nov			26				
2012	Apr, Jun, Sep, Dec			28				
2013	Mar, Jun, Sep, Dec			28				
2014	Mar, Jun, Sep, Dec			28				
2015	Mar, Jun, Sep, Dec			28				
2016	Mar, Jun, Sep, Dec			28				
2017	Mar, Jun, Sep, Dec			28				
2018	Mar, Jun, Sep, Dec			28				
2019	Mar, Jun, Sep, Dec			28				
2020	Jun, Sep, Dec			22				
2021	Mar, Jun, Sep			20				
Rapport économique, social et financier (or "HCFP's opinion")	Direction Générale du Trésor (DGT)	2006	Sep	14	377			
		2007	Mar, Sep	48				
		2008	Jun, Sep	48				
		2009	Mar, Sep	48				
		2010	Sep	24				
		2011	Sep	20				
		2012	Sep	20				
		2013	Sep	22				
		2014	Sep	20				
		2015	Sep	20				
		2016	Sep	20				
		2017	Sep	20				
		2019	Oct	20				
2020	Mar, Apr, Jun, Oct, Nov	27						
2021	May, Sep	6						
Economic Report of the President	Council of Economic Advisers (CEA)	2004	Feb	12	292			
		2005	Feb	12				
		2006	Feb	12				
		2007	Feb	12				
		2008	Jan, Feb	24				
		2010	Feb	22				
		2011	Feb	22				
		2012	Feb	22				
		2014	Mar	22				
		2015	Feb	22				
		2016	Jan, Feb	44				
		2018	Feb	22				
		2019	Mar	22				
2020	Feb	22						
Prévisions économiques	Banque de France (BdF)	2015	Jun, Dec	12	130			
		2016	Jun, Dec	14				
		2017	Jun, Dec	14				
		2018	Mar, Jun, Sep, Dec	26				
		2019	Mar, Jun, Sep, Dec	26				
		2020	Jun, Sep, Dec	20				
2021	Mar, Jun, Sep	18						
Total					40,028			

Appendix B – Detailed List of Interviewees and Interviews

#	Interview				Interviewee				
	Date	Location	Mode	Duration (mn)	Occupation	Organization	Educational Attainment (Country)	Gender	Citizenship
1	Apr 2016	Paris	In person	79	Chief economist	Research or Think Tank	X-ENSAE	M	FR
2	Mar 2017	Belgium	In person	51	Senior Official	International Organization	X-ENSAE	M	FR
3	Apr 2017	Paris	In person	63	Economist	Research or Think Tank	MA Economics	F	FR
4	Feb 2019	Germany	In person	50	Senior Official	Government	PhD Economic Law (DE)	M	DE
5	Sep 2015	Paris	In person	78	Economist	Research or Think Tank	MA Economics	M	FR
6	Mar 2017	Paris	In person	104	Chief economist	Research or Think Tank	PhD Economics	M	FR
7	Apr 2017	Paris	In person	119	Economist	Bank or Asset Manager	MA Economics	M	FR
8	Oct 2015	Paris	In person	68	Senior Official	Government Agency	X-ENSAE	M	FR
9	Mar 2017	Paris suburbs	In person	154	Chief economist	Government Agency	ENSAE	M	FR
10	Mar 2016	United Kingdom	In person	70	Manager	Data Provider	BA Economics (US)	F	US
11	Mar 2017	Paris	In person	100	Chief economist	Central Bank	PhD Economics (US)	M	FR
12	May 2017	Paris suburbs	In person	77	Economist	Bank or Asset Manager	PhD Economics	F	IT
13	Sep 2015	Paris suburbs	In person	65	Economist	Bank or Asset Manager	MA Economics/Finance	F	FR
14	Apr 2015	Paris	In person	65	Economist	Research or Think Tank	PhD Economics	M	FR
15	Mar 2016	United Kingdom	In person	70	Director	Data Provider	MBA Management (US)	M	US
16	May 2017, Jul 2017	Paris	In person	95	Senior Official	Government Agency	X-ENSAE-ENS	M	FR
17	Feb 2017	Paris suburbs	In person	61	Chief economist	Insurance Company	ENSAE-Sciences Po	M	FR
18	Apr 2023	United States	Zoom	48	Economist	Central Bank	MA Economics (US)	M	US
19	Nov 2016	Paris	In person	98	Economist	Research or Think Tank	MA Economics	M	FR
20	Oct 2015	Paris	In person	68	Senior Official	Government Agency	Sciences Po-ENA	M	FR
21	May 2021	Paris	In person	77	Economist	Government	X-ENSAE	M	FR
22	Apr 2015	Paris	In person	125	Economist	Central Bank	ENSAE-Business School	M	FR
23	Aug 2015	Paris	In person	97	Economist	Bank or Asset Manager	MA Economics/Finance	F	FR
24	Oct 2015	Paris	In person	38	Economist	Research or Think Tank	MA Economics/Finance	F	FR
25	Apr 2017	Paris	In person	105	Economist	Research or Think Tank	MA Economics	F	FR
26	Sep 2015, Feb 2016	Paris	In person	73	Chief economist	Research or Think Tank	PhD Economics	M	FR
27	Nov 2016	Paris	In person	57	Economist	Research or Think Tank	MA Economics	M	FR
28	Mar 2021	Paris suburbs	Zoom	76	Chief economist	Government Agency	X-ENSAE-Sciences Po	M	FR
29	May 2017	Paris	In person	67	Chief economist	Bank or Asset Manager	X-ENSAE	M	FR
30	Dec 2015	Paris	In person	66	Chief economist	Insurance Company	ENS	M	FR
31	Feb 2019	Germany	In person	48	Chief economist	Research or Think Tank	PhD Economics (US)	M	DE
32	Nov 2015	Paris	In person	179	President	Research or Think Tank	X-ENSAE	M	FR
33	Jun 2017, Mar 2021	Paris	In person	135	Chief economist	Central Bank	X-ENSAE	M	FR
34	Mar 2023	United States	Zoom	82	Chief economist	Central Bank	PhD Economics (US)	M	US
35	Oct 2015	Paris	In person	71	Chief economist	Government	X-ENSAE	M	FR

#	Interview				Interviewee				
	Date	Location	Mode	Duration (mn)	Occupation	Organization	Educational Attainment (Country)	Gender	Citizenship
36	Mar 2023	United States	In person	65	Economist	Bank or Asset Manager	MA Economics (US)	M	US
37	Oct 2015	Paris	In person	68	Senior Official	Government Agency	ENS-ENSAE	F	FR
38	Sep 2015	Paris	In person	50	Consultant	Data Provider	X-ENSAE	M	FR
39	May 2017	Paris suburbs	In person	77	Chief economist	Non-Financial Company	ENS-ENSAE	M	FR
40	May 2017	Paris	In person	68	Senior Official	Research or Think Tank	X-ENSAE	M	FR
41	Sep 2015	Paris	In person	75	Economist	Bank or Asset Manager	MA Econometrics (NL)	M	NL
42	Apr 2017	Paris	In person	63	Manager	Non-Financial Company	X-ENSAE	M	FR
43	May 2017	Paris	In person	68	Economist	Non-Financial Company	PhD Economics	M	FR
44	Jul 2017	Paris suburbs	In person	108	Economist	Government Agency	ENS-ENSAE	M	FR
45	Oct 2015	Paris	In person	53	Economist	Bank or Asset Manager	PhD Economics	F	FR
46	Apr 2023	United States	Zoom	68	Chief economist	Government Agency	PhD Economics (US)	M	US
47	Jun 2023	United States	Zoom	63	Chief economist	Government	PhD Economics (US)	M	US
48	Jun 2014	Germany	Phone	34	Economist	Central Bank	PhD Economics (IE)	M	IE
49	May 2017	Paris	In person	78	Economist	International Organization	PhD Economics (DE)	F	DE
50	Mar 2021	Paris	Zoom	72	Economist	Central Bank	PhD Economics	M	IT
51	Apr 2017	Paris	In person	77	Economist	Research or Think Tank	PhD Economics	F	FR
52	Mar 2017	Paris	In person	89	Economist	International Organization	X-ENSAE	M	FR
53	Nov 2015	Paris	In person	55	Journalist	Other	MA Finance	M	FR
54	May 2017	Paris suburbs	In person	79	Chief economist	Insurance Company	X-ENSAE	M	FR
55	Mar 2017	Belgium	In person	65	Chief economist	International Organization	MA Economics (DE)	M	DE
56	Oct 2015	Paris	In person	82	Economist	Bank or Asset Manager	ENSAE	M	FR
57	Nov 2015	Paris	In person	64	Economist	International Organization	ENSAE	F	FR
58	Sep 2015	Paris	In person	88	Economist	Research or Think Tank	MA Economics	M	FR
59	Jul 2017	Paris	In person	112	Senior Official	Government Agency	X-ENSAE	M	FR

Abbreviations and Acronyms

Citizenship uses ISO 3166-1 two-letter country codes. Country where the highest diploma was obtained is only specified when different from France.

Considering their *educational attainment*, many interviewees mentioned one or more French *grandes écoles* - prestigious specialized higher education institutions that operate alongside the public university system, deliver master's level degrees, and require passing a highly competitive examination for admission. With the exception of business schools, all of the the *grandes écoles* named by the interviewees are public and listed below:

- ENA : *École Nationale d'Administration*, school of public policy and government
- ENS : *École Normale Supérieure*, research- and teaching-oriented school
- ENSAE : *École Nationale de la Statistique et des Études Économiques*, school for statistics, applied mathematics, and economics.
- Sciences Po : school of social sciences, government, and politics
- X : *École Polytechnique*, France's top engineering school. ENSAE can serve as one of X's specialization school.

Appendix C – Uncertainty and Forecasters’ Consensus. Regression Models

		<i>Dependent variable:</i>	
		Standard Deviation	
		OLS	
		Full model	Great Recession Excluded
		(1)	(2)
Country	France	<i>ref</i>	<i>ref</i>
	Germany	.03*** (.01)	.03*** (.01)
	Eurozone	-.03* (.01)	-.02 (.01)
	Japan	.10*** (.01)	.10*** (.01)
	UK	.09*** (.01)	.09*** (.01)
	US	.10*** (.01)	.08*** (.01)
Distance to the Horizon		.04*** (.001)	.04*** (.001)
Variable	GDP	<i>ref</i>	<i>ref</i>
	Inflation	-.06*** (.01)	-.05*** (.01)
Horizon (Year)	2004	.10*** (.02)	.12*** (.02)
	2005	.09*** (.02)	.10*** (.02)
	2006	.09*** (.02)	.09*** (.02)
	2007	.08*** (.02)	.09*** (.02)
	2008	.09*** (.02)	
	2009	.23*** (.02)	
	2010	.25*** (.02)	.25*** (.02)
	2011	.15*** (.02)	.16*** (.02)
	2012	.14*** (.02)	.15*** (.02)
	2013	.11*** (.02)	.12*** (.02)
	2014	.09*** (.02)	.09*** (.02)
	2015	.07*** (.02)	.08*** (.02)
	2016	.06** (.02)	.07*** (.02)
2017	.06* (.02)	.06*** (.02)	
2018	<i>ref</i>	<i>ref</i>	
Constant		-.01 (.02)	-.03 (.02)
Observations		1,296	1,104
R ²		.58	.64
Adjusted R ²		.57	.63
Residual Std. Error		.10	.09
F Statistic		84.00***	99.00***

Note: *p<0.01 ; **p<0.005 ; ***p<0.001

Source: Forecasts Database.

Note: To enable calculating standard deviations across organizations and studying their evolution over time, cases are retained when *at least five* different organizations produce forecasts for the same country, variable and horizon on *at least three* different dates.

Appendix D – Forecasting Organizations and the Long Term. Results from Regression Models

		<i>Dependent variable:</i>		
		Standard Deviation		
		OLS		
		Full Model	W/o LT Orgas	LT Orgas Only
		(1)	(2)	(3)
Country	France	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Germany	.12*** (.03)	.14*** (.03)	-.59 (.39)
	EuroZone	.11*** (.03)	.14*** (.03)	-.82* (.31)
	Japan	.39*** (.03)	.41*** (.03)	
	UK	.26*** (.03)	.28*** (.03)	
	US	.23*** (.03)	.23*** (.03)	-.86* (.30)
Distance to the Horizon		-.31*** (.01)	-.50*** (.01)	-.12*** (.02)
Variable	GDP	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Inflation	-.49*** (.02)	-.49*** (.02)	-.60*** (.11)
Sector	Central Banks	<i>ref</i>	<i>ref</i>	<i>ref</i>
	Ios	.05 (.06)	-.40*** (.12)	
	Gv't	.47*** (.12)		-.05 (.21)
	Gv't Agencies	.60*** (.08)	-.58*** (.14)	.38 (.17)
	Research & Think Tanks	-.29*** (.06)	-.83*** (.12)	
	Data Prov.	-.35*** (.06)	-.89*** (.12)	
	Banks & Asset Mgmt	-.31*** (.06)	-.86*** (.12)	
	Insurance	-.42*** (.08)	-.97*** (.12)	
NFCs	-.33*** (.07)	-.87*** (.12)		
Constant		1.60*** (.06)	2.30*** (.11)	2.20*** (.28)
Observations		3,162	3,006	156
R ²		.44	.54	.38
Adjusted R ²		.43	.53	.35
Residual Std. Error		.48	.42	.67
F Statistic		163.00***	246.00***	13.00***

Note : *p<0.01 ; **p<0.005 ; ***p<0.001

Source: Forecasts Database.

Note: To enable calculating standard deviations over time and studying their evolution across horizons, cases are retained when a same organization produce forecasts for the same country and variable, and for *at least* three different horizons on *at least five* different dates.

Appendix E – Forecasting Organizations and the Long Term. Detailed Regression Models

		<i>Dependent variable:</i> Standard Deviation <i>OLS</i>		
Country	Distance to the Horizon	-.50*** (.01)	Goldman Sachs	-.80*** (.07)
	France	<i>ref</i>	HSBC	-.80*** (.07)
	Germany	.10* (.04)	IHS Markit	-.78*** (.07)
	EuroZone	.07 (.03)	IMF	<i>ref</i>
	Japan	.34*** (.04)	ING	-.87*** (.08)
	UK	.22*** (.04)	Insee	-.55*** (.10)
	US	.18*** (.04)	JP Morgan	-.76*** (.08)
Variable	GDP	<i>ref</i>	Julius Baer	-.78*** (.10)
	Inflation	-.53*** (.02)	Lehman Brothers	-1.00*** (.14)
Organization	ABN Amro	-.61*** (.13)	Lloyd's	-.82*** (.10)
	Allianz	-.91*** (.10)	Moody's	-.91*** (.10)
	Axa	-1.10*** (.17)	Morgan Stanley	-.86*** (.07)
	Barclays	-.87*** (.09)	Natixis	-.87*** (.10)
	BNP Paribas	-.74*** (.10)	Nomura	-.82*** (.08)
	Bank of America	-.74*** (.07)	OECD	-.39*** (.07)
	Capital Economics	-.66*** (.13)	OFCE	-.58*** (.08)
	Citigroup	-.77*** (.07)	Oxford Economics	-.75*** (.08)
	CommerzBank	-.78*** (.10)	Schroders	-.79*** (.13)
	Crédit Agricole	-.84*** (.10)	SEB (Stockholm)	-.79*** (.11)
	Crédit Suisse	-.82*** (.08)	Société Générale	-.82*** (.08)
	Deutsche Bank	-.71*** (.09)	UBS	-.95*** (.07)
	Dresdner Bank	-1.20*** (.11)	UniCredit	-.85*** (.09)
	European Commission	-.61*** (.07)	WestLB	-.70*** (.10)
	ECB	-.33*** (.09)	Constant	2.30*** (.07)
	Economist's Intelligence	-.77*** (.07)	Observations	1,965
	Unit	-.82*** (.13)	R ²	.55
	Exane	-.82*** (.13)	Adjusted R ²	.54
			Residual Std. Error	.44
			F Statistic	51.00***

Note: *p<0.01 ; **p<0.005 ; ***p<0.001

Source: Forecasts Database.

Note: To enable calculating standard deviations over time and studying their evolution across horizons, cases are retained when a same organization produce forecasts for the same country and variable, and for *at least* three different horizons on *at least five* different dates.