

Forward Guidance and Fiscal Policy in the Time of COVID-19

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Abstract

This paper studies how the announcements of French President Emmanuel Macron made during the COVID-19 pandemic have impacted French financial markets. Distinguishing the effect of press releases announcing future speeches as well as the effect of the speeches themselves, we find that each of them (i) impacts positively the French stock market and (ii) reduces the French-German government bond spread, especially during the 2020 year. We also show that the speeches and their announcements have mixed effects on the volatility of both indicators. Our results suggest that fiscal policymakers' communication can reassure financial markets while supporting conventional and unconventional fiscal policies in times of uncertainty.

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1 Introduction

“Tout sera mis en œuvre pour protéger nos salariés
et pour protéger nos entreprises *quoi qu’il en coûte*”

“Everything will be done to protect our employees
and to protect our companies *whatever it takes*”

Emmanuel Macron, *Statement to the French citizens*, March 12, 2020

The COVID-19 crisis has been a multi-faceted crisis, requiring public authorities to take actions rapidly on sanitary and socio-economic measures. The severity of the pandemic and the scale of the policies implemented to fight the economic downturn have led French President Emmanuel Macron to declare: “We are at war¹”. This declaration was part of a larger policy of the French Presidency to maintain a high level of communication by announcing all major COVID-19-related decisions during formal announcements broadcasted live, called *Adresses aux Français* (“Statement to the French citizens”). The speeches usually contained an overview of the health situation – number of cases, stress level on hospital capacities, etc.– but special attention was given on lockdown announcements as well as the general economic outlook and policy agenda. While there are striking similarities with war-like episodes of communication², we consider that there is a more direct lineage with the monetary policy of forward guidance adopted in advanced economies since the early 2010s. Indeed, the French President ‘whatever it takes’ mantra of March 12, echoes the famous statement of July 26, 2012, at the height of the eurozone crisis by Mario Draghi, President of the European Central Bank (ECB) from 2011 to 2019. The comparison holds not only at a surface level – the same words pronounced by economic leaders in a time of crisis – but also for the economic agenda that this sentence have come to represent; an agenda that consists in large public interventions during downturns in order to minimize uncertainty and reduce the severity of the crisis.

In the aftermath of the Great Financial Crisis, and especially in Europe during the sovereign debt crisis, several central banks have adopted a policy of forward guidance³ in order to anchor market’s expectations on the future of monetary policy in a zero-lower-bound environment.

If we translate these policies to the multi-faceted COVID-19 crisis, it consists for fiscal authorities in making committing statements about the outlook for future rescue envelope in order to fight recession. From March to November 2020, four amending budget laws increased the fiscal packages devoted to the crisis to about €180 billion (around 8% of GDP) in combination with public guarantees of €327 ½ billion (close to 15% of GDP) (IMF, 2021). A first wave of exceptional measures was directly announced by President Macron on the 12th and 16th of March 2020 including (i) the creation of a simplified and reinforced partial activity scheme, (ii) the postponement of social security and fiscal instalments for companies and accelerated refund of tax credits (e.g., CIT and VAT), (iii) state guarantees for bank loans to companies and credit reinsurance

¹*Statement to the French citizens*, March 16, 2020.

²For a more in-depth study of war metaphors used in political speeches during COVID-19, see [Castro Seixas \(2021\)](#).

³Forward guidance as defined by [Woodford \(2012\)](#) consists in “explicit statements by a central bank about the outlook for future policy, in addition to its announcements about the immediate policy actions that it is undertaking”.

schemes and (iv) the postponement of rent and utility payments for affected micro-enterprises and small and medium enterprises (SMEs). Two more measures were announced on April, 14th: (v) support measures for the hardest-hit sectors (tourism, events etc.) and (vi) direct transfers for low-income families. Those measures were not only exceptional by their economic scale but also by their declared ambition: their goal was to “preserve” the French economy from the pandemic and freeze the incoming financial crisis, and such as long as the pandemic would last.

Following the taxonomy proposed by [Campbell, Evans, Fisher and Justiniano \(2012\)](#), Macron’s announcements are more akin to Odyssean forward guidance, in the sense that there is a public commitment to action for the fiscal policymaker, but also have the same potential shortcomings as monetary forward guidance, in the sense that it lacks enforcement mechanism. One important question if we want to define fiscal forward guidance, is to characterize who is the intended audience for the fiscal forward guidance. Is it the general public ? Voters ? Economic actors ? In this paper we consider that while the speeches were made for a larger audience – which sets them apart from monetary policy communication that is in nature a technical communication – economic sections of the addresses were made with specific actors in mind: business owners (large or SME), employers and in general independent workers. This is reflected in the general non-technical tone of the addresses, which are at the same time: political speeches, technical summaries of the pandemic and commitment to fiscal spending.

The main motivation of the paper is to investigate whether the temporary adoption by French fiscal authority of a forward guidance stance was successful at anchoring public expectations during the COVID-19 crisis. Specifically, we contribute to the literature by analysing the effect of French President Macron announcements on economic agents’ expectations on the French economy, proxied by the French stock index and the spread between the 10-year French and German government bonds. The first variable allows us to capture the expectations of economic agents on large private companies whereas the second variable is an important indicator of market perception of fiscal vulnerability. From a methodological viewpoint, we estimate event-dummy regressions, relying on daily data.

The remainder of the paper is organized as follows. Section 2 reviews the related literature. Section 3 presents the data and develops the empirical methodology. Section 4 discusses the main results. The last section concludes.

2 Related Literature

A vast literature deals with the effects of monetary forward guidance from both a theoretical and an empirical point of view ([Blinder et al., 2008](#), [Campbell et al., 2012](#), [Del Negro et al., 2012](#), [Hagedorn et al., 2019](#), [Lunsford, 2020](#), [McKay et al., 2016](#), [Moessner et al., 2017](#)) and generally concludes on the effectiveness of forward guidance, especially near the zero-lower-bound ([Hamilton and Wu, 2012](#), [Wu and Xia, 2016](#)). Special attentions have been given to the effects of unconventional monetary policy announcements on stock markets and government bonds ([Altavilla et al., 2016](#), [Falagiarda and Reitz, 2015](#), [Glick and Leduc, 2012](#)), including since the start of the COVID-19 crisis ([Cortes et al., 2022](#), [Rebucci et al., 2022](#)).

While there is a large literature on the importance of fiscal policy during downturns, the existing research on the influence of fiscal authorities on financial markets in times of stress is more limited. [Art-Sahalia et al. \(2012\)](#) examine the impact of macro and financial sector policy announcements during the Global Financial Crisis, such as government guarantees, on diverse countries and find that they reduce interbank risk premia. [Gödl and Kleinert \(2016\)](#) investigate the impact of three categories of news events on eurozone bond yields: publications of economic forecasts, announcements of fiscal assistance, and austerity measures. They find a market reaction only for growth and budget deficit forecasts.

Several papers study the importance of officials' speeches during the eurozone sovereign debt crisis. [Mohl and Sondermann \(2013\)](#) show that the more euro area governments issued statements at the same time, the more bond spreads increased. In addition, politicians from highly-rated countries have stronger impact on spreads. Similarly, [Ehrmann et al. \(2014\)](#) show that the exchange rate volatility was increasing in the eurozone in response to news, on days when several politicians from AAA-rated countries went public with negative statements. More recently, [Afonso et al. \(2020\)](#) assess the effect of a mix of fiscal and monetary policies on 10-year sovereign bond yield spreads. Releases from the European Commission (EC) announcing higher debt and better budget balance forecasts contribute to the rise and the decline of spreads, respectively. [Fendel et al. \(2021\)](#) study the sovereign yields and spreads of European variation following announcements by the ECB and the EC. In a similar idea, [Havlik et al. \(2022\)](#) find that monetary policy announcements have larger effects than fiscal policy announcements while Next Generation EU had a significant impact, especially on core countries. Finally, the closest paper to ours is [Falagiarda and Gregori \(2015\)](#) which studies the effects of announcements from three different Italian governments on bond spreads during the 2009-2013 period and shows that the credibility of the administration matters, creating substantial differences in the speeches' reception – Monti's cabinet having the highest impact. Our paper aims to shed light similarly in a one-country setting, but this time, in the context of the COVID-19 crisis.

3 Data and Methodology

3.1 Data

In order to study the impact of E. Macron's announcements we use a methodology common in the financial literature – event-dummy regressions ([Gödl and Kleinert, 2016](#)) – which allows to include controls for specific events. Due to the large role that ECB press conferences and policy briefs plays on the evolution of financial series such as stock exchange indexes and sovereign bond spreads, we include these events in our study.

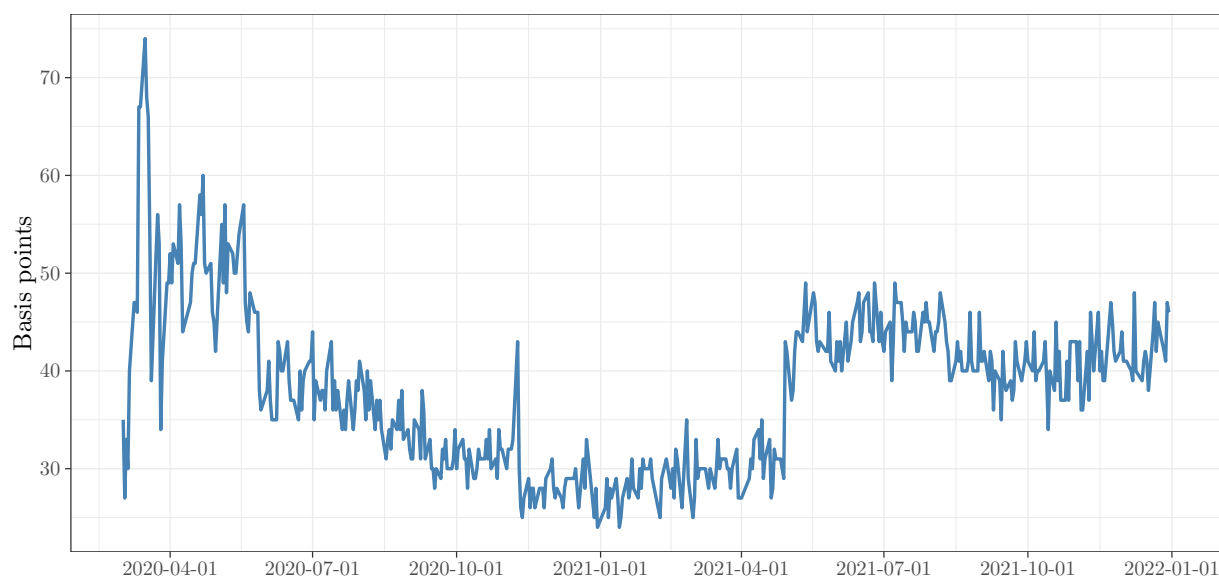
To assess market's reaction to presidential announcements we use two variables. The first one is *Announcement*, which captures the effect of the day of E. Macron's announcements. Because the declarations are always done in the evening (i.e., outside stock-exchange opening hours⁴), we also add the day before and after the addresses to our study. The second one is *announcement_news*, which captures the effect of the news of E. Macron's future speech on the market. Since the

⁴See Appendix A.2 and A.3 for a detailed table of the announcements.

“Addresses aux Français” did not follow a planned schedule like the ECB press conferences for example, the news that the President was going to make a public address could be, in the context of COVID-19, an event *in itself* that could set off a reaction. The dates for the news have been retrieved using AFP (French Press Agency) dispatches which make the basis for French economic news.

We investigate the impact of fiscal announcements on two different classes of variables: (i) the spread between the 10-year French and German government bonds and (ii) the CAC40/CAC All-Tradable⁵, the French stock indexes. We use the first difference of business daily data (5 days per week), collected for the period from March 1, 2020 to December 12, 2021.⁶ We use equity indices as proxies of the general expectations of investors on the financial health of large traded company whereas the 10-year spread⁷ is used to measure market’s perception on the general fiscal health, or ‘seriousness’, of France with regard to Germany.

Figure 1: Evolution of the French spread vis-à-vis Germany, in basis points (2020-2021)



Source: Macrobond

The French spread vis-à-vis Germany is relatively narrow but has increased sharply during the onset of the crisis which was a period of renewed volatility⁸, up to a 70 basis point difference in March 2020, and decreased until the end of 2020, to return to its pre-crisis level, of around 30 basis points (Figure 1). The spread re-increased during Q2-2021, to average 40 basis points.

Similarly, the CAC40 has decreased sharply during the beginning of the crisis, going from around 6000 points in early 2020 to dropping below 4000 points in March 2020. It has continuously increased since then, regaining its pre-pandemic level in March 2021.

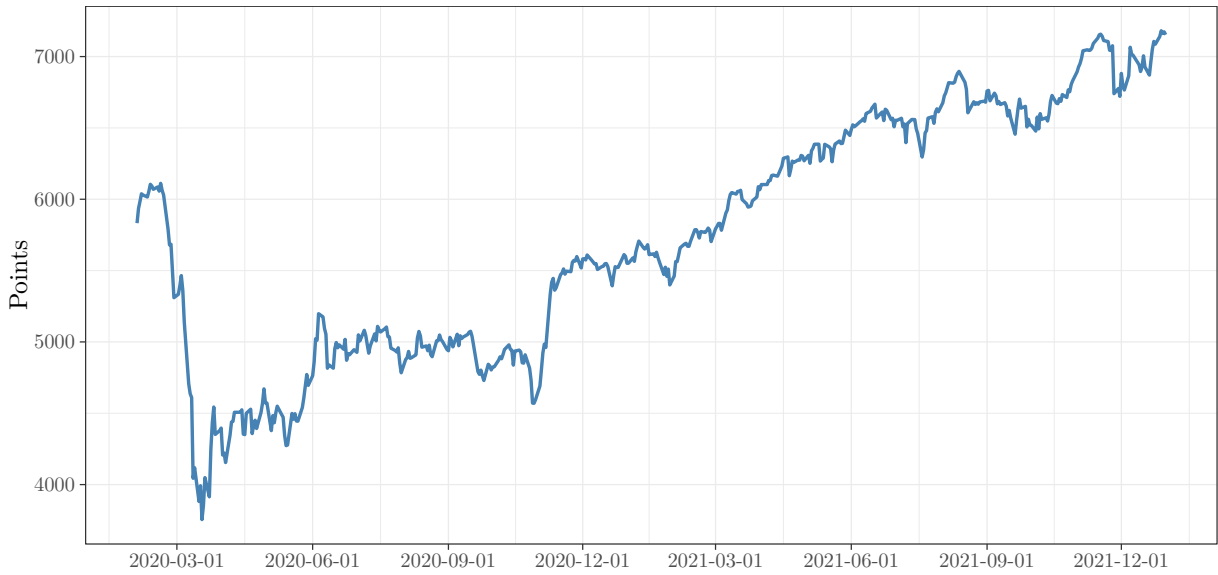
⁵We use both the CAC40, which is the collection of the 40 largest quotations, as well as the CAC All-Tradable that consists of all the companies traded on Euronext Paris.

⁶Details and source of the data are reported in the Appendix A.1. As noted by Gödl and Kleinert (2016), using the first difference ensures stationary series and eliminates the fundamental determinants of the series which need not to be explained here.

⁷Which is commonly used in the literature since the Eurozone crisis (Falagiarda and Gregori, 2015, Mohl and Sondermann, 2013).

⁸The declaration of ECB President C. Lagarde during a press conference on March 12th 2020 that the “[ECB is] not here to close spreads” participated to briefly increase financial stress in the Eurozone.

Figure 2: Evolution of the CAC40 stock index, in points (2020-2021)



Source: Macrobond

3.2 Methodology

While in recent years the ECB policy has lowered all yields and narrowed spreads (Altavilla et al., 2019), the 2020-2021 period has seen renewed volatility. To account for this high volatility, we use a multivariate ARMA(P,Q) – GARCH(p,q) model. In line with Falagiarda and Gregori (2015), our specification is given by:

$$\begin{aligned} \Delta Y_t = & c + \rho \Delta Y_{t-1} + \mu_1 \text{Announcement_news}_{2020} + \mu_2 \text{Announcement_news}_{2021} \\ & + \gamma_1 \text{Announcement}_{t-1} + \gamma_2 \text{Announcement}_t + \gamma_3 \text{Announcement}_{t+1} \\ & + \theta \text{Monetary}_t + \delta \Delta X_t + \eta W_t + \varepsilon_t + \theta \varepsilon_{t-1} \end{aligned} \quad (1)$$

Where ε_t is the error process such that $\varepsilon_t = v_t \sqrt{h_t}$, v_t being an i.i.d. sequence with zero mean and $\sigma_v^2 = 1$, and h_t denoting the conditional variance given by:

$$h_t = \omega + \alpha \varepsilon_{t-1}^2 + \beta h_{t-1} \quad (2)$$

ΔY_t denotes CAC40, CAC All tradable or the 10-year spread expressed in first differences, *Announcement* is a dummy variable which takes the value 1 the days of E. Macron’s announcements, and *Announcement_news* is a dummy variable which takes the value 1 the day the news of a forthcoming presidential announcement is released, the coefficients are split between the year 2020 and 2021 as the value of the coefficient changes significantly during the period. *Monetary* is also a dummy variable, which takes the value 1 the days of ECB monetary announcements extracted from the database of Altavilla et al. (2019). X_t and W_t are control vectors. X_t is a matrix of first-differenced controls that include: a) the *total stock market index (totmkteu)* to control for market-wide business climate changes in the EU, b) the *Oxford COVID-19 government response tracker* from Hale et al. (2021) which is an index that measures the stringency of the national public response to the global pandemic and c) Google LLC mobility index for public transportation Google LLC (2023).

As we are dealing with economic agents decisions and expectations, we are not directly interested in controlling for the intensity of the pandemic *per se* but rather the perceived severity by French citizens and French authorities. This is why rather than, for example, using the number of patients with COVID in hospitals or the number of daily pandemic-related deaths we turn to more indirect indicators like the government response tracker and the mobility index. The first one measures government decisions which can have direct impact on the economic activity (imposing lockdowns or curfews, restricting travel distances or limiting public demonstration), it takes the value 0 when no restriction is implemented and 100 is the theoretical highest value. The second one is the mobility index developed by Google LLC during the pandemic that compares the number of visitors to transit stations to baseline days (base 100 is the median value for the 5-week period from January 3 to February 6, 2020).⁹ We also make use of a vector of dummy controls, W_t containing weekday dummies to control for seasonality as well as dummies for specific fiscal events (announcements from the EU Commission, etc.), using both the list from [Delatte and Guillaume \(2020\)](#) and [Fendel et al. \(2021\)](#). We also replicate our identification strategy by considering the absolute values of our endogenous variables to study the behavior of their variances regarding the announcements.

4 Results

4.1 Sovereign spreads

Table 1 shows the results of the estimation for the sovereign bond spread. We specify four different models by adding progressively additional control variables. The estimated coefficients for the variance equation are in most cases statistically significant, which justifies the use of a GARCH model. In order to take into account a possible reaction to German policy, we also add our pandemic-related controls for Germany. Surprisingly, none of the coefficients of our control variables are statistically significant.

The dichotomy between 2020 and 2021 does appear appropriate for the *Announcement_news* variable. Indeed, while the effect of forthcoming announcements is non-significant for the 2021 period, it appears negative (around 3 basis points the day of the announcement) for the year 2020, indicating a decrease in the variation of the 10-year French and German government bond spread. We only observe this effect for the year 2020 which was a period of higher uncertainty than 2021. This means that news of future presidential speeches had a positive impact on market's expectations in the beginning of the crisis but as the pandemic continued, investors became accustomed to presidential addresses as they became more common and the situation improved.

Interestingly, $Announcement_{t+1}$ also negatively impacts the spread (around 1.6 basis point with a statistically significant coefficient), which means that there is a surprise effect after the announcement, as speeches were done outside trading hours, the effect is lagged. Overall, when combining this with the effect of the news announcement, we can conclude that fiscal communications have a net positive impact – future announcements as well as announcement themselves help to reduce spreads.

⁹See Appendix A.2

Table 1: Parameter estimates, Sovereign Spread

	2020-03/2021-12			
	Δ Spread	Δ Spread	Δ Spread	Δ Spread
Intercept	0.15 (0.13)	0.16 (0.13)	0.16 (0.13)	0.05 (0.54)
<i>Announcement_news</i> ₂₀₂₀	-3.15* (1.89)	-3.00* (1.80)	-3.02* (1.82)	-3.00* (1.82)
<i>Announcement_news</i> ₂₀₂₁	-0.34 (1.87)	-0.39 (1.86)	-0.35 (1.88)	-0.35 (1.91)
<i>Announcement</i> _{<i>t</i>-1}	0.87 (1.51)	0.80 (1.50)	0.81 (1.50)	0.78 (1.51)
<i>Announcement</i> _{<i>t</i>}	0.72 (1.33)	0.61 (1.15)	0.61 (1.15)	0.59 (1.14)
<i>Announcement</i> _{<i>t</i>+1}	-1.55* (0.82)	-1.62** (0.76)	-1.63** (0.76)	-1.63** (0.76)
<i>Monetary</i>		-0.31 (1.00)	-0.31 (1.00)	-0.30 (1.00)
<i>Totmkteu</i>		-0.09 (0.11)	-0.09 (0.11)	-0.09 (0.11)
<i>Stringency_index_DEU</i>			0.11 (0.08)	0.10 (0.08)
<i>Stringency_index_FRA</i>			0.03 (0.04)	0.00 (0.01)
<i>Mobility_index_DEU</i>				0.02 (0.15)
<i>Mobility_index_FRA</i>				-0.06 (0.13)
<i>omega</i>	0.88 (0.61)	0.93** (0.41)	0.93** (0.43)	0.93** (0.41)
<i>alpha</i>	0.11 (0.07)	0.11** (0.05)	0.11** (0.06)	0.11** (0.05)
<i>beta</i>	0.81*** (0.11)	0.79*** (0.08)	0.79*** (0.08)	0.79*** (0.08)
Log likelihood	-1222.63	-1207.65	-1207.53	-1207.54
AIC	5.15	5.15	5.15	5.15
BIC	5.23	5.25	5.26	5.28
Q(5)	0.72	0.75	0.76	0.72
Q(10)	0.39	0.45	0.44	0.44
Q ² (5)	0.01	0.03	0.03	0.04
Q ² (10)	0.03	0.09	0.09	0.10

Note: ARMA(1,1) – GARCH(1,1) regressions on the daily basis points changes in the 10-year bond spread. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. ARMA(1,1) and weekdays fixed effects are included but not reported. Robust standard errors are used (reported in parenthesis). Q(5) and Q(10) are the p.value of the Ljung-Box test for the autocorrelation of the standardized residuals up to the 5th and 10th order, respectively. Q²(5) and Q²(10) are the p.value for the squared standardized residuals.

Table 2: Parameter estimates, Sovereign Spread Volatility

	2020-03/2021-12			
	\Delta Spread	\Delta Spread	\Delta Spread	\Delta Spread
Intercept	2.19*** (0.20)	2.12*** (0.16)	2.12*** (0.16)	2.12*** (0.15)
<i>Announcement_news</i> ₂₀₂₀	0.99 (1.51)	0.15 (1.27)	0.13 (1.27)	0.11 (1.29)
<i>Announcement_news</i> ₂₀₂₁	-0.29 (0.97)	0.29 (0.72)	0.26 (0.73)	0.28 (0.74)
<i>Announcement</i> _{t-1}	0.77 (0.89)	0.30 (0.67)	0.31 (0.67)	0.31 (0.67)
<i>Announcement</i> _t	-0.47 (0.68)	-0.76 (0.60)	-0.77 (0.59)	-0.77 (0.58)
<i>Announcement</i> _{t+1}	0.07 (0.56)	-0.24 (0.47)	-0.24 (0.47)	-0.25 (0.47)
<i>Monetary</i>		1.53** (0.62)	1.53** (0.62)	1.52** (0.62)
<i>Totmkteu</i>		-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)
<i>Stringency_index_DEU</i>			0.04 (0.02)	0.01 (0.01)
<i>Stringency_index_FRA</i>			-0.02 (0.02)	-0.01 (0.02)
<i>Mobility_index_DEU</i>				0.17 (0.12)
<i>Mobility_index_FRA</i>				0.04 (0.11)
<i>omega</i>	0.58** (0.26)	0.59** (0.23)	0.60** (0.24)	0.61** (0.24)
<i>alpha</i>	0.21* (0.12)	0.19* (0.10)	0.20* (0.10)	0.19* (0.11)
<i>beta</i>	0.69*** (0.11)	0.69*** (0.10)	0.68*** (0.10)	0.68*** (0.10)
Log likelihood	-1039.29	-1019.90	-1019.80	-1019.71
AIC	4.39	4.36	4.36	4.37
BIC	4.48	4.47	4.48	4.50
Q(5)	0.04	0.06	0.07	0.06
Q(10)	0.09	0.12	0.12	0.11
Q ² (5)	0.01	0.28	0.29	0.32
Q ² (10)	0.01	0.52	0.52	0.59

Note: ARMA(1,1) – GARCH(1,1) regressions on the absolute value of daily basis points changes of the 10-year bond spread. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. ARMA(1,1) and weekdays fixed effects are included but not reported. Robust standard errors are used (reported in parenthesis). Q(5) and Q(10) are the p.value of the Ljung-Box test for the autocorrelation of the standardized residuals up to the 5th and 10th order, respectively. Q²(5) and Q²(10) are the p.value for the squared standardized residuals.

Volatility analysis

The analysis of the spread volatility (Table 2) supports the lack of effect of presidential announcements on bond spread volatility.

The main driver of volatility in the sovereign bond market is, as expected, monetary policy (Altavilla et al., 2019). Neither the news, nor the presidential announcements *themselves* affect it. The fact that there is no increase in volatility the days surrounding the announcements also indicates that there is no surprise effect in markets' reaction and that all the relevant information of the speeches have already been included in investors' expectations.

4.2 CAC40

Tables 3 and 4 replicate the same identification and sampling strategies by considering changes in CAC40 and CAC-All Tradable indexes and their corresponding volatility, respectively.

A look at the specific year 2021 endorses the significant role of presidential announcements. Indeed, the *Announcement_news* has a large and positive impact on the CAC index. This is compatible with our previous analysis: investors became accustomed to presidential addresses as the financial and economic crisis waned, here on the contrary the change was positive as future news increased the performance of the market. Overall, the two indexes are similarly impacted, albeit with smaller coefficients for CAC-All Tradable, possibly showing that equities of largest companies are more sensitive to fiscal announcements.

CAC indexes are largely driven by monetary policy announcements. The negative sign may be seen as surprising at first sight because when the ECB announces an increase in the asset purchase program¹⁰, according to the portfolio-rebalancing channel, this pushes up the prices of the assets purchased by the central bank, leading to an overall increase in assets prices as a consequence of agents seeking substitutes. Here, on the contrary, it appears that when the ECB reacts to the severity of the crisis, it creates a negative signal to the market, dampening the index performance, as investors take monetary reactions as a sign of financial stress. As expected, the variation of the CAC40 is also positively associated (2.52) with the variation of Europeans stocks (*totmkteu*). Surprisingly *stringency_index* is positively associated with the variation of the CAC40 meaning that an increase in the public response to the pandemic and an increase in the stringency of lockdowns, curfews etc. has a positive impact on French equity indexes. In a similar way, the mobility index, which measures the number of passenger using public transport stations, is negatively associated with the CAC40 (albeit only at the 10% significance level for one specification). Taken together these two controls show a positive relationship between the severity of the pandemic and the performance of the market which can be counter-intuitive at first sight. We propose two hypothesis, not mutually exclusive, for explaining these results: (i) strong measures taken to reduce the pandemic have a reassuring effect on financial actors that translates in a positive reaction or, (ii) this crisis is unprecedented and financial actors do not accurately interpret this new information, which mean that no clear result can be deduced from these variables.

¹⁰On 18 March 2020, the Pandemic Emergency Purchase Programme (PEPP) was implemented in response to the financial and economic crisis as the Eurozone was facing a sharp increase in financial stress on sovereign debt markets, with an initial envelope of €750 billion (ECB website).

Volatility analysis

The volatility analysis of Table 4 asserts the role of fiscal authority communication strategy: unlike the announcements themselves, the press releases of a forthcoming announcements had a strong and positive impact during the COVID-19 crisis for the year 2021 (only significant at the 5 and 10% level for some specifications) but not the year 2020. Taking into account that the year 2021 has seen lower volatility overall, and based on the previous result regarding the effect of *Announcement_news*₂₀₂₁ on the CAC index, it appears that news of presidential addresses during the second year of the pandemic were very positively received, and even expected as their news increases the volatility.

Table 3: Parameter estimates, CAC Index

	2020-03/2021-12							
	CAC40	CAC_All	CAC40	CAC_All	CAC40	CAC_All	CAC40	CAC_All
Intercept	5.71** (2.70)	4.29** (2.00)	-0.02 (1.71)	-0.04 (1.27)	0.30 (1.69)	0.12 (1.27)	0.28 (1.70)	0.26 (1.25)
<i>Announcement_news</i> ₂₀₂₀	-76.25 (50.85)	-59.03 (40.08)	-5.34 (12.75)	0.17 (8.66)	3.07 (14.79)	0.95 (8.96)	2.29 (14.89)	4.11 (9.82)
<i>Announcement_news</i> ₂₀₂₁	58.95*** (16.24)	38.21*** (11.55)	44.32*** (10.19)	22.85*** (5.73)	35.53*** (7.19)	20.73*** (6.37)	35.44*** (7.99)	17.81*** (4.60)
<i>Announcement</i> _{t-1}	21.31 (21.18)	15.50 (14.94)	0.91 (11.75)	2.78 (8.61)	6.50 (12.08)	4.28 (8.38)	5.93 (11.85)	5.04 (7.47)
<i>Announcement</i> _t	-22.24 (23.48)	-17.36 (18.10)	2.50 (6.82)	-4.84 (4.30)	-0.29 (8.47)	-6.42 (4.50)	-0.08 (8.43)	-7.47 (5.12)
<i>Announcement</i> _{t+1}	-12.20 (22.31)	-7.95 (19.06)	7.62 (9.27)	6.37 (7.05)	11.23 (9.33)	5.00 (7.72)	9.75 (9.55)	8.21 (7.70)
<i>Monetary</i>			-12.34* (7.40)	-9.73* (5.84)	-14.13** (6.91)	-11.70* (6.66)	-13.77* (7.29)	-11.61** (4.79)
<i>Totmkteu</i>			2.98*** (0.09)	2.25*** (0.09)	3.04*** (0.12)	2.26*** (0.09)	3.04*** (0.12)	2.31*** (0.09)
<i>stringency_index</i>					1.59*** (0.47)	1.19*** (0.39)	1.29*** (0.48)	0.95*** (0.34)
<i>Mobility_index</i>							-1.89* (1.05)	-1.40 (0.97)
<i>omega</i>	520.88** (227.70)	265.61** (114.02)	165.10** (79.12)	95.53* (56.45)	18.24*** (1.46)	90.90* (53.64)	14.27*** (5.09)	2.82*** (0.42)
<i>alpha</i>	0.17* (0.09)	0.17* (0.09)	0.07 (0.05)	0.10 (0.07)	0.00 (0.00)	0.09 (0.06)	0.00 (0.00)	0.00 (0.00)
<i>beta</i>	0.74*** (0.08)	0.74*** (0.08)	0.75*** (0.10)	0.71*** (0.14)	0.98*** (0.00)	0.73*** (0.13)	0.98*** (0.00)	0.99*** (0.00)
Log likelihood	-2700.33	-2558.24	-2316.48	-2162.84	-2315.50	-2159.62	-2313.74	-2161.66
AIC	11.32	10.73	9.73	9.08	9.73	9.08	9.72	9.09
BIC	11.42	10.82	9.84	9.20	9.85	9.20	9.85	9.22
Q5	0.70	0.70	0.87	0.77	0.86	0.67	0.77	0.44
Q10	0.68	0.65	0.81	0.73	0.64	0.54	0.55	0.40
Q ² (5)	0.91	0.94	0.90	0.97	0.91	0.99	0.89	0.80
Q ² (10)	0.99	1.00	0.99	0.99	0.96	0.98	0.98	0.91

Note: GARCH(1,1) regressions on the daily points changes in the CAC stock index. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$.

Weekdays fixed effects are included but not reported. Robust standard errors are used (reported in parenthesis).

Q(5) and Q(10) are the p.value of the Ljung-Box test for the autocorrelation of the standardized residuals up to the 5th and 10th order, respectively. Q²(5) and Q²(10) are the p.value for the squared standardized residuals.

This is still consistent with the “learning” hypothesis i.e., that financial markets were expecting further expansion, or at least a continuation, of the generous “*quoi qu’il en coûte*” (whatever it takes/costs) policy of public spending implemented since the start of the pandemic. Looking at the results for monetary policy we can see no effect on volatility. A rise in the European market’s performance also strongly increases the volatility of our indicators (6.2 and 4.7 basis points respectively), while monetary policy announcements do not.

Table 4: Parameter estimates, CAC Index Volatility

	2020-03/2021-12							
	CAC40	CAC_All	CAC40	CAC_All	CAC40	CAC_All	CAC40	CAC_All
Interpect	40.81*** (6.92)	25.43*** (5.93)	201.01*** (33.83)	154.78*** (25.05)	199.39*** (34.32)	154.02*** (25.06)	214.46*** (38.21)	168.02*** (27.87)
<i>Announcement_news</i> ₂₀₂₀	29.36 (25.54)	30.84 (20.26)	12.62 (23.15)	15.28 (17.49)	13.35 (23.24)	15.64 (17.48)	11.55 (28.46)	14.01 (17.22)
<i>Announcement_news</i> ₂₀₂₁	37.03 (27.57)	21.11 (20.61)	46.28* (25.25)	30.01 (18.60)	47.59* (25.31)	30.24 (18.64)	50.31** (25.32)	32.80* (18.26)
<i>Announcement</i> _{t-1}	-8.43 (16.50)	-10.15 (11.98)	-4.90 (15.59)	-4.21 (11.57)	-5.01 (15.63)	-4.28 (11.57)	-5.58 (16.66)	-4.97 (11.37)
<i>Announcement</i> _t	2.89 (17.22)	1.48 (12.70)	-2.57 (16.37)	0.20 (12.09)	-2.54 (16.44)	0.24 (12.11)	-1.70 (17.11)	0.58 (11.97)
<i>Announcement</i> _{t+1}	-3.45 (17.53)	-1.87 (13.16)	-4.52 (16.33)	-0.11 (12.22)	-4.39 (16.33)	-0.18 (12.21)	-5.12 (18.31)	-0.88 (12.03)
<i>Monetary</i>			1.21 (11.26)	-0.14 (8.38)	1.48 (11.25)	-0.07 (8.37)	1.00 (11.91)	-0.54 (8.28)
<i>Totmkteu</i>			6.23*** (1.00)	4.68*** (0.75)	6.23*** (1.00)	4.67*** (0.75)	6.37*** (1.30)	4.76*** (0.76)
<i>stringency_index</i>					0.75 (1.15)	0.50 (0.86)	-0.34 (1.36)	-0.30 (0.46)
<i>Mobility_index</i>							2.79 (2.67)	2.17 (1.40)
<i>omega</i>	330.44*** (84.69)	165.49*** (41.20)	260.93*** (82.62)	132.56*** (41.22)	256.19*** (79.32)	131.19*** (40.09)	259.96** (122.36)	138.26*** (42.42)
<i>alpha</i>	0.18*** (0.05)	0.19*** (0.05)	0.16*** (0.05)	0.16*** (0.05)	0.15*** (0.05)	0.16*** (0.05)	0.17*** (0.05)	0.18*** (0.05)
<i>beta</i>	0.71*** (0.06)	0.72*** (0.05)	0.74*** (0.06)	0.75*** (0.06)	0.74*** (0.06)	0.75*** (0.06)	0.72*** (0.08)	0.72*** (0.06)
Log likelihood	-2535.73	-2394.41	-2485.97	-2346.55	-2485.77	-2346.39	-2484.56	-2344.83
AIC	10.65	10.06	10.56	9.97	10.56	9.98	10.56	9.97
BIC	10.78	10.19	10.71	10.12	10.72	10.13	10.73	10.14
Q5	0.79	0.19	0.83	0.87	0.87	0.90	0.75	0.80
Q10	0.93	0.35	0.96	0.97	0.97	0.98	0.93	0.96
Q ² (5)	0.93	0.94	0.96	0.96	0.96	0.96	0.96	0.97
Q ² (10)	0.99	0.99	0.96	0.97	0.96	0.97	0.95	0.96

Note: ARMA(1,1) – GARCH(1,1) regressions on the daily points changes in the CAC stock index. *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$. ARMA(1,1) and weekdays fixed effects are included but not reported. Robust standard errors are used (reported in parenthesis). Q(5) and Q(10) are the p.value of the Ljung-Box test for the autocorrelation of the standardized residuals up to the 5th and 10th order, respectively. Q²(5) and Q²(10) are the p.value for the squared standardized residuals.

5 Conclusion

This paper contributes to the literature on fiscal policy and its tools, examining the proper effects of announcements, in the same way as monetary policy announcements. Our research goal is to develop the study of government's communication in times of economic stress. In the similar way that central banks exert the role of lender of last resort which creates a space for them to conduct forward guidance, fiscal authorities have taken the role of communicating their action during the COVID-19 pandemic, anchoring the expectations of economic agents about future policy.

We focus on the specific announcements made by French President E. Macron during the COVID-19 crisis, which contained an overview of several key indicators as well as fiscal policy commitments. We explore the impact of these announcements on four different variables: the 10-year French and German government bond spread, the French stock exchange index limited to the forty biggest companies (CAC40) or to all listed companies (CAC-All tradable), and the volatility of all these variables.

Our findings corroborate our initial hypothesis: the presidential announcements, as well as the press release of their forthcoming, significantly impact market expectations. In most of our specifications, they tend to positively impact the French stock exchange index while helping reduce the French-German 10-year bond spread. Surprisingly, the press release for forthcoming announcements has more significant impacts than the announcements themselves. From these results, an important policy recommendation can be deduced: in times of uncertainty, fiscal policy makers can specifically communicate to temper markets and support conventional fiscal policies. Furthermore, the negative impact on spreads reveals that fiscal spending is not sanctioned by financial markets.

Finally, our analysis would gain in precision and value from a more in-depth analysis of the tone of fiscal authority speeches, and from using higher-frequency data in order to measure real-time reaction of financial markets to Presidential announcements. For example, CAC Futures that are continuously traded during Presidential announcements (contrary to the stock index itself which is traded until 5 p.m.) would allow future research to conduct event-studies similar to what has been done in the literature studying monetary policy.

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Appendix

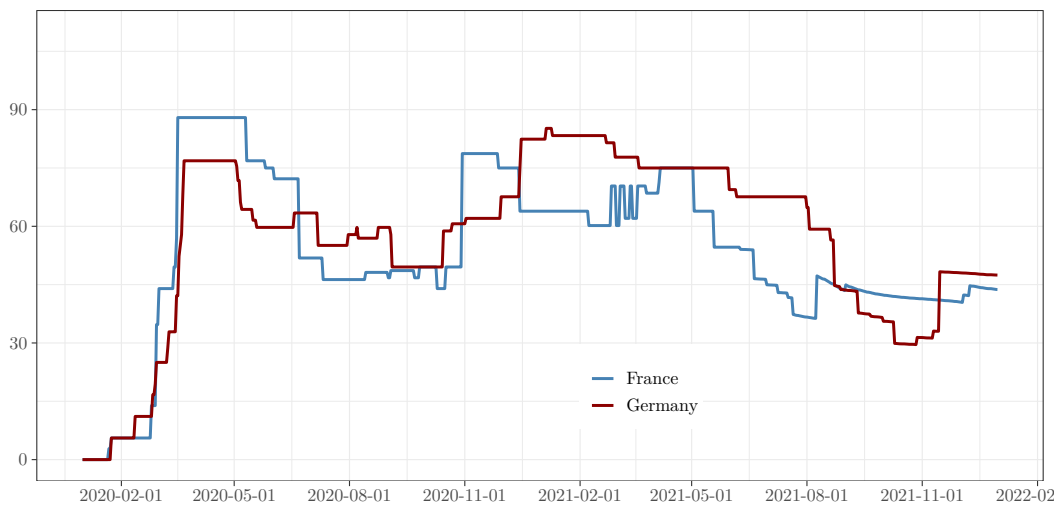
A Data Description

A.1 Economic Variables

- French 10-year bond yield: Macrobond Source
- German 10-year bond yield: Macrobond Source
- French CAC40 stock indexes : Macrobond Source
- Total Market EU : Datastream Source (Mnemonic TOTMKEU)

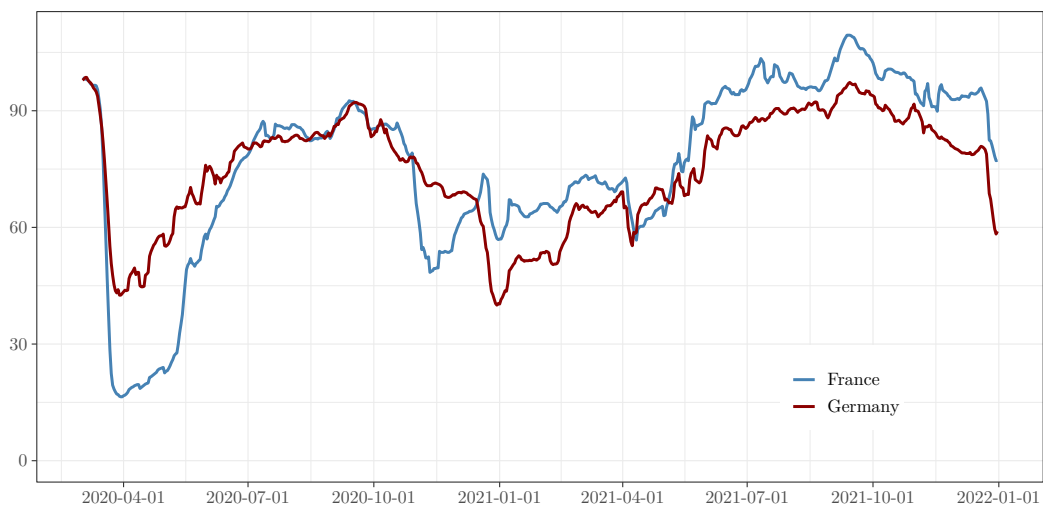
A.2 Pandemic variables

Figure 3: Evolution of the Stringency Index (2020-2021)



Source: [Hale et al. \(2021\)](#)

Figure 4: Evolution of the use of Public transport stations (2020-2021)



Source: [Google LLC \(2023\)](#)

Table 5: Dates and Hours of French Presidential Announcements on French national TV

<i>Announcements</i>	<i>Day</i>	<i>Hour (GMT+2)</i>
13/03/20	Thursday	20:00
16/03/20	Monday	20:00
13/04/20	Monday	20:00
14/06/20	Sunday	20:00
14/10/20	Wednesday	20:00
28/10/20	Wednesday	20:00
24/11/20	Tuesday	20:00
31/03/21	Wednesday	20:00
12/07/21	Monday	20:00
09/11/21	Tuesday	20:00

Source : [Élysée website](#)

A.3 Presidential Announcements

A.4 Press releases dates for announcements news

Table 6: Dates and Hours of press news for E. Macron future addresses

<i>Announcements</i>	<i>Day</i>	<i>Hour (GMT+2)</i>
11/03/2020	Wednesday	8:43
16/03/2020	Monday	6:25
08/04/2020	Wednesday	14:47
11/06/2020	Thursday	11:11
13/10/2020	Tuesday	12:00
26/10/2020	Monday	14:09
18/11/2020	Wednesday	14:57
31/03/2021	Wednesday	2:58
09/07/2021	Friday	11:30
05/11/2021	Friday	14:09

Source : AFP news retrieved using the Factivia Database.

On the 16/03/2020 and 31/03/2021, the date of the news corresponds with the day of E. Macron speech. In order to avoid colinearity issues, we decided to code 1 for the *annonce* and 0 for the *annonce_news*. Either option does not significantly change the result.