

Do Judges Move Markets? Ideological Shifts in the Supreme Court and Macroeconomic Expectations*

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Abstract

This paper studies how judicial ideology affects macroeconomic expectations. We use unexpected deaths of U.S. Supreme Court Justices as quasi-experimental shifts in the Court's ideological balance. High-frequency asset price movements around these deaths reveal how markets perceive their macroeconomic consequences. We find that a more conservative Court is associated with lower inflation expectations, lower real activity expectations and lower bond yields. A shift towards a more liberal Court triggers the opposite responses. The comovement between inflation and real activity expectations suggests that the Court's ideological balance affects the market's view about future aggregate demand. Since the magnitude of the yield responses is comparable to the literature on fiscal policy news, one possible interpretation is that a more conservative (liberal) Court leads to tighter (looser) expected fiscal policy. We validate our quasi-experimental setup with sectoral asset price dynamics, such as high-frequency responses of clean energy and health care stocks.

Keywords: Supreme Court, High-frequency identification, Macroeconomic expectations, News shocks, Fiscal policy.

JEL Classification: E31, E32, D72, K40.

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1 Introduction

Judicial decisions enforce the rule of law, but they also shape the boundaries of economic policy. While policy decisions are typically viewed as the domain of elected politicians, in many modern democracies supreme or constitutional courts have become increasingly central to the policy process. This institutional transformation has been dubbed *judicialization of policy making* (Hirschl, 2008). In the United States, the judicialization trend has been reinforced by growing political polarization, with Congress becoming less capable of enacting major legislation (Boxell, Gentzkow and Shapiro, 2024). As a result, appointments to the Supreme Court have become high-stakes political events, with far-reaching implications for economic outcomes.

Despite the growing recognition of the judiciary’s influence on economic policy, relatively little is known about how shifts in judicial ideology impact economic outcomes. Existing research on the nexus between judicial ideology and the economy has focused on firm-level or case-specific impacts, documenting how court rulings alter regulatory uncertainty and corporate valuations (Khan, Schwartz and Wald, 2024; Cassella and Rizzo, 2023; Bakke et al., 2023). However, the *macroeconomic* dimension of judicial ideology remains underexplored.

This paper is the first to study whether and how ideological shifts in the U.S. Supreme Court move macroeconomic expectations. This is challenging, not only because ideological shifts are relatively rare events, but because there is a constant news flow about potential changes in the Court and their associated probabilities. This makes it difficult to cleanly pin down the precise moment in which economic decision makers learn about when and how the Court’s balance will change.

We use the unexpected deaths of Supreme Court Justices in a high-frequency identification strategy. The idea of our approach is that in a narrow time window around an unexpected death, financial markets reprice their expectations about the ideological direction of the Court and its economic consequences. Ideally, no other important information becomes available in the same time window. We borrow this idea from the high-frequency literature in macroeconomics, which has applied a similar logic to study the economic consequences of changes in monetary policy (Bauer and Swanson, 2023), fiscal policy (Hazell and Hobler, 2024), or oil supply (Känzig, 2021).

The deaths of two recent Supreme Court Justices were both unexpected and led to a meaningful change in the ideological balance of the Court. In 2020, Ruth Bader Ginsburg's death triggered a shift from toward a conservative majority. In 2016, Justice Antonin Scalia's death led the Court to lose its clear conservative majority. These two quasi-experimental events allow us to study an ideological shift in either direction, one towards a more conservative Court and one towards a more liberal one. We provide supporting evidence of the unexpected nature of their deaths by documenting the evolution of betting odds in online betting markets. We also use the retirement announcement of Justice Anthony Kennedy in 2018 as a third event.

To construct high-frequency surprises, we calculate the difference between the first open price of a given financial asset after each Justice's death and the last close prices before it. We choose this open-to-close window size because both deaths occurred after U.S. financial markets had closed, making a within-day high-frequency reaction unavailable. Importantly, the two time windows did not overlap with major macroeconomic data releases, company earnings reports, or other political events that might have been major news in financial markets. We also allow for an extended reaction window after markets open following the news of the death, to allow for the gradual diffusion of information and the adjustment of expectations across different asset classes. For our additional tests using Justice Kennedy, we do rely on intraday market prices, as he announced his retirement during trading hours.

As we are interested in the economy-wide implications of judicial ideology, our main outcome variables are asset prices that reveal market expectations of real economic activity and inflation, such as dividend futures and inflation swaps. Of course, a change in the Supreme Court's composition cannot be cleanly mapped into a structural macroeconomic shock. However, the comovement between activity and inflation expectations can at least tell us whether markets broadly view the news as driving aggregate demand (inflation and activity comove positively) or aggregate supply (inflation and activity comove negatively). We also consider changes in bond yields to support our interpretation. Finally, a number of sectoral asset price responses allow us to validate our empirical strategy.

Our findings are as follows. The conservative shift in the Supreme Court following Justice Ginsburg's death in 2020 produces a broad-based decline in market expectations

of inflation and output. One-year and five-year inflation expectations fall by 0.076 and 0.044 percentage points, respectively. Expected real GDP declines by 0.66 percent at the one-year horizon and by 0.42 percent at the two-year horizon, while real dividend futures fall by 0.98 percent and 0.62 percent at those horizons.

The liberal shift following Justice Scalia's death in 2016 generates the opposite patterns, with increases in expected inflation and expected output. Quantitatively, the results for Scalia are milder than for Ginsburg. For example, one-year and five-year inflation expectation increase by 0.007 and 0.01 percentage points, respectively. One reason behind the smaller magnitudes for Scalia could be that it was less clear to the public how fast a new Justice would be appointed and who it would be. In the case of Ginsburg, it was relatively certain that she would swiftly be replaced with a more conservative Justice by the Trump administration.

The deaths of Ginsburg and Scalia also move interest rates in opposite directions. The conservative shift in the Court's balance after Ginsburg's passing leads to lower bond yields, while the liberal shift after Scalia passing raises bond yields. These yield changes occur across the maturity spectrum, affecting even long-term rates. Quantitatively, Ginsburg's death lowers the 10-year Treasury yield by 2.24 basis points, while Scalia's death increases it by 3.35 basis points.

The fact that asset price responses to a conservative shift have the exact opposite sign of those to a liberal shift gives us confidence to attach a more systematic interpretation to our results. While an ideological shift in the Court is not a structural macroeconomic shock, the positive comovements between inflation and activity expectations are consistent with news about contractionary (expansionary) shifts in aggregate demand following conservative (liberal) judicial surprises. Shifts in expectations about aggregate supply are less plausible since those would lead to a negative comovement between inflation and activity expectations.

One candidate for how the Supreme Court's composition might affect aggregate demand is fiscal policy. Many liberal priorities over the last two decades, for example in the areas of clean energy, health care, social spending, and industrial policy, evolve around significant public investment. As a consequence, markets might interpret a conservative shift in the Supreme Court's ideological balance as reducing the likelihood of future public investment and fiscal stimulus, thereby dampening aggregate

demand expectations. To study the plausibility of this interpretation, we compare the magnitudes of our findings to a nascent literature that uses high-frequency identification techniques to study fiscal policy news (Bi, Phillot and Zubairy, 2025; Wiegand, 2025). The magnitudes of the yield responses we uncover are comparable to results reported in those papers, supporting the interpretation of judicial events as fiscal news.

While macroeconomic expectations are the main focus of our analysis, we also study sectoral asset price dynamics following the quasi-experimental shifts in the Supreme Court's ideological balance. The motivation for considering this cross-sectional analysis is to give additional credibility to our identification strategy. If asset prices associated with conservative (liberal) priorities move in the direction one would expect after the Court becomes more conservative (liberal), we can more reliably claim that the asset price changes in our high-frequency windows indeed reveal relevant news about the Supreme Court.

We show that clean energy and health care equities, two sectors directly tied to cases frequently reviewed by the Supreme Court, fall after Justice Ginsburg's death and increase after Justice Scalia's death. The asset price changes occur also relative to the overall market, which we show by computing cumulative abnormal returns. These dynamics directly correspond to the expected direction. We also consider the responses of a Gender Diversity related equity fund, which is only available for a more recent sample, and which falls after Ginsburg's passing.

Finally, we consider the retirement announcement of Justice Anthony Kennedy in 2018 as an additional quasi-experimental event. Kennedy's retirement represented an unexpected conservative-leaning shift in the Court. The market reactions to this event closely mirror those observed following Justice Ginsburg's death, with reductions in inflation expectations, real growth expectations, and equity valuations in policy-sensitive sectors. This consistency across distinct judicial shifts reinforces our interpretation that markets perceive a more conservative Court as constraining the scope for future fiscal expansion.

Related literature: This paper relates to several strands of research in macroeconomics, finance, and judicial politics. First, we build on the large literature that uses high-frequency financial market data to identify the effects of macroeconomic

surprises. Seminal contributions focus on monetary policy (Gürkaynak, Sack and Swanson, 2005; Gertler and Karadi, 2015; Nakamura and Steinsson, 2018; Swanson, 2021; Bauer and Swanson, 2023), while more recent work studies oil supply, fiscal, or regulation news (Känzig, 2021; Fieldhouse, Mertens and Ravn, 2018; Hazell and Hobler, 2024; Drechsel and Miura, 2025). We apply high-frequency identification techniques to a new institutional setting, the U.S. Supreme Court.

Second, our results more directly connect with the literature on high-frequency fiscal policy news. Recent studies show that news about future government spending, deficits, or debt issuance generates joint movements in inflation expectations, real activity expectations, and nominal yields (e.g., Gormsen and Koijen, 2020; Bi, Phillot and Zubairy, 2025; Wiegand, 2025; Cram, Kung and Lustig, 2025). While this literature typically studies fiscal shocks originating from legislative or executive actions, our results suggest the Supreme Court as a novel source of fiscal news. Shifts in its ideological balance alter market perceptions of future public investment feasibility, thereby revealing news about future fiscal policy.

Third, a growing body of work in judicial politics examines how court decisions affect asset prices. This literature has focused on firm-level or case-specific effects, documenting how court rulings influence corporate valuations, regulatory uncertainty, and sectoral profitability (Khan, Schwartz and Wald, 2024; Cassella and Rizzo, 2023; Huang, Hui and Zheng, 2024; Bakke et al., 2023; Colonnello and Herpfer, 2021). In contrast, we study the macroeconomic implications of judicial ideology by examining how shifts in the ideological balance of the U.S. Supreme Court affect aggregate economic expectations and broad asset classes.

Finally, our paper contributes to a growing literature that leverages unexpected deaths of key political figures as natural experiments to study institutional and economic effects (Jones and Olken, 2005; Bennedsen et al., 2007; Jones and Olken, 2009).

2 Setting and data

2.1 Institutional background

Courts play a dual role in democratic societies. On the one hand, they uphold the rule of law. On the other hand, they increasingly influence the direction of public

policy. In the United States, the Supreme Court has come to shape the scope of fiscal, regulatory, or environmental policy, determining the boundaries within which elected policymakers operate. The expanded policy influence reflects a broader institutional transformation described as the *judicialization of policymaking* (Epp, 1998; Hirschl, 2008).

Political polarization has amplified this trend. As Congress becomes increasingly gridlocked, courts resolve high-stakes disputes on climate regulation, healthcare, and financial oversight (Hasen, 2019). At the same time, the judiciary itself has become more ideological: judicial appointments and voting patterns increasingly align with partisan divisions (McGuire et al., 2009; Nicholson and Hansford, 2014). Consequently, Supreme Court decisions are often perceived as advancing or constraining particular policy agendas rather than serving as neutral legal interpretations. Landmark cases, such as *West Virginia v. EPA* (2022), *Seila Law v. CFPB* (2020), and *NFIB v. Sebelius* (2012), illustrate the economic reach of judicial choices. Each ruling reshaped key policy frameworks in environmental, financial, and healthcare domains, altering expectations about the government's regulatory capacity and fiscal commitments.

These institutional features make the Supreme Court a powerful policymaking body whose ideological composition drives the direction of U.S. economic policy. Because Justices hold life tenure and are replaced infrequently, changes in the Court's membership are rare, yet consequential. They can alter the ideological balance of the Court in ways that affect the perceived durability and scope of economic policies. As a result, unexpected shifts in judicial ideology can plausibly generate revisions in market expectations about inflation, growth, and sectoral outcomes.

2.2 Judicial transitions as ideological shifts

We focus on unexpected changes in the Supreme Court's ideological balance. Two recent judicial transitions provide a quasi-experimental setting for our analysis: the deaths of Justices Antonin Scalia in February 2016 and Ruth Bader Ginsburg in September 2020. Deaths are typically exogenous events, plausibly unrelated to contemporaneous macroeconomic developments, which is why a growing literature uses unexpected deaths of key political figures as natural experiments (Jones and Olken, 2005; Bennedsen et al., 2007; Jones and Olken, 2009).

Panel (a) of Table 1 summarizes the Court's ideological alignment before and after

Table 1: Supreme Court's ideological shifts following Justices' deaths

Panel (a): Justice Antonin Scalia's death (Feb. 13, 2016)		
Alignment	Before Scalia's Death	After Scalia's Death
Liberal	Ruth Bader Ginsburg Stephen Breyer Sonia Sotomayor Elena Kagan	Ruth Bader Ginsburg Stephen Breyer Sonia Sotomayor Elena Kagan
	Antonin Scalia Clarence Thomas Samuel Alito John Roberts	Clarence Thomas Samuel Alito John Roberts
Swing/moderate conservative	Anthony Kennedy	Anthony Kennedy
Vacancy	-	Vacant Seat
Panel (b): Justice Ruth Bader Ginsburg's death (Sep. 18, 2020)		
Alignment	Before Ginsburg's Death	After Ginsburg's Death
Liberal	Ruth Bader Ginsburg Stephen Breyer Sonia Sotomayor Elena Kagan	Stephen Breyer Sonia Sotomayor Elena Kagan
	Clarence Thomas Samuel Alito Neil Gorsuch Brett Kavanaugh	Amy Coney Barrett Clarence Thomas Samuel Alito Neil Gorsuch Brett Kavanaugh
Swing/Moderate Conservative	John Roberts	John Roberts

Justice Scalia's death on February 13, 2016. Scalia's passing removed one of the Court's most conservative members during the final year of President Obama's second term. The event was widely regarded as unexpected. Because the Republican-controlled Senate's Majority Leader Mitch McConnell announced the same day that the Senate would block any nomination by President Obama, the vacancy remained open for an extended period.¹ This combination of events constituted an unexpected shift towards

¹President Obama nominated Judge Merrick Garland in March 2016, while the Republican-controlled Senate refused to hold hearings or votes on the nomination, leaving the seat vacant until Justice Neil

a less conservative makeup of the court.

Conversely, Justice Ginsburg’s death on September 18, 2020 eliminated a senior liberal voice on the Court. It occurred only weeks before the presidential election, during a Republican administration with control of the Senate. The subsequent appointment of Justice Amy Coney Barrett produced what many commentators agree is the most conservative Court in modern history. Panel (b) of Table 1 details the composition of the Court before and after Ginsburg’s passing, showing how Barrett’s confirmation shifted the Supreme Court’s 4-1-4 balance toward a stable 6-3 conservative majority.²

The two panels of Table 1 together show two sharp ideological shifts in the Supreme Court, one making it more liberal and one conservative. As an additional validation, we later examine the retirement of Justice Anthony Kennedy in 2018, whose unexpected replacement by Justice Brett Kavanaugh produced a conservative shift.

2.3 Judicial transitions as surprise events

To support the argument that Ginsburg’s and Scalia’s death were *unexpected*, we present evidence from political prediction markets. Prediction markets have received increasing attention in economics and finance, as they allow the measurement of probabilities of key economic and political events in real time. [Hazell and Hobler \(2024\)](#) also present evidence from prediction markets to support a high-frequency identification design.³ Figure 1 plots daily data from *PredictIt*, which allows traders to bet on judicial nominations and departures. The market-implied probabilities and trading volumes provide a real-time measure of how unexpected these events were and how clearly their ideological direction was perceived.

Panel (a) of Figure 1 shows that Antonin Scalia’s sudden death on February 13, 2016 triggered an immediate surge in trading volume and a discrete jump in the probability of his departure from below 20% to 100%. This discontinuous repricing confirms that the event was largely unanticipated. On the same day, the Republican-controlled

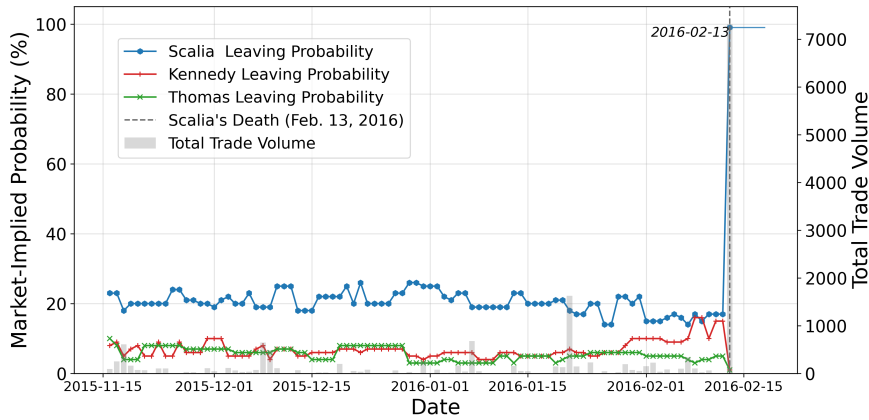
Gorsuch’s confirmation on April 7, 2017.

²To further validate the ideological nature of this change, the Online Appendix provides a systematic overview of Ginsburg’s and Barrett’s prior rulings on environmental and climate-related cases (Ginsburg on the Supreme Court and Barrett on the Seventh Circuit Court of Appeals). These positions confirm that the 2020 transition represented a substantive conservative shift in judicial ideology.

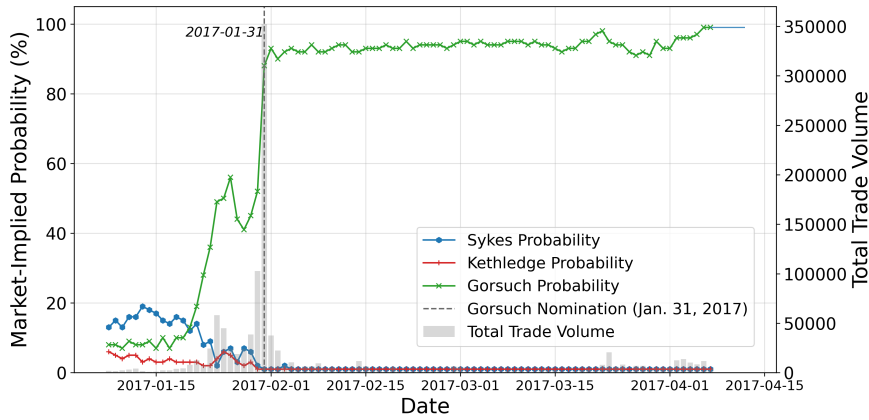
³[Eichengreen et al. \(2025\)](#) study prediction markets to elicit news about political pressure on central bank. [Diercks, Katz and Wright \(2026\)](#) evaluate the accuracy of prediction market-implied forecasts.

Figure 1: Prediction-market evidence on judicial transitions

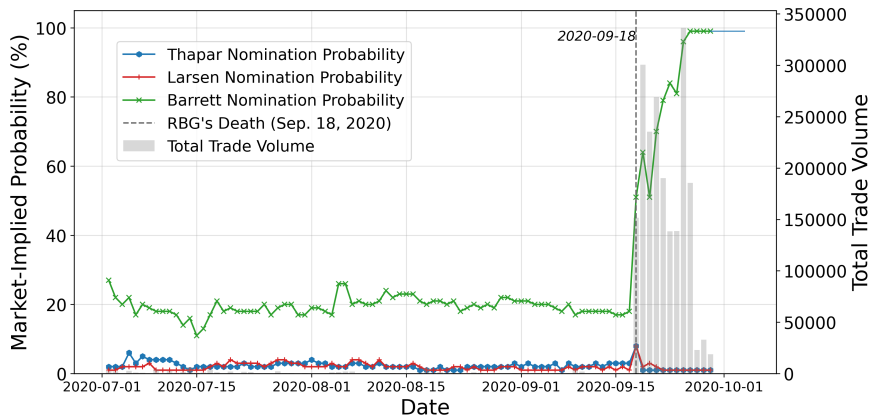
a. Probability of Scalia being the next justice to leave the Supreme Court



b. Probability of Gorsuch being nominated as Supreme Court Justice



c. Probability of Barrett being nominated as next Supreme Court Justice



Notes: Each panel reports daily data from *PredictIt* on the probability of the event described in the panel caption. The gray shaded area represents the total daily trading volume.

Senate announced that it would block any nominee proposed by President Obama. This implied a durable loss of conservative influence on the Court.

Scalia’s vacancy would remain open for more than a year, until the confirmation of Justice Neil Gorsuch in April 2017. Panel (b) of Figure 1 shows that the probability of Gorsuch’s nomination remained negligible throughout 2016 and increased sharply only after President Trump’s inauguration in January 2017. The timing highlights that the ideological reversal occurred more than a year after the liberal shift induced by Scalia’s death, reinforcing our interpretation that his passing generated a persistent shift in the ideological makeup of the Supreme Court.

Panel (c) of Figure 1 shows that Justice Ruth Bader Ginsburg’s death on September 18, 2020 also produced an immediate surge in trading volume in betting markets. Different from Scalia’s death, her departure from the Court was accompanied by a sharp rise in the probability of a succession. Specifically, markets quickly predicted the nomination of conservative judge Amy Coney Barrett to fill Ginsburg’s seat. There is quick rise in the probability of a Barrett nomination from below 20% to 100%. The speed and magnitude of this repricing reinforces both the event’s unanticipated nature and its unambiguous ideological direction, from liberal to conservative.

2.4 Financial market data

We collect high-frequency asset price changes to capture expectations about inflation, growth, and sectoral outcomes. We measure expected inflation using zero-coupon inflation swaps at maturities of 1, 2, 5, and 10 years. Inflation swaps are financial derivatives that exchange a fixed payment for a floating cash flow linked to the U.S. Consumer Price Index, providing a clean measure of market-based inflation expectations (Cieslak and Pflueger, 2023). The data are collected from Bloomberg at ten-minute intervals during market hours. For robustness, we also study “breakeven” inflation expectations from Treasury Inflation-Protected Securities (TIPS) and nominal Treasury yields, also from Bloomberg. We further collect U.S. nominal zero-coupon yield data from [Gürkaynak, Sack and Wright \(2007\)](#), which allow us to examine daily movements along the Treasury yield curve in response to judicial surprises.

We measure expectations about real activity using dividend futures on the S&P 500 index, following [Gormsen and Koijen \(2020\)](#) and [Hazell and Hobler \(2024\)](#). Dividend

futures allow investors to speculate on or hedge against the dividends paid by index constituents over future years; changes in these contracts reflect revisions to expected corporate earnings and aggregate growth. We use 1-year and 2-year dividend futures traded on the Chicago Mercantile Exchange (CME), available from Bloomberg. To obtain proxies for expected real growth, we deflate the nominal dividend futures changes by contemporaneous inflation swap movements (Hazell and Hobler, 2024).

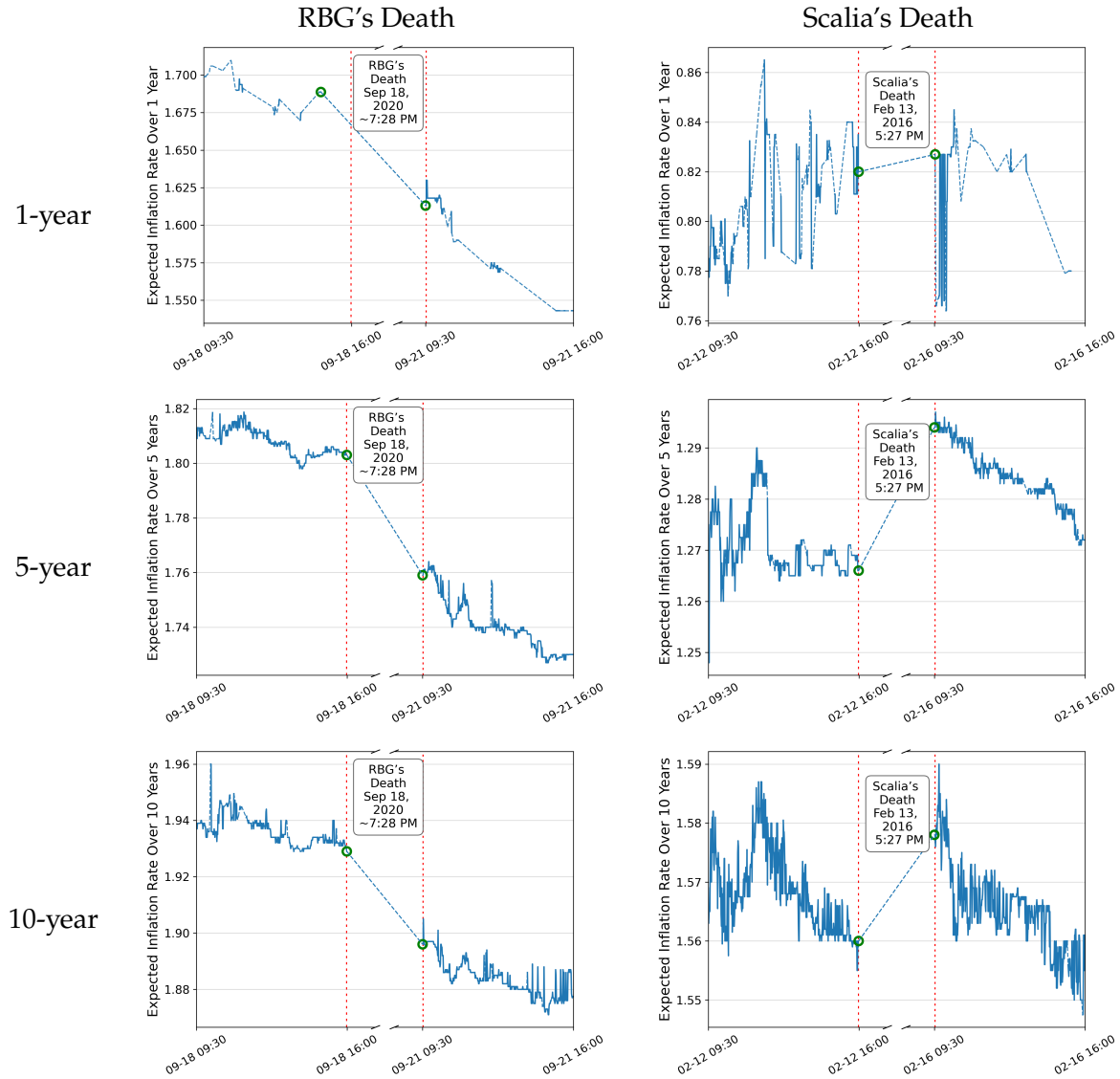
Since dividend futures are not traded continuously and occasionally exhibit missing quotes, we complement these measures with equity index futures and spot returns. Specifically, we use intraday data for the S&P 500 and the Russell 2000 indexes to capture market-wide revisions in growth expectations. The S&P 500 provides a broad proxy for aggregate activity but is heavily weighted toward large-cap technology firms; the Russell 2000, which covers smaller and more domestically oriented companies, serves as a useful benchmark less influenced by sectoral movements in technology. Consistent movements across these series strengthen our interpretation of the surprises as revisions to macroeconomic rather than industry-specific expectations.

The cross-sectional market reactions are measured by equity and sectoral indexes price changes. We use minute-by-minute data on the industrial exchange-traded funds (ETFs) representing policy-relevant sectors such as clean energy and healthcare. These sectors were directly exposed to regulatory and fiscal decisions that the Supreme Court could influence. The data are obtained from Bloomberg.

3 Empirical analysis

We present different sets of results. First, we simply plot the movements in different asset prices before and after the two Justices deaths. Second, we compare the price changes around those events to the distributions of price changes in benchmark time windows. Third, we formally estimate the magnitudes of asset price changes. Fourth, we estimate an econometric single-event study framework that evaluates asset price changes relative to time series predictions.

Figure 2: Expected Inflation Rate by Justice Death Events (columns) and Maturity (rows)

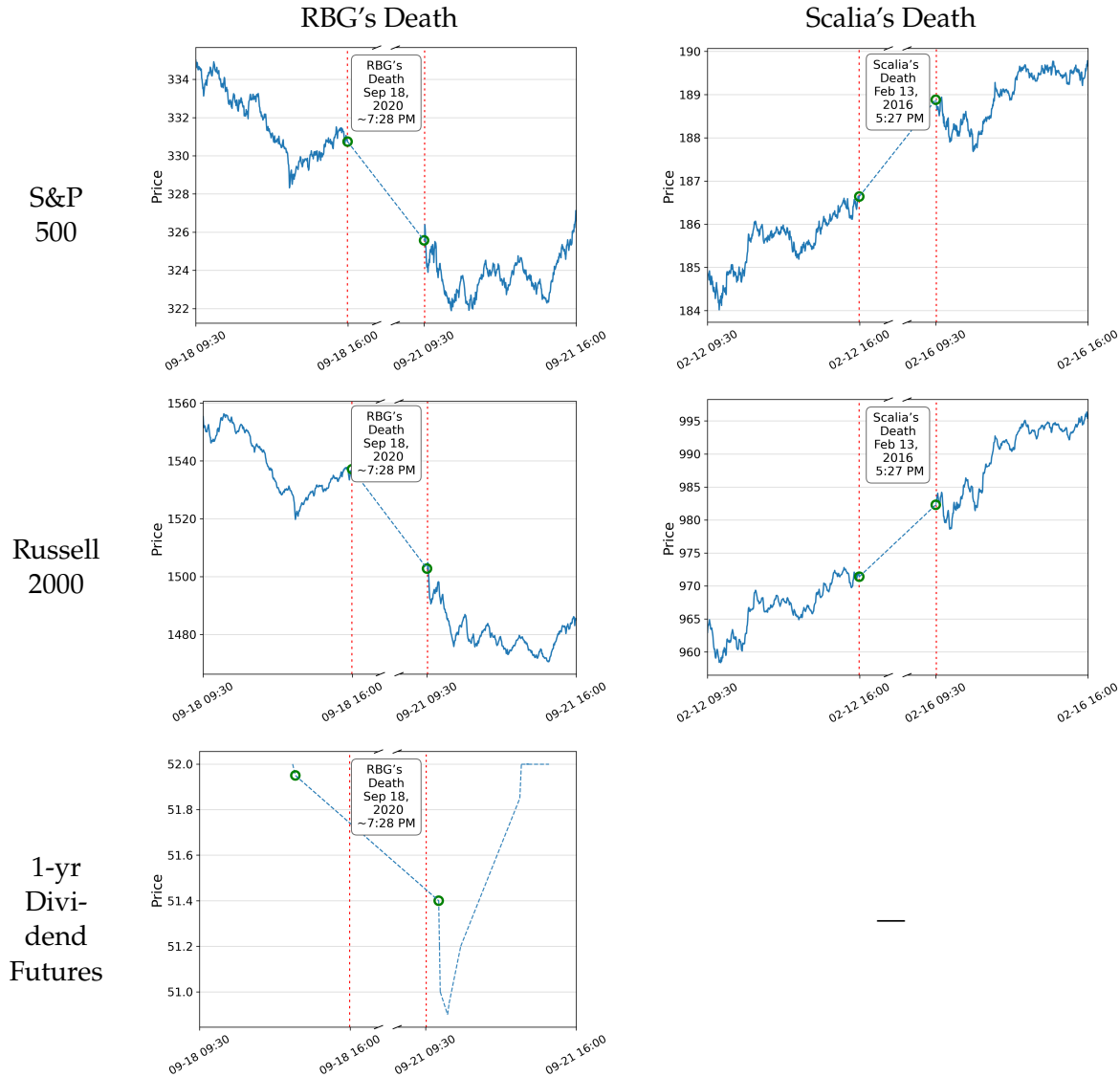


Notes: This figure plots the intraday responses of the expected path of the price level over 1-, 5-, and 10-year horizons, as implied by price changes in the corresponding inflation swaps. Dashed lines indicate missing data, primarily due to weekends and holidays. The 2-year horizon is excluded here because of substantial data gaps and is reported in Appendix.

3.1 A first look at market reactions

Before turning to the formal empirical analysis, we begin with a first look at the data to illustrate how financial markets reacted to the two Supreme Court shifts. Figures 2 and 3 plot intraday movements in market-based expectations of inflation

Figure 3: Expected Economic Growth by Justice Death Events (columns) and Maturity (rows)



Notes: This figure plots the intraday responses of the S&P 500, Russell 2000, and one-year dividend futures around Supreme Court justice death events, which reflect revisions to market expectations of aggregate economic growth and corporate earnings. Dashed lines indicate missing data, primarily due to weekends and holidays. The intraday prices are missing around Justice Scalia’s death for the one- and two-year dividend futures in 2016, and the two-year contract also lacks intraday observations around Justice Ginsburg’s death in 2020.

and real activity, respectively, around the deaths of Justices Ruth Bader Ginsburg and Antonin Scalia. Both events occurred after U.S. financial markets had closed on a Friday, ensuring that the first observable price changes appeared at the Monday

market open. This weekend timing creates an unusually clean environment: there were no overlapping macroeconomic releases, corporate earnings reports, or policy announcements during the intervening days that could confound the interpretation of price movements. The observed jump at the Monday open thus provides a natural experiment for studying how investors revised their expectations in response to purely judicial news.

Figure 2 displays the response of inflation expectations inferred from one-, five-, and ten-year zero-coupon inflation swaps. Following Justice Ginsburg's death in September 2020, expected inflation rates dropped sharply across all maturities and continued to decline throughout the first trading session after the event. The cumulative change amounted to roughly 4 percent at the one-year horizon and 2.5 percent at five years, suggesting a broad-based downward revision in market expectations of inflation. By contrast, after Justice Scalia's death in February 2016, inflation swap rates rose modestly but persistently across maturities, indicating that investors anticipated more expansionary policy or less regulatory constraint. These opposite reactions point to a clear ideological interpretation: markets viewed Ginsburg's death as a conservative (disinflationary) surprise, while Scalia's death was perceived as a liberal (expansionary) surprise.

Figure 3 turns to indicators of real economic activity. Prices of the S&P 500, the Russell 2000, and one-year dividend futures all fell markedly following Ginsburg's death, with losses concentrated at the market open and little reversal over the subsequent hours. The decline in the Russell 2000, which captures smaller and more domestically oriented firms, closely mirrors that of the broader S&P 500, indicating that the effect was not driven by technology or large-cap exposures. Dividend futures, which directly price expectations of aggregate corporate profits, dropped nearly one percent in real terms, confirming that investors downgraded their expectations of near-term growth. In contrast, all three series increased substantially after Scalia's death, reinforcing the interpretation of the event as a liberal surprise associated with expectations of looser fiscal or regulatory constraints.

Taken together, these figures reveal a coherent pattern across both events and asset classes. judicial shifts that tilt the ideological balance of the Supreme Court toward conservatism are associated with lower expected inflation, slower expected

real growth, and declines in equity valuations—an overall aggregate-demand-like response. Conversely, liberal shifts generate the opposite pattern, consistent with expectations of greater policy activism and fiscal expansion. The speed and consistency of these reactions suggest that markets price the Supreme Court’s ideological direction as a key input into macroeconomic expectations. These visual patterns motivate our formal identification strategy, in which we quantify the magnitude, persistence, and cross-asset coherence of these responses using high-frequency data.

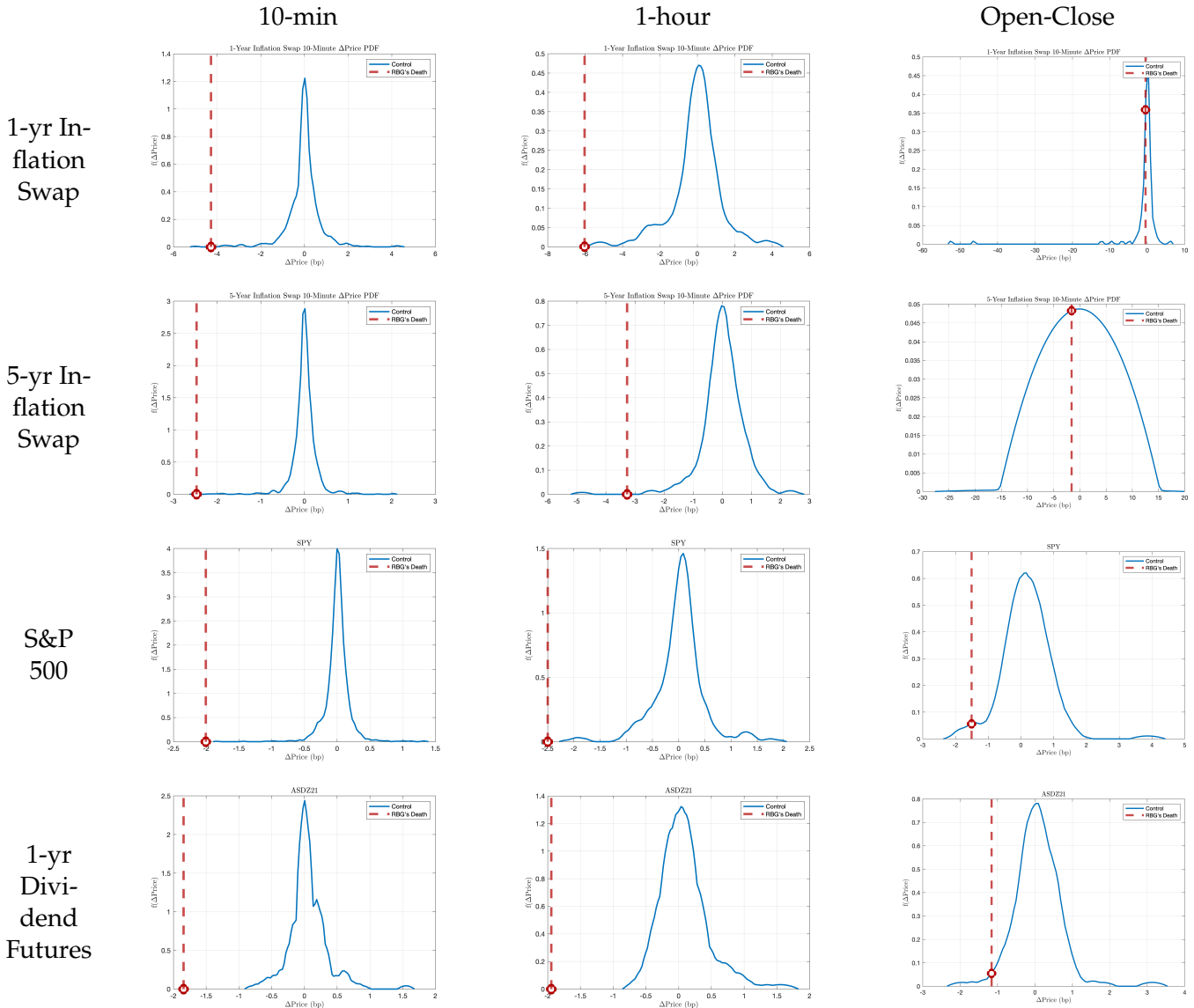
3.2 Empirical distribution of price changes

To assess whether the market reactions observed in the previous subsection represent statistically unusual movements, we compare asset price changes on the event days with those on nearby control days. Figures 4 and 5 plot the empirical probability density functions (PDFs) of price changes around the deaths of Justices Ruth Bader Ginsburg and Antonin Scalia, respectively. The analysis covers four representative assets that span inflation, growth, and equity expectations: the one- and five-year inflation swaps, the S&P 500 index, and one-year dividend futures. For each asset, we compute returns over three horizons—10-minute, one-hour, and open-to-close intervals—to trace how the adjustment of market expectations unfolds over time.

The control distributions are estimated using an Epanechnikov kernel applied to non-event periods surrounding each shift. Specifically, for the high-frequency (10-minute and one-hour) measures, we exclude a 60-minute window around the event time to prevent contamination from the judicial news. For the open-to-close measure, which captures the overnight and full-day reaction, we exclude one trading day around the event. These control distributions provide a benchmark for the normal range of price fluctuations given prevailing market conditions, allowing us to test whether the observed judicial-day changes fall within or outside the historical norm.

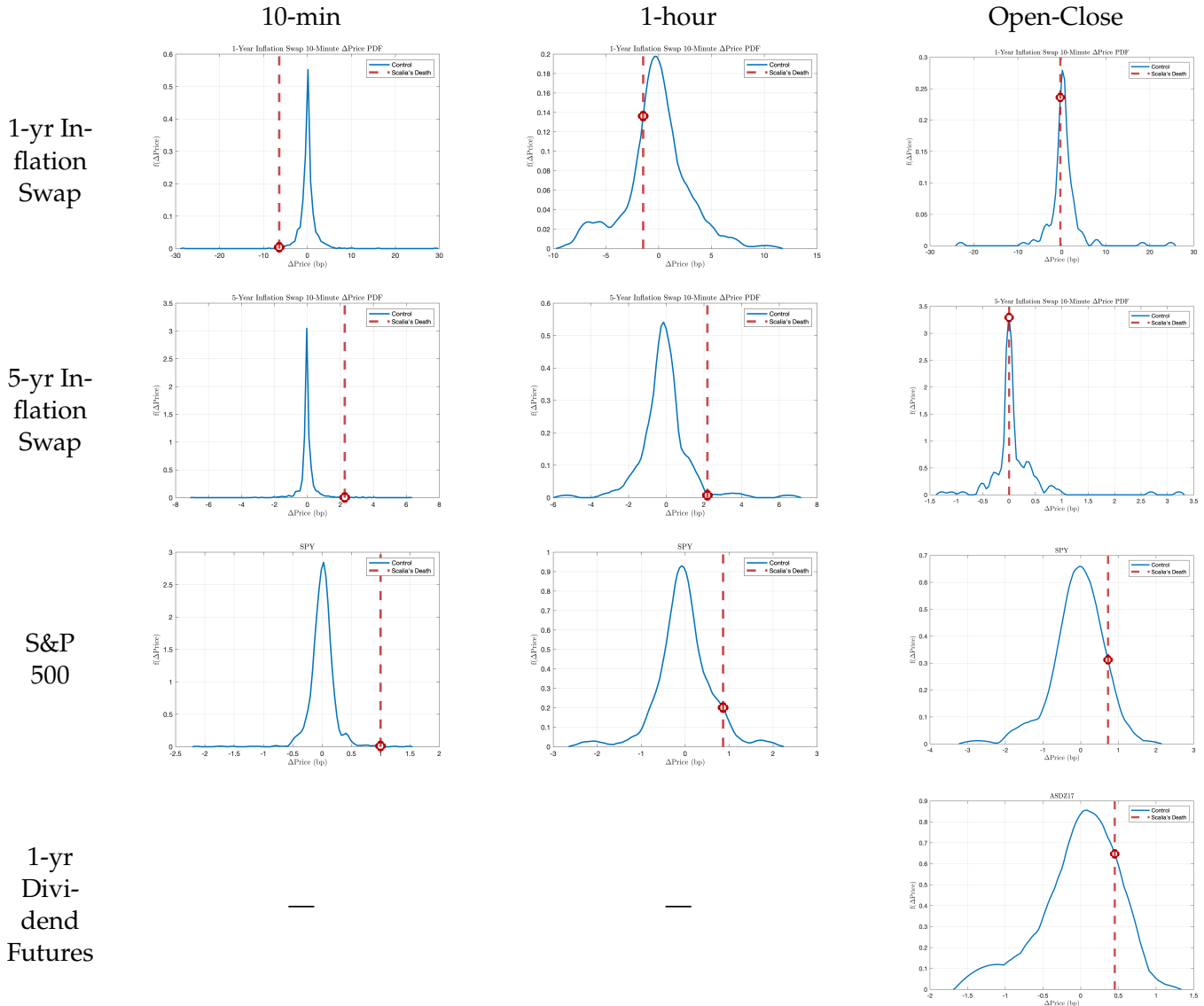
Figure 4 shows that the price changes associated with Justice Ginsburg’s death lie far in the left tails of the control distributions across all assets. At the 10-minute horizon, both the one- and five-year inflation swaps record large negative moves that are rarely observed in normal trading, indicating an immediate and significant decline in expected inflation. At longer horizons, the magnitude of the decline increases, suggesting that markets continued to absorb and reassess the judicial news over several

Figure 4: Ginsburg's Death versus Control Days: Distribution of Assets' Price Changes



Notes: This figure plots the empirical probability density functions (PDFs) of assets' price changes around Justice Ruth Bader Ginsburg's death (red lines) to those on control days (blue lines), estimated using an Epanechnikov kernel. Each row corresponds to an asset (one-year, five-year inflation swaps, S&P 500 and one-year dividend futures), and each column represents a time horizon for measuring price changes: 10-minute, 1-hour, and open-to-close. For the 10-minute and 1-hour horizons, the control distributions are computed using data from 1 month before and one month after the event, excluding the 60-minute window surrounding the event time. For the open-to-close measure, the overnight price changes are constructed using data from 3 months before and after the event, excluding the 1-day window surrounding the event time.

Figure 5: Scalia's Death versus Control Days: Distribution of Assets' Price Changes



Notes: This figure plots the empirical probability density functions (PDFs) of assets' price changes around Justice Scalia's death (red lines) to those on control days (blue lines), estimated using an Epanechnikov kernel. Each row corresponds to an asset (one-year, five-year inflation swaps, S&P 500 and one-year dividend futures), and each column represents a time horizon for measuring price changes: 10-minute, 1-hour, and open-to-close. For the 10-minute and 1-hour horizons, the control distributions are computed using data from one month before and 1 month after the event, excluding the 60-minute window surrounding the event time. For the open-to-close measure, the overnight price changes are constructed using data from 3 months before and after the event, excluding the 1-day window surrounding the event time.

hours. Similarly, the S&P 500 and one-year dividend futures exhibit pronounced negative jumps, with the latter implying a roughly 1% drop in expected corporate earnings in real terms. These shifts are well beyond typical intraday volatility: for instance, the Ginsburg event ranks among the most negative one-hour changes in inflation swaps within a six-month window surrounding the event. The consistency of the sign and timing across all assets reinforces the interpretation of a broad, contractionary market repricing following a conservative judicial shift.

In contrast, Figure 5 shows that the distribution of price changes around Justice Scalia's death displays the opposite pattern. Five-year inflation swaps, equity prices, and dividend futures exhibit positive jumps that lie on the right tails of their control distributions, indicating that the Court's sudden ideological shift toward liberalism was perceived as an expansionary surprise. This symmetry across the two events further strengthens our identification: judicial shifts appear to be priced as directional and economically meaningful surprises, rather than as idiosyncratic noise.

Three stylized facts emerge from these empirical distributions. First, the amplitude of market responses increases with the horizon of measurement. While 10-minute intervals capture the immediate repricing upon market open, the one-hour and open-to-close measures show that prices continue to drift in the same direction as information diffuses across investors and asset classes. Second, the direction of movement is strikingly coherent across assets: inflation expectations, equity valuations, and growth proxies move together, consistent with a common macroeconomic factor—an aggregate demand-type shock—rather than isolated sectoral effects. Finally, the tails of the event-day distributions are clearly separated from those of control days, implying that the observed price changes are statistically rare and not driven by routine volatility or liquidity conditions.

Overall, the evidence shows that markets react swiftly and coherently to Supreme Court shifts, repricing macroeconomic expectations within minutes of trading. These results provide the first systematic indication that changes in the Supreme Court's ideological balance are perceived as macro-relevant events. They motivate the formal identification strategy in the next section, where we quantify the magnitude, persistence, and cross-asset dynamics of these judicial surprises using a high-frequency event-study framework.

3.3 The macro effects of Supreme Court Justices' death surprises

3.3.1 Immediate price jumps across assets and horizons

We now formally quantify the magnitude of market reactions to the two Supreme Court shifts documented above. Tables 2 and 3 report the estimated price jumps in inflation swaps, equity indexes, and dividend futures across different horizons. Each entry represents the average change in the observed market price of the relevant asset, measured as the difference between the opening price of the first trading session following the event and the corresponding pre-event close, with standard errors computed from pre-event volatility windows. The results allow us to assess both the size and timing of the market adjustments across asset classes and maturities.

Table 2 shows a broad-based decline across all assets following Justice Ginsburg's death. Inflation expectations, as captured by one- to ten-year zero-coupon inflation swaps, dropped significantly and almost uniformly across horizons. At the one-year horizon, expected inflation fell by roughly 7 basis points within one hour of trading and by about 14 basis points by the end of the day. Similar declines are observed at longer maturities, indicating that the disinflationary response was not merely short-term but reflected a persistent downward revision in policy expectations. Equity prices reacted in the same direction: the S&P 500 declined by approximately 5.2% at the market open and closed the day nearly 3.7% lower than the previous Friday. One-year and two-year dividend futures, which proxy for expected corporate earnings, also dropped by 0.35-1% in real terms, consistent with weaker expected growth. Together, these effects imply that the market interpreted Ginsburg's passing—and the resulting conservative shift on the Court—as reducing the likelihood of future fiscal expansion and regulatory support, thereby tightening expected aggregate demand. The reaction occurred almost instantaneously and remained persistent throughout the day, suggesting that investors rapidly internalized the policy consequences of a more conservative judiciary.

Table 3 presents the corresponding results for Justice Scalia's death in February 2016. The direction of the responses is strikingly symmetric to those observed for Ginsburg. Inflation expectations rose modestly but significantly, by around 3 basis points at the one-year horizon and up to 2-3 basis points at longer maturities. Equity markets also responded positively: the S&P 500 increased by about 2.2% within min-

Table 2: Price Jump of the Related Asset Prices around RBG's Death

	(1)	(2)	(3)	(4)	(5)	(6)
	1-min	10-min	1-hour	Close-Open	Open-Close	Close-Close
Panel A: Change in the price level from 1-yr Inflation Swap						
Price Jump	-0.0757 (0.0060)	-0.0707 (0.0131)	-0.0707 (0.0209)	-0.1380 (0.1127)	-0.0077 (0.0917)	-0.1457 (0.0539)
observations	1988	337	111	65	65	64
Panel B: Change in the price level from 2-yr Inflation Swap						
Price Jump	-0.0508 (0.0148)	-0.0496 (0.0168)	-0.0530 (0.0246)	-0.0375 (0.0517)	-0.0010 (0.0140)	-0.0385 (0.0490)
observations	8138	891	160	65	65	64
Panel C: Change in the price level from 5-yr Inflation Swap						
Price Jump	-0.0440 (0.0029)	-0.0440 (0.0053)	-0.0405 (0.0135)	-0.0375 (0.0389)	-0.0285 (0.0220)	-0.0660 (0.0284)
observations	8790	896	160	65	65	64
Panel D: Change in the price level from 10-yr Inflation Swap						
Price Jump	-0.0330 (0.0033)	-0.0330 (0.0057)	-0.0330 (0.0113)	-0.0565 (0.0256)	-0.0030 (0.0044)	-0.0595 (0.0247)
observations	8310	896	160	65	65	64
Panel E: Change in the price level from 1-yr Dividend Future						
Price Jump	-0.5500 (0.1330)	-0.9500 (0.1487)	-1.0000 (0.2097)	0.5500 (0.2556)	-0.6000 (0.2844)	-0.0500 (0.2577)
observations	85	62	37	53	53	64
Panel F: Change in the price level from 2-yr Dividend Future						
Price Jump	-0.3500 (0.2762)	-0.3500 (0.3090)	-0.3500 (0.3668)	0.1000 (0.3512)	-0.2000 (0.3541)	-0.1500 (0.3316)
observations	53	40	28	36	36	64
Panel G: Change in the price level from S/ & P 500 Index						
Price Jump	-5.1700 (0.2118)	-6.5700 (0.6635)	-5.5600 (1.4547)	1.2700 (3.0834)	-4.9500 (2.0864)	-3.6800 (3.6479)
observations	8969	896	160	65	65	64

Notes: Each column reports the change in the observed market price of the related asset, measured as the difference between the opening price on Monday, September 21 (the first trading session after Justice Ginsburg's death), and the closing price on Friday, September 18. The empirical standard errors, computed as the standard deviation of the asset price changes over 1 month prior to RBG's death for intraday data and 3 month prior to the event for daily data, are reported in the parentheses.

Table 3: Price Jump of the Related Asset Prices around Scalia's Death

	(1)	(2)	(3)	(4)	(5)	(6)
	1-min	10-min	1-hour	Close-Open	Open-Close	Close-Close
Panel A: Change in the price level from 1-yr Inflation Swap						
Price Jump	0.0070 (0.0117)	-0.0510 (0.0208)	-0.0120 (0.0251)	-0.0370 (0.0549)	-0.0026 (0.0266)	-0.0470 (0.0666)
observations	3355	612	143	62	62	61
Panel B: Change in the price level from 2-yr Inflation Swap						
Price Jump	0.0100 (0.0135)	0.0120 (0.0191)	0.0120 (0.0235)	0.0010 (0.0377)	-0.0210 (0.0188)	0.0120 (0.0497)
observations	220	108	62	50	50	49
Panel C: Change in the price level from 5-yr Inflation Swap						
Price Jump	0.0280 (0.0041)	0.0290 (0.0080)	0.0280 (0.0161)	-0.0030 (0.0396)	0.0000 (0.0053)	0.0070 (0.0396)
observations	6456	735	147	62	62	61
Panel D: Change in the price level from 10-yr Inflation Swap						
Price Jump	0.0180 (0.0047)	0.0230 (0.0077)	0.0210 (0.0153)	-0.0010 (0.0353)	0.0000 (0.0012)	-0.0010 (0.0356)
observations	8519	857	153	62	62	61
Panel E: Change in the price level from 1-yr Dividend Future						
Price Jump	N.A.	N.A.	N.A.	0.1000 (0.0744)	0.2000 (0.1700)	0.0000 (0.0798)
observations				15	15	60
Panel F: Change in the price level from 2-yr Dividend Future						
Price Jump	N.A.	N.A.	N.A.	0.0500 (0.1310)	0.1500 (0.3053)	0.1000 (0.1071)
observations				17	17	60
Panel G: Change in the price level from S/ & P 500 Index						
Price Jump	2.2400 (0.1596)	1.87 (0.4844)	1.62 (1.1148)	1.0100 (2.0838)	1.3800 (2.0661)	3.1500 (2.6709)
observations	8579	857	153	62	62	61

Notes: Each column reports the change in the observed market price of the related asset, measured as the difference between the opening price on Tuesday, February 16 (the first trading session after Justice Scalia's death), and the closing price on Friday, February 12. The empirical standard errors, computed as the standard deviation of the asset price changes over 1 month prior to Scalia's death for intraday data and 3 month prior to the event for daily data, are reported in the parentheses.

utes of the open and ended the day more than 3% higher. Dividend futures, though less liquid in this period, show consistent increases of around 0.1-0.2%, indicating an upward revision in expectations of near-term corporate profits. This pattern is consistent with the market perceiving Scalia’s unexpected death as a loss of conservative influence and, by extension, a liberal shift in the Supreme Court’s policy outlook—one that raised the perceived probability of more expansive fiscal, environmental, and regulatory actions. Notably, the adjustment in inflation expectations and equities occurred simultaneously, reinforcing the interpretation of the event as an aggregate-demand-type shock rather than a sectoral or liquidity-driven response.

3.3.2 Dynamic responses and counterfactual analysis

Figure 6: 5-yr Inflation Swap - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 5-yr Inflation Swap subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

While Tables 2 and 3 document large and immediate price jumps at the market open following Supreme Court justice deaths, these estimates do not by themselves establish whether the observed movements are unusual relative to the typical dynamics of asset prices. In this subsection, we complement the jump-based analysis with a dynamic event-study framework that constructs counterfactual price paths in the

Figure 7: 10-yr Inflation Swap - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 10-yr Inflation Swap subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

absence of the judicial shift. This approach allows us to separate the causal effect of the justice’s death from normal market fluctuations and to assess the persistence of the response over intraday horizons.

We model asset prices around the event following the standard single-event study framework of MacKinlay (1997). Let y_t denote the log price (or rate) of a given asset at time t , and let T denote the event time corresponding to the first trading session after the Justices’ death. Asset prices evolve according to

$$y_t = \begin{cases} \varepsilon_t, & t < T, \\ \varepsilon_t + \alpha_t, & t \geq T, \end{cases}$$

where ε_t captures the “typical” evolution of prices in the absence of the judicial shift, and α_t represents the causal effect of the Justices’ death on the asset price. The object of interest is therefore the post-event deviation of observed prices from their counterfactual path had the surprise not occurred.

We estimate the causal effect by constructing the expected counterfactual price path using an autoregressive integrated moving average (ARIMA) model estimated

Figure 8: S&P 500 - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the S&P 500 subtracting the last value on September 18th at 10-minute frequency. The green dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure 9: 5-yr Breakeven Inflation Rate - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 5-yr Breakeven inflation rate subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

exclusively on pre-event data. For each horizon $j \geq 0$, the estimated effect of the judicial shift is given by

$$\hat{\alpha}_{T+j} = y_{T+j} - \mathbb{E}_T[y_{T+j} \mid \{\alpha_{T+k}\} = 0],$$

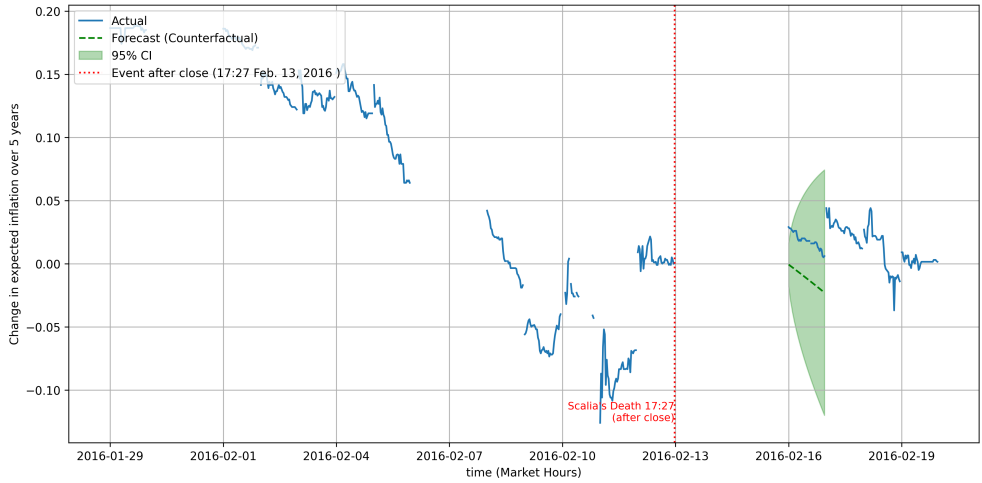
where the conditional expectation is generated by the ARIMA process fitted over a two-week window prior to the event date T . Model orders are automatically selected using the Akaike Information Criterion, ensuring a flexible yet parsimonious representation of pre-event price dynamics. Importantly, the estimation window ends strictly before the Justices' death, so that the counterfactual forecast is not contaminated by post-event information.

The identifying assumption underlying this approach is that the distribution of ε_t —the typical, non-event-driven component of price movements—remains unchanged around the event date T . In other words, absent the Justices' death, asset prices would have continued to evolve according to their pre-existing stochastic process, and no other atypical shocks arrived contemporaneously with the event. This assumption is particularly plausible in our setting because both deaths occurred over weekends, when financial markets were closed and no scheduled macroeconomic announcements, policy releases, or earnings reports took place.

Figures 6–13 report the resulting counterfactual analysis for inflation swaps, breakeven inflation rates, and equity indexes. Across assets and maturities, we observe a sharp and persistent divergence between realized prices and the ARIMA-implied counterfactual paths immediately following Justice Ginsburg' death. Inflation expectations fall rapidly below their predicted trajectories, breaching the 95 percent confidence bands within minutes of market open and remaining outside the confidence region throughout the trading session. Similar patterns emerge for equity indexes and dividend futures, which experience sustained declines relative to their counterfactual paths. These deviations indicate that the observed price movements are not simply continuations of prior trends or realizations of typical volatility, but instead reflect a discrete and economically meaningful surprise.

The response following Justice Scalia's death exhibits the mirror image of this pattern. Inflation expectations and equity prices rise above their counterfactual paths,

Figure 10: 5-yr Inflation Swap - Percent Change Relative to Feb-12 Close Price



Notes: This plot shows the intraday price path of the 5-yr Inflation Swap subtracting the last value on Feb. 16. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on Feb. 12. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure 11: 10-yr Inflation Swap - Percent Change Relative to Feb-12 Close Price

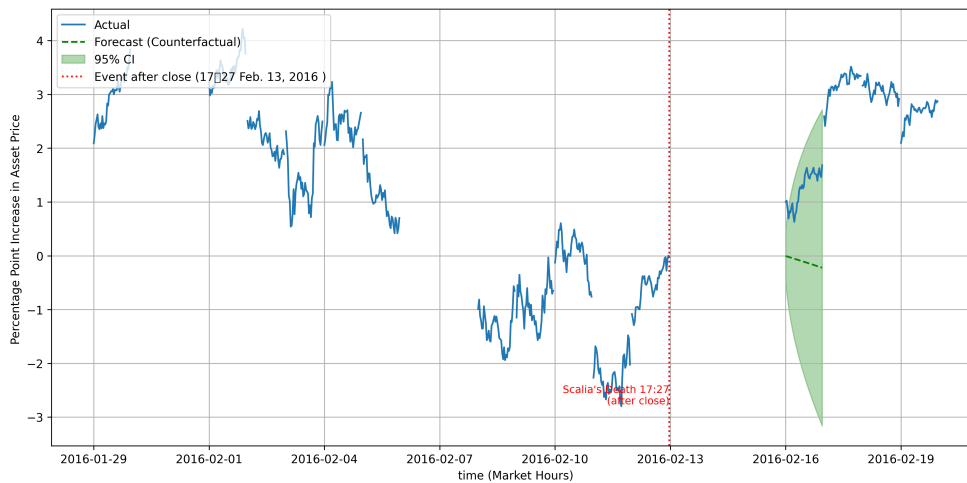


Notes: This plot shows the intraday price path of the 10-yr Inflation Swap subtracting the last value on Feb. 16 at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on Feb. 12. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

again with deviations that are both immediate and persistent. The symmetry of the responses across the two events—liberal versus conservative ideological shifts—

provides further evidence that markets interpret changes in the Supreme Court’s ideological balance as macro-relevant news rather than as idiosyncratic or asset-specific disturbances.

Figure 12: S&P 500 - Percent Change Relative to Feb-12-2016 Close Price



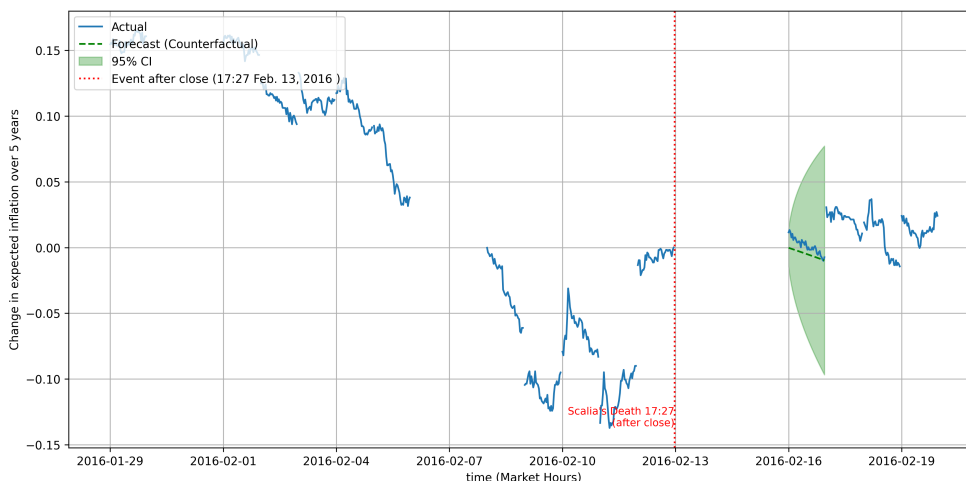
Notes: This plot shows the intraday price path of the S&P 500 subtracting the last value on February 12th at 10-minute frequency. The green dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Specifically, figure 6 shows the response of the five-year inflation swap following Justice Ginsburg’s death. Immediately after market open, realized inflation expectations fall sharply below the ARIMA-implied counterfactual path and breach the 95 percent confidence band within minutes. The deviation persists throughout the trading session, indicating a rapid and sustained downward revision in medium-term inflation expectations rather than a transient price fluctuation.

Figure 7 presents the corresponding response for the ten-year inflation swap. Despite the longer maturity, the pattern is remarkably similar: inflation expectations diverge sharply from the predicted path and remain well outside the confidence interval for the remainder of the day. The presence of comparable deviations at both medium and longer horizons suggests that markets revised expectations about the broader policy environment rather than merely near-term inflation dynamics.

For brevity, we focus on medium- and long-maturity inflation swaps (5-year and

Figure 13: 5-yr Breakeven Inflation Rate - Percent Change Relative to Feb-12-2016 Close Price



Notes: This plot shows the intraday price path of the 5-yr Breakeven inflation rate subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on Feb 12, 2016. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

10-year) in the main text, as these maturities are more informative about policy expectations and less affected by short-term market fluctuations. Results for shorter maturities (1-year and 2-year) are reported in the Appendix figures D.1 and D.2 and display the same qualitative pattern.

Turning to real activity, Figure 8 plots the intraday path of the S&P 500 relative to its counterfactual forecast. Equity prices drop discretely at the market open and continue to drift downward relative to the ARIMA benchmark, mirroring the behavior observed in inflation expectations. While the S&P 500 primarily reflects the performance of large-cap firms, Appendix Figure D.3 reports analogous results for the Russell 2000 index, which is more representative of smaller and domestically oriented firms. The responses are qualitatively similar across the two indices. The joint decline in inflation compensation and equity valuations is consistent with a contractionary aggregate-demand shock induced by a conservative shift in the Supreme Court’s ideological balance.

Beyond inflation swaps and equity prices, the counterfactual analysis yields sim-

ilarly sharp deviations for market-based measures of inflation compensation constructed from Treasury yields. Figure 9 shows the intraday response of the five-year breakeven inflation rate following Justice Ginsburg’s death. Breakeven rates drop discretely at the market open and fall well below the ARIMA-implied counterfactual path, breaching the 95 percent confidence band shortly after trading begins. The close alignment between the responses of inflation swaps and breakeven rates indicates that the decline in inflation expectations is not driven by movements in liquidity premia or idiosyncratic pricing in a single market, but instead reflects a broad-based downward revision in expected inflation. The corresponding response for the two-year breakeven inflation rate is reported in Appendix Figure D.4 and shows a similar pattern.

A parallel set of results emerges for Justice Scalia’s death in 2016. Figures 10–13 document the dynamic responses of inflation swaps, breakeven inflation rates, and equity indexes relative to their counterfactual paths. Across assets and maturities, realized prices move sharply in the opposite direction compared to the Ginsburg event: inflation expectations and equity prices rise above their predicted trajectories immediately after market open and remain persistently outside the confidence bands over the trading day. The symmetry of the counterfactual deviations across the two events—negative following a conservative shift and positive following a liberal shift—reinforces the interpretation of judicial deaths as ideologically one-sided and macroeconomically meaningful surprises.

The counterfactual analysis reinforces the interpretation of the judicial deaths as causal surprises to macroeconomic expectations. The sharp breaks from predicted price paths, their timing at market open, and their persistence throughout the trading day are difficult to reconcile with explanations based on gradual information diffusion, routine market volatility, or unrelated contemporaneous news. Instead, the evidence indicates that investors rapidly and coherently revised expectations about inflation, growth, and policy-relevant outcomes in direct response to the unexpected changes in the Supreme Court’s ideological composition.

3.3.3 From nominal to real growth expectations

The asset price responses documented above are measured in nominal terms. To interpret these movements as revisions in real economic activity, we convert nominal

price changes into real terms by adjusting for contemporaneous changes in inflation expectations.

Table 4 summarizes the resulting nominal and real responses. We continue to focus on short-horizon percentage changes in asset prices measured over the event window surrounding Supreme Court justice deaths. For each asset, nominal price changes are computed using the first available one-minute last price on the first trading day after the event and the last available one-minute last price on the final trading day before the event. In cases where one or both prices are missing, we use the nearest available observations. Values with asterisk indicate those cases. For instance, for the 2-year dividend future, the prices correspond to September 17 2020 12:50 p.m. and September 23 2020 2:57 p.m. Since the analysis is conducted over a narrow event window, these price changes capture revisions in market expectations rather than realized economic outcomes.

Following [Gormsen and Koijen \(2020\)](#) and [Hazell and Hobler \(2024\)](#), we interpret changes in dividend futures and equity prices as revisions in expected nominal growth. To obtain measures of expected real growth, we deflate these nominal responses using market-based inflation expectations at comparable horizons. Under a log-linear approximation, expected real growth equals expected nominal growth minus expected inflation. Specifically, dividend futures are matched with inflation swaps of the same maturity, reflecting the contract horizon over which future cash flows are priced. Equity indexes are paired with inflation swaps based on their sensitivity to the business cycle. The S&P 500 index, which reflects medium-term expectations of corporate earnings and aggregate activity, is matched with the two-year inflation swap, while the Russell 2000 and other small-cap indexes are matched with the one-year inflation swap, given their stronger exposure to near-term economic fluctuations. This horizon-matching approach ensures that nominal and inflation expectations refer to comparable future periods.

Table 4 reports both nominal and real responses for aggregate growth proxies. Following Justice Ginsburg's death, nominal dividend futures and equity prices decline sharply, indicating a sizable downward revision in expected nominal growth. After adjusting for the concurrent decline in inflation expectations, the implied real growth responses remain strongly negative. For example, the one-year dividend future falls

Table 4: Aggregate effect of Justices' death surprises

Asset Price changes (percentage change)	RBG's Death	Scalia's Death
Economic Growth		
S/​&P 500 ETF	-1.5632	1.2002
Russell 2000 ETF	-2.2354	1.1207
S/​&P SmallCap 600 ETF	-2.1562	1.0932
1-yr dividend future	-1.0587	NA
2-yr dividend future	-0.6711*	NA
Real economic growth		
S/​&P 500 ETF	-1.5124	1.1902
Russell 2000 ETF	-2.1597	1.1137
S/​&P SmallCap 600 ETF	-2.1054	1.0862
1-yr dividend future	-0.9830	NA
2-yr dividend future	-0.6203	NA

Notes: This table reports nominal and real percentage changes in asset prices around Supreme Court justice deaths. The asterisk indicates a case where one of the required prices was missing. In this instance, the nearest available observations were used—specifically, the last available price before September 18 and the first available price after September 21. For the 2-year dividend future, the prices correspond to September 17, 2020 at 12:50 p.m. and September 23, 2020 at 2:57 p.m.

by 1.06 percent in nominal terms, while the corresponding decline in inflation expectations implies a real growth revision of approximately 0.98 percent. Similar patterns are observed across equity indexes, with real responses only modestly attenuated relative to their nominal counterparts.

The opposite pattern emerges following Justice Scalia's death. Nominal equity prices increase, and inflation expectations rise modestly, resulting in positive revisions to expected real growth. The symmetry of the real responses across the two events mirrors the nominal evidence and reinforces the interpretation that Supreme Court justice deaths generate economically meaningful revisions in market expectations of real economic activity like an aggregate demand shock.

3.4 Fiscal interpretation of the aggregate demand shock

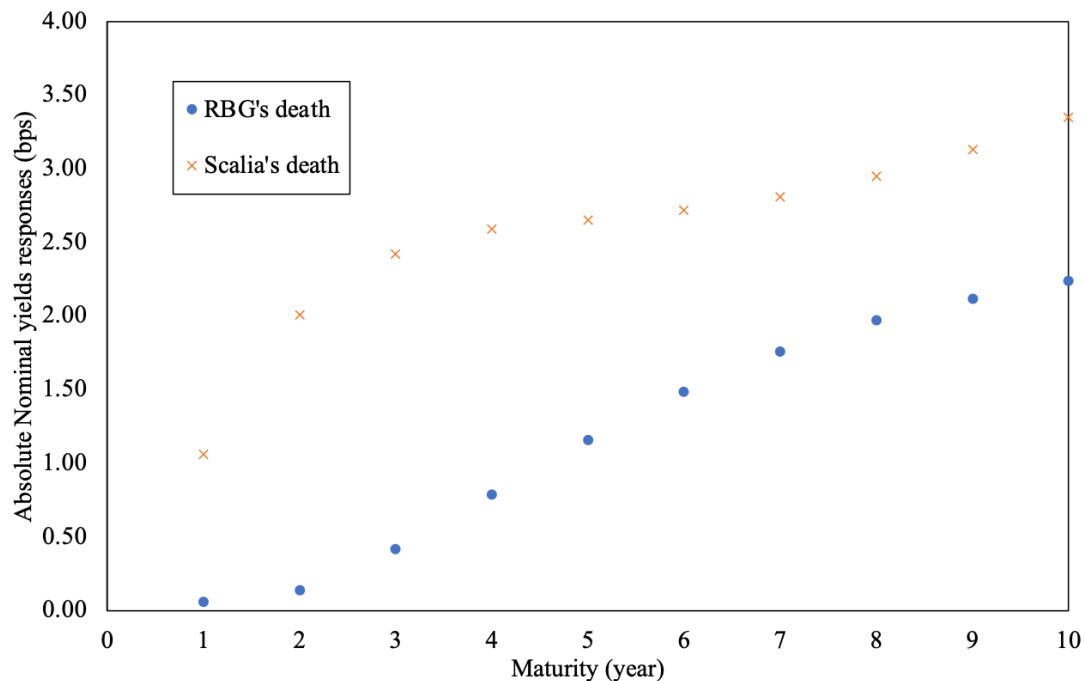
This section interprets the empirical findings through a fiscal and policy-constraint channel. The central observation motivating this interpretation is that conservative shifts in the Supreme Court lead to simultaneous declines in inflation expectations and expected real economic activity, while liberal shifts generate the opposite pattern. Such

comovement is difficult to reconcile with supply-side mechanisms, which would typically imply opposing movements in inflation and output, but is instead characteristic of shocks that primarily operate through aggregate demand.

Judicial ideology can affect aggregate demand through two closely related mechanisms. First, through a policy implementation channel, a more conservative Court is perceived as constraining the scope and durability of government spending programs, regulatory interventions, and subsidies in areas such as clean energy, healthcare, and public investment. Second, through a political equilibrium channel, judicial ideology shapes expectations about the feasibility of future fiscal expansion by altering the probability that ambitious legislation survives judicial review. In both cases, a conservative shift in the Court lowers the expected effectiveness of fiscal policy, leading markets to revise downward their expectations of inflation and real growth.

3.4.1 Nominal yield curve responses

Figure 14: Nominal yields responses to death surprises



Notes: Nominal yields responses are plotted in absolute value. Yield changes following RBG's death are negative at all maturities.

Figure 14 plots the absolute value of nominal Treasury yield responses across

maturities following Supreme Court justice deaths. Yield changes following Justice Ginsburg's death are negative at all maturities, while yield changes following Justice Scalia's death are positive at all maturities. To facilitate comparison across events, the figure plots absolute changes in yields; the sign of the response differs across events but is uniform across maturities within each event.

Two features of the yield responses are particularly noteworthy. First, the yield curve response is monotonic and upward sloping in maturity for both events. Longer-maturity yields respond more strongly than shorter-maturity yields, indicating that the judicial shifts primarily affect expectations about the medium- to long-run fiscal and macroeconomic environment rather than short-lived monetary or liquidity conditions. This maturity pattern is difficult to reconcile with purely transitory demand shocks or monetary policy surprises, which typically generate flatter or hump-shaped responses.

Second, the sign of the yield movements is consistent with a fiscal-policy interpretation. Justice Ginsburg's death, which shifted the Court in a more conservative direction, is associated with a decline in nominal yields across all maturities, reflecting reduced expectations of future fiscal expansion and lower anticipated government borrowing needs. In contrast, Justice Scalia's death, which shifted the Court in a more liberal direction, leads to increases in nominal yields, consistent with higher expected fiscal deficits and greater Treasury issuance. The fact that yields move in opposite directions across the two events but exhibit similar maturity profiles reinforces the interpretation of these judicial deaths as ideologically asymmetric fiscal shocks.

Importantly, the upward slope of the yield response provides direct evidence that markets interpret judicial ideology as affecting long-run fiscal capacity. Under standard fiscal transmission mechanisms, shocks that raise expected government deficits and debt exert stronger upward pressure on long-term yields than on short-term yields, as investors demand higher compensation for holding long-duration government debt. The maturity structure observed in Figure 14 is therefore closely aligned with the canonical predictions of fiscal shock models.

3.4.2 Magnitude and comparison with benchmark fiscal shocks

To assess the economic magnitude of the judicial shifts, we compare the estimated yield responses to benchmark fiscal shocks studied in recent work. This comparison

reveals that the magnitude of the yield movements induced by Supreme Court justice deaths is remarkably consistent with those generated by sizable, but plausible, fiscal news surprises.

[Bi, Phillot and Zubairy \(2025\)](#) study shocks to Treasury issuance and show that a one-standard-deviation increase in marketable government debt-equivalent to an increase of approximately 0.9 percent of GDP over two years—raises the 10-year Treasury yield by about 1.2 basis points on impact and by slightly more than 2 basis points at its peak. In our setting, Justice Scalia’s death increases the 10-year nominal yield by approximately 3.35 basis points, while Justice Ginsburg’s death lowers the 10-year yield by about 2.24 basis points. These magnitudes are comparable in size to the benchmark issuance shock and suggest that markets interpret the judicial events as conveying information about meaningful shifts in future fiscal capacity.

Similarly, [Wiegand \(2025\)](#) analyzes fiscal news shocks that increase the cumulative deficit-to-GDP ratio by 1 percent over five years. He finds that such a shock raises the 2-year Treasury yield by approximately 2 basis points and the 10-year yield by about 2.3 basis points, with roughly two-thirds of the response occurring through real yields and one-third through breakeven inflation. In our data, Justice Scalia’s death raises the 2-year yield by roughly 2.01 basis points and the 10-year yield by 3.35 basis points, while Justice Ginsburg’s death produces similarly sized declines of 0.14 and 2.24 basis points, respectively. The close correspondence in magnitudes across maturities suggests that the judicial shifts are of a similar order of economic significance as the fiscal news shocks examined in these studies.

To recap, these comparisons indicate that Supreme Court justice deaths generate yield curve responses consistent not only in sign and maturity profile, but also in magnitude, with well-identified fiscal shocks in the literature. This evidence supports the interpretation that markets perceive changes in judicial ideology as affecting the expected trajectory of fiscal policy and government borrowing, thereby operating through an aggregate-demand channel rather than through supply-side or purely regulatory mechanisms.

4 Validation

While macroeconomic expectations are the main focus of our analysis, this section studies sectoral asset price dynamics following the quasi-experimental shifts in the Supreme Court’s ideological balance. The motivation for considering this cross-sectional analysis is to give additional credibility to our identification strategy. If asset prices associated with conservative (liberal) priorities move in the direction one would expect after the Court becomes more conservative (liberal), we can more reliably claim that the asset price changes in our high-frequency windows indeed reveal relevant news about the Supreme Court.

4.1 Effects by policy areas

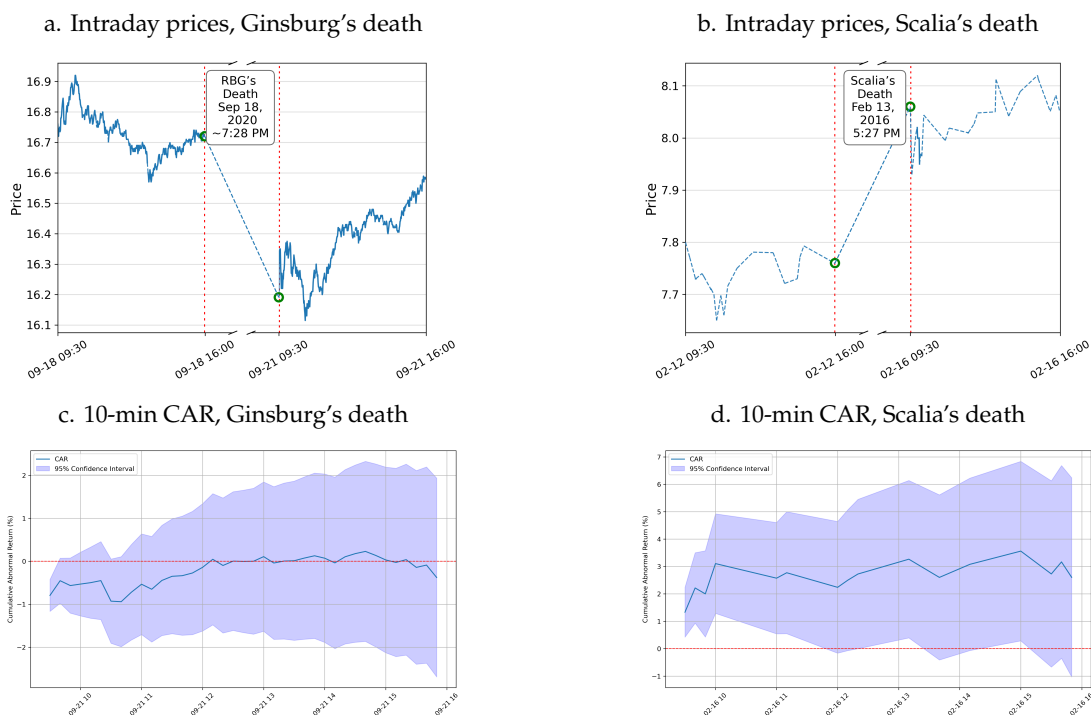
To quantify sector-specific responses while controlling for aggregate market movements, we implement a standard market-model event study. Let r_t denote the return on a given sector ETF at time t . Returns are decomposed as

$$r_t = \beta r_t^{mkt} + \varepsilon_t + \alpha_t \cdot \mathbf{1}\{t \in \mathcal{W}\},$$

where r_t^{mkt} is the S&P 500 return, \mathcal{W} denotes the event window surrounding the judicial death, and α_t captures the abnormal return attributable to the event. The error term ε_t reflects idiosyncratic return fluctuations.

We begin with the clean energy sector, which is highly exposed to fiscal policy through subsidies, tax credits, and government investment programs. This exposure is amplified by the judiciary’s role in shaping the scope and enforcement of environmental regulation. For instance, Justice Ginsburg’s long-standing pro-environmental voting record, together with the ideological shift implied by her death, provides a clear incentive for markets to reassess expectations about future climate-related fiscal support (see Appendix Tables A.1 and A.2 for institutional background). Panels (a) and (b) of Figure 15 plot intraday prices of the S&P Global Clean Energy Index ETF around Justice Ginsburg’s and Justice Scalia’s deaths. Following Justice Ginsburg’s death, clean energy prices drop sharply at market open and remain depressed throughout the trading day. In contrast, Justice Scalia’s death is associated with an immediate and

Figure 15: S&P Global Clean Energy Index ETF around Justices' deaths



Notes: Panels (a)-(b) plot intraday prices of the S&P Global Clean Energy Index ETF (ICLN) around the deaths of Justices Ginsburg and Scalia. Panels (c)-(d) report cumulative abnormal returns (CARs) at 10-minute frequency, estimated using a standard market-model event study in which abnormal returns are the residuals from a regression of sector ETF returns on contemporaneous S&P 500 returns; the market exposure coefficient is estimated using 10-minute return data over the one-month period prior to the event, and confidence intervals are based on Newey–West HAC standard errors with five lags.

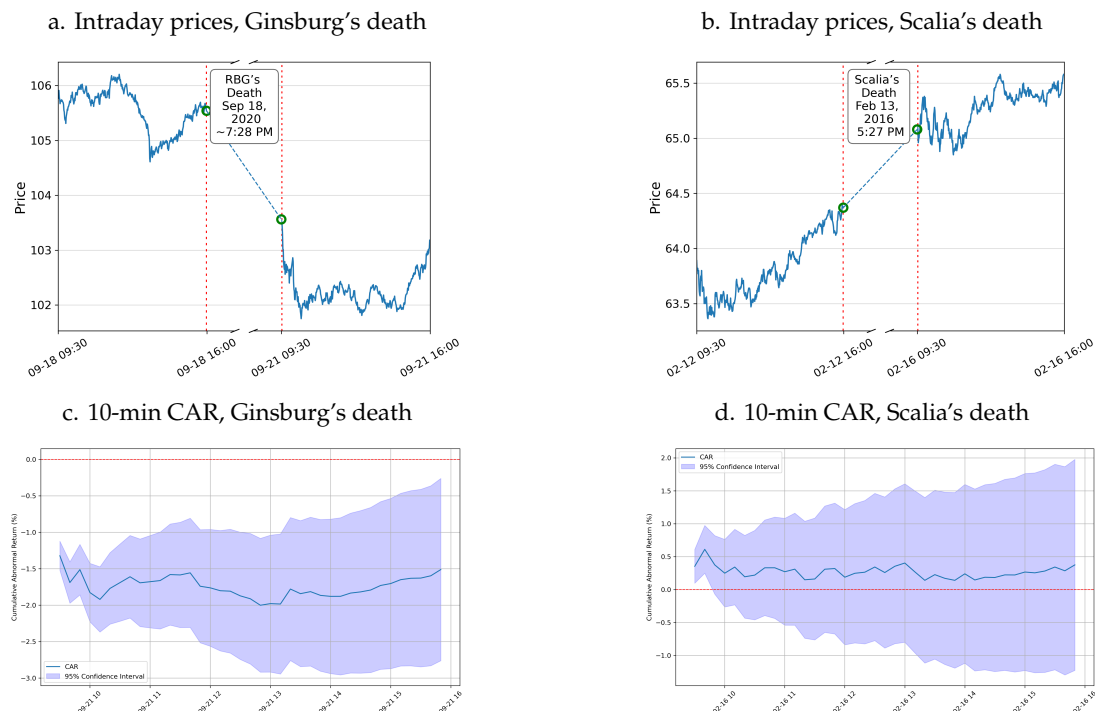
sustained increase in prices.

Panels (c) and (d) of Figure 15 report 10-minute cumulative abnormal returns (CARs) for the same ETF following the two judicial deaths. CARs following Justice Ginsburg's death exhibit a downward trajectory over the post-event window, while CARs following Justice Scalia's death move significantly in the opposite direction. Although the 10-minute aggregation smooths high-frequency variation and attenuates the sharp initial response, the sign and persistence of the movements are consistent with a negative (positive) revision in expectations about future fiscal support for clean energy following Justice Ginsburg's (Scalia's) death.

While Panels (c) and (d) of Figure 15 report 10-minute cumulative abnormal returns to trace smoother post-event dynamics, the immediate response is most clearly visible at higher frequency. Appendix Figure E.1 reports CARs constructed using

1-minute returns. At this frequency, clean energy prices drop sharply upon Justice Ginsburg’s death and remain significantly below zero over the initial post-event window, while Justice Scalia’s death is associated with an immediate and positive response. The consistency across frequencies indicates that the 10-minute CARs in the main text reflect a smoothed version of an immediate and directional price adjustment rather than transitory liquidity effects.

Figure 16: S&P 500 Health Care Select Sector Index around Justices’ deaths



Notes: Panels (a)-(b) plot intraday prices of the S&P 500 Health Care Select Sector Index around the deaths of Justices Ginsburg and Scalia. Panels (c)-(d) report cumulative abnormal returns (CARs) at 10-minute frequency, estimated using the same market-model event study as in Figure 15.

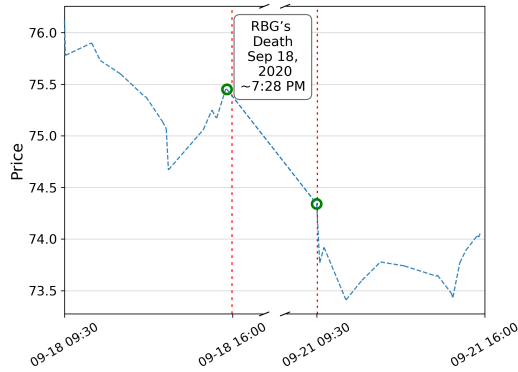
The health care sector provides a second test of the fiscal channel, given its reliance on government spending, reimbursement policy, and judicial interpretation of health-related legislation. Panels (a) and (b) of Figure 16 show intraday price movements of the S&P 500 Health Care Select Sector Index around the two judicial deaths. Health care stocks decline sharply following Justice Ginsburg’s death and rise following Justice Scalia’s death.

As shown in Panels (c) and (d) of Figure 16, real cumulative abnormal returns in the health care sector are persistently negative after Justice Ginsburg’s death and

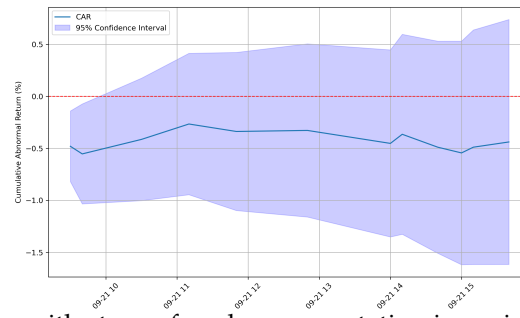
positive, though more muted, after Justice Scalia’s death. This pattern is consistent with markets revising expectations about the scope and durability of public health programs in response to shifts in judicial ideology. Appendix Figure E.2 reports results constructed using 1-minute returns, which display a consistent intraday response.

Figure 17: SSGA Gender Diversity Index ETF (SHE) around Justice Ginsburg’s death

a. Intraday prices, Ginsburg’s death



b. 10-min CAR, Ginsburg’s death



Notes: SHE is an ETF that tracks U.S. companies with strong female representation in senior leadership. SHE was launched on March 7, 2016 and is therefore not available for the Scalia event. Panel (a) plots intraday prices around Justice Ginsburg’s death. Panel (b) reports cumulative abnormal returns (CARs) at 10-minute frequency, estimated using the same market-model event study as in Figure 15.

Finally, we examine gender-related firms using the SSGA Gender Diversity Index ETF (SHE), which tracks companies with strong female representation in senior leadership. The SSGA Gender Diversity Index ETF (SHE) was launched on March 7, 2016 and therefore is not available for the Scalia (February 13, 2016) event. Consequently, the gender-sector evidence pertains only to the Ginsburg (September 18, 2020) event.

Although these firms are not tied to a single spending program, their valuations depend on the enforcement of anti-discrimination laws and broader social policy frameworks. Panel (a) of Figure 17 shows a sharp intraday decline in the SHE ETF following Justice Ginsburg’s death.

Panel (b) of Figure 17 plots real cumulative abnormal returns for the gender diversity ETF. While confidence intervals are wider than in the previous sectors, the point estimates indicate a persistent negative response. The direction of the effect is consistent with markets revising downward expectations about the enforcement and expansion of gender-related policies under a more conservative Court. Results based on 1-minute returns are not reported for the gender diversity ETF, as trading at this

frequency is sparse, making high-frequency inference unreliable.

As an additional robustness check, we repeat the CAR analysis controlling for changes in inflation expectations, measured by the 2-year inflation swap price. The results are reported in Appendix Figure F.1-F.3 and are qualitatively unchanged, indicating that the sectoral responses are not driven by inflation changes.

Table 5: Sectoral effects of Supreme Court Justice deaths in real terms

Aset Price changes (percentage change)	RBG's Death	Scalia's Death
Clean Energy Sector (Climate Policy & Environmental Policy)		
ICLN	-3.1131	3.8560
QCLN	-1.9772	0.1467
Health Care Sector		
SPDR ETF(S/ &P 500 Health Care Sector Index)	-1.8253	1.0930
Gender Policy		
Gender Diversity ETF (SHE)	-1.4204	NA
Energy Futures		
US Energy ETF (IYE)	-2.4197	1.2725
US Brown Energy ETF (XLE)	-4.2336	1.3829
WTI Oil ETF (USO)	-1.2913	1.9108
Natural Gas ETF (UNG)	-0.7081	-3.3341
Coal ETF (KOL)	-3.0606	0.8178
Carbon ETF (KRBN)	-3.1914	NA

Notes: This table reports real percentage point changes in asset prices around key Supreme Court justice deaths. For each asset, the nominal percentage-point changes over the event window is calculated based on the first available 1-minute last price on September 21, 2020 (or February 16, 2016) and the last available 1-minute last price on September 18, 2020 (or February 12, 2016). To approximate real (inflation-adjusted) changes in asset prices, sectoral ETFs are paired with the 2-year inflation swap, which captures medium-term policy and demand expectations most relevant for sector performance.

Table 5 reports sectoral asset price responses in real (inflation-adjusted) terms. Several features stand out. First, sectors with direct exposure to government spending, subsidies, or policy enforcement—clean energy, health care, and gender-related assets—exhibit large and directionally consistent responses to Supreme Court justice deaths. Following Justice Ginsburg's death, these sectors experience pronounced declines in real prices, whereas Justice Scalia's death is associated with positive or muted responses where data are available. This asymmetric pattern aligns closely with shifts

in expected fiscal capacity induced by changes in judicial ideology.

Second, the consistency of responses across policy-relevant sectors supports the interpretation of judicial deaths as aggregate demand shocks operating through a fiscal channel rather than through narrow, sector-specific regulation alone. Clean energy and health care, which rely heavily on sustained public investment and programmatic support, display particularly strong reactions, while the gender diversity ETF also responds negatively following Justice Ginsburg’s death, consistent with revised expectations about the enforcement of social and labor-related policies.

Finally, adjusting asset price changes for inflation does not materially alter either the sign or the relative magnitude of the sectoral responses. This indicates that the observed patterns are not driven by contemporaneous movements in inflation expectations, but instead reflect real revisions in expected cash flows and policy support. For completeness, Appendix Table G.1 reports the corresponding nominal asset price responses, which display qualitatively similar patterns.

The cross-sectoral evidence strongly supports the fiscal interpretation of the aggregate demand shock. Sectors with greater exposure to government spending, subsidies, and judicially mediated policy enforcement—clean energy, health care, and gender-related firms—exhibit large, immediate, and persistent abnormal returns following Supreme Court justice deaths. The consistency of the sign, timing, and persistence of these effects across policy areas reinforces the view that judicial ideology shapes macroeconomic expectations by altering perceived fiscal capacity rather than through narrow or purely regulatory channels.

4.2 Justice Anthony Kennedy’s retirement

The set of judicial events that plausibly generate sharp and unanticipated revisions in macroeconomic and fiscal expectations is extremely limited. Appendix Tables H.1 and H.2 provide a hand-collected classification of Supreme Court justice deaths and retirements since 1954, distinguishing between events that were widely anticipated and those that arrived as genuine surprises. With few exceptions, judicial transitions over this period—including most retirements and several deaths—were expected or unfolded gradually, leaving little scope for abrupt market re-pricing.

This historical classification highlights that only few events in the modern era

Table 6: Market Responses to Anthony Kennedy’s Retirement

Asset Price changes type timing	Anthony Kennedy’s Retirement (pre cutoff = 14:07 ET, on-wire timestamp)		
	10-min	30-min	Pre→Close
Inflation Expectations (bp)	conservative-leaning surprise Jun 27, 2018; earliest news on wire at 2:07pm ET		
1-yr Inflation Swap	—	—	−0.63*
2-yr Inflation Swap	−0.10	−0.10	0.00
5-yr Inflation Swap	—	—	−1.00*
10-yr Inflation Swap	−0.20	−0.50	−0.20
Economic Growth (%)			
S&P 500 ETF (SPY)	−0.059	+0.025	−0.384
Russell 2000 (RTY)	−0.086	−0.084	−0.756
S&P SmallCap 600 (SML)	−0.083	−0.069	−0.808
Russell 2000 ETF (IWM)	−0.049	−0.006	−0.644
1-yr dividend future (ASDZ19)	0.000	−0.088	−0.177
2-yr dividend future (ASDZ20)	NA	NA	NA
Clean Energy Sector (%) (Climate & Environmental Policy)			
ICLN	−0.230	−0.115	−0.471
QCLN	−0.046	−0.441	−0.716
Health Care Sector (%)			
SPDR ETF (S&P 500 Health Care Sector Index)	−0.072	+0.072	−0.431
Gender Policy (%)			
Gender Diversity ETF (SHE)	−0.332	−0.332	−0.130
Energy Futures (%)			
US Energy ETF (IYE)	+0.072	−0.120	−0.287
US Brown Energy ETF (XLE)	+0.066	−0.106	−0.264
WTI Oil ETF (USO)	−0.121	−0.366	−0.637
Natural Gas ETF (UNG)	+0.165	−0.114	+0.124
Coal ETF (KOL)	−0.065	−0.258	−0.645
Carbon ETF (KRBN)	NA	NA	NA

Notes: Changes are measured from the last quote at or before 14:07 ET (the on-wire timestamp of the earliest English-language news report) to three post-event anchors: the first quote at or after 14:17 ET (10-min), the first quote at or after 14:37 ET (30-min), and the same-day NYSE close at 16:00 ET (Pre→Close). Units: bp for inflation swaps, % for all other series; ASDZ19 is reported as % of index price (−0.177% = −0.10 on a base of 56.55). * uses the next-day close because of sparse intraday coverage (USSWIT1 ends 11:02 ET; USSWIT5 ends 14:04 ET); for these rows the intraday windows are not available. ASDZ20 has only four observations on the event day, all after 14:39 ET, leaving no pre baseline. KRBN was not yet launched in 2018. Real (inflation-adjusted) changes following [Gormsen and Kojien \(2020\)](#) and [Hazell and Hobler \(2024\)](#) are nearly identical to the nominal values reported here because event-day inflation swap movements are small (≤ 1 bp).

plausibly qualify as sudden judicial shifts with meaningful ideological implications: the deaths of Justices Scalia and Ginsburg, and the unexpected retirement of Justice

Table 7: Market response of Justice Kennedy’s retirement in real terms

Asset Price changes (percentage change)	Kennedy’s Retirement
Economic Growth	
S&P 500 ETF	−0.384
Russell 2000 ETF	−0.644
S&P SmallCap 600 ETF	−0.808
1-yr dividend future	−0.177
2-yr dividend future	NA
Real economic growth	
S&P 500 ETF	−0.384
Russell 2000 ETF	−0.638
S&P SmallCap 600 ETF	−0.802
1-yr dividend future	−0.171
2-yr dividend future	NA
Clean Energy Sector (Climate Policy & Environmental Policy)	
ICLN	−0.471
QCLN	−0.716
Health Care Sector	
SPDR ETF (S&P 500 Health Care Sector Index)	−0.431
Gender Policy	
Gender Diversity ETF (SHE)	−0.130
Energy Futures	
US Energy ETF (IYE)	−0.287
US Brown Energy ETF (XLE)	−0.264
WTI Oil ETF (USO)	−0.637
Natural Gas ETF (UNG)	+0.124
Coal ETF (KOL)	−0.645
Carbon ETF (KRBN)	NA

Notes: This table reports nominal and real percentage changes in asset prices around Justice Kennedy’s retirement, in the format of Tables 4 and 5. Price changes are measured from the last quote at or before 14:07 ET on June 27, 2018 (the on-wire timestamp) to the same-day NYSE close at 16:00 ET. Real changes deflate each nominal series by the contemporaneous change in the inflation swap of matching horizon following [Gormsen and Kojen \(2020\)](#) and [Hazell and Hobler \(2024\)](#): the S&P 500 ETF is matched with the 2-year inflation swap; the Russell 2000 ETF, S&P SmallCap 600 ETF, and the 1-year dividend future are matched with the 1-year inflation swap; sectoral ETFs are paired with the 2-year inflation swap. Real and nominal values are nearly identical because event-day inflation swap movements are small (≤ 1 bp). The 2-year dividend future (ASDZ20) is reported as NA because it has only four observations on the event day, all after 14:39 ET, leaving no pre baseline. The Carbon ETF (KRBN) had not yet been launched in 2018.

Anthony Kennedy. Given the limited number of such events, we use Justice Anthony Kennedy's retirement as a validation case. Although the possibility of his departure had been widely anticipated for several years, the precise timing of Justice Kennedy's retirement was unexpected.

Table 6 reports asset price responses to Justice Anthony Kennedy's retirement. Because the announcement occurred during U.S. trading hours rather than over a weekend, we measure price changes from the last quote prior to the news appearing on the news wire (14:07 ET on June 27, 2018) to three post-event anchors: the first quote ten minutes later (10-min), the first quote thirty minutes later (30-min), and the same-day NYSE close at 16:00 ET (Pre→Close).

The response builds gradually after the wire timestamp. Within the first ten minutes, intraday movements are small and noisy: the S&P 500 declines by only 0.06%, the Russell 2000 by 0.09%, and the 10-year inflation swap by 0.2 basis points. Over the subsequent twenty minutes, the pattern evolves unevenly: some series (QCLN, USO) move sharply, while others (SPY, ICLN) partially retrace before resuming the downward trajectory by close. The full repricing is most clearly visible at the same-day close: the S&P 500 ETF falls by 0.38%, the Russell 2000 and S&P SmallCap 600 drop by 0.76% and 0.81%, and clean-energy, health-care, and energy ETFs decline by 0.26–0.72% (with QCLN at the upper end of this range). This timing pattern, in which the largest cumulative price movements are realized only several hours after the wire timestamp, is consistent with gradual information diffusion across asset classes and trader types, and parallels the longer-horizon drift documented for the Ginsburg event in the counterfactual analysis above.

The signs of the responses align with the documented conservative-shift effects following Justice Ginsburg's death. Inflation expectations decline across maturities: the 10-year inflation swap drops by 0.5 basis points within the first thirty minutes (partially reverting to -0.2 basis points by close), the 2-year swap declines by 0.1 basis points within the same window, and the 1- and 5-year rates, which lack reliable intraday coverage on the event day, decline by 0.6 and 1.0 basis points when measured against the next-day close. These declines are roughly an order of magnitude smaller than the corresponding reactions documented for Justice Ginsburg's death, matching the proportional scaling observed in the equity responses (e.g., the S&P 500 declines

by 0.38% for Kennedy versus approximately 5% for Ginsburg). Policy-sensitive sectors mirror the Ginsburg pattern: clean energy, health care, gender-diversity, and most energy-related ETFs all decline. Natural gas (UNG) is the lone positive outlier, plausibly reflecting contemporaneous oil-market dynamics unrelated to the judicial event.

Table 7 reports the same-day close-to-close responses in the format of Tables 4 and 5, separating nominal and real growth measures and grouping the sectoral ETFs by policy area, so that the magnitudes can be read off directly against the corresponding values for the Ginsburg and Scalia events. Real and nominal responses are close to each other because the same-day close inflation swap movements are small. The magnitudes are roughly an order of magnitude smaller than those following Justice Ginsburg's death (cf. Table 4), consistent with the fact that Justice Kennedy's retirement had been widely discussed for several years and the announcement primarily resolved residual timing uncertainty. Asset prices responded in the same direction as they did following Ginsburg's death, consistent with a downward revision in expectations about fiscal capacity, aggregate demand, and policy support in the affected sectors.

5 Conclusion

This paper studies how shifts in judicial ideology affect macroeconomic expectations. Exploiting rare and unexpected Supreme Court justice deaths together with the unexpected retirement of Justice Kennedy, we show that changes in the ideological balance of the U.S. Supreme Court generate immediate and persistent responses in a broad set of asset prices. Conservative-leaning judicial surprises lower inflation expectations, expected real growth, nominal Treasury yields, and valuations in policy-sensitive sectors; liberal-leaning surprises generate responses of the opposite sign.

The joint decline in expected inflation and expected real growth following conservative shifts is consistent with a contractionary aggregate demand shock rather than a supply-side channel. Sectoral evidence from clean energy, health care, and gender-diversity firms further supports this interpretation, highlighting the role of judicial enforcement and policy durability in shaping expectations about government spend-

ing and regulatory support. The magnitudes of the yield responses are comparable to estimates from the recent fiscal-news literature, suggesting that markets price judicial ideology as macroeconomically relevant fiscal news.

More broadly, the results highlight a channel through which legal institutions influence macroeconomic expectations. While courts do not set fiscal policy directly, their ideological composition affects the credibility, durability, and feasibility of policy initiatives—a margin that financial markets appear to internalize. The analysis identifies revisions in expectations rather than realized macroeconomic outcomes, and the set of judicial events suitable for high-frequency identification is necessarily limited; future research could explore how these expectation shifts translate into real activity and investment, or examine similar channels in other institutional and legal settings.

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ONLINE APPENDIX TO
**Do Judges Move Markets? Ideological Shifts in the Supreme
Court and Macroeconomic Expectations**
by Thomas Drechsel and Naixin Zhang

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A Justices' positions on environmental cases

To support the ideological characterization of Justices Ginsburg and Barrett used in the main text, this section provides a hand-collected overview of their voting positions on environmental and climate-related cases. Table [A.1](#) lists Justice Ginsburg's stances on Supreme Court cases during her tenure (1993–2020). Table [A.2](#) lists Justice Barrett's stances on cases during her tenure on the Seventh Circuit Court of Appeals (2017–2021), prior to her elevation to the Supreme Court.

Table A.1: Justice Ginsburg’s Positions on Environmental and Climate-Related Supreme Court Cases

Case	Date	Ginsburg’s stance	Final Vote
Panel A: Justice Ginsburg’s Tenure (1993-2020)			
City of Chicago v. Environmental Defense Fund	May 2, 1994	pro-environment	7-2 (pro-environment)
PUD No. 1 of Jefferson County	May 31, 1994	pro-environment	7-2 (pro-environment)
v. Washington Department of Ecology			
Babbitt v. Sweet Home Chapter, Communities for a Great Oregon	June 29, 1995	pro-environment	6-3 (pro-environment)
United States v. Bestfoods	June 8, 1998	pro EPA environment	9-0 (pro-EPA)
Friends of the Earth v. Laidlaw	January 12, 2000	Pro-environment	7-2 (Pro-environment)
Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers	January 9, 2001	Pro-environment, in dissent	5-4 (against-environment)
Whitman v. American Trucking Associations, Inc.	February 27, 2001	pro EPA and environment	9-0 (pro-EPA)
Borden Ranch Partnership v. Army Corps of Engineers	Dec 16, 2002	anonymous	4-4 (pro-environment, the original judgment is valid)
Alaska Dept. of Environmental Conservation v. EPA	January 21, 2004	Pro-EPA	5-4 (Pro-EPA)
South Florida Water Management District v. Miccosukee Tribe of Indians	March 23, 2004	pro-environment	9-0 (pro-environment)
Cooper Industries, Inc. v. Aviall Services, Inc.	December 13, 2004	Pro-environment, in dissent	7-2 (against-environment)
S.D. Warren Co. v. Maine Board of Environmental Protection	May 15, 2006	pro-environment	9-0 (pro-environment)
Rapanos v. United States	June 19, 2006	Pro-EPA, in dissent	4-1-4 (plurality)
Massachusetts v. EPA	April 2, 2007	Pro-EPA	5-4 (Pro-EPA)
Environmental Defense v. Duke Energy	April 2, 2007	Pro-EPA	9-0 (Pro-EPA)
United States v. Atlantic Research Corp.	June 11, 2007	pro EPA and environment	9-0 (Pro-EPA)
Winter v. NRDC	October 8, 2008	Pro-environment, in dissent	5-4 (against NRDC)
Winter v. Natural Resources Defense Council, Inc.	November 12, 2008	Pro-environment, in dissent	5-4 (against-environment)
Burlington N. & Santa Fe Ry. Co. v. United States	May 4, 2009	Pro-EPA, in dissent	8-1 (against-EPA)
Coeur Alaska v. SEACC	June 22, 2009	Pro-environment, in dissent	6-3 (favored mining)
AEP v. Connecticut	June 20, 2011	Pro-EPA	8-0 (Pro-EPA)
Los Angeles County Flood Control District v. Natural Resources Defense Council, Inc.	January 8, 2013	against environment	9-0 (against-environment)
Decker v. Northwest Environmental Defense Center	March 20, 2013	pro EPA while slightly against environment	7-1 (Pro-EPA)
Utility Air Regulatory Group v. EPA	June 23, 2014	Pro-EPA, in dissent	5-4 (limited EPA)
EPA v. EME Homer City	April 29, 2014	Pro-EPA	6-2 (Pro-EPA)
Michigan v. EPA	June 29, 2015	Pro-EPA, in dissent	5-4 (against EPA)
Atlantic Richfield Co. v. Christian, et al.	April 20, 2020	pro-EPA	7-2 (Pro-EPA)
County of Maui v. Hawaii Wildlife Fund	April 23, 2020	Pro-environment	6-3 (pro-environment)
Panel B: Post-Ginsburg Supreme Court Decisions (2021-2025)			
HollyFrontier Cheyenne Refining LLC v. Renewable Fuels Association	June 25, 2021	N.A.	6-3 (against-environment)
West Virginia v. EPA	June 30, 2022	N.A.	6-3 (against-EPA)
Sackett v. EPA	May 25, 2023	N.A.	5-4 (against-EPA)
Ohio v. EPA	Jun 27, 2024	N.A.	5-4 (against-EPA)
City and County of San Francisco v. EPA	March 4, 2025	N.A.	5-4 (against-EPA)

Notes: The rulings and judicial positions listed in this table were hand-collected from publicly available case summaries on the Oyez website (<https://www.oyez.org/>). Each entry reflects Justice Ruth Bader Ginsburg’s stance on major environmental and climate-related cases decided by the U.S. Supreme Court, including her vote, opinion type, and the final decision split. Classification of her stance (e.g., “Pro-EPA” or “Pro-environment”) is based on the majority holding’s policy implications.

Table A.2: Justice Barrett’s Positions on Environmental and Climate-Related Court Cases

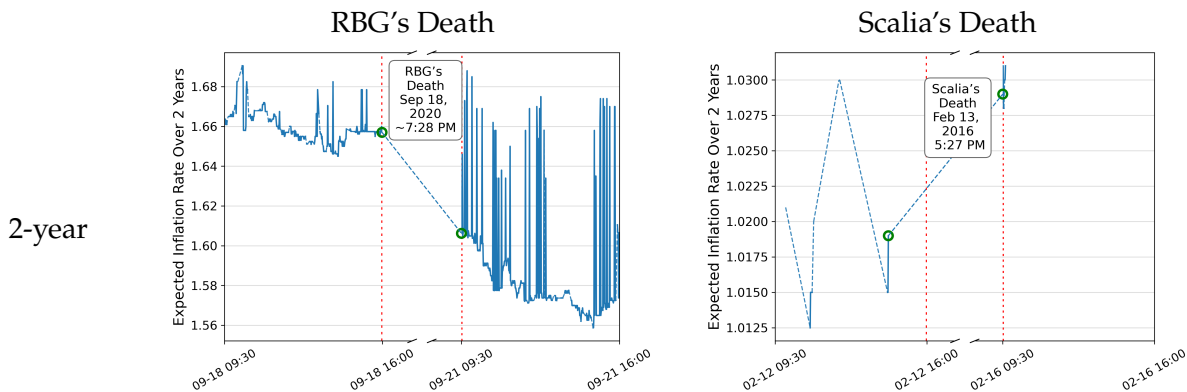
Case	Date	Barrett’s stance	Final Vote
Orchard Hill Building Co. v. U.S. Army Corps of Engineers	Jun. 27, 2018	Against-EPA/Environment	Against-EPA/Environment
Protect Our Parks, Inc. v. Chicago Park District	Aug. 21, 2020	Against-environment	Against-environment

Notes: The cases are from her service in the Seventh Circuit U.S. Court of Appeals (2017-2021). The rulings and judicial positions listed in this table were hand-collected from publicly available case summaries from JUSTIA (<https://law.justia.com/cases/federal/appellate-courts/ca7/>). Each entry reflects Justice Amy Coney Barrett’s stance on major environmental and climate-related cases decided by the Seventh Circuit U.S. Court of Appeals. Classification of her stance (e.g., “Pro-EPA” or “Pro-environment”) is based on the majority holding’s policy implications.

B Additional inflation expectation series

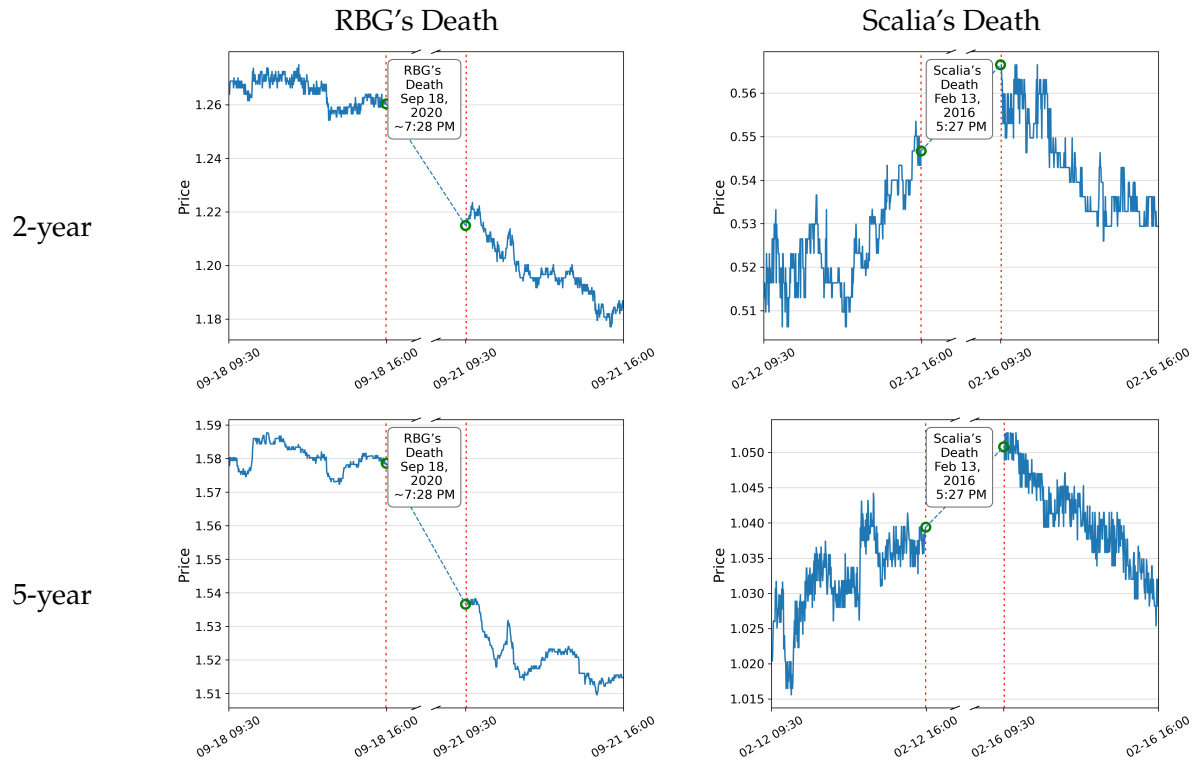
This section reports intraday responses of additional inflation expectation series that are not shown in the main text. Figure B.1 reports the path of the 2-year inflation swap rate, which is omitted from the main text because of substantial intraday data gaps in the pre-event window. Figure B.2 reports the corresponding analysis using breakeven inflation rates implied by TIPS–Treasury spreads at the 2- and 5-year horizons.

Figure B.1: Expected Changes of the Price Level over 2 years by Justice Death Events



Notes: This figure plots the intraday responses of the expected path of the price level over 2 years, as implied by price changes in the 2-year inflation swaps. Dashed lines indicate missing data, primarily due to weekends and holidays.

Figure B.2: Expected Inflation Rate by Justice Death Events (columns) and Maturity (rows)

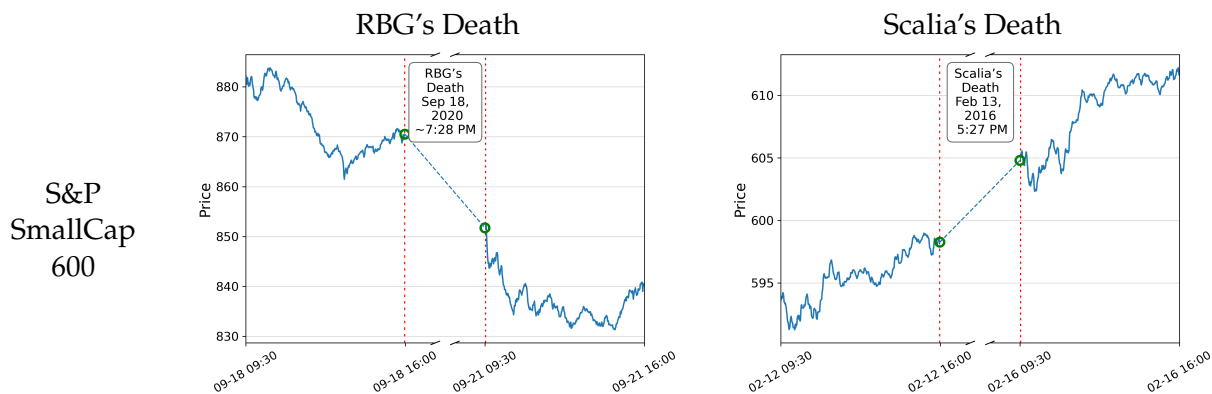


Notes: This graph plots the intraday responses of the expected path of the price level over 2- and 5-year horizons, as implied by Breakeven Inflation Rate. Breakeven Inflation Rate is the difference between the nominal yield and the yield on Treasury Inflation-Protected Securities (TIPS) of equivalent maturity. Dashed lines indicate missing data, primarily due to weekends and holidays.

C Additional real activity series

This section reports an additional real-activity series. Figure C.1 shows the intraday price response of the S&P SmallCap 600 index following the deaths of Justices Ginsburg and Scalia. The pattern mirrors that of the Russell 2000 in the main text, indicating that the response is not confined to a single small-cap benchmark.

Figure C.1: Expected Economic Growth Around Justice Death Events



Notes: This figure plots the intraday price responses of the S&P SmallCap 600 index around the deaths of Justices Ginsburg and Scalia. Dashed lines indicate missing data, primarily due to weekends and holidays.

D ARIMA counterfactual at additional horizons

This section extends the counterfactual ARIMA analysis in Section 3.3.2 to additional maturities and asset series. Figures D.1–D.4 report the counterfactual paths for the 1- and 2-year inflation swap rates, the Russell 2000 index, and the 2-year breakeven inflation rate around Justice Ginsburg’s death. Figures D.5–D.7 report the analogous figures for Justice Scalia’s death. Across maturities and asset classes, the realized post-event price paths break sharply from their ARIMA counterfactual trajectories, mirroring the patterns documented for the 5- and 10-year horizons in the main text.

Figure D.1: 1-yr Inflation Swap - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 1-yr Inflation Swap subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.2: 2-yr Inflation Swap - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 2-yr Inflation Swap subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.3: Russell 2000 - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the Russell 2000 Index subtracting the last value on September 18th at 10-minute frequency. The green dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.4: 2-yr Breakeven Inflation Rate - Percent Change Relative to Sept-18-2020 Close Price



Notes: This plot shows the intraday price path of the 2-yr Breakeven inflation rate subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.5: 1-yr Inflation Swap - Percent Change Relative to Feb-12 Close Price



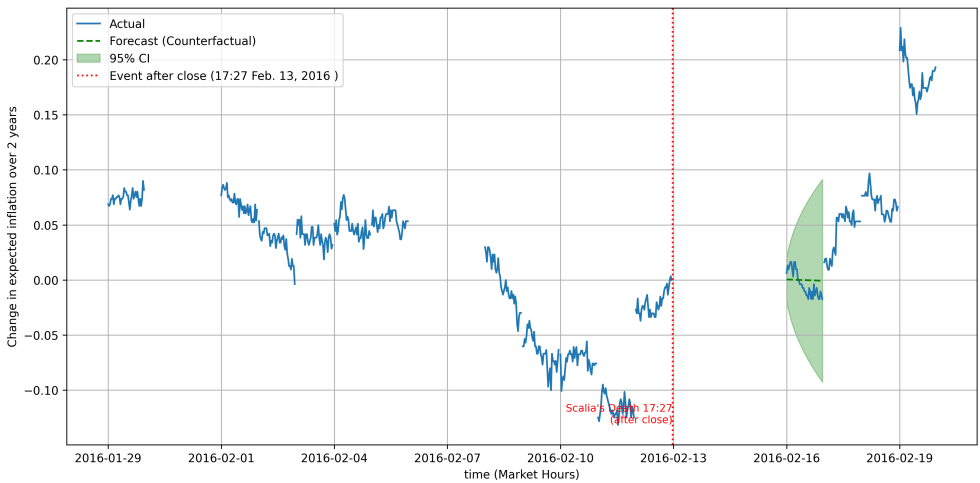
Notes: This plot shows the intraday swap rate of the 1-yr Inflation Swap subtracting the last value on Feb. 16 at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on Feb. 12. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.6: Russell 2000 - Percent Change Relative to Feb-12-2016 Close Price



Notes: This plot shows the intraday price path of the Russell 2000 Index subtracting the last value on February 12th at 10-minute frequency. The green dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on September 18. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

Figure D.7: 2-yr Breakeven Inflation Rate - Percent Change Relative to Feb-12-2020 Close Price

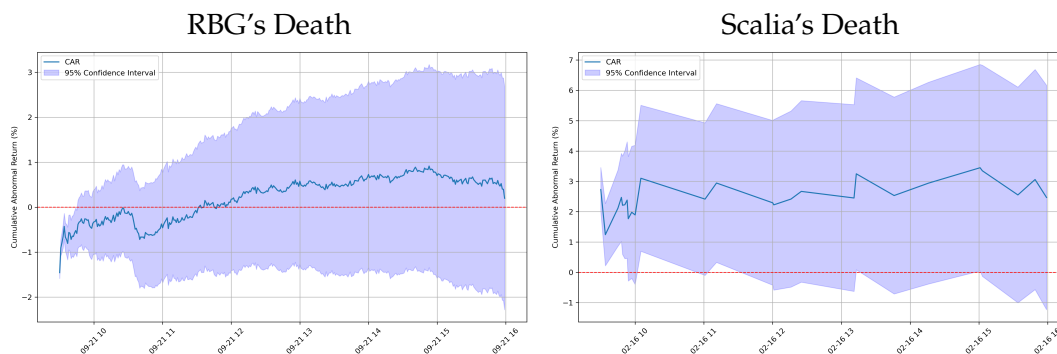


Notes: This plot shows the intraday price path of the 2-yr Breakeven inflation rate subtracting the last value on September 18th at 10-minute frequency. The orange dashed line displays the counterfactual price trajectory forecasted by an ARIMA model estimated using 2-week pre-event data ending on Feb 12, 2016. The shaded region represents the 95% confidence interval of the counterfactual forecast. The vertical dotted red line marks the event time.

E Sectoral CAR at one-minute frequency

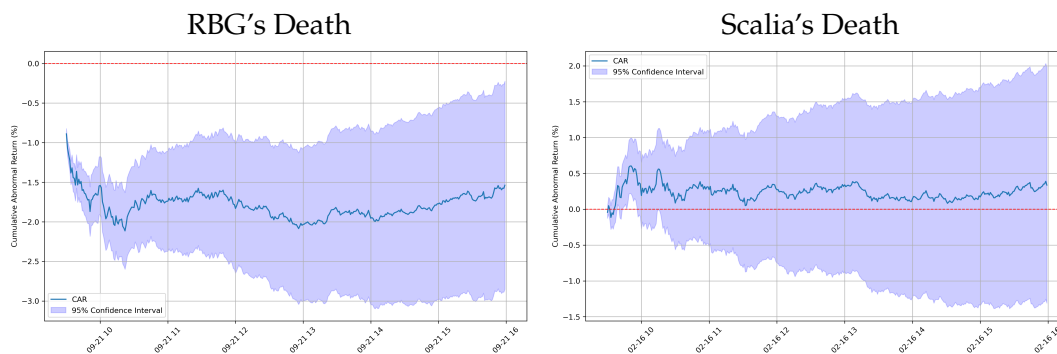
As a frequency-robustness check, this section reconstructs the cumulative abnormal return analysis in Section 4.1 using 1-minute returns rather than 10-minute returns. Figures E.1 and E.2 report the resulting CARs for the clean-energy and health-care sector ETFs. The patterns are consistent with the baseline 10-minute results in the main text.

Figure E.1: S&P Global Clean Energy Index ETF 1-min Cumulative Abnormal Return



Notes: This figure reports cumulative abnormal returns (CARs) estimated using a standard market-model event study. Abnormal returns are computed as the residuals from a regression of sector ETF returns on contemporaneous S&P 500 returns. The market exposure coefficient is estimated using 1-minute return data over the one-month period prior to the event. Standard errors and confidence intervals are computed using Newey–West heteroskedasticity- and autocorrelation-consistent (HAC) standard errors with five lags.

Figure E.2: S&P 500 Health Care Select Sector Index 1-min Cumulative Abnormal Return

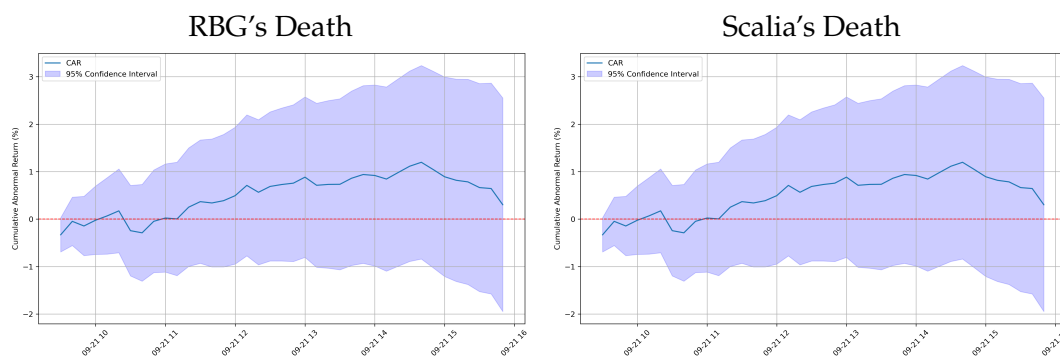


Notes: This figure reports cumulative abnormal returns (CARs) of S&P 500 Health Care Select Sector Index estimated using a standard market-model event study. The market exposure coefficient is estimated using 1-minute return data over the one-month period prior to the event. Standard errors and confidence intervals are computed using Newey–West heteroskedasticity- and autocorrelation-consistent (HAC) standard errors with five lags.

F Sectoral CAR controlling for inflation expectations

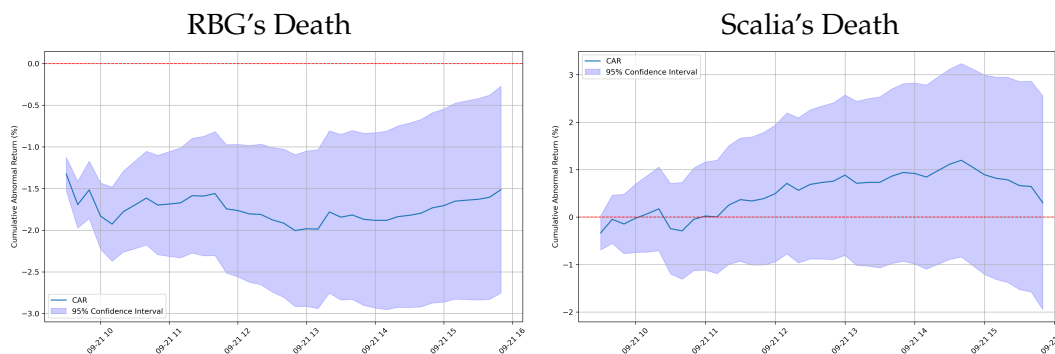
As a further robustness check, this section reconstructs the CAR analysis controlling for contemporaneous changes in the 2-year inflation swap rate, so that the sectoral responses cannot be attributed to movements in inflation expectations. Figures F.1, F.2, and F.3 report the resulting CARs for the clean-energy, health-care, and gender-diversity sector ETFs. The qualitatively unchanged results confirm that the sectoral effects in the main text are not driven by inflation expectations.

Figure F.1: S&P Global Clean Energy Index ETF 10-min Cumulative Abnormal Return



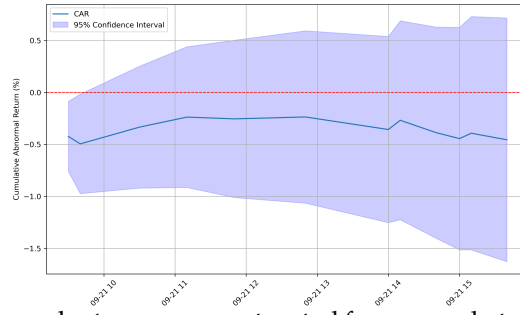
Notes: Cumulative abnormal returns are constructed from a market-model regression of S&P Global Clean Energy Index ETF returns on S&P 500 returns, controlling for changes in the 2-year inflation swap price. The model is estimated using 10-minute data over the one-month pre-event window. Confidence intervals are based on Newey–West HAC standard errors with five lags.

Figure F.2: S&P 500 Health Care Select Sector Index 10-min Cumulative Abnormal Return



Notes: Cumulative abnormal returns are constructed from a market-model regression of S&P 500 Health Care Select Sector Index returns on S&P 500 returns, controlling for changes in the 2-year inflation swap price. The model is estimated using 10-minute data over the one-month pre-event window. Confidence intervals are based on Newey–West HAC standard errors with five lags.

Figure F.3: SSGA Gender Diversity Index ETF(SHE) 10-min Cumulative Abnormal Return



Notes: Cumulative abnormal returns are constructed from a market-model regression of SSGA Gender Diversity Index ETF returns on S&P 500 returns, controlling for changes in the 2-year inflation swap price. The model is estimated using 10-minute data over the one-month pre-event window. Confidence intervals are based on Newey–West HAC standard errors with five lags.

G Sectoral effects in nominal terms

Table G.1 reports the sectoral effects in nominal terms, complementing the real-terms version in the main text (Table 5). The patterns are qualitatively unchanged.

Table G.1: Sectoral effects of Supreme Court Justice deaths

Aset Price changes (percentage change)	RBG's Death	Scalia's Death
Clean Energy Sector (Climate Policy & Environmental Policy)		
ICLN	-3.1639	3.8660
QCLN	-2.0280	0.1567
Health Care Sector		
SPDR ETF(S/ &P 500 Health Care Sector Index)	-1.8761	1.1030
Gender Policy		
Gender Diversity ETF (SHE)	-1.4712	NA
Energy Futures		
US Energy ETF (IYE)	-2.4705	1.2825
US Brown Energy ETF (XLE)	-4.2844	1.3929
WTI Oil ETF (USO)	-1.3421	1.9208
Natural Gas ETF (UNG)	-0.7589	-3.3241
Coal ETF (KOL)	-3.1114	0.8278
Carbon ETF (KRBN)	-3.2422	NA

Notes: This table reports percentage point changes in asset prices around key Supreme Court justice deaths. For each asset, the percentage-point changes over the event window is calculated based on the first available 1-minute last price on September 21, 2020 and the last available 1-minute last price on September 18, 2020.

H Historical classification of judicial transitions

The set of judicial events that plausibly generate sharp and unanticipated revisions in macroeconomic expectations is limited. Tables H.1 and H.2 provide a hand-collected classification of all Supreme Court justice deaths and retirements since 1954, identifying which events were widely anticipated and which arrived as genuine surprises, along with their associated ideological impact. The classification motivates our focus on the deaths of Justices Scalia and Ginsburg, as well as the retirement of Justice Kennedy.

Table H.1: Justices Who Died in Office Since 1954

Justice	Term of Service	Date of Death	Age at Death	Expected or Surprise	Ideology Shift	Notes / Context
Fred M. Vinson	1946-1953	8-Sep-53	63	Surprise	5-4 moderate conservative \Rightarrow 5-4 liberal	Died of a heart attack in office
Robert H. Jackson	1941-1954	9-Oct-54	62	Expected	5-4 conservative, no change	Died of a heart attack after a long illness. His death did not significantly alter the Court's ideological balance.
William H. Rehnquist	1972-2005	3-Sep-05	80	Expected	5-4 conservative, no change	Died from thyroid cancer after a long illness.
Antonin Scalia	1986-2016	13-Feb-16	79	Surprise	5-4 conservative \Rightarrow 4-4 balance	Died suddenly in his sleep while on a trip in Texas. There had been no public indication of serious illness.
Ruth Bader Ginsburg	1993-2020	18-Sep-20	87	Surprise	4-1-4 weak conservative \Rightarrow 6-3 conservative supermajority.	Though she had a long history of cancer, the timing of her death was unexpected.

Table H.2: Supreme Court Retirements Since 1954

Justice	Term of Service	Date of Retirement	Age at Retirement	Expected or Surprise	Ideological Impact	Notes / Context
Sherman Minton	1949-1956	15-Oct-56	66	Expected	5-4 conservative, no change	Health decline was well known and resignation came as no surprise.
Harold Hitz Burton	1945-1958	13-Oct-58	70	Expected	5-4 moderate conservative, no change	His deteriorating health had been public for years, and retirement was widely anticipated.
Charles Evans Whittaker	1957-1962	31-Mar-62	61	Surprise	5-4 conservative, no change	His resignation came earlier than expected and was triggered by severe psychological stress.
Arthur J. Goldberg	1962-1965	25-Jul-65	56	Surprise	5-4 liberal , no change	Resigned to become U.S. Ambassador to the United Nations at Johnson's request. Highly unusual resignation for a diplomatic post; no ideological shift since Fortas (liberal) replaced him.
Tom C. Clark	1949-1967	12-Jun-67	67	Surprise	5-4 conservative ⇒ 5-4 liberal	Not due to age or health, but to avoid conflict of interest —a rare and unexpected reason for departure. Retired so that his son, Ramsey Clark, could serve as U.S. Attorney General without conflict.
Abe Fortas	1965-1969	14-May-69	58	Surprise	5-4 liberal ⇒ 5-4 conservative	Resigned amid ethics scandal and threat of impeachment
Earl Warren	1953-1969	23-Jun-69	78	Expected retirement but unexpected outcome	5-4 liberal ⇒ 5-4 conservative	Announced retirement expecting a Democratic successor, but Nixon won. Plan backfired and shifted Court rightward.
John M. Harlan II	1955-1971	23-Sep-71	72	Expected	5-4 conservative, no change	His illness was known and resignation followed shortly after diagnosis.
Potter Stewart	1958-1981	3-Jul-81	66	Expected	5-4 moderate conservative ⇒ 5-4 conservative	Widely anticipated after a long tenure; no political or health-related surprises.
Warren E. Burger	1969-1986	26-Sep-86	79	Expected	5-4 conservative, no change	Stepped down at age 79 to chair the U.S. Constitution Bicentennial Commission, enabling Reagan to elevate Rehnquist and nominate Scalia.
Lewis F. Powell Jr.	1972-1987	1987	79	Surprise	5-4 swing ⇒ 5-4 conservative	Retirement was earlier than expected and caught the Reagan administration somewhat unprepared.
William J. Brennan Jr.	1956-1990	20-Jul-90	84	Expected	5-4 conservative, no change	After 34 years on the bench and visible health issues, his retirement was long anticipated.
Thurgood Marshall	1967-1991	1-Oct-91	82	Expected	5-4 conservative ⇒ 5-4 stronger conservative	Retired due to poor health
Byron White	1962-1993	28-Jun-93	76	Expected	5-4 conservative ⇒ 5-4 liberal	Retired after long service and advancing age
Harry Blackmun	1970-1994	3-Aug-94	85	Expected	5-4 conservative, no change	Age and declining health
Sandra Day O'Connor	1981-2006	2006	75	Expected	5-4 swing ⇒ 5-4 stronger conservative	Retired to care for her ailing husband.
David H. Souter	1990-2009	2009	69	Expected	5-4 conservative, no change	Widely anticipated.
John Paul Stevens	1975-2010	2010	90	Expected	5-4 conservative, no change	Publicly expressed dislike of Washington; expected to retire under a Democratic president.
Anthony Kennedy	1988-2018	2018	81	Surprise	5-4 swing ⇒ 5-4 solid conservative	Oldest sitting justice, long-expected retirement.
Stephen Breyer	1994-2022	2022	83	Expected	6-3 conservative, no change	Many expected him to serve longer; sudden decision enabled Trump to nominate a more conservative successor.
						Retired under pressure from progressives while Democrats controlled White House and Senate.