GENERAL SOURCES

Below are frequently used sources for *The Courage to Act*, with links; see also A Note on Sources and Selected Bibliography in the printed book.

**Federal Reserve documents**

- Information about the Federal Open Market Committee, including minutes of policy meetings, post-meeting statements, and economic projections by FOMC members (which appear quarterly as an appendix to the minutes of the meeting) is at http://www.federalreserve.gov/monetarypolicy/fomccalendars.htm.
- FOMC historical materials (including transcripts) are at http://www.federalreserve.gov/monetarypolicy/fomc_historical.htm.
- Federal Reserve press releases, including FOMC statements, discount rate meeting minutes, explanations of asset purchase programs, and authorizations for emergency facilities, are at http://www.federalreserve.gov/newsevents/press/all/2015all.htm.
- Speeches by members of the Board of Governors are at http://www.federalreserve.gov/newsevents/speech/2015speech.htm.
- Congressional testimony by members of the Board of Governors is at http://www.federalreserve.gov/newsevents/testimony/2015testimony.htm.

**Other public documents**

- Transcripts of Senate and House hearings are at http://www.gpo.gov/fdsys/browse/collection.action?collectionCode=CHRG.
Material made available by the Financial Crisis Inquiry Commission, including archived interviews and documents, is at http://fcic.law.stanford.edu/report.

Main data sources

- Federal Reserve Bank of Philadelphia real-time data: All data about the unemployment rate, GDP, payrolls, PCE, CPI (headline and core), and consumer spending come from the Philly Fed’s Real-Time Data Research Center, which compiles initial data releases and subsequent data revisions from the BEA and BLS: https://www.phil.frb.org/research-and-data/real-time-center/.
- FRED, Federal Reserve Bank of St. Louis: FRED is a database for financial and macroeconomic data. We used FRED data extensively. Key indicators available from FRED include GDP, consumer spending, investment, the FOMC’s target for the federal funds rate, payrolls, unemployment, oil prices, the S&P 500 stock market index, the Dow Jones Industrial Average stock market index, the TED spread, and housing prices (as measured by the Case-Shiller 20-City Composite Home Price Index): https://research.stlouisfed.org/fred2/.
- The effective federal funds rate, mortgage rates (including the 30-year conventional fixed-rate mortgage rate), treasury yields, rates on certificates of deposits, and other money market rates come from the Federal Reserve Board’s H.15 release: http://www.federalreserve.gov/releases/h15/data.htm.
- Data about the Fed’s balance sheet come from the Federal Reserve Board’s H.4.1 release: http://www.federalreserve.gov/releases/h41/.
- Data on commercial paper rates and amounts outstanding come from the Federal Reserve Board’s commercial paper release: http://www.federalreserve.gov/releases/cp/.
- Data on sector-level assets and liabilities come from the Federal Reserve’s flow of funds database: http://www.federalreserve.gov/releases/z1/.
- The Federal Reserve’s National Information Center is a repository of information on bank-level assets and liabilities. For example, a list of the top bank holding companies by assets is available at: https://www.ffiec.gov/nicpubweb/nicweb/HCSGreaterThan10B.aspx.

• Firm-level data on earnings, capital, assets, and liabilities can be found using EDGAR, the SEC’s database on company filings: http://www.sec.gov/edgar.shtml.

• Bloomberg L.P. provides detailed data on financial assets, including intra-day high and low prices for individual stocks, daily yields on government securities, and prices of other money market instruments.
NOTES

Quotations not otherwise referenced are from emails or the publicly released transcripts of FOMC meetings. The Afterword is included only in the paperback edition of *The Courage to Act*.

Chapter 1: Main Street

6  **Ty’Sheoma Bethea drew national attention to Dillon**: Doug McKalip, “Grand Opening of Dillon’s New Middle School,” White House blog, September 12, 2012,


Chapter 2: In the Groves of Academe


27  **Samuelson’s mathematical approach did not sit well**: The *New York Times* obituary of Samuelson, December 13, 2009, quotes Robert Solow on the Harvard economics department of the time: “You could be disqualified for a job if you were either smart or Jewish or Keynesian. So what chance did this smart, Jewish, Keynesian have?”


Mishkin and I looked at the experience of the early adopters: Ben S. Bernanke and Frederic S. Mishkin, “Inflation Targeting: A New Framework for Monetary Policy?” Journal of Economic...


Chapter 3: Governor


When Strong died in 1928, his successors abandoned his hands-off approach: For more information about this episode, see ibid., 289.

Chapter 4: In the Maestro’s Orchestra


my confirmation hearing before the Senate Banking Committee: United States Congress, Senate Committee on Banking, Housing, and Urban Affairs, “Nominations of: Roger W. Ferguson, Jr., Ben S. Bernanke, Paul S. Atkins, April H. Foley, and Joseph Max Cleland,” hearing, October 14, 2003,
Chapter 5: The Subprime Spark


Some have argued . . . too starkly: See, for example, John B. Taylor, “Housing and Monetary Policy,” National Bureau of Economic Research working paper no. 13682, December 2007, http://www.nber.org/papers/w13682.pdf. A study by the Federal Reserve Bank of San Francisco found that the Fed would have had to raise the federal funds rate by eight percentage points to avert the housing boom and bust in 2002–06, an increase in rates that would have pushed the economy far from the desired levels of employment and inflation. See Òscar Jordà, Moritz Schularick, and Alan M. Taylor, “Interest Rates and House Prices: Pill or Poison?”, FRBSF Economic Letter, August 3, 2015, http://bit.ly/1MIdrP2.


Notes from The Courage to Act by Ben S. Bernanke

Chapter 6: Rookie Season

A wave of criticism followed: Nell Henderson, “Fed Chief Calls His Remarks a Mistake,” Washington Post, May 24, 2006,

Chapter 7: First Tremors, First Response

“At this juncture . . . likely to be contained”: Ben S. Bernanke, “The Economic Outlook,” testimony before the Joint Economic Committee, U.S. Congress, March 28, 2007,

my conclusion was widely shared: See, for example, Rick Kirkland, “The Greatest Economic Boom Ever,” Fortune, July 12, 2007,

Only about 13 percent . . . all outstanding mortgages: Federal Open Market Committee, transcript of meeting, March 21, 2007,


Bank stocks were also performing well: See, for example, Standard and Poors, S&P 500 Financials Sector Index, 2000–07.


The Panic of 1907, for instance, had modest origins: For an account of the panic, see Robert Bruner and Sean Carr, The Panic of 1907: Lessons Learned from the Market’s Perfect Storm (New York: John Wiley & Sons, 2007).


the bank’s judgment that the troubled assets in its funds could not be fairly valued: BNP Paribas, press release, August 9, 2007, http://bit.ly/1KQWT4A.


“Like a hungry Oliver Twist accepting his gruel”: Laurence Norman, “Please, Mr. Bernanke, We Want More,” Dow Jones, August 31, 2007.

Chapter 8: One Step Forward


Chapter 9: The End of the Beginning


177 SIVs had liquidated 23 percent . . . balance sheet: Ibid., 253.


TAF auctions were, by design, intended to overcome the stigma: A study by economists at the New York Fed shows that banks were willing to pay extra to borrow from the TAF instead of the discount window, providing empirical evidence of the stigma of discount window borrowing. See Olivier Armantier, Eric Ghysels, Asani Sarkar, and Jeffrey Shrader, “Discount Window Stigma during the 2007–2008 Financial Crisis,” Federal Reserve Bank of New York staff report no. 483, August 2015, http://www.newyorkfed.org/research/staff_reports/sr483.html.


Chapter 10: Bear Stearns: Before Asia Opens


Chapter 11: Fannie and Freddie: A Long, Hot Summer


Fannie and Freddie owned or had guaranteed about $5.3 trillion: James B. Lockhart, III, testimony before the Senate Committee on Banking, Housing, and Urban Affairs, on the appointment of FHFA as Conservator for Fannie Mae and Freddie Mac, September 23, 2008,


The failure would cost the FDIC about $13 billion: Estimates of resolution costs can be found at Federal Deposit Insurance Corporation, “FDIC Failures and Assistance Transactions: US and Other Areas,” Historical Statistics on Banking, table BF01, “2008,” [https://www2.fdic.gov/hsob/](https://www2.fdic.gov/hsob/).


Chapter 12: Lehman: The Dam Breaks

Lehman borrowed seven times from the PDCF: Board of Governors of the Federal Reserve System, Primary Dealer Credit Facility (PDCF),


“overriding the rights of millions of shareholders”: Alistair Darling, Back from the Brink (New York: Atlantic, 2011), 123.
Chapter 13: AIG: “It Makes Me Angry”

270 the cost of borrowing would as much as double on Monday: Depository Trust Clearing Commission, “DTCC GCF Repo Index; Commercial Paper Rates from Board of Governors of the Federal Reserve System Commercial Paper Release,”

270 a temporary infusion of $70 billion that morning: Federal Reserve Bank of New York, Historical Open Market Operations,

272 “dominant, brilliant, irascible, short tempered, controlling, obsessive”: Bethany McLean and Joe Nocera, All the Devils are Here: The Hidden History of the Financial Crisis (New York: Portfolio/Penguin, 2010).


273 “You guys up at FP ever do anything to my triple-A rating”: Ibid.

274 “Fact is, many Wall Streeters have given up really analyzing this company”: Carol Loomis and Eileen Gunn, “AIG: Aggressive. Inscrutable. Greenberg,” Fortune, April 25, 1998,


274-5 a plan to obtain $20 billion for AIG’s holding company: Eric Dash and Andrew Ross Sorkin, “Throwing a Lifeline to a Troubled Giant,” New York Times, September 17, 2008,


“We are faced with two bad choices”: David Wessel, In Fed We Trust: Ben Bernanke’s War on the Great Panic (New York: Crown Business, 2009), 197.


Chapter 14: We Turn to Congress


Chapter 15: “Fifty Percent Hell No”


Chapter 16: A Cold Wind


an “ambush”: Sheila Bair, Bull by the Horns: Fighting to Save Main Street from Wall Street and Wall Street from Itself (New York: Free Press, 2012), 111.


Chapter 17: Transition


The spread between yields . . . fell: Diana Hancock and Wayne Passmore, “Did the Federal Reserve’s MBS Purchase Program Lower Mortgage Rates?” Federal Reserve Board Finance and


Chapter 18: From Financial Crisis to Economic Crisis


A quarter of homeowners would owe more on their mortgages: “Number of Underwater Homes Halved Since 2009,” Marketwatch, June 5, 2014, http://on.mktw.net/1FLxCtN.

Lenders had begun 1.7 million foreclosures: RealtyTrac, “U.S. Foreclosure Starts by Year.”
Chapter 19: Quantitative Easing: The End of Orthodoxy


“If I were to try to read, much less answer, all the attacks”: Francis Bicknell Carpenter, Six Months at the White House with Abraham Lincoln (New York: Hurd and Houghton, 1866).


continuity in the middle of a crisis was an important consideration: Timothy F. Geithner, Stress Test: Reflections on Financial Crises (New York: Crown, 2014), 359.


“the most important player guiding the world’s most important economy”: Michael Grunwald, “Person of the Year 2009: Ben Bernanke,” Time, December 16, 2009, http://ti.me/1Vt5hzp.


Chapter 20: Building a New Financial System


Sheila seemed prepared to concede: Sheila Bair, Bull by the Horns: Fighting to Save Main Street from Wall Street and Wall Street from Itself (New York: Free Press, 2012), 186.

“Giving the Fed more responsibility”: Senate Committee on Banking, Housing, and Urban Affairs, “The Administration’s Proposal to Modernize the Financial Regulatory System,” hearing, June 18,


Notes from The Courage to Act by Ben S. Bernanke 43


466  **“We shall deal with our economic system as it is”:** Woodrow Wilson, first inaugural address, March 4, 1913, available at Lillian Goldman Law Library, Yale Law School, [http://www.bartleby.com/124/pres44.html](http://www.bartleby.com/124/pres44.html).

**Chapter 21: QE2: False Dawn**


479  **yields on Greek ten-year bonds were about 6 percentage points higher:** Data from Bloomberg L.P.


the longest string of dissents by a Fed policymaker since 1980: Sudeep Reddy, “The Lone

Kevin . . . published an op-ed: Kevin Warsh, “The New Malaise and How to End It,” Wall Street
Journal, November 8, 2010,

I also wrote an op-ed: Ben S. Bernanke, “What the Fed Did and Why: Supporting the Recovery and
Sustaining Price Stability,” Washington Post, November 4, 2010,


proposed legislation to remove the full employment part of the Fed’s dual mandate: Luca Di Leo,


Wolfgang Schäuble was translated as calling our decision “clueless”: Ralph Atkins, “Germany
Attacks US Economic Policy,” Financial Times, November 7, 2010,
http://www.ft.com/intl/cms/s/0/c0dca084-ea6c-11df-b28d-00144feab49a.html#axzz3c6g2tFNf.

an animated YouTube video: “Quantitative Easing Explained,” YouTube, November 11, 2010,
https://www.youtube.com/watch?v=PTUY16CkS-k.
Chapter 22: Headwinds


new foreclosures, which had declined from a peak of 2.1 million: RealtyTrac, “U.S. Foreclosure Starts by Year.”


Orrin Hatch . . . complained that we had intruded into fiscal policy: Caroline Gage, “Republican Senators Say Fed Overstepped its Role with Advice on Housing,” Bloomberg News, January 10, 2012, http://bloom.bg/10MB6ig.

fifteen of the sixteen servicers agreed to pay $10 billion: Ibid., 13.


“be looking for someone new”: Ibid.


in a weak economy, it promotes job creation: For more discussion, see my blog post on the topic: Ben S. Bernanke, “Monetary Policy and Inequality,” Ben Bernanke’s blog, June 1, 2015, http://www.brookings.edu/blogs/ben-bernanke/posts/2015/06/01-monetary-policy-and-inequality.


Chapter 23: Taper Capers


we were right to stay the course on securities purchases: “Staying the Course at the Fed,” editorial, New York Times, September 19, 2013, http://nyti.ms/1N9qkCq.


We saw little reason not to reduce our monthly securities purchases: Board of Governors of the Federal Reserve System, press release, January 29, 2014,

Epilogue

the Fed’s balance sheet stood at nearly $4.5 trillion: Board of Governors of the Federal Reserve System, press release, October 29, 2014,

The Fed sent almost $100 billion to the Treasury: Board of Governors of the Federal Reserve System, press release, January 9, 2015,


so-called audit-the-Fed legislation: On Fed financial audits, see Board of Governors of the Federal Reserve System, “Does the Federal Reserve Ever Get Audited?”,

Second, a proposal emerged in the House: For more detail, see my blog post on the topic, “The Taylor Rule: A Benchmark for Monetary Policy?”, Ben Bernanke’s blog, April 28, 2015,
A third proposal: For more detail, see my blog post on the topic, “Warren–Vitter and the Lender of Last Resort,” Ben Bernanke’s blog, May 15, 2015,

Afterword to the Paperback Edition

semi-regular blog posts: See Ben Bernanke’s blog, https://www.brookings.edu/blog/ben-bernanke/.


customer confidence surveys: Ben Bernanke, “How Do People Really Feel About the Economy?,” Ben Bernanke’s blog, June 30, 2016, http://brook.gs/2bLpkWt. As I discuss there, even as people have reported improvement in their personal financial condition or the economic outlook, they continue to give very negative responses to questions about whether the country is moving “in the right direction.” My post argues that increasing partisanship and polarization help explain this apparent paradox.

I called on Congress to increase spending or cut taxes: See for example my testimonies of June 7, 2012, and February 26, 2013:


