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# BEN BERNANKE: THEORY AND PRACTICE

BY ALEXANDER J. GILL

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# Ben Bernanke: Theory and Practice

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## **Abstract**

Ben Bernanke researched monetary policy for over 25 years prior to becoming a policymaker, and his two-term career as Chairman of the Federal Reserve featured a severe recession coupled with a financial crisis, a chief subject of Bernanke's research. His reaction to economic events is noteworthy in its originality and breadth, but its intellectual underpinnings are, with a few exceptions discussed in the paper, not without written precedent. This paper will summarize and connect Bernanke's research and policymaking and show that the two are closely aligned.

**JEL Codes:** B310, E580, E650.

**Keywords:** Economic thought, history of economic thought, central banking, Fed, Bernanke.

## **1 Introduction**

Ben Bernanke's term as Federal Reserve (Fed) Chairman recently ended, but his term as a member of the Board of Governors does not expire until 2020. It is rare for someone to remain on the Board after stepping down from the Chairmanship, but it should come as no surprise that Bernanke has not left the Federal Open Market Committee. His fascination with business cycles and the role of monetary policy in mitigating them is longstanding and motivated his course of academic study as well as his actions as a policymaker. Given Bernanke's understanding of the Great Depression, the transmission of monetary policy and price movements, and the effects of business cycles on investment, his actions confronting the Great Recession should pose few mysteries to followers of his published writings. Overall, his career displays a remarkable

degree of consistency, contrary to the assertions of some existing literature on the subject reviewed below.

## 2 Academic Career

Bernanke's first few major publications focused on the effects of recessions on investment decisions. If economic downturns curtail financial intermediation, the lack of credit (specifically, bank loans) may itself exacerbate the crisis. This early work foreshadows his "credit channel" and "financial accelerator" work of later years with Alan Blinder, Mark Gertler, and others (see below) and informs an appropriate contextualization for an interpretation of his body of work.<sup>1</sup> His dissertation ("Long Term Commitments, Dynamic Optimization, and the Business Cycle," MIT 1979) and derivative work (e.g. Bernanke [1983a]) focused on investment and wage-setting decisions under uncertainty. The young Bernanke displayed a keen interest in the causes and effects of economic decision-making in times of flux and the consequent macroeconomic outcomes. He argued that bankruptcy (and its costly avoidance) imposes externalities on borrowers by restricting credit flows (Bernanke [1981]), that "irreversible" (highly nonsubstitutable) capital investments are discouraged by uncertainty (Bernanke [1983a]), and that the failure of financial institutions in the Great Depression increased the cost of financial intermediation and thus hurt borrowers (Bernanke [1983b]).

These three papers feature themes and conclusions that Bernanke still embraces today. The idea that banks are "special" in their ability to perform financial intermediation in the presence of asymmetric information pervades his academic work (for instance, see Bernanke [1988] or Bernanke and Blinder [1992]). Bernanke clearly saw banks through the lens of the budding imperfect information literature beginning with Akerlof [1970]. Akerlof [1970], Stiglitz and Weiss [1981] and others heavily influenced his interest in the macroeconomic effects of imperfect information and moral hazard. He argues later, in the 1990's, that the "credit channel" of monetary policy transmission depends largely on the assumption that banks provide a unique service in overcoming informational asymmetries in credit markets; if bank loans and bonds are interchangeable, there is no place for a separate "credit" effect of monetary policy beyond the traditional

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<sup>1</sup> The "credit channel" of monetary policy transmission refers to the effect of monetary policy on lending beyond its direct influence on the cost of capital. For Bernanke and other prominent theorists, the credit channel manifests in a variety of ways, most prominently by affecting collateral values on borrower balance sheets and by potentially disrupting relationships that allow banks to partially overcome problems of imperfect information. The "financial accelerator" is a closely related concept that conveys the idea that these indirect effects of monetary policy exacerbate or "accelerate" economic fluctuations in the direction of the intervention. This reasoning underpins Bernanke's longstanding fear of deflation.

“money channel” view (that monetary policy affects investment by directly influencing the cost of capital). Furthermore, there is here (in these early papers) as well as throughout his later work an implicit assumption of omniscient observer status of the researcher, with Bernanke able to opine on whether the knock-on effects of financial crises could and should be avoided. As an academic he only once displays caution in this respect when he writes (Bernanke [1981], p. 158) that his policy prescriptions have no answer for the claim that “activist policy is too imprecise for practical use.” His later writings and, of course, policy decisions have displayed no such hints of humility. Finally, these early arguments undergird Bernanke’s long-held view that macroeconomic instability imposes its own real costs on the economy (beyond the adverse effects of the underlying cause of the variation). For that reason, stability for its own sake is a worthy goal. This stability norm is nearly universally held by macroeconomists and is particularly central to Bernanke’s choices of research questions, further described below.

As the 1980’s progressed into the 1990’s, Bernanke published numerous papers establishing the “credit channel” of monetary policy (Bernanke [1988], Bernanke and Blinder [1988], Bernanke and Gertler [1989, 1990], Bernanke and Blinder [1992], Bernanke and Gertler [1995], Bernanke and Gilchrist [1996]). In particular, his longstanding coauthorship with Mark Gertler produced influential arguments for the presence of real effects of credit market disruptions that presaged the now booming literature on leverage cycles (see, for example, Fostel and Geanakoplos [2008]). In the summer of 1979, when Bernanke was working on his first major publications and preparing to start his first job (at Stanford), he rented a house from Robert Hall (then a professor at Stanford) with Mark Gertler (Bernanke [2014b]). They began a long series of conversations that resulted in a paper on banking theory (Bernanke and Gertler [1987]) that featured a model in which banks are especially equipped to obtain private information relevant to investment and analyze the model’s implications for monetary policy, financial crises, and credit disintermediation. Their common interests and productive working relationship would lead to influential work in the 1990s. A 1995 paper with Gertler, “Inside the Black Box,” contended (p. 28) that “the direct effects of monetary policy on interest rates are amplified by endogenous changes in the external finance premium.” (emphasis omitted)<sup>2</sup> In Bernanke and Gertler [1990], they argue that entrepreneurs with low net worth, and hence limited ability to post collateral for loans, are forced to rely heavily on external finance for operating expenses and funding new projects. If

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<sup>2</sup> The external finance premium is the difference between the costs of external and internal finance (the market interest rate facing a firm minus the opportunity cost of raising funds internally).

lending to such borrowers imposes significant agency costs, there may be an inefficiently low level of investment. Furthermore, financial fragility may spill over from significant bankruptcies (using the examples of Penn Central, Chrysler, and Continental Illinois), making debtor bailouts advisable assuming moral hazard can be avoided (pp. 107-8). This literature firmly establishes Bernanke's view that business cycles and monetary policy are asymmetric in the expansionary and contractionary phases. A recession or monetary tightening will affect interest rates directly, as will booms and expansionary policy, but contractions also set an "accelerator" in motion that will further undermine credit provision and lead to a potentially vicious cycle in the manner of Fisher [1933]'s "debt-deflation" arguments, which had a profound influence on Bernanke's thought.

Bernanke's interest in credit cycles features ancillary components that cannot be ignored in a proper account of his work. Multiple empirical investigations he completed focused on sticky real wages, or "short run increasing returns to labor." (e.g Ch. 5-9 in Bernanke [2000a]). His belief in sticky real wages leads directly to another reason to fear deflation in that such a combination results in high unemployment, denoting production levels below potential (which Bernanke seems to assume can be identified). If real wages can rise but not fall, monetary policy should focus on maintaining positive inflation rates, constrained by some semblance of long run price stability, in order to avoid unnecessary disruption to aggregate production. The Great Depression had a profound impact on his thought (introduction to Bernanke [2000a], Dimand and Koehn [2008], Dimand and Koehn [2012]). In particular, the interpretations of Friedman and Schwartz [1963] and Eichengreen [1992] on the role of the gold standard were formative. The gold exchange standard in effect at the time imposed deflationary pressures when asset prices began to fall in 1929, and Bernanke's overarching belief about the Great Depression is that it was largely caused by the gold standard and the resulting monetary contraction.<sup>3</sup>

Bernanke unquestionably accepts the argument that since the Fed met the stock market crash with monetary contraction and the Great Depression subsequently unfolded, the monetary contraction *caused* the Great Depression. In my review of his work, I found only one mention of the *post hoc ergo propter*

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<sup>3</sup> Technically, his argument is that it was the failure of monetary policy to counteract the contractionary pressures arising from the gold standard of the time. Interestingly, and in line with the gist of the second critique given here, Bernanke does not blame previous expansion of the money supply beyond that supported by gold and foreign exchange reserves for the contraction but rather the gold standard itself. In other words, it was the rules of the gold standard that were the problem, not the fact that the rules were previously flouted.

*hoc* fallacy, which is invoked so that it could be summarily dismissed (Bernanke and Blinder [1992], p. 904). Second, although Bernanke is careful to empirically establish the fact of wage stickiness in the Great Depression (see, for instance, chapters 5 through 9 of [Bernanke, 2000a]), he repeatedly expresses amazement at its presence given the weakness of unions at the time (in Bernanke [2000a] and Bernanke [1995]). Much work, for instance Higgs [1987] and Rothbard [1963], however, details the various interventions of the Hoover and Roosevelt administrations in propping up wages. Bernanke's belief that he has identified failures, both by private and public actors, that caused or worsened the Great Depression, connect well with arguments he made much later. For instance, Bernanke and Boivin [2003] state that Fed forecasts outperform private ones because of i) the depth and breadth of information the Fed takes into account and ii) the ability of the Fed to obtain information unavailable to individual market participants or to use information available to the public in a more rational way than self-interested actors, and that these considerations provide a clear justification for monetary policy authorities to regulate or augment private decisions, and [Bernanke and Reinhart, 2004, p. 85] states that private decisions can be helpfully replaced the grand hubris of the central banker in times of flux.

The corporate debt crisis and ongoing financial flux in the late 1980's led Bernanke to write a number of papers discussing the causes and consequences of the financial market disruptions (Bernanke and Campbell [1988], Bernanke [1989, 1990], Bernanke and Whited [1990], Bernanke and Lown [1991]). In these, the arguments he made earlier are applied to contemporaneous issues on a more or less one-to-one basis. For instance, in Bernanke and Campbell [1988] he claims that bankruptcy "must of necessity involve net social costs when it is invoked," (p. 89), that "indirect costs [of financial crises]...such as the losses due to shutdowns or reorganizations and the destruction of intangible assets may be...significant," (p. 92), that near-bankruptcy impedes profit maximization (as in Bernanke [1981]) (p. 93), and that wage or price stickiness can lead to externalities and suboptimal macroeconomic equilibria (p. 94-5). Bernanke [1988] reiterates the "special" status of banks as intermediaries under imperfect information and stresses the credit channel of monetary policy transmission. Bernanke [1990] argues that the Federal Reserve's support of the futures clearinghouse market in 1987 (with the bailout of the Options Clearing Corporation) avoided many costs of the October crash, and Bernanke praises Greenspan for intervening (p.191). Bernanke and Lown [1991] (p. 237) features a discussion of monetary policy in a liquidity trap, where the authors argue that the credit channel will

effectively cease in such a situation but that monetary policy can still be effective in easing credit conditions, a theme he returns to a decade later in research on Japan and research (with Vincent Reinhart) advocating specific policies in that setting, a point discussed further below.

In the first decade and a half of his career, Bernanke can perhaps be best summarily described as a Keynesian with a credit channel.<sup>4</sup> He accepts the Keynesian paradigm in full (sticky wages, demand deficiency/animal spirits, role of fiscal and monetary policy, etc.) and provides a second theoretical vehicle for monetary policy to affect lending and interest rates. Although his later work in no way contradicts his early work, there is a teleological shift in the mid-1990's in his research from an effort to theoretically explicate nuances of monetary policy to an attempt to propose ideal yet realistic monetary policy rules and practices. These rules and practices are derived from a concern for price stability while taking account of imperfect information and market expectations. Indeed, the overarching theme of Bernanke's career, if there is one, is the role of financial intermediation in overcoming informational asymmetries between lenders and borrowers. Banks (and the central bank) perform a function of central importance in Bernanke's view, and he dedicated his time to improving our understanding and management of those processes. Over both periods, however, he addresses the symptoms of credit market fluctuations ("destruction of intangible assets," etc.) and appropriate responses to those fluctuations but does not explore their possible causes. He defers instead to Keynes's animal spirits or to real business cycles theorists' exogenous shocks. This point is relevant because it arguably influenced Bernanke's and his peers' approach to macroeconomic modeling. Since endogenous and exogenous shocks are the presumed cause of cyclicity and central banks are empowered to stabilize credit markets, the intuitive (and nearly universal) method involves having the central bank confront a preexisting economy already in disequilibrium. Rather than the proverbial local town sheriff in movies of the "western" genre, standing on the edge of the screen throughout the protagonist's adventures, the central bank is modeled as the cavalry riding to the rescue at the end, a *deus ex machina* for cycle-prone capitalism.

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<sup>4</sup> To see how closely this description also applies to Bernanke on the eve of the Great Recession, see Bernanke [2007]. Some commenters have objected to my characterization of Bernanke as Keynesian and note that he considers himself, more or less, a monetarist (see, e.g. Bernanke [2002]). Friedman's influence on Bernanke's thought is undoubtedly significant, as noted below, and Bernanke cites Friedman much more often than Keynes. Bernanke's position on the role of fiscal and monetary policy in guiding investment over the business cycle is quintessentially Keynesian, however, regardless of any monetarist influence.



### 3 Transition to Policymaker

As the 1990's progressed, Bernanke shifted his focus from providing a theoretical and historical account of credit disruptions and their interactions with monetary policy to trying to answer practical questions. Given that wages are sticky and that a "financial accelerator" exists, what should a prudent central banker do? This shift led to two strains of research: inflation targeting and zero-lower-bound (ZLB) policy options. His first publications on inflation targeting came after he teamed with other researchers including Frederic Mishkin, whom he knew from a brief overlap of their stays at M.I.T. in graduate school and from conferences (Bernanke [2014a]). Inflation targeting (IT) is essentially what it sounds like with a few important nuances ([Bernanke and Mishkin, 1997, Bernanke and Woodford, 1997, Bernanke and Posen, 1999, Bernanke and Woodford, 2001]). The two main components of any IT regime are a target for inflation and transparent communication about the existence and specific nature of the central bank's target. He uses the term "constrained discretion" to denote the fact that an IT regime constrains policymakers (if they wish to remain credible) by forcing adherence to their public statements regarding medium-term inflation goals yet allows considerable flexibility in the short term. He explicitly and consistently advocates a target of roughly 2% annual inflation in core prices over 1-4 year horizons, citing the lagged nature of monetary policy effects (p. 31) and the tendency of price indices to overstate inflation given substitution effects (Bernanke and Posen [1999]). Overall, central banks should be "goal dependent" and "instrument independent" (p. 315). Inflation targeting is closely related to another argument Bernanke stressed during this period and after becoming a policymaker: that a central bank should not target asset prices, burst bubbles, or in general respond to any price movements that are not part of core, underlying price inflation (Bernanke and Woodford [2001], Bernanke and Gertler [1999], Bernanke and Watson [1997]). This is due to difficulties in bubble identification and the lack of sharp monetary policy tools that can be so precisely deployed as would be necessary, as well as the circularity of targeting economic variables that may themselves be functions of actual and expected monetary policy. His embrace of IT reflects his belief that it is the best policy strategy available to achieve the dual mandate of price stability and full employment.<sup>5</sup>

When a central bank follows inflation targeting but is also expansionary for a long period of time, arrival

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<sup>5</sup> In a 2003 speech quoted in Seidman [2006], Bernanke said, "I personally subscribe unreservedly to the Humphrey-Hawkins dual mandate, and I would not be interested in the inflation-targeting approach if I didn't think it was the best available technology for achieving both sets of policy objectives."

at the zero lower bound is almost inevitable; hence Bernanke's interest in researching policy options in that contingency. When Bernanke became a Fed Governor in 2002, he met and began working closely with Vincent Reinhart at the New York Fed (Bernanke [2014b]). Jointly with Reinhart (Bernanke and Sack [2004], Bernanke and Reinhart [2004]), Bernanke in the early naughts, after lecturing Japan about inadequate monetary policy responses to deflation (see Ball [2012] and the citations therein), slow growth, and a zero lower bound, began arguing for a specific set of policy responses to the ZLB. Ball [2012] criticizes Bernanke for abandoning some of his earlier recommendations, like long term interest rate targeting (note that in Bernanke [1993a], he questions the central bank's ability to affect long term rates) and exchange rate targeting (which is technically the domain of the Treasury, not the Fed). Bernanke's position has always been that a central bank can and should engage in efficacious expansionary policy even at the ZLB, so his abandonment of these two specific policy options in that contingency does not represent a monumental shift in his thinking on the issue. Furthermore, the situations in Japan and the U.S. in the early naughts might have been sufficiently different to warrant different policy prescriptions.<sup>6</sup>

Specifically, Bernanke and Reinhart recommended three expansionary policies they contend can ease credit conditions even at the ZLB: balance sheet expansion (quantitative easing), forward guidance, and changing relative security supplies (manifested as "Operation Twist"). Most readers will probably recognize those three policies as currently or recently in operation. A student of Bernanke prior to the Great Recession would not be surprised at his actions as Federal Reserve Chairman over the course of the turmoil in credit markets beginning in 2007. Over his tenure as Chairman, all of his previous (save the two mentioned above) recommendations from his research have essentially been followed and implemented. Two policy innovations stand out as absent from his published research, however: the term deposit facility and paying

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<sup>6</sup> This point is made in Bernanke's response to a question on this issue in an interview with the author (available upon request): "I was actually asked that question [about his advice to Japan and his own actions], and I tried to explain why there was not any inconsistency. And one of the basic reasons why it's a different situation is that the Fed was not in deflation. I mean, Japan was missing its target. And it wanted positive inflation. It had negative inflation, and so it was fully credible, in particular, and there were not any tradeoffs involved in getting...inflation up to target. And even today, Abenomics, I think is very credible because everybody believes – it's not like the people think, somehow, that the Bank of Japan doesn't really want to get to 2%, everyone believes that they do. So they have the benefit of credibility, in that respect...Now, in the United States, particularly when I was asked that question, the question was not, "Should the Fed try to get to 2%?" The question was, "Shouldn't the Fed be more aggressive?" Which in the minds of people like Larry Ball means go for 4% inflation. And I think one of the problems with that is, even if you think it's a good idea, which it may or may not be, because people think that the Fed wants 2% inflation, that saying that we were trying to get 4% is not credible. So it's a different situation. Because we were close to our actual target and pushing it above target would be a much less credible thing, particularly when the government was not supporting it, than what the Bank of Japan has recently done. So I think that's one of the main differences, and there are other differences as well."

interest on reserves. Both of these policies, in addition to being unmentioned in Bernanke's academic work on the ZLB, are unambiguously contractionary and thus contradict the general rationale of aggressively offsetting credit contraction during recessions. Both serve to limit the flow of credit from reserves to the economy at large, an issue Bernanke has always (as academic as well as policymaker) stressed. The only noncontradictory explanation that can ultimately be given for Bernanke's participation in these actions is that the two contractionary policies serve the goals of long term price stability. In fact there is no contradiction; the creation of so many excess reserves only to hold them back from the economy led market participants to believe that he would risk hyperinflation to have a chance to save the economy when in fact his policies guarded against it. The justification given by Bernanke and the Federal Reserve Board for interest payments on reserves is that it i) eliminates the "implicit tax" on banks resulting from reserve requirements (as if "free" banks, operating without a central bank, have ever been excused from reserve requirements) and ii) provides another policy tool to the Fed.<sup>7</sup> The second reason is by far the more compelling. Not only can the Fed easily manipulate the money supply by adjusting this rate, it can also preclude deflation (Bernanke [2008]) by setting an effective positive lower bound on the federal funds rate. Large amounts of excess reserves also improve banks' tier 1 capital ratios and improve stress test performance, which has been an explicit goal of the Fed since the beginning of the financial crisis. The term deposit facility, analogous to certificates of deposit in the retail banking sector, allow enormous flexibility to remove reserves from the system by offering attractive returns to banks that agree to park reserves at the Fed in lieu of lending them. Again, this can all be interpreted in line with Bernanke's doctrine of "constrained discretion." The ballooning balance sheet is discretion while the offsetting policies are constraint.

Bernanke's statements as a policymaker, for obvious reasons, are generally less informative than his academic arguments (although those too were subject to significant social and professional pressures). In general, his positions have been consistent, but he speaks about a broader range of issues as Fed Chairman than as a professor. A series of four speeches he gave to students at George Washington University in 2011, collected in a volume entitled "The Federal Reserve and the Financial Crisis," (Bernanke [2013a]) is particularly informative.<sup>8</sup> It was an extended treatment of the title subject for the benefit of an audience

<sup>7</sup> <http://www.federalreserve.gov/monetarypolicy/reqresbalances.htm>, accessed July 10, 2013. The website has subsequently been altered and no longer mentions an "implicit tax" arising from reserve requirements (as of October 16, 2013).

<sup>8</sup> While presenting an earlier version of this paper at Duke University, I was fascinated to learn from Professor Bruce Caldwell that videos of these lectures were sent via e-mail to economics professors across the U.S. by the Fed with requests that the

outside of professional economics. I summarize it here because in these speeches, Bernanke straightforwardly and accurately represents the same views he espoused in 1980 in the context of explaining, with history watching, his actions in the face of the biggest economic disruption since the Great Depression.

He begins by explaining the functions of a central bank and the Keynesian understanding of the effects of monetary policy (pp. 3, 53), then enters a lengthy digression explaining the Great Depression as the result of the Fed's inappropriate response to deflationary pressures resulting from the gold standard (pp. 19-26). The secondary decline in 1938, too, was due to tight monetary policy (p. 26). The recent housing bubble was due in large part to "psychology" (p. 42) and the failure of banks (pp. 49, 65) and regulators (p. 50) to keep up with financial innovations. The Fed could and should have exercised its authorities to improve banking practices (pp. 51, 98-99, 118). International capital flows, not monetary policy, explain the rise and fall of house prices – the timing of changes in the data indicate as much (pp. 53-54). Low and stable inflationary expectations, partly due to his predecessors' credibility, has allowed him more flexibility (pp. 58-63, 107). He explicitly links his understanding of the Great Depression to his response to the Great Recession (p. 74).<sup>9</sup> Throughout his remarks, he invokes Walter Bagehot's *Lombard Street* (Bagehot [1873]) arguments, and states that bailouts are the "least bad" of options (p. 94).<sup>10</sup> Housing was a "major cause" (p. 114) and "trigger" (p. 110) of the recession, and the response of policymakers is responsible for our avoidance of much worse outcomes (pp. 87, 122).

Bernanke's statements and actions display a remarkable consistency over more than 30 years, and his careers in academia and public service, reviewed above, are widely acclaimed at the time of this writing.

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professors show the speeches to their students. One is hard pressed to make any inference from this fact other than that these speeches were a public-relations effort intended to improve the Fed's (and Bernanke's) reputation among young students of economics at a time where monetary policymakers were under attack for a "sluggish" recovery, secretive deals with firms well outside of the Fed's regulatory and policymaking mandates, and a lack of concern for moral hazard when giving bailouts. All three issues are addressed in Bernanke's remarks (although it takes Bernanke two more years to admit that allowing some firms to fail is necessary to avoid moral hazard in bank management; see Bernanke [2013b]).

<sup>9</sup> Bernanke typically employs the "classic financial crisis" rhetoric to make the point that he views the events during his chairmanship through the lens of the Great Depression. See Bernanke [2014a, 2013c]. To my knowledge, Bernanke has never doubted the veracity of the presumed correspondence between the two periods, except to note that the Great Recession happened "in the complex environment of the 21st century global financial system." (Bernanke [2014a])

<sup>10</sup> Bernanke has since consistently invoked Bagehot's arguments to justify and glorify his actions during his chairmanship. Hogan and Salter [forthcoming] argue that he misinterprets Bagehot's rules of bailing out only banks suffering from liquidity crises at a penalty rate rather than insolvent banks at a discounted rate, as Bernanke has arguably done. It may well be that Bernanke misconstrues Bagehot's advice, but all that matters for our present purposes is that he agrees with Bagehot that the banking system should be rescued from credit "crunches." Also, it is not clear what effect a correct understanding of Bagehot would have had on Bernanke's actions given the difficulty in distinguishing insolvent from illiquid banks during a financial crisis.

When asked in a question-and-answer session following an address to U.S. schoolteachers what he expects his legacy to be, Bernanke replied first that the answer is “for others to say.” Bernanke [2013b]<sup>11</sup>

## 4 A Consistent Career

Ben Bernanke studied at Harvard (1971-1975) and MIT (1975-1979), worked at Stanford (1979-1983) and Princeton (1985-2005), served as an editor of the *American Economic Review* (2001-2004), associate editor of the *Quarterly Journal of Economics* (1985-1992), co-editor of macroeconomic research (1994-2001) and director of the Program in Monetary Economics (2001-2003) at the National Bureau of Economic Research, head of the Council of Economic Advisers (2005-2006), and Chairman of the Federal Reserve (2006-2014).<sup>12</sup> Although he would likely loathe the description, Bernanke’s resume is the gold standard of the macroeconomics profession. Furthermore, the consistency of his thought over his career, the obvious conviction in his arguments and actions, and his calm demeanor under extraordinary circumstances are the subjects of near universal admiration. His legacy, however, is highly uncertain. The theoretical contributions described above are unlikely to exit the scene any time soon given the voracious interest in credit market dynamics after the 2007/08 financial crisis.<sup>13</sup> His reputation as policymaker is subject to much more variation because of its dependence on economic events. More accurately, it depends on the reigning interpretation of economic events. Alan Greenspan’s fall from “The Maestro” to a failed capitalist ideologue took less than two years from the end of his Chairmanship. Bernanke’s present reputation is similarly dependent on subjective interpretations that can rapidly change as subsequent events unfold.

The respect and popularity he currently enjoys despite a lackluster recovery depends crucially on the generally accepted counterfactual world of even worse economic performance in Bernanke’s absence. Although employment, for instance, is still below the Fed’s target five years after the Lehman Brothers’ bankruptcy,

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<sup>11</sup> He goes on to say that his tenure was “eventful,” that he made every effort to stave off recession, and that he was innovative and “transparent.” All but the transparency claim have merit.

<sup>12</sup> Also, as chairman of the economics department at Princeton from 1996-2002, Bernanke was responsible for recruiting economists such as Wolfgang Pesendorfer, Michael Woodford, Chris Sims, Mark Watson, Paul Krugman, and Faruk Gul to the department (Bernanke [2014b]).

<sup>13</sup> In the above discussion, Bernanke’s influential research on the permanent income hypothesis, econometric theory and practice, and factor-augmented vector-auto-regressive methods of macroeconomic modeling was either ignored or suppressed under the qualitative thrust of Bernanke’s arguments. These omissions simply reflect the aim of this paper: to connect theory and practice, not to provide a comprehensive review of his work (although the two approaches are closer than they are for most research subjects).

few question the belief that things would be even worse without such an aggressively expansionary monetary policy response. Economists and others seem to accept Bernanke's argument that the Great Depression was so severe and long lasting because of a central bank response in direct opposition to Bernanke's actions over the past six years.<sup>14</sup>

## 5 Conclusion

A lifelong fascination with the role of banking in the economy led Bernanke to dedicate himself to ensuring that the mistakes of past monetary policy makers not be repeated. His consistency and dedication on these matters lend credence to the claim that he is genuine in his professed understanding of economics, history, and policymaking and in his desire to improve lives. In the introduction to his book *Essays on the Great Depression*, Bernanke claims that there is a consensus among macroeconomics that free markets are best for achieving economic growth but that central intervention is sometimes necessary to avoid some unwanted consequences of unbridled capitalism, like recessions. But we can take full advantage of the capitalist system's beneficial properties under an interventionist regime that allows us to avoid some of the costs of recessions as long as the "will to do so" exists ([Bernanke, 2000b], p. 151). He could not have known it then, but the will to do so will critically depend on the perceived success of his own policies over the course of the Great Recession.

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<sup>14</sup> In this belief, Bernanke has been heavily influenced by, among other similar works, Eichengreen [1992] (see his glowing review [Bernanke, 1993b]), Friedman and Schwartz [1963], and Fisher [1933]. Bernanke accepts the truth of those arguments wholly and explicitly.

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