Friedrich A. Lutz

A Forgotten Monetary Economist and Social Philosopher

LACHEZAR GRUDEV

The twelfth chairman of the Federal Reserve, Paul Volcker, who is credited with ending the long period of inflation that challenged the U.S. economy in the 1970s, recalled that as a student at Princeton University, he acquired his economic knowledge from two German-born economists: Oskar Morgenstern, who taught introductory courses in economics as well as game theory, and Friedrich Lutz, who taught monetary theory and banking (Silber 2013, 17). Volcker continued: "But it was only money and banking and monetary policy that really caught my attention" (Volcker and Harper 2018, 17), and "[Lutz] taught us that too much money created inflation" (Silber 2013, 34). Without any doubt, the student understood the lessons of his master. However, compared with the extensive literature on Oskar Morgenstern, whose contributions have been held in the highest esteem, Lutz's intellectual legacy has fallen into neglect, among both economists and historians of economics.

There are three reasons to revitalize Lutz's research program. First, his publications in the areas of monetary economics, monetary policy, and international monetary theory established him as an expert in the field of money and banking (Veit-Bachmann 2003, 14–15). Second, Lutz was very well connected to top-tier American economists, and this was why the Austrian economist and social philosopher

Lachezar Grudev is interim professor of political economy at the Faculty of Business and Economics at the University of Applied Sciences Zwickau, Kornmarkt 1, 08056 Zwickau, Germany. He can be reached at lachezar.grudev@fh-zwickau.de.

The Independent Review, v. 28, n. 2, Fall 2023, ISSN 1086–1653, Copyright © 2023, pp. 225–236.

Friedrich A. Hayek (1899–1992) thought of Lutz when envisaging the appropriate person to write a U.S. version of *The Road to Serfdom* (Caldwell 2011, 303). Further evidence of his being well connected was Lutz's membership in the Bellagio Group, in which leading monetary economists discussed topical theoretical and practical problems of international monetary policy (Dal-Pont Legrand and Hagemann 2013, 249). Third, he has been remembered as an inspiring teacher who was able to explain complex phenomena in a clear and straightforward manner, something that many students described as influential in their decision to study monetary economics (Lenel 1976, 3–4; Silber 2013, 17).

The Early German Years

Lutz was born in 1901 as the third child of the brewery owner Friedrich Lutz and his wife, Amélie Lutz, née Metzger, in Saarburg, Lorraine, which was then part of the German Empire. Lutz's father died three months before the birth of his youngest child. World War I brought many tragedies to Lutz's family. Lutz lost his older brother on the battlefield, and his native Lorraine became part of France. The latter forced the family to leave their newly occupied hometown and move to Stuttgart, in Southwest Germany. After graduating from high school in 1920, Lutz studied at the universities of Heidelberg and Berlin. During his Berlin years (1921–25), an acquaintance with the young assistant professor Walter Eucken (1891–1950) would turn out to be fateful for Lutz. Eucken would later become one of the founders of the Freiburg School of Economics, whose ideas would influence German economic policy after World War II, thereby initiating the German economic miracle (Goldschmidt 2013; Kolev and Köhler 2022; Klinckowstroem 2023).

Eucken's early research program, and his debate with the German Historical School, which still dominated German economic thinking after World War I, shaped Lutz's ideas as a young scholar. Eucken and Lutz belonged to a generation of economists who accused the representatives of the Historical School of failing to explain the causes of hyperinflation between 1920 and 1923 and thus to provide recommendations for how to fight this disastrous phenomenon, which shattered the basis of the German economy (Lutz 1971, 62–63). The descriptive methods of members of the Historical School were oriented toward collecting and analyzing facts about historical epochs, countries, and even single industries with the aim of inductively deriving theory from their research. However, this approach made them helpless regarding the explanation of urgent problems. At the same time, members of the Historical School did not hide their abhorrence of the abstract-deductive theoretical approach, which isolated German economic thinking more and more from the theoretical achievements of their Austrian and Anglo-Saxon colleagues (Janssen [1998] 2012).

Lutz himself became a victim of the Historical School's dominance, which made his path to an international reputation anything but easy. With Eucken's mediation, Lutz submitted his doctoral thesis to Hermann Schumacher, one of the leading representatives of the Historical School. Schumacher rejected Lutz's thesis with the explanation that "it was too abstract." This was a calamity for the young scholar because German students were required to submit a doctoral thesis in order to graduate from their study of economics. Hyperinflation had already destroyed his mother's savings, which meant that Lutz could not finance his study until he found another supervisor (Veit-Bachmann 2003, 11–12). This firsthand experience of the social effects following hyperinflation was highly influential on Lutz's later decision to research monetary economics and monetary policy. Luckily for Lutz, Eucken was appointed professor of economics at the University of Tübingen, not far from Stuttgart, in 1925. Eucken accepted the young scholar as his first doctoral student. Lutz defended the thesis *A Controversy on Capital Theory* (1927), which provides a short glimpse of Lutz's ability to present a history of economics. He classified the research programs of leading economists such as Eugen von Böhm-Bawerk, Gustav Cassel, and John Bates Clark according to how they explained the formation of capital. On the basis of this classification, Lutz analyzed how the theory of capital had evolved since the writings of Adam Smith. This book was later included by the Austrian economist Friedrich A. Hayek in the mandatory reading list for his economics classes at the London School of Economics and Political Science (LSE) (Lutz to Eucken, October 2, 1934).[1]

In 1929, Lutz became Eucken's assistant at the University of Freiburg in Southwest Germany, where Eucken had moved in 1927. There, Lutz finished his habilitation thesis, *The Business Cycle Problem in Economics* (1932). This type of thesis was then an indispensable prerequisite to starting an academic career in the German-language area. Lutz's thesis provided a historical account of how the explanation of causes and persistence of economic crises evolved from the theories of David Ricardo, Jean-Baptiste Say, and Thomas Malthus to the contemporary business cycle research of the 1930s. Lutz criticized the still dominant nineteenth-century approach initiated by the French medical doctor Clément Juglar, which was oriented toward proving that crises were an inevitable phenomenon of capitalism. This approach neglected the institutional factors that affected the recovery process from economic crises. Lutz claimed that business cycle theorists either described or just replicated the idea of the wavelike movements of capitalism by constructing mathematical models without explaining the reason for the occurrence and persistence of economic crises. Lutz became Eucken's first student to be granted the right to lecture at the university. As a lecturer at Freiburg, Lutz taught Current Disputes in Monetary Policy, Currency and Money, and Problems of Business Cycle Theory, as well as statistics tutorials (Rühl 1994; Brintzinger 1996, 45–46; Grudev 2019).

1. The cited letters between Lutz and Eucken are from the Walter Eucken Archive at Thüringer Universitäts- und Landesbibliothek Jena, University of Jena.

A crucial moment in Lutz's career was Hayek's decision to send his doctoral student Vera Smith to Freiburg, where she was able to study the German monetary history in the context of her doctoral thesis, *The Rationale of Central Banking and the Free Banking Alternative* (1936) (Hayek 1983, 362). The thesis had been favorably reviewed by Austrian economists because it analyzed the foundation of central banks as institutions intended to support the treasury and thus state policy in general. This supported the Austrian view that central banks always tended to destabilize the value of money (Zelmanovitz 2019). Hayek's advice to Smith to spend several weeks in Freiburg was hardly a coincidence because Eucken already had a reputation as an economist who had explained German hyperinflation between 1920 and 1923 as being the result of expansive monetary policy conducted by the German Central Bank. In this sense, Eucken debunked the common view that hyperinflation was a result of the balance of payments, a view promoted by the infamous Historical School (Ellis [1934] 1937). When Vera arrived in Freiburg, Lutz had already been teaching monetary theory and policy, lectures that he inherited from his teacher. According to Hayek, Smith convinced Lutz to apply for a Rockefeller Fellowship in order to study the English banking and monetary system. As Hayek recalled, "She came back bringing Lutz to London, and after a while they married" (Hayek 1983, 362).

Lutz and the Years of High Theory

In October 1934, Lutz embarked on a ship to London for his one-year fellowship in England, where he intended to spend nine months at LSE and three months after that at Cambridge. Lutz's British sojourn took place during a period that Hayek described as the decade of high theory, when economic theory was transformed and formalized (Hayek [1963] 1995, 49). The surviving correspondence between Eucken and Lutz documents how Lutz himself experienced these years. He learned new instruments of analysis, such as consumer and producer surplus, supply and demand elasticity, and indifference curves that were developed by Alfred Marshall and Francis Y. Edgeworth and refined by young LSE scholars such as R. G. D. Allen and John R. Hicks. As an economist trained in the Historical School's tradition, Lutz not only was surprised by this completely new theoretical approach but also recognized the increasing division between German and Anglo-Saxon economics in the 1930s (Grudev 2021).

During his London stay, Lutz studied the British monetary and banking system and participated in the famous Grand Seminars at LSE organized by Hayek and Lionel Robbins.[2] Lutz established lifelong connections with the two professors, who later played an instrumental role in his academic career. In Cambridge,

2. For more about the Grand Seminars at LSE, see Howson (2011) and Caldwell and Klausinger (2022).

Lutz participated in a discussion with John Maynard Keynes. In one of his letters, Lutz related that Keynes was completing "a new book on monetary theory that [was] supposed to be published in the end of October 1935. But the message of this book [had] changed once again" (Lutz to Eucken, May 20, 1935).

Upon his return to Germany in 1935, Lutz recognized that his teacher had been involved in opposition to the former rector Martin Heidegger. The Nazis had considered the famous philosopher to be a fitting person to establish Nazi ideology in the traditionally independent University of Freiburg and condemned any opposition against him (Klinckowstroem 2023, 172–74). The intellectual nexus to Eucken would be one of the reasons why the Nazi Party vetoed Lutz's appointment at several universities in Germany (Syga-Dubois 2019, 636; Grudev 2021, 22–23). Furthermore, Lutz's research of institutionally based economics was met with strong criticism by Nazi-oriented economists who started dominating German economics. An example of such criticism is provided by a review of his book *The Fundamental Problem of the Monetary Constitution* (Lutz [1936] 1962). In this book, Lutz analyzed the performance of the German, American, and English banking systems during the Great Depression. Lutz concluded that the Peel Banking Act of 1844, which assigned exclusive note-issuing power to the Bank of England, contributed to the higher resilience of the English banking system during the Depression. The lack of such legislation in Germany made the German banking system more vulnerable to shock, which plunged the whole German economy into deep crisis (Lutz [1936] 1962, 99–102). A Nazi-oriented economist rejected Lutz's conclusion that a monetary institutional framework, such as the British one, would have saved the German banking system from collapse. The disastrous state of the German economy was actually a result of an infernal plan created by England and the United States, according to this critic. Such a parochial explanation of economic events was unimaginable for Lutz, but this review probably made him aware of the newest trends of economic thinking that he would have to tolerate if he was to continue researching in Germany (Grudev 2021, 19–20).

The Forced Emigration

This hostile academic environment was the reason why he applied for another Rockefeller Fellowship in 1936, but this time to visit American universities. On March 31, 1937, before he sailed to America, he married Hayek's doctoral student Vera Smith, who would play an instrumental role in Lutz's acclimation to U.S. academia. After several stays at leading American universities, the German scholar joined Princeton University in September 1938 as an instructor. Five months later, he became an assistant professor. In 1943, he was affiliated with the Institute for Advanced Study, and he became a full professor in 1947, teaching a variety of courses such as Money and Banking, International Monetary Economics, Public Finance, and Advanced Microeconomics.[3] When Lutz joined Princeton, he had already made a grand entrance into the U.S. economics scene with his essay "The Outcome of the Saving-Investment Discussion" (1938), published in the *Quarterly Journal of Economics*. Lutz analyzed how the Cambridge economists D. H. Robertson and Keynes, as well as the representatives of the Stockholm School, formulated the relationship between saving and investment when they explained the business cycle phenomenon. Lutz concluded that the relationship between saving and investment was no longer useful in the analysis of the business cycle phenomenon because even if there was equality between saving and investment, this would not guarantee that there would be economic equilibrium. The paper provoked discussion in the 1939 issue of the *Quarterly Journal of Economics,* where leading economists such as Oskar Lange (1939) and Abba Lerner (1939) responded to Lutz's critical statement (Veit-Bachmann 2003; Grudev 2021).

As an assistant professor at Princeton, Lutz focused on interest rate and monetary theory. His paper "The Structure of Interest Rates" (1940), which also gave rise to extensive discussions in the pages of the *Quarterly Journal of Economics,* formulated a theory of interest rate structure by postulating the assumption of rational expectations developed by John R. Hicks in his book *Value and Capital* (1939). Several papers in the *American Economic Review* (Lutz 1945b) and the *Quarterly Journal of Economics* (Lutz 1945a) focused on how interest rates affected the investment decisions of firms. These ideas provided the basis for Lutz's highly technical book *The Theory of Investment of the Firm* (1951), written jointly with his wife. Besides writing about interest rate theory, Lutz published seminal works on international monetary economics and discussed the associated topical problems. With his essay on Keynes and Harry D. White's proposal regarding the creation of the Bretton Woods system, Lutz launched a new series of essays on international finance at Princeton (Lutz 1943). Further essays and lectures established him as a leading expert in international monetary economics and finance (e.g., Lutz 1954).

Lutz as a Transatlantic Interlocutor and Classical Liberal

During his Princeton years, Lutz did not forget his Freiburg alma mater. Immediately after the end of World War II, Lutz became a guest professor at Freiburg, where he introduced the economics taught at American universities. Thus, he contributed to overcoming the increased academic isolation that German economics students suffered during the war (Veit-Bachmann 2003, 22). One cannot imagine a more suitable person for this integrative role than Lutz. As a young German scholar, he had initially faced the difficulties of adopting the modern Anglo-Saxon economic approach, but he went

3. Martin Shubik Papers, "Notes, Economic Theory; Prof. F. Lutz (Fall 1949–Spring 1950)" Folder, Box 2, Economists' Papers Archive, David M. Rubenstein Rare Book and Manuscript Library, Duke University.

on not only to actively contribute to the newest developments in modern economics but also to become an outstanding teacher at Princeton. Lutz's students praised him for his didactic skills. He was able to explain the most complex and intricate theories in a simple way, so that even graduate students attended his introductory lectures (Lenel 1976; Veit-Bachmann 2003). Volcker himself remembered Lutz as "very good and logical" and recalled that his lectures made Volcker believe that money and banking economics was "more precise than other economics" (Mehrling 2001, 435). These skills can be recognized in his writings, in which he was able to clearly explain the most complex economic issues without using mathematics.

In 1947, Eucken invited Lutz to be a cofounder and editor of the Freiburg-based journal *ORDO—Jahrbuch für die Ordnung von Wirtschaft und Gesellschaft,* which aimed to popularize the Freiburg School's research program on institutionally based economics. After Eucken's sudden death in 1950 during a lecture tour at LSE organized by Hayek and Robbins, Lutz was considered to be the natural successor to Eucken's chair. However, because of bureaucratic issues, he was deprived of this opportunity. In 1953, Lutz accepted a financially superior position at the University of Zurich, where he taught Theory and History of Social Economics until the end of his life. During the Zurich years, Lutz remained loyal to Freiburg. He was the cofounder and a lifelong board member of the Walter Eucken Institute in Freiburg, the aim of which was to preserve Eucken's intellectual legacy. He remained the coeditor of *ORDO,* in which he published papers in the tradition of his teacher's research program (Ritzmann 1976; Brintzinger 1996).

Lutz considered it his duty to seek conversation with scholars and students outside the narrow scope of economics. In several public lectures held at Zurich, Lutz accentuated the relevance of institutionally based economics and the role of the history of economics for the development of economic theory. All of these lectures were summarized in his book *Political Beliefs and National Economic Theories* (1971), which aimed to make a broader readership familiar with the contemporary problems of economics. During this period, Lutz published his influential book *The Theory of Interest* (1956), which traces the development of interest rate theory from the Austrian economist Eugen von Böhm-Bawerk to the modern concepts developed by Don Patinkin. The book is considered to be the standard reference work on the history of capital and interest rate theory (Blaug [1962] 2003, 547).

In Switzerland and Germany, Lutz played an active role in several organizations dedicated to economic research. He was a director of the Swiss Office of International Studies, the aim of which is to organize seminars and lectures in order to discuss topical social and economic problems. Lutz took over supervision of the research department of the Bank for International Settlements in 1956, and at the same time he was a member of the Board of Academic Advisors at the German Ministry of Economics until 1974. Lutz also advised the Swiss and German Central Banks as well as the Bank for International Settlements. At these three banks, Lutz adopted a strong anti-Keynesian stance, in opposition to the dominant Keynesian views that engulfed monetary policymaking during the 1960s and 1970s (Richter 1998; Toniolo 2005). Such a confident position did not come out of nowhere. Lutz was able to draw on his experience as an adviser at the Federal Reserve in the 1940s, where, following Morgenstern's mediation, Lutz consulted with the Board of Governors on the proper monetary and interest rate policy.

Further evidence for the high esteem of Lutz's reputation was his appointment as a publisher of several books that are still considered standard reference works in economics. The American Economic Association appointed Lutz and the Chicago monetary economist Lloyd W. Mints as chairmen of a committee to select articles for republication in the authoritative volume *Readings in Monetary Theory* (American Economic Association 1951), a compilation of the most important essays on monetary economics (Veit-Bachmann 2003). In 1958, Lutz became chairman of the Programme Committee of the Corfu Conference on the Theory of Capital, which later gave rise to the Cambridge capital controversy. Among the active participants were eminent economists such as Paul Samuelson, Robert Solow, Evsey Domar, John R. Hicks, Nicholas Kaldor, and Piero Sraffa. Lutz was coeditor of the conference volume, *The Theory of Capital: Proceedings of a Conference Held by the International Economic Association* (Lutz and Hague 1961). In chapter 1, "The Essentials of Capital Theory," Lutz provided a lucid summary of the Cambridge capital controversy, which dominated economic thinking from the early 1950s until the end of the 1960s (Hagemann 2008).

Lutz was a founding member of several societies that were intended to preserve the intellectual foundations of liberalism and the functioning of free-market economies, as well as social order, during the postwar era. Lutz was among the founding members of the Bellagio Group, the purpose of which was to discuss issues of international finance and monetary economics. This group was founded by his Austrian colleague Fritz Machlup, who invited economists with an international reputation to join, such as Robert Triffin, Peter B. Kenen, Robert Mundell, William Fellner, and Gottfried Haberler. During the first meetings (in 1961–63), they examined alternative monetary plans that might solve the balance of payments difficulties (Connell 2013). Lutz supported the idea of flexible exchange rates as the best solution to the balance of payments difficulties. He argued that if exchange rates were allowed to fluctuate within well-defined limits, then speculation would be thwarted, the confidence in currencies would be preserved, and any exacerbation of balance of payments difficulties would be avoided (Lutz 1966).

Lutz was also invited by Hayek to the founding meeting of the Mont Pèlerin Society in 1947. Because of his teaching engagements at Princeton, he declined, but he was able to attend the society's next business meeting in Basel in 1948. Hayek envisaged the society as an opportunity to gather scholars from all over the world to discuss the intellectual program of a new liberalism, thus providing an alternative to the dominant planning tendencies after World War II (Caldwell and Klausinger

2022, 642–43). Lutz not only played an instrumental role in the formation of the society's position on topical economic and political problems but also was the only member who served twice as its president (Hartwell 1995, 145–46, 151–56; Schmelzer 2010, 74–76).

Friedrich Lutz died in Zurich on October 4, 1975, and Vera passed away on August 20, 1976. Despite the passage of time since then, Lutz's intellectual legacy can still inspire regarding how to conduct research on monetary and banking issues. Several events show that Lutz's monetary economics embedded in institutional analysis is more than necessary today. The 2007 financial crisis demonstrated that without taking into account the institutional framework within which banks interact, we cannot understand the fragility of the banking sector and its contagious effect on the real economy. The 2019 LIBOR (London Interbank Offered Rate) scandal proved that the banks could form a cartel that can manipulate the interbank interest rate, the benchmark for pricing loans and derivatives. The subject of forming a cartel has been neglected by many monetary economists and policymakers. The recent banking crisis following the failure of Silicon Valley Bank provides further evidence of the fragility of the banking system, which once again proves the necessity of an institutional analysis of the monetary and banking sector in the tradition of Friedrich A. Lutz.

References

American Economic Association. 1951. *Readings in Monetary Theory: Selected by a Committee of the American Economic Association* (Chairs of the Selection Committee for this volume: Friedrich A. Lutz and Lloyd W. Mints). Homewood, Ill.: Richard D. Irwin.

Blaug, Mark. [1962] 2003. *Economic Theory in Retrospect.* Cambridge, U.K.: Cambridge University Press.

Brintzinger, Klaus-Rainer. 1996. *Die Nationalökonomie an den Universitäten Freiburg, Heidelberg und Tübingen, 1918–1945.* Frankfurt: Peter Lang.

Caldwell, Bruce. 2011. The Chicago School, Hayek, and Neoliberalism. In *Building Chicago Economics: New Perspectives on the History of America's Most Powerful Economics Program,* edited by Robert Van Horn, Philip Mirowski, and Thomas A. Stapleford, 301–14. New York: Cambridge University Press.

Caldwell, Bruce, and Hansjörg Klausinger. 2022. *Hayek: A Life 1899–1950.* Chicago: University of Chicago Press.

Connell, Carol M. 2013. *Reforming the World Monetary System: Fritz Machlup and the Bellagio Group.* London: Pickering & Chatto.

Dal-Pont Legrand, Muriel, and Harald Hagemann. 2013. Lutz and Equilibrium Theories of the Business Cycle. *Œconomia* 3, no. 2: 241–62.

Ellis, Howard S. [1934] 1937. *German Monetary Theory 1905–1933.* Cambridge, Mass.: Harvard University Press.

Goldschmidt, Nils. 2013. Walter Eucken's Place in the History of Ideas. *Review of Austrian Economics* 26, no. 2: 127–47.

Grudev, Lachezar. 2019. Friedrich A. Lutz' Epistemological and Methodological Messages during the German-Language Business Cycle Debate. *Journal of Contextual Economics—Schmollers Jahrbuch* 139, no. 1: 1–27.

———. 2021. Emigration with a Pulled Handbrake: Friedrich A. Lutz's Internal Methodenstreit. Center for the History of Political Economy at Duke University Working Paper Series. At https://ssrn.com/abstract=3858831.

Hagemann, Harald. 2008. Zur Einführung: Friedrich A. Lutz (1901–1975). In *Grundtexte zur Freiburger Tradition der Ordnungsökonomik,* edited by Nils Goldschmidt and Michael Wohlgemuth, 273–78. Tübingen: Mohr Siebeck.

Hartwell, Ronald M. 1995. *A History of the Mont Pelerin Society.* Indianapolis, Ind.: Liberty Fund.

Hayek, Friedrich A. 1983. Interview by Armen A. Alchian. "Tape: Alchian I, Side One: Tape Date: November 11, 1978." In *Nobel Prize-Winning Economist: Friedrich A. von Hayek,* 362–88, completed under the auspices of the Oral History Program, University of California, Los Angeles. Los Angeles: Regents of the University of California. At https://archive.org/details/nobelprizewinnin00haye/mode/2up.

———. [1963] 1995. The Economics of the 1930s as Seen from London. In *Contra Keynes and Cambridge: The Collected Works of F. A. Hayek,* vol. 9, edited by Bruce Caldwell, 49–73. Chicago: University of Chicago Press.

Hicks, John R. 1939. *Value and Capital: An Inquiry into Some Fundamental Principles of Economic Theory.* Oxford, U.K.: Clarendon Press.

Howson, Susan. 2011. *Lionel Robbins.* Cambridge, U.K.: Cambridge University Press.

Janssen, Hauke. [1998] 2012. *Nationalökonomie und Nationalsozialismus: Die deutsche Volkswirtschaftslehre in den dreißiger Jahren des 20. Jahrhunderts.* Marburg: Metropolis.

Klinckowstroem, Wendula Gräfin von. 2023. *Walter Eucken: Ein Leben für Menschenwürde und Wettbewerb.* Tübingen: Mohr Siebeck.

Kolev, Stefan, and Ekkehard A. Köhler. 2022. Transatlantic Roads to Mont Pèlerin: "Old Chicago" and Freiburg in a World of Disintegrating Orders. *History of Political Economy* 54, no. 4: 745–84.

Lange, Oskar. 1939. Saving and Investment: Saving in Process Analysis. *Quarterly Journal of Economics* 53, no. 4: 620–22.

Lenel, Hans O. 1976. Zum Gedenken an Friedrich A. Lutz. *ORDO—Jahrbuch für die Ordnung von Wirtschaft und Gesellschaft* 27, no. 1: 3–5.

Lerner, Abba. 1939. Saving and Investment: Definitions, Assumptions, Objectives. *Quarterly Journal of Economics* 53, no. 4: 611–19.

Lutz, Friedrich A. 1927. *Der Kampf um den Kapitalbegriff in der neuesten Zeit: Inaugural-Dissertation an der Eberhards-Karls-Universität Tübingen* (The Recent Battle over the Notion of Capital). Tübingen: Eugen Göbel.

———. 1932. *Das Konjunkturproblem in der Nationalökonomie* (The Business Cycle Problem in Economics). Jena: Gustav Fischer.

———. 1938. The Outcome of the Saving-Investment Discussion. *Quarterly Journal of Economics* 52, no. 4: 588–614.

———. 1940: The Structure of Interest Rates. *Quarterly Journal of Economics* 55, no. 1: 36–63.

———. 1943. *International Monetary Mechanism: The Keynes and White Proposals.* International Finance Section, Department of Economics and Social Institutions, Princeton University.

———. 1945a: The Criterion of Maximum Profits in the Theory of Investment. *Quarterly Journal of Economics* 60, no. 1: 56–77.

———. 1945b: The Interest Rate and Investment in a Dynamic Economy. *American Economic Review* 35, no. 5: 811–30.

———. 1954. The Case for Flexible Exchange Rates. *Banca Nazionale del Lavoro Quarterly Review* 7, no. 31: 175–83.

———. [1936] 1962. Das Grundproblem der Geldverfassung (The Fundamental Problem of the Monetary Constitution). In *Geld und Währung: Gesammelte Abhandlungen,* edited by Karl Friedrich Maier, 28–102. Tübingen: J.C.B. Mohr (Paul Siebeck).

———. 1956. *Zinstheorie*. Tübingen: J.C.B. Mohr (Paul Siebeck). English translation, 1967, *The Theory of Interest.* Dordrecht: D. Reidel.

———. 1961. The Essentials of Capital Theory. In *The Theory of Capital: Proceedings of a Conference Held by the International Economic Association,* edited by Friedrich A. Lutz and Douglas C. Hague, 3–17. London: Macmillan.

———. 1966. *The Problem of International Liquidity and the Multiple-Currency Standard*. International Finance Section, Department of Economics and Social Institutions, Princeton University.

———. 1971. *Politische Überzeugungen und nationalökonomische Theorie: Zürcher Vorträge* (Political Beliefs and National Economic Theories), edited by Alfred Bosch and Reinhold Veit. Tübingen: J.C.B. Mohr (Paul Siebeck).

Lutz, Friedrich A., and Douglas C. Hague, eds. 1961. *The Theory of Capital: Proceedings of a Conference Held by the International Economic Association*. London: Macmillan.

Lutz, Friedrich A., and Vera Lutz. 1951. *The Theory of Investment of the Firm*. Princeton, N.J.: Princeton University Press.

Mehrling, Perry. 2001. An Interview with Paul A. Volcker. *Macroeconomic Dynamics* 5, no. 3: 434–60.

Richter, Rudolf. 1998. Die Geldpolitik im Spiegel der wissenschaftlichen Diskussion. In *Fünfzig Jahre Deutsche Mark: Notenbank und Währung in Deutschland seit 1948,* edited by Deutsche Bundesbank, 561–608. Munich: C.H. Beck.

Ritzmann, Franz. 1976. Professor Dr. Friedrich A. Lutz. In *Rektoratsrede und Jahresbericht 1975/76,* 79–81. Zurich: University of Zurich.

Rühl, Christof. 1994. The Transformation of the Business Cycle Theory: Hayek, Lucas and a Change in the Notion of Equilibrium. In *Money and Business Cycles: The Economics of F. A. Hayek,* vol. 1, edited by Marina Colonna and Harald Hagemann, 168–202. Aldershot, U.K.: Edward Elgar.

Schmelzer, Matthias. 2010. *Freiheit für Wechselkurse und Kapital: Die Ursprünge neoliberaler Währungspolitik und die Mont Pèlerin Society*. Marburg: Metropolis.

Silber, William. 2013. *Volcker: The Triumph of Persistence*. New York: Bloomsbury Press.

Syga-Dubois, Judith. 2019. *Wissenschaftliche Philanthropie und transatlantischer Austausch in der Zwischenkriegszeit: Die sozialwissenschaftlichen Förderprogramme der Rockefeller-Stiftungen in Deutschland*. Vienna: Böhlau.

Toniolo, Gianni. 2005. *Central Bank Cooperation at the Bank for International Settlements, 1930–1973*. Cambridge, U.K.: Cambridge University Press.

Veit-Bachmann, Verena. 2003. Friedrich A. Lutz: Leben und Werk. In *Währungsordnung und Inflation: Zum Gedenken an Friedrich A. Lutz (1901–1975),* edited by Viktor J. Vanberg, 9–43. Tübingen: Mohr Siebeck.

Volcker, Paul A., and Christine Harper. 2018. *Keeping At It: The Quest for Sound Money and Good Government*. New York: Public Affairs.

Zelmanovitz, Leonidas. 2019. Vera Smith: The Contrarian View. *Library of Economics and Liberty*. At https://www.econlib.org/library/Columns/y2019/ZelmanovitzSmithV.html.