### Doing Capitalism in the Innovation Economy

Legendary economist Hyman Minsky identified author William H. Janeway as a "theorist-practitioner" of financial economics; this book is an expression of that double life. Interweaving his unique professional perspective with political and financial history, Janeway narrates the dynamics of the Innovation Economy from the standpoint of a seasoned practitioner of venture capital, operating on the frontier where financial speculation intersects with novel technology. In this fully revised and updated edition, Janeway develops his theory that asset bubbles play a central role in financing technological innovation and that state investment in national goals enables the innovation process. Now, the digital revolution, sponsored by the state and funded by speculation, has matured to attack the authority, and even the legitimacy, of governments. The populist response in the West, especially in the United States, opens the door for China to seize leadership of the Innovation Economy from America.

WILLIAM H. JANEWAY has been an active venture capital investor for more than forty years. In particular, he built and led the Warburg Pincus Technology Investment team that provided the financial backing to a series of companies that made critical contributions to building the internet economy. He received his Ph.D. in Economics from Cambridge, where he has endowed the Cambridge Endowment for Research in Finance and the Janeway Fund for Economics, and is an affiliated member of the Economics Faculty. He is a member of the Board of the Social Science Research Council, of the Institute for New Economic Thinking and of the Fields Institute for Research in the Mathematical Sciences.

#### **Advance Praise**

"Since its original publication, Bill Janeway's *Doing Capitalism* has become a classic, helping to launch the digital revolution and explaining how venture capital has leveraged state investments and financial bubbles to change the world through technological innovation. In this new edition, he looks at the past to predict the future, explaining how the digital revolution has grown and taken on a life of its own – and letting us know, with clarity and insight, what comes next."

Eric Schmidt Technical Advisor and Former Executive Chairman, Google and Alphabet Inc.

"Doing Capitalism in the Innovation Economy is a brilliant (and also much-needed) breath of fresh air. Bill Janeway tells about capitalism as it really is: from his joint perspective as leading-venture-capitalist/leading-economic-theorist."

George Akerlof Nobel Laureate in Economics, 2001

"Bill Janeway's double hat of venture capitalist and economist brings a fresh perspective to bear on the political, economic and financial forces behind innovation. This second edition complements the first by tackling new and really important questions, such as the perception of slower productivity growth, the flood of passive investor capital in search of yield in a low-interest world, or the US disengagement of the state. From the analysis of bubbles as speculative funding through the importance of assured access to cash, *Doing Capitalism in the Innovation Economy* is key reading for all those interested in the future of innovation."

Jean Tirole Nobel Laureate in Economics, 2014 "Bill Janeway nails it again. Yes: the innovation game has changed one more time, with different roles for the Three-Player Game that Janeway defined and so accurately portrayed in the first edition. Technological innovations primarily focused on hardware gave way to those focused on software, which, in turn, gave way to services, which is now giving way to data as the source of competitive advantage. Each of the changes requires a shift in how you play the innovation game. But this last shift will have dire consequences for those who don't fully understand just how fundamental it is. This book is a must-read."

John Seely Brown
Former Chief Scientist, Xerox Corp,
and Director of Xerox Palo Alto Research Center (PARC)
Advisor to the Provost, University of Southern California
Co-Chairman, Deloitte Center for the Edge

"Anyone who thinks that innovation is driven by the rational market-driven processes of standard economic theory understands neither the history nor the practical reality of innovation. Bill Janeway understands them a lot and has thought deeply about the implications. The result is a superb book which not only debunks mainstream theory but explains the crucial roles which both governments and the private sector must play to drive the innovation which society needs."

Lord Adair Turner Chair of the Institute for New Economic Thinking

"The world has never been more in need of the economic and political insights of Bill Janeway. I can think of few books that have taught me as much as this one. It will help you see the world around you more deeply – how we got here, where we want to go, and how to renew our faith in our institutions and our future. It is wise, insightful, and rich with economic history, the personal stories of a brilliant investor, and an essential call to action for business leaders, investors, and policy makers."

Tim O'Reilly Founder and CEO O'Reilly Media; Partner, O'Reilly Alphatech "This one-of-a-kind book bringing together insights about venture capital, macroeconomics and the future of technology is now more timely than ever. How to reconcile the dynamism of 21st-century technology with the disappointing sluggishness of economic growth and persistent stagnation of wages is one of the great intellectual challenges of our age. The explanation, Bill Janeway suggests, lies at the junction of technology and finance. There is no one better qualified than the author to help us navigate that dangerous intersection."

Barry Eichengreen George C. Pardee and Helen N. Pardee Professor of Economics and Political Science University of California, Berkeley

"Neither Adam Smith's nor Henry Ford's picture of the economy is relevant for us today. What thumbnail picture is relevant? We do not know, but Bill Janeway thinks harder and more successfully about this question than anybody else I have seen."

J. Bradford DeLong Professor of Economics, University of California, Berkeley

#### Praise for the First Edition

"William H. Janeway, a key creator of modern venture capital, tells the amazing story of the intersection of economics and innovation. This book is essential to anyone who wants to understand technology and how its creation will be financed for decades to come."

Marc Andreessen, co-creator of the internet browser, co-founder of Netscape and Andreessen Horowitz

"When the despair of troubled economic conditions compels us to yearn for a better time, our fantasies gravitate to a savior called innovation. To discern whether such yearning attracts us to a mirage or to a sound basis for hope requires a discriminating and experienced mind. I know of no better mind in this realm than Bill Janeway, whom Hyman Minsky called a theoristpractitioner of financial economics. He has spent 40 years at the forefront of venture capital and financial economics. He takes us beyond mechanical details and reveals the deeper processes and interactions between state, market and finance that can foster and/or inhibit technological progress. Doing Capitalism leaves the neoclassical economic framework in tatters. It is a historically grounded and sophisticated look at how our society must rise to the challenges of collective action under radical uncertainty and integrate institutions on many levels to bring about the betterment of our human condition. This fine work will deepen your understanding of what innovation entails and impart a vision that will both surprise you, and inspire you, to move beyond your prejudices, whatever your political persuasion."

Rob Johnson, Executive Director of the Institute for New Economic Thinking

"This is, quite simply, the only book I have read that does justice to the necessary interplay between the market of real goods and services, speculative financial markets, and the state. It is wise, insightful, and rich with both economic history and the personal stories of a brilliant investor. If you want to understand the innovation economy, go no farther: read this book."

> Tim O'Reilly, Founder and CEO O'Reilly Media; Partner, O'Reilly Alphatech

"A powerful reinterpretation of capitalism, seen from above and lived from inside, by someone who is as much at home in the practical world of innovation and finance as in the abstract world of economic theory. Janeway's book is a fascinating double dip from theory to reality and back. Indispensable for anyone in finance or academia, in policy or politics, wanting to act intelligently in the post-bubble world and beyond."

Carlota Perez, Professor of Technology and Socio-Economic Development, Tallinn University of Technology, Estonia, and LSE, Cambridge and Sussex Universities in England

"This is a masterful historical and conceptual analysis of the Three Player Game between the state, private entrepreneurial innovation and financial capitalism. The state has a key role in funding scientific research that leads to innovation. Amply funded by financial capitalism, innovation is a source of long-term growth. But speculative funding of innovation is also associated with asset and credit bubbles that end up in financial crashes ... A Minsky-inspired synthesis of the financial excesses of Schumpeterian creative destruction, this book should be required reading for all."

Nouriel Roubini, Professor of Economics at New York University and Chairman of Roubini Global Economics

"A revelatory exploration of the complex dynamics underlying the innovation economy and the inherent roles of speculation and waste as experienced by one of the great venture capitalists and political/economic thinkers of our age. This book provides a powerful framework for dealing with the economic challenges we are facing today. It couldn't have come at a better time!"

John Seely Brown, Former Chief Scientist of Xerox Corp and Director of its Palo Alto Research Center (PARC) "I have never held orthodox financial theory in high regard. I do not find it useful. It presumes a stability and certainty of knowing about the future that is both wrong and dangerously misleading. Bill Janeway can see that. He is both a practitioner and a financial theorist and his book, Doing Capitalism, is serious new economic thinking on the process of innovation. This is a realm where standard economic treatments do not get to the heart of the matter - dealing with radical uncertainty. Janeway applies keen insights from his experience as a venture capitalist and creates a vision of the interaction between governments, financiers, and firms that shows what institutions society must develop to foster innovation. I believe that *Doing* Capitalism in the Innovation Economy will help all of us, whether academics, private sector leaders, or government officials, to see beyond shallow political dogma and move to a deeper understanding of challenges of technological advance."

George Soros, Chairman of Soros Fund Management

"Doing Capitalism is a magnificent chronicle of how technology combined with economics to forge the beast that is today's financial environment ... A bravura literary debut."

Cambridge Business Online

"Janeway, who built the technology investment team of Warburg Pincus, has a powerful message: an innovative economy 'begins with discovery and culminates in speculation.' Unfashionably, he insists that the state plays a central role in the innovative economy, as a source of funding for infrastructure and research and as a guarantor of stability when financial speculation ends in disaster, as it tends to do."

Martin Wolf, Financial Times (online), "Best Books of 2012"

"... a tour de force with a solid thesis, excellent writing and exposition, and a history that too many have forgotten ... or never knew. Brilliant!"

John C. Bogle, founder of Vanguard

"I highly recommend *Doing Capitalism in the Innovation Economy* by William H. Janeway. The author is a venture capital veteran who provides a fascinating glimpse into a rarified niche of the financial world, especially as to how VC firms funded the first modern technology start-ups of the 1970s and '80s."

Simon Towers, Associate Vice President and Group Manager, Center of Innovation for Tomorrow's Enterprise, Infosys Labs

"... [an] original and thought-provoking book."

John Cassidy, The New Yorker

"If you have ever wondered what the interplay of government, bubbles and venture capital have to do with innovation, this is the book for you ... *Doing Capitalism in the Innovation Economy* is rich in historical references and stories, wise in its philosophy, deep in its evaluation and observation; and a tribute to the life's work of an important investor and constructive thinker. This book is outstanding and deserves your time."

Wall Street Oasis (wallstreetoasis.com)

"'Some books,' said Sir Francis Bacon, 'are to be tasted, others to be swallowed and some few to be chewed and digested.' From a lifetime of reflection and experience, Janeway has produced a book that should be chewed and digested thoroughly."

Sanjay Unni, Quantitative Finance

"A rewarding memoir about the learning, training and life experience required to achieve mastery in the venture economy."

Kirkus Reviews

"This is one of the most intelligent, sensible and insightful books about Wall Street published since the financial implosion of 2008."

Robert Teitelman, Slate

"Janeway is a well-informed economist as well as a successful venture entrepreneur, and he argues for the importance of government in the nation's economic growth."

Jeff Madrick, NYRB

"Drawing on 40 years of experience in venture capital ... Janeway offers detailed accounts of several incidents from history, emphasizing the role of the state. This ... will find its ideal audience among the market-savvy."

Publisher's Weekly

# Doing Capitalism in the Innovation Economy

Reconfiguring the Three-Player Game between Markets, Speculators and the State

**Second Edition** 

William H. Janeway



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