PAUL SCHULTE

THE NEXT REVOLUTION IN OUR CREDIT-DRIVEN ECONOMY

THE ADVENT OF FINANCIAL TECHNOLOGY

WILEY

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Advance Praise for The Next Revolution in Our Credit-Driven Economy: The Advent of Financial Technology

This book is a timely and comprehensive description of the rapidly changing financial world. It covers not only the changing role of financial institutions but is also one of the first to analyze the profound impact of technology and big data on financial institutions and transactions. There is no question that the tens of billions of dollars in fines levied on the banks will change their ways of doing business. But, when a world top bank announces that it is hoping major institutional depositors will withdraw at least a hundred billion dollars in deposits, something serious must have happened. The book covers, in everyday language, the lead-up to and the current status of this transformation. Best of all, the author draws on his extensive BRIC experience to differentiate an increasingly regional market despite much hyped "globalisation." It is also a must read for the practitioner, as the author goes beyond descriptions to investment strategies.

—Charles Liu, founder and former chairman of Hao Capital, and financial technology pioneer in China

Throughout history, dictators have abused their control of finance to subjugate people and destroy economic vitality. Paul Schulte's exceptional understanding and international experience permit him to show simple metrics by which all can measure when and how finance is abused to the detriment of investors. He shows, moreover, that advancements in technology now offer both the means and a process by which the world can end this sad saga, for everyone's benefit.

—Frederick L. Feldkamp, attorney; co-author of *Financial Stability: Fraud, Confidence, and the Wealth of Nations* (Wiley, 2014)

Paul Schulte's book is brilliant, witty and has penetrating simplicity. He moves beyond connecting the dots for a sneak peek on how online-to-offline credit is the Jedi lightsaber which is behind the rise, fall, and renaissance of livelihood, lifestyle and power hubs globally. His book prisms the perfect storms and vast opportunities as Wall Street, Corporates, Government and Digital Continents align and disrupt. Spotlighting the urkraft of bank credit, Schulte presciently lays out how mobile, wireless and cloud data analytics are turbocharging the jump over the garden wall for vast pools of money—the lifeblood of business, nonprofit funding and government. The canvas Schulte unrolls reads like a thriller in fiction—entertaining and more jolting because it is nonfiction.

—Camille Tang, president and co-founder, ConvenientPower Group

After the global financial crisis of 2008, the Queen of England wondered why all the country's economists had failed to sound warnings. Financial instabilities are inherently unpredictable; all you can do is clean up afterwards, quoth Greenspan. But in this important book Paul Schulte explains how crises can indeed be foreseen. For our lifetimes, economic "growth" has been driven by the expansion of credit. Failure to account adequately for the overwhelming importance of credit has led governments and central banks to miss obvious warning signs. Warning signs of another type are being missed today by many of the world's major banks. The second half of this book analyses how their revenue streams are under attack, while their costs are driven ever higher by regulators and governments. This will inevitably lead to the ultimate irony: "too big to fail" will be rephrased as "so big, it must fail." Customers may be winners; shareholders assuredly will not. At least Queen Elizabeth and Jamie Dimon should read this book. You should, too.

—Nick Sallnow-Smith, former UK Treasury civil servant; former company treasurer and ex-banker

This book ties together the unethical practices of banks with the growing financial and wealth-gap crisis destabilizing our world.

—Max Keiser, editor and host, *The Kaiser Report*

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Credit allows us to spend money we don't have, to buy goods we don't want, to show off to people we don't like. More prosaically, excessive credit creation over the past half century has fuelled a series of rolling asset price booms and busts to which the solution has always been to create even more credit. Schulte, unlike most policymakers, understands the relationship between credit and real life. This timely work explains these inter-linkages and how the technology and big data revolution is spawning new models of financial intermediation that threaten the very existence of traditional banks.

—Simon Ogus, CEO, DSG Asia Limited

Paul is one of the most astute commentators in his understanding of the financial architecture globally. This book gives the reader a ringside seat into the fast evolving creative destruction that is engulfing the financial services industry in the aftermath of the global financial crisis which has altered the regulatory landscape permanently. This interplays with the lightning-speed evolution of Internet-led fulfilment of underserved areas in this space. A tectonic shift is in the making. This book is a must-read for anyone following financial markets.

**—Amit Rajpal, global banks portfolio manager,
Marshall Wace**

This book will bolster Paul's already substantial reputation as a stimulating, original thinker and skilled polemicist. Written in clear, declarative sentences (as he says, "anyone" can understand the arguments), the first section of The Next Revolution in Our Credit-Driven Economy *argues for the central role of credit and the credit cycle in economic analysis and financial valuation. He offers insightful recommendations on investment in multiple assets classes through the credit cycle. The book's second section is a wakeup call to bankers on the disruptions to commercial banking's "business as usual" attitude posed by new financial technologies. His observations are telling; his conclusions persuasive.*

**—Eugene K. Galbraith, deputy president director,
PT Bank Central Asia Tbk**

Mr. Schulte brings a definitive element of "been there, done that" to his insightful text about how the financial world truthfully operates. As he states from the beginning, he wants to explain it like he was talking to his grandmother, and he delivers. That which appears to be beyond the grasp of the loudest spokesmen of today's Economic Ivory Towers, Paul lays out with the clearest of common sense and the most obvious of logic—CREDIT MATTERS! This text should be highly recommended to any student of Finance and Economics. It should be made compulsory for any practicing central banker.

—David Dredge, co-chief investment officer, Convex Strategies Group, Fortress Investment Group

Paul Schulte elucidates the impact of the credit cycle on our economies, our politics, and our lives. In the process he provides tools for us to profit from the cycle and to avoid catastrophe when it turns down. The book should be read by financial professionals, regulators, political leaders, and anyone trying to manage a portfolio, even a personal portfolio, of investments.

—William Overholt, president, Fung Global Institute

Paul Schulte's book outlines in depth the growth of credit in our economy and the importance of the credit cycle as a key driver in both economic growth and investment returns. His illustration of the pendulum swing of the credit cycle and identification of the consistent mistakes made during boom/bust cycles will surely be helpful to those who make business and investment decisions across the global markets. Schulte then helps guide us to the beginning of the cross-section of technology and finance, a merger of two worlds that will likely dominate the global economic discussion for the next decade.

—Minh Duc Do, senior vice-president, Gerson Lehrman Group

Facebook, Alibaba, Big Data, geopolitics, crowdsourcing, the Great Recession and 13,000 pages of the Dodd-Frank Act. What do all have to do with an industrial revolution in banking and financial services? To quote William Gibson, the revolution is already here; it is just unevenly distributed. Bankers and the regulators who are meant to provide the guardrails for the bankers may not quite know that the revolution is underway; the visionaries, the paranoiacs and the insurgents know it already. Once this lucidly written and brilliant account by Paul Schulte is evenly distributed, everyone will know about the revolution, what the revolution is being driven by and who might be expected to survive it. With compelling explanations of the impact of credit on economic fundamentals, the changing global financial architecture and chapters on the anatomy of a credit crisis, readers get a "front row seat in this technological slugfest." Those who do not pick up a copy of this book do so at their peril.

—Bhaskar Chakravorti, senior associate dean of International Business and Finance, the Fletcher School at Tufts University; founding executive director, Institute for Business in the Global Context

Schulte has a rare gift for explaining in simple terms the extraordinary importance of banks, credit, and regulators in modern economies—how their irresponsible behavior has devastated lives, toppled governments, and collapsed economies the world over. He adds to this some provocative thoughts on the future of banks and credit in a bit-driven world, posing the question of whether banks as we know them will survive the challenges of the digital revolution. Schulte depicts banking and its uncertain future with rare clarity.

—James Stent, external supervisor, China Everbright Banking Corporation

The Next Revolution in Our Credit-Driven Economy

To Rob Citrone, Eric Bushell, Adam Levinson, and David Halpert—four pairs of sturdy shoulders on which to stand.

Whoever controls the volume of credit in any country is absolute master of all industry and commerce.

—James A. Garfield, 20th President of the United States

O Fortune
Like the moon you are changeable,
Ever waxing and waning.
Hateful Life first destroys wealth and then gives abundance
As Fantasy takes over.
Poverty and power are, in turn, melted like ice.

—Carl Orff, "O Fortuna," *Carmina Burana*

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Acknowledgments

This book has been ripening in my head for several years during the literally thousands of meetings I've had with hedge fund managers, mutual fund managers, and policy makers in central banks, as well as ministers and senior bureaucrats in national development entities on five continents. In addition, when I worked for the Minister of Finance of Indonesia and spent two years working at the White House in Ronald Reagan's second administration, I received a "behind the scenes" look at the way in which this thing called monetary policy is made. It is always a mix of politics, accommodation to bankers, a desire to keep ahead of the guy across the pond, spurious national security considerations, and mostly back-of-the-envelope calculations.

That said, over the years a few very smart people in the money management business have challenged me to leave my comfort zone and push forward into the unknown to answer some thorny questions. And sometimes they have inspired me to write the unpleasant truth about financial markets, which, while working in the crocodilian world of investment banking, had put my career as an analyst at risk from time to time.

So I would like to mention a few of these people who have coerced me to lay it all on the line. Dave Dredge, in particular, has been a great mentor over the past 25 years. Jeremy Kranz has been a wonderful interlocutor. Amit Rajpal has been a great sounding board and I consider him the best bank analyst around. Other intellectual leaders who have helped me are Gao Xiqing, Byron Gill, David Courtney, Chris Mikosh, Jack Malvey, Alex Muncerow, Frank Wang, Tomonori Tani, Simon Ogus, and Todd Tibbetts, a great friend for the past 25 years. A very special thanks goes to Fred Feldkamp, who was gracious enough to go through every line of the book and bring out some vitally important conclusions that were lying just beyond the horizon but were not visible to me from the map room. In addition, I am very grateful to Jim Stent, one of the smartest commercial bankers I have met in my 25 years in Asia. Without fear or favor, he went through the book line by line and made valuable changes.

Thanks to Gavin Liu and Christian Ng for editing and fact checking.

About the Author

Paul Schulte has his own consulting firm called Schulte Research. He is a 25-year veteran of equity and fixed income research in Wall Street firms. He is a Senior Fellow at the Council on Emerging Market Enterprises at the Fletcher School at Tufts University. He has been a Visiting Scholar at Hong Kong University of Science & Technology for eight years. He is also a Visiting Scholar at the University of Hong Kong. He has taught in MBA programs in China, the United States, the United Kingdom, and Brazil, and lives in Hong Kong. He previously worked at the National Security Council in Washington, D.C. His other books are *Cravings for Deliverance* and *Healing Weary Hearts*.

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Introduction: A Few Numbers Can Crack the Code

The genesis of this book lies in a simple question that I put to more than a thousand of the M.B.A. students I taught over the past 16 years across five continents, many of whom had degrees in economics from New York University, the University of Chicago, Harvard, Columbia, Berkeley, or the London School of Economics. They would *always* get it wrong.

I would draw a simple supply-and-demand curve on the chalk board and ask students a simple question: What causes a change in demand for goods and services? They would say it was changes in tastes, technology, demographics, income, substituted goods, and so on. These are the usual suspects peppered throughout economics books. They offer a partial explanation, but something far more fundamental is missing.

Yet when I would ask them how they buy just about anything (how they increase demand in their own lives), almost all of them would say they use credit—credit cards, layaway plans, mortgages, student loans, small business loans, vendor financing, loan sharks, and so on. How on earth can we all look at a supply-and-demand curve and leave out the one thing that seems to be the underlying determinant of demand—the availability of credit? The answer is deceptively simple.

It seems that credit is the lifeblood of the economic body, yet we all just assume it is there and will always be there. Why? Because until a few years ago, it *was* always there. And it has been there for the past 70 years. Credit is the oxygen of the economy, yet the study of economics has repeatedly left it out of the equation. Look at the first five chapters of any economics book and you might find a few scattered paragraphs on credit, but typically that is it. Incredible!

Think about it. From cradle to grave, our decisions are based on how much credit we can manage to scrounge up. The kind of christening or bar mitzvah we can have depends on it. When we can own our first home depends on it. The scale and timing of our wedding depends on it. It is vital to the kind of education we can receive. How we retire and how we are buried depends on it. The quality of our health care depends on it. All of our major decisions about life revolve around the availability of credit. And yet none of these very bright students—many of them the cream of the crop, and some of them currently serving as money managers and policymakers—recognized that credit is a critical determinant of demand.

I will concede that this is a reasonable mistake. Since the end of World War II in 1945, the Western world has had positive credit growth in just about every year in and out for 70 years—three generations! These students would need to go back in time to the era of their *great*-grandparents to find a time when credit shrank for a significant period of time. This was during the Great Depression. The reason these students did not realize that credit is a vital determinant of demand is because it has just been there all their lives, like oxygen. Their parents and grandparents depended on it.

Not anymore. In the past few years, we have seen a compression in credit (let's call it a depression in credit) for the first time since the 1930s. What was assumed to be there as a given by a generation of the elite future leaders of our time is simply gone, vanished. As we will see, the warning signs were right there in front of us, just as they were in front of us during the Asian crisis in 1997. Indeed, in the twilight of 2014, we see credit growth for the entire Euro-zone dip into negative territory for the second time in four years.

U.S. credit growth is scrimping along in the single digits after going negative for several quarters from 2009 through 2013. It has only started to take off a little bit since mid-2014. The buoyancy of these numbers is belied by the large amount of credit being thrown at the student loan market (to retrain adults or to keep adults out of the job market?) and the mortgage market (through the FHA, which is blithely giving 95 percent mortgages to questionable buyers) by implicitly guaranteed government credit.

This book is about the importance of credit and the way it drives the prices of just about everything that investors touch: equities, bonds, currencies, real estate. The evidence that shows the connection between consumption and credit during a cycle is obvious and will be laid out clearly and persuasively. A quite reasonable starting point for investment strategy—or even portfolio construction for a high-net-worth individual—should begin with grounded knowledge of the credit cycle for a country.

Equity valuations, house prices, bond prices, and currency values are derived from the credit cycle of a country. Income, inflation, capital formation, and other economic data sets come from credit, not the other way around. Looking at economics without regard to credit is a flawed experiment. The science of economics did not predict in any way, shape, or form the crisis of 2008. Furthermore, it claimed that the crisis of 2008 could not happen. So much for the modern school of economics! Something else must now be tried.

As an investment strategist and bank analyst for more than two decades, I have met with thousands of fund managers globally, and I contest that there are only a handful who understand the credit cycle and its implications. These are often current or former bank analysts or CIOs who have a mixed mandate for both equity and credit. Oddly, bank analysts, for instance, are seen as "separate" from corporate analysts in money management firms and are seldom utilized in asset allocation decisions. This is an astounding phenomenon. Indeed, the bank analysts should form the foundation of the portfolio allocation. Too often their work on credit and liquidity is left alone in the "too difficult" pile, and many corporate analysts are left with examination of such secondary and derivative trivialities as economic variables, revenues, costs, and price-to-earnings ratios (P/Es). These come after liquidity and solvency—not before! If an investment firm can have only one industry analyst, it should be a bank analyst. The rest is superfluous in comparison.

This book will show that trends in credit have an overwhelmingly powerful effect not only on stock prices but also on asset prices (houses and buildings) as well as the price of currency. In other words, when the credit cycle is on the upswing, the prices of equities, real estate, and currencies tend to appreciate at the same time. They are just as driven by these movements in credit as the moon is driven to rotate around the earth. Economic data pour forth from credit dynamics.

The phenomenon we see today is one where new forms of technologies are being created to allocate capital more efficiently. It is that simple. Banks have shown themselves to be out of touch when it comes to the allocation of capital and the management of risk. So, in a world where the cost of capital is zero, firms are attracted like a magnet to inefficient organizations that cannot change with the times and that mismanage their own core businesses. Furthermore, these institutions are so big that they are arguably incapable of change. Banking is a glaring example, although these titanic changes are occurring in education, retail, and many other industries.

While this disruption is happening, there is a great deal of debt from the last cycle that still needs to be warehoused until it matures. Central banks are accommodating this deleveraging (think of deleveraging as shrinkage) of credit by allowing loans that can no longer be held by banks to drop onto their balance sheets. This is contractionary. So, people who say that central banks are printing money are deluded. It is simply not true. In fact, the opposite is the case.

In similar fashion, when the curtain comes down on the credit cycle, equities, real estate, and currencies almost always tumble at the same time. The United States is closer to the end of the cycle, while Europe has a long, long way to go. This is why Euroland growth is so anemic. This book will dissect the various stages of credit trends and show how various asset classes react at these various stages. We will provide a kind of timetable for getting in and out.

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