The Capital Markets

The Capital Markets

Evolution of the Financial Ecosystem

GARY STRUMEYER
WITH
EXECUTIVE EDITOR,
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WILEY

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Preface

Throughout my career in financial services as an author, educator, and sales executive, and president of a broker dealer, I continue to be amazed by the lack of understanding that the average person has about the evolution of our global capital markets ecosystem. This condition, if left unchecked, can easily become untenable and dangerous in our highly regulated, hyperconnected, tech-saturated world. This book—the first of its kind post–Financial Crisis—will serve as an antidote to this condition. I have assembled the right team—practitioners, academics, and economists—to present clearly in these pages the fundamentals necessary for both professionals and nonprofessionals to learn about what makes up our capital markets ecosystem.

Gary Strumeyer

Acknowledgments

First and foremost I wish to single out the driving force behind our literary adventure by expressing my deepest appreciation and unqualified gratitude to our consummate editor in chief, Dr. Sarah Swammy. Through her ability to find, recruit, and sign the best, most qualified authors, combined with her benevolent taskmaster persona and her laser-like focus on submitting the final drafts well in advance of the original deadlines, she brought to life the vision of this book and ensured the high quality of its contents. She shares with me my belief in the power of thought leadership and motivated the host of talented writers and thinkers to bring this project home with efficiency, speed, and grace. Thank you, Sarah, for your many contributions to this work—chief among them keeping me ahead of schedule.

Specials thanks are due to Alberto Baptiste and Peter Borish. Al got the ball rolling by providing us with key resources early in our progress. He was integral in kicking off this endeavor, enabling us to attract industry leaders as contributors. I am also grateful to Peter for his guidance, insight, and connecting us with the Robin Hood Foundation.

I would also like to express my gratitude to all of my friends and colleagues who shared their experience, market insight, time, and contacts to make this book comprehensive and successful: Joe Gaziano, Larry Harris, Ron Hooey, Joe Keenan, Dena Mandara, Lenny Scotto, and Sam Schwartzman.

Thanks, again, to all of the contributors not only for their brilliant submissions but for helping us to identify the trends and subject matter relevant to the evolving financial ecosystem.

Gary Strumeyer

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Gary M. Strumeyer is the former president of BNY Mellon Capital Markets, LLC, a registered broker-dealer subsidiary of The Bank of New York Mellon Corporation ("BNY Mellon").

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Gary served on BNY Mellon Operating Committee and Executive Steering Committee of BNY Mellon's Women's Initiative Network where he was a mentor and sponsor. Formerly, Gary served on the board of directors of the Cambodian Children's Fund and was a member of the National Association of Securities Dealers (NASD) Corporate Debt Market Panel.

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The Capital Markets

PART One

Introduction and Tools

CHAPTER 1

The Early 21st-Century Evolution of Global Capital Markets

The Great Transition Era

Jack Malvey

INTRODUCTION

The pace of economic evolution varies and is told in real time by fluctuating global capital markets. New technologies arrive, displacing old ways. Political frameworks oscillate between centralized and decentralized approaches to economic affairs. Regulators shift between more or less economic and market oversight. Economic policies alternate between stimulus and restraint. Corporate finance trends swing between high and low financial leverage. Healthier, longer-living people migrate in search of better opportunities. Economies rise and fall. Industries soar and skid. Firms come and go. Institutional and individual investment philosophies adapt to new products like ETFs and revisions in expected return and risk tolerance assumptions. Currencies and commodities climb and descend based on general economic prospects and idiosyncratic market conditions like demand and supply. Changes in market psychology favor some economic and industry groupings over others.

The signs of economic evolution are all around us and often can be seen more clearly through a long-term lens. Each one of us has a unique, personal, observational journey. Although oblivious at the time, I grew up in a kind of U.S. economics laboratory. At the peak of the Baby Boom years, in the early 1960s, the intersection of three major highways in sprawling suburban Northern New Jersey persuaded developers to launch three full-sized malls. A fourth mall was added in the early 1970s. Routes 17 and 4, which ran north–south, also were flanked by a nearly continuous strip of car dealerships, diners, camping stores, bathroom fixture and tile sellers, furniture stores, and even a bowling alley and a roller-skating rink. Paramus, New Jersey, where Routes 17 and 4 met the Garden State Parkway, quickly transformed from a truck-farm center selling produce like corn and tomatoes, which it had been until the late 1950s, into a post–World War II American shoppers' paradise.

Particularly during the holiday season, the density of the highway traffic and the scarcity of mall parking spaces provided a real-time indicator of general economic conditions. The famous circular flow diagram from Economics 101 was fully enacted. People

The Capital Markets: *Evolution of the Financial Ecosystem*, Gary Strumeyer and Sarah Swammy

worked and earned so that they could shop. Even in the tender years of our adolescence, my childhood friends and I questioned the adult population's apparent dedication to the "shop-until-you-drop model" in often heavily congested malls.

Somehow, this retail business model regularly failed over the years. Despite their alluring decorative displays in this hubbub of prodigious economic activity, most of the retailers of my youth have long vanished. Gimbels, Bamberger's, Korvettes, Ohrbach's, Sterns, Alexander's, Herman's Sporting Goods are all gone, killed by a combination of excessive debt; overexpansion into too many malls; business-cycle downturns; the arrival of less expensive competitors; and, for the fortunate few, acquisition by nimbler firms.

This life-cycle pattern of industries and firms is hardly confined to retailers. Over the past half century, industry sectors like airlines, auto manufacturers, communications, conglomerates, financial institutions, mining, media, oil and gas producers, railroads, real estate, and technology providers have all experienced bouts of intoxicating prosperity, periods of abject gloom, and mass extinction events. Popular industry stalwarts like Pan Am, TWA, McDonnell Douglas, American Motors, Circuit City, Chemical Bank, Texaco, Penn Central, GTE, Dalton's, and Digital Equipment have disappeared.

Similar transformative structural and cyclical tides have rippled through regional economies, sovereign nations, and non-U.S. firms. Designated as China's first Special Economic Zone, Shenzhen, China, sprouted from a town of 330,000 in 1980 to a metropolitan area of 18 million by 2016. While among the most spectacular growth stories of the past four decades, Shenzhen does not stand alone. The skylines of Seoul, Tokyo, Bangkok, Singapore, London, New York, and many other urban centers have been re-sculpted by the erection of new structures that look like the cover of a science fiction novel set in the 23rd century.

Like the forensic criminologists on the popular *C.S.I.* TV programs, the task of the capital markets profession (economists, corporate financial managements, portfolio managers, security analysts, and strategists) is to search for explanatory clues to government, industry, and issuer success and failure across the vast global financial system of at least $405 trillion on May 31, 2016, on the way to $4.0 quadrillion by 2050, as shown in Figure 1.1.

FIGURE 1.1 Capital markets: Growth industry; global financial asset choice set: May 31, 2016, and projected to 2050*

*Projected cagr as shown above based on our historically derived assumptions. 1) Barclays fixed income indices data as of May 31, 2016, except U.S. commercial and industrial loans (May 25, 2016), non-agency U.S. MBS (December 31, 2015), and cash and cash-like (see below); 2) Global equity market capitalization per Bloomberg; 3) Data as of June 30, 2015, per Preqin; 4) U.S. data as of December 31, 2015, and non-U.S. real estate estimated from U.S. share of global GDP; 5) Notional amounts outstanding and gross market value data per BIS as of December 31, 2015, and may not add up exactly to total due to rounding; 6) Cash and Cash-Like: Sum of M2 money supply for Brazil, Canada, China, Eurozone, Hong Kong, India, Japan, Russia, Singapore, U.K., and U.S. and converted to U.S.$ using most recent data and exchange rates as of May 31, 2016; dates of most recently published data do not exactly match. Global Financial Asset Choice Set intended to be a representation of various market values as defined by the footnotes above and should not be construed as a complete representation of all assets or markets. Sum of asset class components and all asset classes may not add up exactly to total due to rounding.

Source: BNY Mellon using data from FactSet, Bloomberg, Barclays Live, IMF, BIS, Preqin, Raconteur.net, and Reserve Bank of India

Global Cash Financial Market Value Size (U.S.$ Billion)			
	5/31/2016	*CAGR (%)*	*12/31/2050*
Total Debt[1]	**128,509**		***1,202,155***
Multiverse Index	48,989		*696,111*
U.S. Aggregate Index	18,940	*6%*	*142,084*
Pan-European Aggregate	14,659	*8%*	*209,903*
Asian-Pacific Aggregate	9,689	*10%*	*261,680*
Global High Yield	2,317	*10%*	*62,584*
Canadians	1,157	*3%*	*3,216*
Euro Yen	13	*3%*	*35*
Other	2,214	*6%*	*16,609*
Global Inflation-Linked Securities Index	2,518	*5%*	*13,609*
Global Capital Securities	725	*2%*	*1,438*
U.S. Municipal Bond Index	1,429	*5%*	*7,721*
Global FRNs	841	*1%*	*1,186*
Russia, India, and China Aggregate Indices	3,518	*10%*	*95,002*
Short-Term Indices	4,865	*6%*	*36,497*
Non-Agency U.S. MBS, U.S. Hybrid ARMs	641	*4%*	*2,487*
U.S. Commercial & Industrial Loans	2,060	*4%*	*7,996*
Cash and Cash-Like[6]	62,924	*5%*	*340,107*
Total Equity	**67,275**		***698,305***
Global Common Equity[2]	63,110	*7%*	*655,073*
Private Equity Funds[3]	4,165	*7%*	*43,232*
Total Debt and Equity	**195,785**		***1,900,460***

Global Real Estate Asset Value Size (U.S.$ Billion)			
	5/31/2016	*CAGR (%)*	*12/31/2050*
Real Estate/Land[4]			
Non-U.S. Real Estate	146,107	*7%*	*1,516,558*
United States	48,912	*5%*	*264,369*
Total	**195,019**		***1,780,927***

Global Derivatives[5]	Size (U.S.$ Billion)			
	Notional	**Market Value**		
Commodities	**1,320**	**297**		***1,605***
Gold	286	75	*5%*	*405*
Other commodities	1,034	222	*5%*	*1,200*
Currencies	**70,446**	**2,579**		***30,472***
Forwards and forex swaps	36,331	947	*6%*	*7,104*
Currency swaps	22,750	1,345	*8%*	*19,259*
Options	11,365	287	*8%*	*4,109*
Credit Default Swaps	**12,294**	**421**	***10%***	***11,370***
Interest Rate Contracts	**384,025**	**10,148**		***274,107***
Forward rate agreements	58,326	114	*10%*	*3,079*
Swaps	288,634	8,993	*10%*	*242,886*
Options	37,065	1,042	*10%*	*28,143*
Equity Derivatives	**7,141**	**495**		***13,369***
Forwards and swaps	3,321	147	*10%*	*3,970*
Options	3,820	348	*10%*	*9,399*
Other	**17,685**	**558**	***10%***	***15,071***
Total	**492,911**	**14,499**		***345,995***

Grand Total	**405,302**	***4,027,382***

Long-term predictive success hinges on a command of politics, demographics, history, economics, finance, quantitative methods, technological knowhow, and psychology.

The pursuit of capital market diagnostic excellence can be daunting. A weekday never passes for financial markets without fresh releases providing economic, industry, issuer, rating agency, central bank, and regulatory information. This data torrent can sometimes obscure the more important determinants of capital market valuations and induce random-walk noise trading.

For example, the interpretations of local central bank governors' speeches may be quickly canceled out by the remarks 24 hours later by another governor from the same central bank. An inordinate emphasis can be placed on highly volatile and often subsequently revised economic statistics like the U.S. monthly employment report.

CAPITAL MARKET MISSION AND KEY CAPITAL MARKET QUESTIONS

It's generally accepted that all categories of investors seek to optimize their risk-adjusted returns, income, or capital preservation in accordance with their chosen time horizon, risk tolerance, and bespoke portfolio constraints (e.g., environmental, social and governance (ESG) standards). Concurrently, all types of financial security issuers seek to limit their cost of capital. The myriad competing investor and issuer quests is sorted out in the capital markets.

The main function of global capital markets is to match capital savers with capital needers. In most societies, there are some governments, individuals, and enterprises that do not spend their entire income. These delayers of consumption thereby save. In contrast, there are governments, individuals, and firms that spend more than their income. If such spending is partially dedicated to the funding of existing enterprise expansion and the formation of new businesses, then such excess spending is deemed to be investing.

Through this around-the-clock market process, the value of every stock, bond, currency, commodity, real estate unit, and collectible is established. Most of these determinations are made via some form of electronic exchange. But many also are formed through various types of auctions.

As usual, the textbook condensation of complex activities does not fully illuminate the activities, excitement, and consequences of the capital markets mission. The study of capital markets can help shed light on some of society's important questions like:

- Why are construction cranes working almost continuously in certain cities, while nearly invisible in other urban centers?
- Why do retail clothing stores and restaurants come and go at such a high turnover rate?
- Why do some businesses last for decades?
- Where does the capital come from to sponsor the creation of new firms and technologies that improve the quality of life for billions of people?
- What explains the vast difference in borrowing rates among nations?
- What is the proper balance between fiscal and monetary policy?

- Should nations strive for a strong or weak currency?
- Should a firm finance its expansion through common stock, preferred stock, senior debt, junior debt, or convertible debt?
- Why do certain works of art sell at more than $100 million? How are prices determined for rare coins, stamps, antiques, and sports memorabilia?
- Where does the money come from that pours into institutions like mutual funds, hedge funds, endowments, insurance companies, and pension funds? And what are these institutions really trying to accomplish with their money?
- Will ZIRP (zero-interest rate policies) and NIRP (negative-interest rate policies) by central banks really prove effective in stimulating advanced economy growth?
- Will global banks be able to smoothly "normalize" their policies in the late Teens/early Twenties without inflicting an economic growth pause and chilling, perhaps only briefly, capital market risk-taking?
- Will virtual currencies and block chain methods become more prevalent?
- Does inadequate liquidity, especially for credit instruments, pose a systemic risk for markets?
- Are global trade flows helped or hurt under various types of trade agreements?
- What are the principal causes of slow productivity growth despite a near-unanimous sense of accelerated technological change so far in the 21st century?
- What are the best future career fields? Will the arrival of more robots significantly displace huge portions of the workforce?
- How should portfolios be diversified, and how often should asset class allocations be adjusted?
- Who will pay and how much to curb climate change?
- Will long-living retirees have sufficient financial resources to fund their post-working lives?

POST–GREAT RECESSION, GLOBAL CAPITAL MARKETS CHART A MORE CONSERVATIVE COURSE

Approaching a decade after its onset in 2007 and more than seven years after its supposed conclusion in 2009, the Great Recession and its aftershocks continue to reverberate through the global financial system. In various forms, social unrest ferments from Iraq to Syria to Turkey to Greece to Belgium to France to England and to the United States. This lurking social unrest spills over into unexpected plebiscite outcomes, like the United Kingdom's decision in June 2016 to leave the European Union.

In many parts of the world, good jobs and real wage advances remain scarce. Advanced economy growth dawdles below historic post-recession norms (3.0% or greater GDP growth for at least two-to-four consecutive quarters). Despite ebullient "techno-optimistic" celebrations of coming mammoth industry disruptions authored by big data, 3D printing, nanotechnology, biotechnology, social media, smart communications, fintech, driverless vehicles, robotics, artificial intelligence, virtual currencies like bitcoins, and drones, productivity gains dwindle in a slow-moving economic current