

# The Early 21st-Century Evolution of Global Capital Markets

## The Great Transition Era

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### INTRODUCTION

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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

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.

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**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       |
| <b>Total Debt<sup>1</sup></b>                            | <b>128,509</b> |          | <b>1,202,155</b> |
| 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 <sup>6</sup>                          | 62,924         | 5%       | 340,107          |
| <b>Total Equity</b>                                      | <b>67,275</b>  |          | <b>698,305</b>   |
| Global Common Equity <sup>2</sup>                        | 63,110         | 7%       | 655,073          |
| Private Equity Funds <sup>3</sup>                        | 4,165          | 7%       | 43,232           |
| <b>Total Debt and Equity</b>                             | <b>195,785</b> |          | <b>1,900,460</b> |

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

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

|                    |                |                  |
|--------------------|----------------|------------------|
| <b>Grand Total</b> | <b>405,302</b> | <b>4,027,382</b> |
|--------------------|----------------|------------------|

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**

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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.

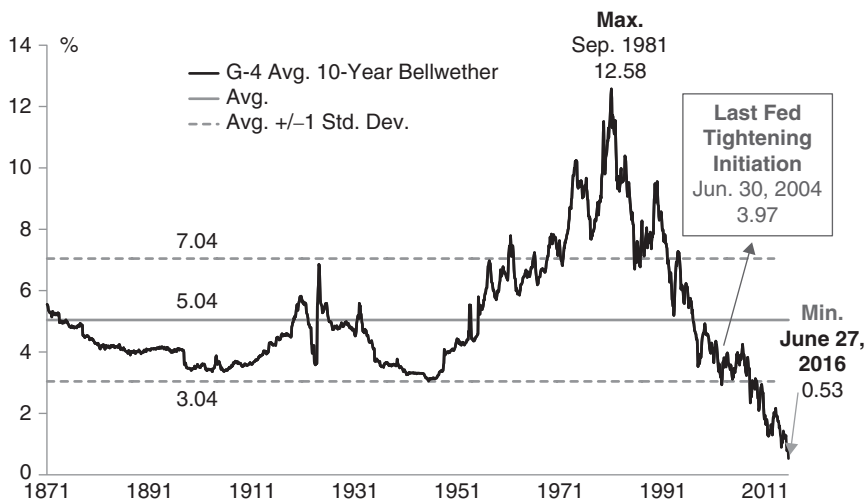
In many parts of the world, good jobs and real wage advances remain scarce. Advanced economy growth dawdles below historic post-recession norms (3.0% or greater GDP growth for at least two-to-four consecutive quarters). Despite ebullient “techno-optimistic” celebrations of coming mammoth industry disruptions 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

characterized as secular stagnation. The skewed distribution of wealth draws rebuke from political populists and the Vatican. Vast new immigration flows perturb long-term residents of some nations. Equities and risky credit asset values ride a bumpy roller-coaster. Precious metals sky, retreat, and then bounce. Energy prices descend to multi-decade lows in 2016 courtesy of fracking, while interest rates tumble to multi-century troughs as shown in Figure 1.2 and even fall into unprecedented negative territory for Japan and large parts of Europe. The U.S. dollar, yen, and the euro engage in seesaw contests to ascertain the least favorite major currency of all, while China aspires to global reserve currency status.

Chronic wariness rules the capital market mindset in the Teens. And little wonder. “Manipulated” market valuations (especially suppressed bond yields) rest on pillars of unprecedented economic stimulus largesse, especially from central banks. Policymakers are assailed for doing too little or too much. In many investment arenas, the search for portfolio alpha generation has morphed into sideline-standing, index-hugging capital preservation. Returns from alternative investment strategies, particularly by macro hedge funds, have proven less bountiful and consistent.

The strategic-outlook haze seldom has been thicker. Inspired by ideological and theological divisions, geopolitical uncertainties abound in this new “multipolar world” of the early 21st century. The menu of proposed political and economic remedies to exit this “high state of uncertainty” grows ever longer.

Deep structural forces shift the tectonics of the global financial system. A multiple-generation escalation of financial leverage in all forms has crested and begun to recede,



**FIGURE 1.2** Record low G4 10-year interest rates (%): 1871 to June 27, 2016\*

\*Germany, Japan, U.K., and U.S.; closest substitute available used when 10-year government bond yield data unavailable.

Source: BNY Mellon using data from Global Financial Data and Bloomberg

albeit at a glacial pace. While undeniably an overall benefit, globalization comes with a price in the form of displaced industries and workers. EM economies converge to advanced economy status through their ascent of the production value chain. Systemic uncertainties, especially in financial services, have bred a well-intentioned quest by regulators to suppress potential instability through additional oversight. Stoking echoes of the 19th century and the 1930s, the efficacy of capitalism has even been called into question.

The progression to the mid-21st century likely will follow a hybrid of three main scenarios: first, an unlikely return to the Goldilocks milieu of bounding risky asset valuations during the mid-1980s and mid-1990s; second, a perpetuation of chronic malaise for advanced economies spanning all of the Teens and consuming much of the Twenties (see Japan's experience since 1989); third, and closely related to the second scenario, a muddle-through, risk on/risk off, range-mired global financial system mainly waiting for the passage of time to eventually rekindle dormant animal spirits.

This "Great Transition" of the global financial system poses vast implications for financial industry business models. The ill-prepared, rooted mainly in the traditions of the past, will be "reengineered" into "adaption capitulation" or obsolescence. "Fast-mover adaptation assimilants" will seize their fields.

## **ACCURATE FINANCIAL ERA DEFINITION HELPS CHART BUSINESS AND PORTFOLIO STRATEGY**

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Most intellectual disciplines assign a broad label to each major phase of their historical evolution. While unable to match the taxonomic diversity of geology and biology, physics and economics can be divided roughly into classical, modern (neoclassical), and postmodern periods. This practice of "era categorization" extends to financial markets, where the capricious ebb and flow of business and valuation cycles gives rise to an abundance of defining labels.

For any field, especially financial markets, no single universal label completely fits an era. Nonconforming theoretical and information outliers often coexist with mainstream perspectives. Despite centuries of convergence, the fortunes of local economies frequently deviate from the global norm. And secular global financial market labels usually fail to encompass the prospects of technological advances, productivity enhancements, and history-altering geopolitical events like the rise of the "Arab Street" in 2011 and ISIS/ISIL in 2014. Instead, many professionals, who know they cannot reliably predict the price of a 10-year Treasury a week in advance, place too much faith in multi-decade forecasts of economic parameters like growth, deficits, interest rates, savings, and investments generated by linear data extrapolations via spreadsheet analytics. History convincingly shows the fallacy of overreliance on secular forecasts of financial market metrics to characterize an era. For example, the U.S. government falsely was thought as recently as 2000 to be running budget surpluses for as far as the eye can see.

The sources and appropriate remedies for the profound and repeated systemic financial malfunctions from the onset of the Asian Financial Crisis in 1997 through the dot-com bubble in the late 1990s and its collapse in 2000, the U.S. corporate governance

deficiencies in 2001–2002, the real-estate bubble detonating, financial-deleveraging Great Recession of 2007–2009, and its damaging offspring, the Sovereign Credit Crisis of 2010–2012, have been thoroughly parsed. Like the multidiscipline excavations of the root causes of the Great Depression of the 1930s, the search for deeper interpretations equipped with historical forensics, especially the persistence of “anticipation failure” by the policymaker and investor consensus, will occupy scholars for decades. Triggered by the difficult experiences of 1997–2011, especially 2007 through early 2009, and reinforced by a multitude of lingering uncertainties, a neither first, nor last, “New Conservative Financial Consensus” has dawned in this “Great Transition Era” that will long endure in our opinion.

For policymakers and strategic investors, the formation of expectations about the future format of the global financial system should rank higher than the mental exhaustion incurred from absorbing the ever-changing, herd-dominated tactical prophecies of capital market values. The contemplation and ultimate selection of a strategic template to define a financial era can enhance the forecasting prowess and ensuing organizational success of capital market institutions. Multiple candidates like “Capitalism 4.0,” “The Rise of EM,” “The Grand Convergence,” “The Great Deleveraging,” “The Consumer Bust,” “The Clash of Generations,” “The Age of Financial Reform,” “The Post–Great Recession,” and “The Second Great Contraction” vie for the best title to encapsulate this 2007–2030 era. Each holds a valid yet partial claim on characterizing this unfolding period in capital market history. Paralleling recent political reorientations in the United States and parts of Europe, “The Great Transition Era” serves as the most comprehensive portrayal of the present and medium-term financial milieu in our view.

Under the aegis of this Great Transition Era, economic policymaker, regulatory, legislative, credit rating agency, and even judicial overseers have switched from a minimalist, do-not-tamper-with-legal-market-activities approach to a cautious, interventionist, prophylactic philosophy focused on sound banking rules, higher capital requirements, liquidity fortification, and discovery of willing or unintended malfeasance. “Expected risk” now takes precedence over “expected gain.” The first question has become “what can go wrong?” rather than “what’s the upside?” The maintenance of liquidity and minimization of valuation volatility have climbed the “micro” financial decision-making checklist. Ironically on a macro basis, the application of the “New Conservative Financial Consensus” has entailed the pursuit of prosperity through fiscal austerity consistent with a political repudiation of Keynesian economics.

Economic, market, industry, and issuer forecasts are justifiably viewed as malleable projections of the future, dependent upon model mechanics and the regular recalibration of assumption inputs. The daily din of instantaneous, conjectural reactions to new financial system data has been properly classified as occasionally useful “background noise,” to be methodologically overridden by rigorous analyses. The heady pace of financial innovation from the mid-1970s through the mid-Oughts, which featured the introduction of Treasury futures and options, ABS, CMOs, swaps, modern high-yield and emerging-debt markets, and CDS has stalled in the Teens. The global financial system has installed new antiviral software, expelled toxic components like certain structured credit products such as CDOs, and has rebooted with higher defensive firewalls.



By definition, a *consensus* does not imply unanimity. Indeed, anti-consensus, contrarian investment strategies frequently reap generous rewards. Accordingly, all aspects of the “Next-Generation Financial System” will not be found in harmony during “The Great Transition Age.” Risk-taking has not been entirely vanquished. The pursuit of absolute and relative returns, an increasingly more arduous chore in the late Ought-Teens regime of low interest rates, demands the assumption of some portfolio risks. And as evidenced by the gradual globalization and asset class range extensions of the portfolio management choice set for plan sponsors, sovereign wealth funds, and endowments, the steady march out of the “nominal risk curve” has not and will not be curtailed by the “New Conservative Financial Consensus.” But this seeming contradiction can be quickly resolved by switching to a “risk-adjusted framework.” Anachronistic portfolio constraints, from local market-only anchors to credit-quality restrictions and asset-class eliminations, probably impinge risk-adjusted alpha over the long run more than active management errors.

## **THE GREAT TRANSITION AGE UNFOLDS**

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In the aftermath of all major financial calamities, pledges to more cautious, systemic-stress mitigating, safety-first methods are widely promulgated and willingly embraced by policymakers and survivors. The longevity of such “professions of prudence” is usually proportional to the magnitude of the dislocation. Given the colossal damage inflicted by the Great Depression of the 1930s, many capital market institutions in the 1970s still could be found navigating in accordance with four-decade-old, conservative financial philosophies. As a result, restrained government and corporate financial leverage, tepid consumer borrowings, and plan sponsor preference for higher bond than equity allocation generally prevailed until the early 1980s. The global financial system of 1945–1972 still regularly succumbed to local recessions and negative reappraisals of key capital market values. But the periodicity of shocks and amplitude of valuation responses paled in comparison to the successor era of 1973–2016, inaptly once thought to be emblematic of a “Great Moderation” macroeconomic triumph.

As with its more severe predecessor in the 1930s, the painful Great Recession of 2007–2009 and malingering uncertainties like the growing probability of European and U.S. recession recidivism in the late Teens/early Twenties, augmented by the United Kingdom’s departure from the European Union, have inspired a well-warranted embrace of government, policymaker, corporate, consumer, investor, and institutional financial conservatism. An outbreak of fiscal rectitude has descended upon European and U.S. governments. Corporate capital cushions and liquidity provisions have been fortified. Consumer spending growth has waned in advanced economies, while savings have blossomed. To the benefit of the global financial system, the recent “lessons learned” and re-learned (see Figure 1.3) will inform mainstream economic, issuer, portfolio, legislative, and regulatory policies throughout the Teens and beyond.

In some ways, little learning progress has been made over the past century. In Bruner & Carr’s *The Panic of 1907: Lessons Learned*, the following catalysts for

- Inadequate big-picture thinking about economic/capital market evolution and risk.
- Like industries and individual firms, global economic and global financial systems periodically require tweaking and even major overhaul.
- Ignorance/ignoring of rich capital market history of past two centuries can be highly hazardous to portfolios.
- Global trade and capital flow imbalances are not sustainable infinitely.
- Residential and commercial real estate valuations do not continuously escalate and are highly correlated.
- Reoccurring systemic and idiosyncratic credit misdiagnoses continue to plague world financial system.
- Government, financial institution, and consumer financial leverage have risk limits and need to be recalibrated lower.
- Excessive reliance on short-term financing.
- Complete consideration of high fluctuations in liquidity.
- Regular fallibility of institutions (certain financials, rating agencies, regulators), financial risk models, risk surveillance.
- Antiquated regulatory and government oversight methodologies need overhaul, with enhanced global coordination and additional scrutiny of rating agencies and certain types of alternative managers.
- Rate of financial innovation exceeded “comprehension speed limit.”
- Inter-asset-class correlations can be disturbingly high.
- Hazards of yield maximization and understaffed asset management firms.

**FIGURE 1.3** Lessons Re-learned from Great Recession (2007–2009)

the Panic were cited: complexity of system architecture; buoyant growth for a while; inadequate safety buffers; adverse leadership; real economic shock; excess fear and greed and strange behaviors; and failure of collective action.<sup>1</sup> Hopefully, variations of the same lessons are not reintroduced in yet-to-be-written histories of future severe panics, manias, and crashes. But such optimism may be misguided. As John Kenneth Galbraith wrote in *A Short History of Financial Euphoria* in 1993, “Recurrent speculative insanity and the associated financial deprivation and larger devastation are, I am persuaded, inherent in the system. Perhaps it is better that this be recognized and accepted.”<sup>2</sup>

Guided by the Grand Convergence of political, economic, finance, and portfolio management methods, the world economy ironically has become more asymmetric since the mid-1990s. Advanced economies did not miss a beat during the Asian Financial Crisis of

<sup>1</sup>Robert F. Bruner and Sean D. Carr, *The Panic of 1907: Lessons Learned from the Market's Perfect Storm* (Hoboken, NJ: John Wiley & Sons, 2007).

<sup>2</sup>John Kenneth Galbraith, *A Short History of Financial Euphoria* (New York: Penguin, 1994).

1997–1998. And the Great Recession largely spared emerging nations thanks to a commodity price bloom until 2015. EM economic ascendance likely will persist well into the 2020s. But having bottomed in 2009, advanced economies are envisioned to deliver below full potential growth of 1.5%–2.0% out to 2025.

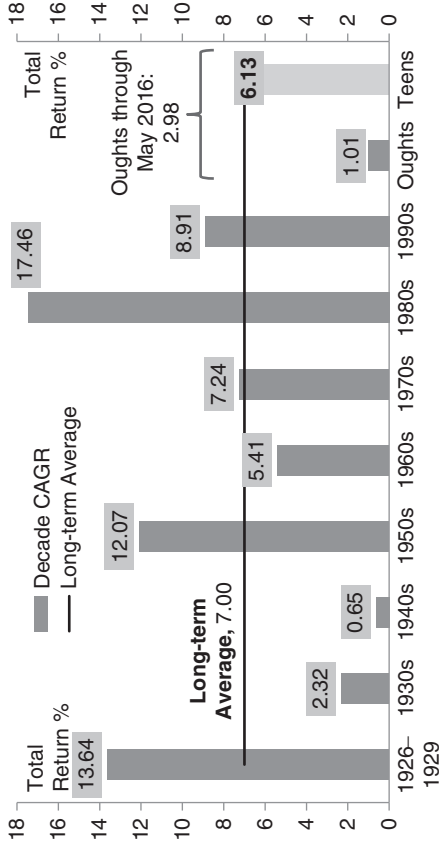
In the Q2 2009 through Q2 2015 recognition of this AE economic rebound, unfolding conservative financial era, and gusher of restorative liquidity injected by monetary policymakers, risky financial asset valuations recorded extraordinary gains as shown in Figures 1.4 and 1.5 (global financial asset returns by decade). Volatility for most financial asset classes tumbled. Emerging market valuations boomed. Adjusting for record European, Japanese, and U.S. corporate cash holdings, effective corporate financial leverage dipped. Money markets normalized. The lowest interest rates since the 1950s inspired a massive surge in debt refundings and trimmed borrowers' cost of debt capital. Steep yield curves abetted financial institution recovery. Corporate mergers and acquisitions rose. Rating downgrades and defaults plummeted.

## **NO TRANSITIONS ARE FRICTIONLESS**

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While vastly improved from early 2009, global financial conditions in the late Teens are hardly idyllic. Structural aftermath questions linger. Bonds arguably entered bubble territory in 2010 and remain partially disconnected from fundamentals thanks to the policy ministrations of central banks. Greece tottered on the brink of de facto default in 2015 and could still instigate a systemic “European Contagion” across its periphery sufficiently potent to trip up a few key major banks and to derail the euro. The United States barely sidestepped a perilous excursion into unprecedented default territory on August 2, 2011, earning an S&P AAA to AA+ rating rebuke along the way, as Washington struggled to overcome a vast ideological divide to raise the U.S. government debt ceiling. Great Britain voted to leave the European Union on June 23, 2016. The Brexit process may be emulated in France, Holland, Italy, and TBD. Scotland may conduct another referendum to leave the United Kingdom, and Northern Ireland may opt to merge into the Republic of Ireland. Several additional European sovereigns and portions of the U.S. public finance sector like Puerto Rico require fiscal remediation. Real estate has recovered slowly in parts of the world and may already be cyclically peaking in some areas. Structural unemployment resists easy resolution in the United States and Europe.

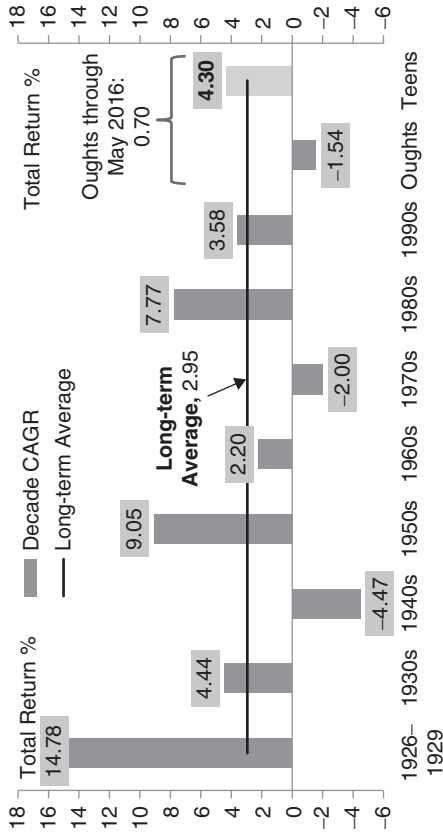
The frayed Washington Consensus has inspired new flavors of capitalism and mildly reinvigorated a long-settled debate about the merits of globalization. A global legion of experts and official overseers has introduced a lengthy and sometimes contradictory prescription list of regulatory cures, often without confirming benefit-cost analyses. Acute political partisanship, though genuine, is side-by-side with and often obscures intense battles among income levels and commercial interests protecting and expanding their benefits and privileges. In several Western democracies, a contentious, intransigent political process thwarts the crafting of compromise and application of intelligent solutions, like using the tax code to incent production and restrain consumption, to complex political-economic problems.



|                        | Periodic Compound Average Annual Growth Rates (%) |                               |                               |                                |             |  |
|------------------------|---|-------------------------------|-------------------------------|--------------------------------|-------------|--|
|                        | 1926-1999   | 1946-1999                     | 1970-1999                     | 1980s                          | 1990s       | Oughts                                 |
| Global Equity          | 9.34  | 11.19                         | 12.11                         | 6.96                           | 20.77       | 9.09                                   |
| Global Bond            | 4.79  | 5.48                          | 9.07                          | 7.16                           | 12.03       | 8.08                                   |
| Global Financial Asset | 7.91  | 9.07                          | 11.12                         | 7.24                           | 17.46       | 8.91                                   |
|                        | <b>1926-1980-<br/>May 31, 2016</b>                | <b>1980-<br/>May 31, 2016</b> | <b>2010-<br/>May 31, 2016</b> | <b>Oughts<br/>May 31, 2016</b> | <b>2016</b> | <b>Oughts through<br/>May 31, 2016</b> |
| Global Equity          | 7.76  | 8.35                          | 6.90                          | -2.60                          | 1.01        | -0.27                                  |
| Global Bond            | 4.88  | 7.88                          | 4.48                          | 5.84                           | 5.30        | 4.07                                   |
| Global Financial Asset | 7.00  | 8.42                          | 6.13                          | 1.01                           | 2.98        | 1.53                                   |

**FIGURE 1.4** Nominal global financial asset returns by decade\*: 1926 to May 31, 2016

\*Global Financial Asset: 60% weighted return of Global Equity and 40% weighted return of Global Bond. Global Financial Asset portfolio is rebalanced monthly. Global Equity: from 1926 to 1987, Global Financial Data World Total Return Index (U.S.-dollar) is used; MSCI-Hedged World U.S.-dollar Index from 1988 to current. Global Bond: from 1926 to 1986, Global Financial Data Global Total Return Government Bond Index; from 1987 to 1989, Barclays Global Treasury Index; from 1990 to 1998, Barclays Global Aggregate Index; from 1999 to 2016, Barclays Multiverse Index is used. Global Bond U.S.-dollar hedged after 1986 and Global Equity U.S.-dollar hedged after 1987. Financial asset total return series begins in 1926; Global Equity total return except from 1988 to current. *Source:* BNY Mellon using data from Global Financial Data, FactSet, Barclays Live, and Bloomberg



|                        | Periodic Compound Average Annual Growth Rates (%) |           |           |       |       |       |        |           |                             |       |
|------------------------|---|-----------|-----------|-------|-------|-------|--------|-----------|-----------------------------|-------|
|                        | 1926-1999   | 1946-1999 | 1970-1999 | 1970s | 1980s | 1990s | Oughts | 2010-2016 | Oughts through May 31, 2016 | 2016  |
| Global Equity          | 5.11  | 4.97      | 3.96      | -2.26 | 10.80 | 3.75  | -5.06  | 5.06      | -1.22                       | -1.16 |
| Global Bond            | 0.46  | -0.41     | 1.14      | -2.07 | 2.78  | 2.79  | 3.16   | 2.68      | 2.97                        | 3.15  |
| Global Financial Asset | 3.45  | 2.97      | 3.04      | -2.00 | 7.77  | 3.58  | -1.54  | 4.30      | 0.70                        | 0.63  |

|                        | 1926-        | 1980-        |
|------------------------|--------------|--------------|
|                        | May 31, 2016 | May 31, 2016 |
| Global Equity          | 3.93         | 3.33         |
| Global Bond            | 0.91         | 2.87         |
| Global Financial Asset | 2.95         | 3.39         |

**FIGURE 1.5** Real global financial asset returns by decade\*: 1926 to May 31, 2016  
 \*Global Financial Asset: 60% weighted return of Global Equity and 40% weighted return of Global Bond. Global Financial Asset portfolio is rebalanced monthly. Global Equity: from 1926 to 1987, Global Financial Data World Total Return Index (U.S.-dollar) is used; MSCI-Hedged World U.S.-dollar Index from 1988 to current. Global Bond: from 1926 to 1986, Global Financial Data Global Total Return Government Bond Index; from 1987 to 1989, Barclays Global Treasury Index; from 1990 to 1998, Barclays Global Aggregate Index; from 1999 to 2016, Barclays Multiverse Index is used. Global Bond U.S.-dollar hedged after 1986 and Global Equity U.S.-dollar hedged after 1987. Financial asset total return series begins in 1926; Global Equity total return except from 1988 to current. Source: BNY Mellon using data from Global Financial Data, FactSet, Barclays Live, and Bloomberg

Secular outlook confidence gained and then waned since the chaos of early 2009. In turn, tactical market sentiment has oscillated in a bipolar pendulum between recovery euphoria and reoccurring bouts of doubt sufficient to entertain economic contraction conjectures. Corporate and consumer animal spirits remain subdued in the late Teens. All layers of the global financial system continue to deleverage, a most welcome trend for both debtors and creditors. But this “debt-downsizing adjustment” will require years to complete and leave scars as evidenced by peripheral Europe and all layers of U.S. governments. As manifest in the proliferation of long-term forecasts, outlook horizons have never been longer and risk-mitigation culture seldom has been more worshipped. Abetted by technology, macro and micro risk vigilance has been generationally and possibly permanently enhanced. The ever-stronger interdependence of the global financial system has been widely acknowledged and has induced an erosion of regional and asset-class siloization. In turn, this has bred a desire for greater global policymaking and regulatory harmonization.

The blueprint for the Next-Generation Global Financial System has been cast; the detailed construction and adoption phases have begun. Business models will require major recalibration, both in anticipation and after detailing of new regulatory rules. To the possible detriment of arresting structural unemployment in the United States and Europe, the ability of accommodative monetary policy to offset fiscal conservatism remains unknown. The forecast divide between possible deflation now/inflation later for advanced economies has not been resolved.

Guided by a desire to invest in rapid economic growth and a quest for yield maximization, global trade and capital flow imbalances persist in favor of emerging-market nations and may worsen with potential deployment of currency and trade protectionist policies. The endurance of export-driven Modern Mercantilism and low-saving Western Consumerism cannot be predicted. A grand rebalancing ultimately must be implemented; the economic mechanisms and especially political willingness to achieve sustainable global capital flow equilibrium are unclear. As displayed by soaring values for precious metals and bitcoins again in 2016, confidence in the ability of certain major currencies, like the U.S. dollar, to serve as a permanent store-of-value rather than a depreciating asset has diminished. While highly unlikely to lose its role in the foreseeable future, the status of the U.S. dollar as the world’s reserve currency will continue to be questioned as an inevitable transition to a multipolar world economic regime unfolds. And until full resolution of several European sovereign credit concerns, the destiny of the European currency union and the euro will entice conjecture about the modern meaning of “risk-free government securities.”

A potential strategic upward reset by the early Twenties of medium- and long-term interest rates on possible inflation reignition in advanced economies, a broad asset allocation shift from bonds to equities, and further economic normalization have inspired apprehension of higher debt capital costs and refunding roadblocks for some debt asset classes like lower-quality credits. The fates of the mortgage-finance agencies, Fannie Mae and Freddie Mac, are obscured by political considerations. Bond market perturbations likely will emanate from the Fed’s slow march to higher short-term interest rates over the late Teens and eventual paring of its quantitative-easing balance sheet horde of U.S.

debt securities. The capability of emerging-markets to sustain their enviable surge over the past decade and to withstand embryonic inflation and a possible retreat of hot capital flows has been called into question.

The exponential rise of algorithmic trading has not peaked. In the spirit of efficiency maximization, heeding the siren's call of allegedly superior quantitative methods, and ironically sometimes at the expense of rigorous fundamental differentiation, high-speed trading has shrunk investment horizons at many institutions. Except for ETFs, next-generation contingent bank capital structures like CoCos, and Islamic Finance, new financial product innovation largely has stalled since 2007. Securitization and derivitization have regressed into the plain-vanilla methods of the 1990s. And as demonstrated in 2001, a terrorist shock and sudden escalation of geopolitical risk could dim expectations at any time. The specter of systemic cyber-disruption has become more real.

### **THE NEW CONSERVATIVE FINANCIAL CONSENSUS SPEEDS THE TRANSITION TO THE NEXT-GENERATION GLOBAL FINANCIAL SYSTEM**

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Over the coming decade of the Twenties, the increasingly complex and inseparably interwoven global economy and global financial system face a gauntlet of deep adjustments. The accelerating geographic rearrangement of manufacturing, resource, technology, services, health care, and education introduces profound questions about the structural destiny of the global and, even more so, many local economies. In advanced economies, the combination of escalating entitlement obligations emanating from aging populations and a concurrent desire to rein in government deficits can only be rectified through some politically challenging combination of benefit reductions and tax increases. The construction of new measures of international and national economic vitality would aid in smoothing the path to a 21st-century fiscal rectitude that eschews pork-barrel spending, targets benefits only to those truly in need rather than the politically potent, and funds projects after rigorous cost-benefit analyses. And as demographics and fiscal constraints stretch social safety nets in advanced economies, many emerging economies will grapple with their initial fabrication.

Globally, long-run savings may not match burgeoning infrastructure investment demand from a rising middle-class in emerging nations. The possible scarcity of investment capital may escalate capital costs and crowd out some traditional borrowers from financial markets. The global flow of human capital in pursuit of superior economic opportunity accelerates with each passing generation and engenders difficult-to-forecast economic and social knock-on effects. Attempts to arrest global climate change will shape government, industry, issuer, and investor decision-making in a yet-to-be determined manner. For instance, the rate of acceptance of electric cars and alternative energy sources like solar and wind will help determine the longevity of high dependence on fossil fuels. And the anticipated opening of the Arctic Passage will charge lower-cost trade between Europe and Asia. Meanwhile, geopolitical risks in the Middle East loom as a constant presence.

Akin to the discovery quest for dark matter, the search for and retention of asset management excellence (risk-adjusted absolute returns and relative-value alpha) will become more difficult. Many traditional informational advantages have been dissipated by technology, new analytics, the substitution of expert independent research providers for generic sell-side research, enhanced macro-market expertise by supranational organizations (e.g., BIS, IMF, World Bank, Asian Development Bank), local central banks, and a prodigious expansion of a more proficient 24/7 financial media. And absolute returns have been compressed in a sea of surfeit liquidity, sponsored by stimulative-minded central banks.

This ongoing upgrade of the global financial system under the auspices of a conservative mantle will extend beyond the Teens. This lengthy transition will not be without cost. While espousing the virtues of free markets, nation-state participation in economic affairs will advance. As firms compete in brand power, product quality, and costs, nations will vie to attract business via modest corporate tax rates, low real wages, and high-quality human capital. Central bank oversight likely will be increased, leading to the possible politicization of monetary policy. The regenerative bypass of traditional-banking endeavors, under the well-intentioned guidance of Basel III, to raise capital and liquidity, to the less-regulated, shadow banking system will reintroduce systemic vulnerabilities. European and U.S. economic performance may remain subdued for a long period as institutional and retail balance sheets embrace deficit and debt diets. The social consequences of extended austerity ultimately will become conspicuous as evidenced by the late 2011 flurry of disjointed protests and the 2016 presidential campaign of Bernie Sanders directed against Wall Street and big banks. To the detriment of the restraining prudence of moral hazard, a handful of key systemically important financial institutions effectively will stay too big to fail. At the potential expense of liquidity and allowing for some resurrection of the shadow banking, the world financial system has become lumpier with rising aggregations of investment capital in sovereign wealth funds and very large asset management firms. And periods of pronounced secular adjustment always re-sort economic, industry, and issuer leaders and trailers, often in unpredictable ways.

## **STURDIER GLOBAL FINANCIAL SYSTEM PROMOTES WORLD ECONOMIC GROWTH**

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Conservatism alone does not immunize the global financial system from setbacks. Structural adjustment frictions will not dissipate. Business cycles will persist and possibly feature shorter-duration amplitudes accompanied by waves of high volatility. Complete global financial, environmental, and tax regulatory harmonization remains a distant goal. The eventual abatement of massive monetary and fiscal stimulus in the late Teens/early Twenties may spur a minor, temporary growth retreat and diminution of systemic liquidity. Some risk complacency will cyclically reoccur when markets enjoy a long spell of relative calm, new enlistees join the capital market profession, and partial amnesia of 2007–2009 sets in at some institutions. Individual economies and asset classes occasionally will stampede upward at rapid velocities prior to bubble bursts. Periodic and



sometimes negative short-term fluctuations of capital market parameters are an inevitable feature of capitalism.

Financial systems are always partially beholden to the governments that set up the laws and rules that guide their operations. Just as professional athletic contests require referees, financial system regulation is an unavoidable accomplice to sound, fair, unbiased, and competitive free markets. Optimal financial markets should promote the general welfare of society through efficient capital allocation to its most productive applications and not facilitate capital detours into schemes like international tax arbitrage. Successful financial systems hinge on a balanced approach by governments. Insufficient oversight can encourage fraud, waste, capital destruction, and less-than-optimal economic growth. Conversely, excessive and capricious government oversight can chill innovation and willingness to take risk by businesses, entrepreneurs, and investors.

Nonetheless as a consequence of the Great Recession, this unfolding conservative re-sculpting of the global financial system into a sturdier edifice will reduce the chances of systemically perilous mishaps, especially along the instigating vectors of the late Oughts. Future economic historians may well cite the evolutionary-stimulative consequences of the Great Recession under the aegis of a New Conservative Financial Consensus as a more important legacy than the containment of its numerous catalysts. A robust, generally stable, efficient global financial system underpins world economic progress. This will reinvigorate strategic confidence, augment capital raising, sharpen capital allocation, spur innovation, unleash new asset management methods, and help speed global economic growth. Eight decades elapsed between the Great Depression and the Great Recession. Hopefully as a result of this Great Transition Age, the distance to the next global financial system spasm of similar magnitude will measure at least eight decades. The global financial system of the late Teens has not attained perfection, but it's far sounder than its predecessors. And its successor iterations over the next two decades will be even sturdier.