

FOREIGN DEBT AND ECONOMIC DEVELOPMENT:  
AN ANALYSIS OF FINANCIAL INSTABILITY IN DEVELOPING ECONOMIES

A Thesis  
by  
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## ABSTRACT

### FOREIGN DEBT AND ECONOMIC DEVELOPMENT: AN ANALYSIS OF FINANCIAL INSTABILITY IN DEVELOPING ECONOMIES (August 2012)

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The recent disruptions within the global financial system have led to a notable reassessment of heterodox economic theories in hope that their unique insights into the capitalist business cycle can help illuminate the underlying instabilities that may have contributed to recent crises. This paper focuses in particular on the work of noted post-Keynesian economist Hyman P. Minsky and his associated theories of financial fragility and the inherent instability of modern financial capitalism. This thesis will emphasize the theoretical foundations of Minsky's work, notably his *financial instability hypothesis*, and then apply this conceptual framework to the recent Asian financial crisis of 1997-98. This analysis is supported by a quantitative overview of both domestic and international economic data primarily focusing on the variables commonly attributed to Minskian financial fragility; primarily capital investment, asset prices, and credit expansion. Careful examination of these factors leads to the conclusion that the Asian financial crisis was a prime example of Minsky's *financial instability hypothesis*. Emerging

economies in East Asia were consumed in a mania of debt financed over-investment and asset speculation, increasingly funded via foreign capital through loans from international commercial banks. Consequently, these respective economies were accumulating distressing levels of financial fragility underneath their much-applauded veneers of perpetual growth and wealth accumulation.

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## I. INTRODUCTION

The widespread turmoil inflicted upon the global economy over recent years by the convulsions of the financial system has prompted the reappraisal of economic thought previously relegated to the fringes of the academic and financial communities. This thesis examines the theories and potential applications of one such economist, Hyman P. Minsky, who argued that economic stability is inherently destabilizing due to its effects on both the level of private investment, leading to overleveraging, and the gradual undermining of associated capital structures. Minsky's work, termed the *financial instability hypothesis*, provides a thought provoking and timely theoretical framework for examining the recent bout of financial crises that have plagued the global economy. Specifically, this thesis applies Minsky's *financial instability hypothesis* to the Asian financial crisis of 1997-98, and argues that it was largely investment-driven growth, financed through increasingly speculative methods, that led to the accumulated economic fragility that would be the downfall of the high-flying economies of East Asia.

Hyman Minsky developed his *financial instability hypothesis* as an adaptation of the investment-driven business cycle put forward by John Maynard Keynes in his seminal work, *The General Theory of Employment, Interest, and Money*, published in 1936 after Keynes witnessed the truly unprecedented scale of global economic devastation wrought during the Great Depression. Minsky argued that Keynes'

theory, while far superior to the classical paradigm that preceded it, was fundamentally flawed because it did not properly account for the development of the capital structure that supported the investment cycle, and therefore could not adequately explain the potentially destabilizing role of finance in the business cycle. To address this weakness Minsky first bolstered the Keynesian business cycle by incorporating Michael Kalecki's profit equation, derived from a heterodox accounting of macroeconomic stocks and flows, and then integrated this more comprehensive theory of business investment with a deep understanding of the inner workings of the modern financial system. It is this comprehensive framework that will be used to analyze both the domestic and international sources of economic instability that were building within the seemingly unrelenting expansion of the East Asian economies during the early-to-mid nineties.

To provide empirical support for this theory, a quantitative overview of both domestic and international economic data will be used to examine the development of financial instability that provides the backbone of a Minskian framework. National statistics on asset prices, capital investment, credit expansion, and other important variables of economic growth will be used to illustrate the tenuous nature of the respective expansions of the highlighted East Asian economies during the 1990s. It is also noteworthy that analysis of the Asian financial crisis provides an opportunity to utilize Minsky's theory, which has largely been constrained to the study of national economies, on an international scale. This is primarily due to the fact that a principal source of fragility within many of the East Asian economies was their growing dependence on foreign-denominated debt to finance their domestic

spending and investment. Therefore, relevant balance of payments data for each nation will also be incorporated into the final analysis.

Careful analysis of this data bolsters Hyman Minsky's core argument that modern capitalist economies, i.e. those that have developed and matured in the post-WWII period, do trend toward economic instability due to the confluence of the aforementioned factors that Minsky described in his *financial instability hypothesis*. All of the East Asian economies that suffered the deepest downturns during the crisis (Thailand, Indonesia, South Korea, Malaysia, and the Philippines) exhibited the highest levels of Minskian financial instability in the region. The progression of these downturns, i.e. capital flight, plummeting asset prices, large-scale defaults, and massive currency devaluations, also exhibit the features that are expected from a Minskian crisis. Still, it is important to note that the structural causes of financial crises like the one that engulfed East Asia are hotly debated, with many prominent theories offered by the various schools of economic thought.

### **Competing Theories**

Due to the recent economic crises that have afflicted the developed world a plethora of new research and scholarship has appeared focusing on the history and underlying causes of bubbles and busts. Often these new perspectives are linked to the ongoing debate over the recent collapse of the so-called Great Moderation. The almost two-decade period beginning in the early 1980s when economic volatility decreased substantially and steady, low-inflation growth was the norm has come to

a jarring end. As a consequence macroeconomics as a whole is currently in a state of turbulence, as the post-synthesis paradigm of Keynesian and Neoclassical maxims appears to no longer offer obvious solutions to modern economic problems.<sup>1</sup>

The underlying causes of the current lingering financial and economic crises are fiercely debated within both academic and political circles. Some prominent economists, such as Carmen Reinhart and Kenneth Rogoff, have become highly vocal about the role of government debt in both triggering financial crises and lengthening their duration due to the dynamics of debt deleveraging. In particular, they have argued that once a government passes the 90 percent debt-to-GDP threshold it enters a kind of economic no-man's-land, a period characterized by rising interest rates, heightened volatility, prolonged unemployment, and substandard growth.<sup>2</sup> This argument has been reinforced by the spiraling sovereign debt crisis that has tormented the European Monetary Union (EMU). The heavily indebted nations of Greece, Ireland, and Portugal have all ceded large sections of their fiscal sovereignty in order to attain bailout funds from both the European Union (EU) and the International Monetary Fund (IMF) after being effectively locked out of the bond market due to soaring interest rates on their government debt. These events have helped solidify a growing consensus against

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<sup>1</sup> For heterodox alternatives see Steven Kates, ed., *Macroeconomic Theory and Its Failings: Alternative Perspectives on the Global Financial Crisis* (Northampton, Edward Elgar Publishing, 2010), For a critique of neoclassical theory and institutional alternatives, see Douglass North, "Cliometrics - 40 Years Later," *The American Economic Review* 87 (1997): 412-414, and Avner Greif, "Cliometrics After 40 Years," *The American Economic Review* 87 (1997): 400-403.

<sup>2</sup> Carmen Reinhart and Kenneth Rogoff, *This Time is Different: Eight Centuries of Financial Folly*, (Princeton: Princeton University Press, 2009). See also Reinhart and Rogoff, "The Forgotten History of Domestic Debt," *The Economic Journal* 121 (2011): 319-350.

rising levels of government debt and are viewed as clear evidence in support of Reinhart and Rogoff's argument.

Nevertheless, there have been numerous critiques of this rather obsessive focus on the detrimental role that growing levels of government debt play in economic crises. Post-Keynesians, many working under the framework developed by Minsky, frequently criticize Reinhart and Rogoff for the lack of differentiation in their arguments. They posit that you cannot aggregate all sovereign debt together and form such broad and nonspecific conclusions. Particularly, they note that governments that have suffered through sovereign debt crises tended to have at least one of the following characteristics; large debts denominated in foreign currency, a fixed exchange rate (including adhering to a commodity-backed standard), or membership within a currency union. In all of these cases the respective governments were not "monetary and fiscal sovereigns," i.e. they did not have fully domestic control over their fiscal and monetary policy.<sup>3</sup> Therefore, it is misguided to strictly compare their subsequent fiscal problems with nations who maintain such sovereignty. The combination of relatively high levels of government debt and historically low interest rates seen in countries like Japan, the United Kingdom, and the United States provide cogent support for this argument, as they are highly antithetical to Reinhart and Rogoff's general thesis.<sup>4</sup>

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<sup>3</sup> See Yeva Nersisyan and L. Randall Wray, "Does Excessive Sovereign Debt Really Hurt Growth? A Critique of This Time Is Different, by Reinhart and Rogoff," *Jerome Levy Economics Institute of Bard College*, Paper 603 (2010).

<sup>4</sup> For an in-depth analysis of the difference between sovereign and non-sovereign currency see L. Randall Wray, *Understanding Modern Money: The Key to Full Employment and Price Stability*, (Cheltenham, UK: Edward Elgar Publishing, 1998).

A more internationalist approach to financial crises that has become increasingly popular in recent years centers on the concept of global imbalances, primarily within trade and capital flows, and their distorting effects on domestic economies.<sup>5</sup> Ben Bernanke famously advocated for this theory in a 2005 speech where the future Chairman of the Federal Reserve coined the term “global savings glut” (GSG).<sup>6</sup> Bernanke argued that excessive net savings in emerging markets (mainly China and the oil exporting nations) were flowing into the United States bond market, artificially suppressing interest rates and helping to fuel asset prices through the expansion of cheap credit, largely in the form of subprime mortgages. These financial flows also augmented the growing demand for seemingly “riskless” AAA investments, a need that was satisfied by the rise of mortgage-backed securities.<sup>7</sup> With this framework Bernanke tied together global capital flows, the rise of structured finance, and the resulting asset price speculation in the US housing market.

Popular economic historian Niall Ferguson further reinforced this model in his 2008 book *The Ascent of Money* with his introduction of “Chimerica” into the economic vernacular. Ferguson presented America’s debt-driven consumption and the Chinese desire to accumulate foreign exchange reserves as a kind of symbiotic

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<sup>5</sup> For an example of the widespread adoption of the “global savings glut” see “The great thrift shift,” *The Economist*, September 22, 2005.

<sup>6</sup> For details of the original text of the speech see Ben Bernanke, “The Global Saving Glut and the U.S. Current Account Deficit” (speech, Sandridge Lecture to the Virginia Association of Economists in Richmond, Virginia, March 10, 2005).

<sup>7</sup> After becoming Fed Chairman Bernanke further developed his theory in B. Bernanke, C. Bertaut, L.P. Demarco, and S. Kamin, “International Capital Flows and the Returns to Safe Assets in the United States, 2003-2007,” *International Financial Discussion Papers*, Number 1014, (2011).

relationship that formed between the world's largest debtor and creditor nations.<sup>8</sup> Americans, in Ferguson's view, were able to maintain their abnormally high levels of consumption through a combination of increased consumer debt and artificially cheap Chinese imports. The Chinese benefitted by subsidizing their labor-intensive coastal export industry while also accumulating the foreign exchange reserves that the developing world covets after the financial crises of East Asia, Russia, and Argentina in the late 1990s. Ferguson further argues that the situation is fundamentally unsustainable and is likely to end in yet another financial crisis.<sup>9</sup>

This GSG theory of financial crisis has been severely criticized in the years since Ben Bernanke's original speech. Harvard economists David Laibson and Johanna Mollerstrom illustrated in a 2010 paper for the National Bureau of Economic Research (NBER) that global savings rates did not exhibit the robust rise one would expect if there were truly a global glut.<sup>10</sup> They also argue that America's twin bubbles in housing and consumption were not indicative of a global excess of savings, which should have manifested itself as an investment boom in the recipient countries (as was the case in East Asia during the 1990s). Further criticism of the GSG can be found in an influential paper from researchers at the Bank of

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<sup>8</sup> For Ferguson's initial writings on "Chimerica" see Episode 6 in Niall Ferguson, *The Ascent of Money: A Financial History of the World* (New York: Penguin Press, 2008). This was later expanded upon in Niall Ferguson and M. Schularick, "The End of Chimerica," *International Finance* 14:1 (2011): 1-26.

<sup>9</sup> Niall Ferguson, "The End of Chimerica: Amicable Divorce or Currency War?" Testimony to United States House of Representatives, Committee on Ways and Means, Washington, DC, March 24, 2010.

<sup>10</sup> David Laibson and Johanna Mollerstrom, "Capital Flows, Consumption Booms and Asset Bubbles: A Behavioral Alternative to the Savings Glut Hypothesis," *National Bureau of Economic Research*, Working Paper No. 15759 (2010).



International Settlements (BIS) published in 2011.<sup>11</sup> The researchers note that financial flows have come to dwarf the current account movement of real goods and services. For example, they state that in 2010 gross financial inflows to the United States were sixty times the size of the current account deficit. The authors argue that it was the international banking system, mainly large U.S. and European financial institutions, that drove asset price speculation throughout the developed world through the process of endogenous credit creation and excessive leverage. This reformulation of Bernanke's "global savings glut" has been termed the "global banking glut," and finds ultimate culpability in the rise of cross-border speculative lending as opposed to developing world excess saving.<sup>12</sup>

Another theory of financial crisis that has received growing interest in recent years is the concept that income and wealth inequality foster economic fragility and lead to recurrent crises. This argument was at the core of the 2010 book, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, by Raghuram Rajan, a professor of economics at the University of Chicago's Booth School of Business. Rajan argued that a confluence of political and socioeconomic factors such as unequal access to education, the weakened state of labor unions, and skewed tax policy benefitting corporations and the wealthy, have led to the stagnation of working-class wages in America over the past three decades.<sup>13</sup> Meanwhile, the

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<sup>11</sup> Claudio Borio and Piti Disyatat, "Global imbalances and the financial crisis: Link or no link?" *Bank of International Settlements*, Working Paper No. 346 (2011).

<sup>12</sup> For more details on the concept of a "global banking glut" see Hyun Song Shin, "Global savings glut or global banking glut?" *VoxEU*, <http://www.voxeu.org/index.php?q=node/7446>.

<sup>13</sup> Raghuram Rajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy* (New Jersey: Princeton University Press, 2010).

wages at the top of the income pyramid have soared, creating an increasingly large gap between the potential consumption levels of the two groups. According to Rajan this gap was filled with increasingly cheap and easy to attain credit, allowing American families to consume far beyond their means and contributing to both the debt buildup and financial speculation that has led to the most recent crises.<sup>14</sup> This trend of rising inequality is not limited to America, as other scholars have noted that large disparities in wealth and income have been rising across most developed nations over the past four decades.<sup>15</sup>

Noble Prize winning economist Joseph Stiglitz has also argued strongly in favor of the concept that inequality is destabilizing and inevitably leads to economic stagnation and political turmoil. In his recent book, *The Price of Inequality: How Today's Divided Society Endangers Our Future*, Stiglitz argues, much like Rajan, that wealth has been allowed to concentrate and accumulate through the corruption of the political and regulatory system in America over the last four decades. He notes the overarching trend toward unequal economic and political opportunity, as well as the inefficiency and waste that plagues an economy distorted by captured regulators, inequitable tax policy, and corporate welfare purchased through an increasingly monetized electoral system. However, Stiglitz's greatest concern is that

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<sup>14</sup> For more discussion on the role of inequality in financial crises see Michael Kumhof and Romain Ranciere, "Inequality, Leverage, and Crises," *International Monetary Fund*, Working Paper No. WP/10/268 (2010) and M. Azzimonti, E. Francisco, and V. Quadrini, "Financial Globalization, Inequality, and the Raising of Public Debt," *Federal Reserve Bank of Philadelphia*, Working Paper No. 12-6 (2012).

<sup>15</sup> For an in-depth analysis of rising global inequality see James K. Galbraith, *Inequality and Instability: A Study of the World Economy Before the Great Crisis* (New York: Oxford University Press, 2012), as well as Anthony Atkinson, Thomas Piketty, and Emmanuel Saez, "Top Incomes in the Long Run of History," *Journal of Economic Literature* 49:1, (2011): 3-71.

the essential social contract that has buttressed America is being undermined by the expanding inequalities of wealth and opportunity; a stark situation that subverts the nation's capacity for the collective action that is fundamental to a liberal democracy.<sup>16</sup>

Economists Michael Bordo and Christopher Meissner have recently countered this thesis in a 2012 paper on inequality and financial crises. The authors note that credit booms do raise the possibility of economic crisis (a finding agreeable to a Minskian), but argue that their empirical research found no evidence of accelerated credit expansion being caused by rising economic inequality.<sup>17</sup> Instead, they advance the more orthodox argument that low interest rates and high levels of economic growth are the two best indicators of credit expansion. They argue that periods of low and stable inflation, steady growth, and liberalized finance give rise to complacency among borrowers, lenders, and regulators that allows credit to expand at an unsustainable rate. This is a more traditional "boom and bust" argument, with both empirical and theoretical roots that can be found throughout the economic and historical literature.<sup>18</sup>

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<sup>16</sup> Joseph Stiglitz, *The Price of Inequality: How Today's Divided Society Endangers Our Future* (New York: W.W. Norton & Company, 2012).

<sup>17</sup> For a direct counterargument to Rajan's thesis see Michael Bordo and Christopher Meissner, "Does Inequality Lead to a Financial Crisis?" *National Bureau of Economic Research*, Working Paper No. 17896 (2012).

<sup>18</sup> For an analysis of how credit expansion and low interest rates can lead to an economic crisis see Moritz Schularick and Alan Taylor, "Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Crises, 1870-2008," *National Bureau of Economic Research*, Working Paper No. 15512 (2009), and Barry Eichengreen and Kris Mitchener, "The Great Depression as a Credit Boom Gone Wrong," *Bank of International Settlements*, Working Paper No. 137 (2003).

## Minsky and Kindleberger

A noted scholar who utilized Minsky's theories on the modern capitalist business cycle was Charles Kindleberger, who adapted a distinctly Minskian framework to provide the theoretical foundation for his historical account of financial crises: *Manias, Panics, and Crashes: A History of Financial Crises*, first published in 1978.<sup>19</sup> This work deserves an extended discussion because, as a historian of past economic crises, Kindleberger shows how an economic historian can combine a social scientist's eye for narrative with economic theory and meld the two in way that forms a coherent and significant contribution to both fields. Kindleberger emphasized the instability of the credit system, the preponderance of mass irrationality in euphoric cycles, and the asymmetry of information between market insiders and outsiders as key factors in the continual booms and busts of capitalism. But like Minsky, Kindleberger found the most culpability within the banking system, stating in *Manias, Panics, and Crashes* that "The thesis of this book is that the cycle of manias and panics results from the pro-cyclical changes in the supply of credit; the credit supply increases rapidly in good times, and then when economic growth slackens, the rate of growth of credit has often declined sharply."<sup>20</sup> Still, he noted that credit growth is only part of the larger cycle of booms and busts, a dynamic process that he outlined in five distinct stages.

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<sup>19</sup> For the most recent edition of Kindleberger's seminal work see Charles Kindleberger and Robert Aliber, *Manias, Panics, and Crashes: A History of Financial Crises, 6<sup>th</sup> Edition* (New York: Palgrave MacMillan, 2011).

<sup>20</sup> Kindleberger and Aliber, 12.

For Kindleberger the onset of any speculative boom begins with an initial “displacement.” Frequently this shift in the economic landscape arises through the introduction of a new and disruptive technology. Kindleberger also noted that financial liberalization, deregulation, and innovations in banking, all of which can provide greater market liquidity and make credit easier to attain, are also forms of displacement and can initiate the same levels of speculative fervor. This exogenous shock alters the economic outlook and distorts the anticipated profit opportunities of private firms and individuals. Increasingly risky forms of investment are rationalized on the basis of “new paradigms,” as economic activity ramps up and the investment cycle fuels a self-fulfilling surge of production.<sup>21</sup>

These displacements, whether they represent truly significant economic revolutions like the railroad expansion and the tech bubble, or are only thinly veiled mania like the Dutch tulip bubble, all trend toward excess and speculation as they develop. Rising profit expectations lead to an initial burst of investment that flows through the economy resulting in increased employment and growing incomes. This economic expansion typically results in higher asset prices, especially within the sector of the economy benefitting from the displacement shock. Rising asset prices and increasing production are seen as justification of the original displacement thesis. They serve to reinforce the popular narrative and encourage increased investment and speculation. This “boom” stage of the cycle is notable for its high

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<sup>21</sup> Kindleberger and Aliber, 27.

profit margins and fast rising asset prices. This is also the point in cycle where accelerating credit expansion becomes a major driving force.<sup>22</sup>

As the boom continues past forays of speculative investment are rewarded with high profits and capital gains. The natural extrapolation of these conditions into the future provides a fertile ground for the debt-fueled “euphoric” stage that follows. The previously mentioned factors create an environment of cyclically high profits for businesses and low defaults for banks; a perfect recipe for the easing of credit standards as banks compete against one another to meet the growing demand for debt-financed investment and speculation. This part of the cycle is typified by what former Chairman of the Federal Reserve Alan Greenspan famously termed “irrational exuberance.”<sup>23</sup>

Kindleberger notes that this stage is also characterized by what Adam Smith referred to as “overtrading,” or leveraged speculation that is devoid of fundamental analysis.<sup>24</sup> Established methods for analyzing businesses and investments are discarded as outdated and naive. An air of “this time is different” gradually pervades the investment community. Assets are bought solely because they are expected to rise in price. This is justified by the fact that rising prices are all that speculators have known during the recent euphoria. As Kindleberger aptly states, “There is

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<sup>22</sup> Kindleberger and Aliber, 29.

<sup>23</sup> For the infamous “Irrational Exuberance Speech” see Alan Greenspan, “The challenge of Central Banking in a Democratic Society,” (speech, At the Annual Dinner and Francis Boyer Lecture of The American Enterprise Institute for Public Policy Research, Washington, D.C., December 5, 1996.)

<sup>24</sup> Kindleberger and Aliber, 30.

nothing as disturbing to one's well-being and judgment as to see a friend get rich."<sup>25</sup>  
As amateurs and speculators rush into the market rational banks should begin to rein in lending, however; banks are profit-driven firms that are in the business of selling debt, and at the heights of euphoria that business is good.

At this point the cycle has reached an unsustainable mania, as even the easiest of credit conditions can only entice so many buyers, while vastly inflated prices tempt sellers at increasingly high rates. Kindleberger notes that the asymmetry of "insiders and outsiders" plays a key role at this juncture. The former, benefitting from insiders knowledge that current prices are unsustainable, become increasingly anxious to sell and monetize their gains. Meanwhile the latter cannot raise their demand enough to compensate, as too many are already invested and debt levels are maximized. At the point where the selling of insiders overwhelms the buying of outsiders prices begin to collapse, and as there is little to no outside demand left to prop up prices the collapse builds upon itself. This is the "revulsion" stage of the cycle, where debt-financed investors who were betting heavily on rising prices are forced to liquidate their holdings at any price to cover their debts. Selling begets more selling as positions are liquidated and asset prices plunge.<sup>26</sup>

As anxiety spreads the price increases that were once seen as inevitable morph into inescapable declines in the eyes of both businesses and investors. In a financial panic cash becomes king, as other positions are liquidated plummeting prices trigger margin calls and additional declines. Banks become fearful of the

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<sup>25</sup> Kindleberger and Aliber, 30.

<sup>26</sup> Kindleberger and Aliber, 32

destruction that rising defaults will surely inflict on their inflated asset books. They begin to call in loans; further exacerbating the forced selling that is battering prices, while at the same time restricting loans to even the most creditworthy borrowers. Even “Main Street” businesses with little to no connection to the collapsing bubble are threatened as their credit lines are withdrawn, weakening their ability to finance production and payrolls, all in the face of falling demand for their products. Kindleberger terms this the “discrediting” stage of the cycle. The previously accepted narrative of the euphoric boom is shattered by the ensuing crash. He argues that prices only begin to stabilize when either, 1) assets become so cheap that businesses are willing to sacrifice the security of liquidity for potential investment gains, 2) the government steps in with tremendous levels of counter-cyclical fiscal support, or 3) a lender of last resort, generally the central bank, credibly promises to supply unlimited liquidity to meet the rising demand for cash.<sup>27</sup>

Kindleberger noted that this model of economic fragility, strongly patterned after Minsky’s *financial instability hypothesis*, was reliably found within more past bubbles and speculative booms than any other model of financial crises. Self-perpetuating debt cycles and speculative mania are shown to have a long and storied history of interdependent development. From Kindleberger’s work it is clear that the factors identified by Minsky as central to the endogenous cyclicity of the

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<sup>27</sup> Kindleberger and Aliber, 33.



business cycle are timeless.<sup>28</sup> The blending of human psychology with an in-depth knowledge of the inner workings of the financial system has created a robust theoretical framework for historical analysis of both specific crises and the longer-term evolution of capitalism. This is a primary reason why modern scholars are still successfully applying Kindleberger's framework to current crises, most recently the American housing bubble,<sup>29</sup> as well as the current crisis within the European Monetary Union.<sup>30</sup>

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<sup>28</sup> For another excellent example of Kindleberger's unique form of economic history see Charles Kindleberger, *The World in Depression, 1929-1939* (Los Angeles: University of California Press, 1986).

<sup>29</sup> Barkley Rosser, Marina Rosser, and Mauro Gallegati. "A Minsky-Kindleberger Perspective on the Financial Crisis." *Journal of Economic Issues*, Vol. 46:2 (2012): 449-458.

<sup>30</sup> Yves Rannou, "Banking regulation, behavioral finance and the financial crisis in Europe: Looking to the Kindleberger-Minsky paradigm," *Journal of Risk Management in Financial Institutions*, Vol. 3:3 (2010): 278-295.

## II. A MINSKIAN FRAMEWORK

Hyman Minsky (1916-1996) was an American economist and professor commonly associated with the post-Keynesian school of thought. He is most widely known for his comprehensive theory of financial crises in modern capitalist economies. However, before discussing Hyman Minsky's broader theories of the capitalist business cycle it is important to delve into his distinctly heterodox views on money and banking, as they played an outsized role in the formulation of his *financial instability hypothesis*. As Minsky stated in *Can "It" Happen Again?*, "The thesis underlying this book is that an understanding of the American economy requires an understanding of how the financial structure is affected by and affects the behavior of the economy over time."<sup>31</sup>

Minsky adhered to a post-Keynesian view of banking and credit that is commonly referred to as horizontalism, and stands in stark contrast to the verticalist view of credit creation that dominates mainstream economics.<sup>32</sup> Horizontalism is primarily associated with the post-Keynesian school of economics and has been featured in the work of economists such as Basil Moore, Joan Robinson,

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<sup>31</sup> Hyman Minsky, *Can "It" Happen Again? Essays on Instability and Finance* (Armonk, N.Y: M.E. Sharpe, 1982), 15.

<sup>32</sup> For more information on the history of endogenous money see Basil Moore, *Horizontalists and Verticalists: The macroeconomics of credit money* (New York: Cambridge University Press, 1988), and Nicholas Kaldor, *The Scourge of Monetarism* (New York: Oxford University Press, 1982), and Phillip Arestis and M. Sawyer, eds., *A Handbook of Alternative Monetary Economics* (Cheltenham, UK: Edward Elgar Publishing, 2006).

Nicholas Kaldor, Paul Davidson, James K. Galbraith, and Minsky.<sup>33</sup> The theoretical roots of horizontal banking are found in the earlier works of Knut Wicksell, Joseph Schumpeter, Michael Kalecki, and Keynes.

These economists developed their theories in opposition to the standard model of credit creation in economics which holds that the expansion and contraction of the money supply is exogenous; meaning that credit creation is driven by factors outside of the private economy, namely the actions of the central bank. In this model private lending is restrained by the reserve requirement, which mandates that banks hold a certain portion of their deposits on reserve at the central bank. These deposits are used to settle interbank lending and are the primary means through which the central bank conducts monetary policy through the maintenance of the federal funds rate.<sup>34</sup>

The fed funds rate is the standard overnight lending rate for the interbank market and is set by the Federal Open Market Committee (FOMC). The rate is maintained by open market operations (OMOs) where the Federal Reserve buys and sells treasury securities to adjust the supply of reserves in the interbank market in order to equalize the market lending rate with the Fed's stated target rate. Consequently, the aggregate level of reserves in the interbank market at a given time is the result of Federal Reserve policy, with the Fed either adding (through the purchase of treasuries) or subtracting (through the selling of treasuries) reserves

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<sup>33</sup> For an excellent summary of the current state of post-Keynesian economics see, Paul Davidson, *Post Keynesian Macroeconomic Theory, Second Edition: A Foundation for Successful Economic Policies for the Twenty-First Century* (Northampton: Edward Elgar Publishing Limited, 2011).

<sup>34</sup> For an excellent example of orthodox monetary theory see, Gregory Mankiw, *Principles of Macroeconomics, 6<sup>th</sup> Edition* (Mason, Ohio: South-Western College, 2011).

through open market operations as a necessity for maintaining its target rate in the federal funds market. It is primarily through these operations that standard economic theory argues the Federal Reserve is able to control bank lending, and thereby adjust the aggregate money supply to complement current economic conditions.<sup>35</sup>

Interbank reserves, it is argued, directly influences the supply of credit through the money multiplier. According to standard monetarism banks operating within a fractional-reserve system (where banks are required to only hold a set fraction of their deposits on reserve) are able to leverage their regulated reserves in order to facilitate lending.<sup>36</sup> As an example, a bank operating under a ten percent reserve requirement can accept a \$100 deposit, keep \$10 on reserve (either as vault cash or on deposit at the central bank), and lend the remaining \$90 to potential borrowers. In this way banks are said to “create money out of thin air.”

In standard monetarism this expansion of the money supply can be kept in check by the central bank, which can sell treasury securities into the interbank market, thereby absorbing excess reserves and shrinking the monetary base. Because of the reserve requirement this reduction in the monetary base is thought to necessarily lead to a reduction in potential credit. Likewise, an expansion of the monetary base through the purchasing of treasury securities creates excess reserves in the interbank market (often analogized with the dry tinder used in lighting a fire),

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<sup>35</sup> Mankiw, Part VI.

<sup>36</sup> Mankiw, Part VI.

which are understood to be a catalyst for bank lending and the expansion of the money supply.<sup>37</sup>

In orthodox economics banks are also restrained from lending by their deposit bases. Commercial banks are primarily funded through deposits, either from households, businesses, or other financial service firms. The remainder of their financing typically comes from the issuing of debt (mostly through short-term borrowing in the money markets or long-term borrowing through corporate bonds) and their equity capital base.<sup>38</sup> Orthodox economics argues that banks still function in a way recognizable to their ancestors from the era of commodity-backed money. They must compete for deposits (by paying competitive interest rates) in order to then lend these deposits out to businesses and investors at a market lending rate. The potential money supply, and therefore the availability of debt-financed investment, is limited by the available stock of savings. This is the standard model of banks as intermediaries between patient savers with excess money and impatient borrowers short on money.<sup>39</sup>

Minsky firmly rejected this neoclassical model of banking, viewing it as an antiquated relic of commodity-backed money that utterly failed to adapt to the evolution of the modern financial system. Specifically, he argued that both the reserve requirement and the deposit limit were not the essential constraints on

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<sup>37</sup> Mankiw, Part VIII.

<sup>38</sup> Benton Gup and James Kolari, *Commercial Banking: The Management of Risk, 3<sup>rd</sup> Edition* (Hoboken: John Wiley & Sons, 2005).

<sup>39</sup> Mankiw, Part V.

credit expansion that neoclassical economists envisioned.<sup>40</sup> First, Minsky correctly argued that the development of modern central banking had rendered the reserve requirement irrelevant in terms of restricting credit growth. He noted that central bank policy now targets the federal funds rate explicitly, instead of through the aggregate money supply. In other words, the central bank supplies (drains) whatever amounts of reserves are required to lower (raise) the interbank lending rate to match the target rate. As a result of this policy reserves are always readily available within the interbank market at the set rate, and therefore do not inhibit bank lending in the manner they once did when reserves were held in gold (and thus were not freely creatable by the central bank).<sup>41</sup>

Minsky also rejected the argument that banks are passive takers of deposits, financial intermediaries offering competitive rates to attract the funding they need to finance loans. Instead, he adopted the post-Keynesian view that bank loans are self-financed. In the process of creating money banks issue loans (assets for banks, liabilities for borrowers) that generate offsetting deposits (liabilities for banks, assets for borrowers).<sup>42</sup> If these deposits are then transferred out of the bank, maybe to purchase a home or invest in a factory, the bank can fill the financing gap

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<sup>40</sup> Hyman Minsky, "Central Banking and Money Market Changes," *The Quarterly Journal of Economics*, Vol. 71, No. 2 (1957).

<sup>41</sup> This was recently verified in a 2009 speech by the President of the NY Federal Reserve, William Dudley, who stated that, "Based on how monetary policy has been conducted for several decades, banks have always had the ability to expand credit whenever they like. They don't need a pile of 'dry tinder' in the form of excess reserves to do so. That is because the Federal Reserve has committed itself to supply sufficient reserves to keep the fed funds rate at its target." William C. Dudley, "The Economic Outlook and the Fed's Balance Sheet: The Issues of 'How' versus 'When'" (speech, at the Association for a Better New York Breakfast Meeting, New York, July 29, 2009.)

<sup>42</sup> This leads to the famous saying within post-Keynesian economics that "loans create deposits."

through the interbank market for reserves, which has already been shown to supply all desired reserves at the central bank's target rate. Thus, modern banks are not restrained from issuing credit by the neoclassical restrictions of reserve requirements and deposit funding.

As a consequence the money supply is set endogenously, by the demands of the private economy for liquidity, business working capital, investment finance, and so forth. The central bank anchors the base rate of money through the fed funds market, and private banks then set the lending rate based on the general markup needed to cover their costs of operation and attain a desired return on equity for their investors. At this price banks sell their product on the market. Much like automakers sell cars or grocery stores sell food; banks sell debt. They offer their goods at a market price and lend freely to creditworthy borrowers that meet their internally set requirements. Consequently, the ultimate supply of credit within the economy is determined primarily by the lending standards of private banks and the demand for debt from households and firms. The central bank can affect the funding costs for banks, and subsequently raise or lower the general price of debt, but it cannot control the aggregate supply.<sup>43</sup> This is an explicit refutation of the economic orthodoxy; mechanical models of exogenous money and central bank control over credit creation are inoperable remnants of an outdated concept of banking and finance.

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<sup>43</sup> Minsky, "Central Banking and Money Market Changes."

Specifically, Minsky is dismissing a fundamental concept that underlies the neoclassical theory of economics, the argument that savings fund investment. In its place he is adopting the Keynes/Kalecki model that overturns the traditional line of causation, arguing instead that the private investment decisions of capitalists are what allow for the accumulation of savings.<sup>44</sup> The importance of this reformulation of the orthodox model cannot be overstated. By arguing that savings arise from capitalist investment Minsky is casting-off the fundamental underpinnings of the hypothetical loanable funds market that dominates the neoclassical models embedded within orthodox monetary theory. He is also explicitly rejecting the idea of an elastic market rate of interest, an intermediating force that brings passive savings into equilibrium with active borrowers. In its place he substitutes the “cost plus markup” model of pricing mentioned earlier that banks utilize to sell debt, much like nonfinancial firms use to sell their own goods and services.<sup>45</sup>

The endogenous money supply is a critical aspect of Minsky’s broader theory of the capitalist business cycle because it directly relates to the outsized role of financial institutions in modern economies. Because the Federal Reserve cannot directly control the expansion of credit, the banking system is the ultimate arbiter of money within the economy.<sup>46</sup> As previously mentioned, the works of economic historian Charles Kindleberger have shown that both households and businesses

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<sup>44</sup> Hyman Minsky, “Finance and Profits: The Changing Nature of American Business Cycles,” *The Business Cycle and Public Policy, 1929-80*, Joint Economic Committee, Congress of the United States, U.S. Government Printing Office, Washington, D.C. (1980).

<sup>45</sup> Hyman Minsky, “The Financial Instability Hypothesis: A Clarification,” *Hyman P. Minsky Archive*, Paper 145 (1989).

<sup>46</sup> Minsky, “Finance and Profits,” The significance of finance.



have long and infamous histories of collective bouts of insanity when confronted with rising asset prices and speculative investment opportunities.

In such an environment strict credit standards and prudent underwriting combine to form the financial gatekeeper between speculative profit-seekers and the latest financial craze. However, banks are in the business of making money, and banks make money primarily by selling debt. Additionally, the historical record is also filled with overzealous bankers, urging their fellow capitalists forward in pursuit of the latest paradigm shifting opportunity.<sup>47</sup> Therefore, as Minsky rightly observes, once it becomes apparent that banks are able to endogenously expand the money supply to meet private demand, it also becomes apparent that bouts of speculation are always at risk of becoming self-perpetuating manias of debt-financed overinvestment and the misallocation of capital.

In a modern capitalist banking system the only exogenous limit on the cyclical expansion of credit that Minsky acknowledged was the ability of financial regulators to limit lending on the basis of regulatory capital requirements.<sup>48</sup> Banks can always obtain deposits and reserves to fund their assets, but these are both liabilities on bank balance sheets. They are short and medium-term debts that require regular interest payments to lenders. What banks cannot create is equity capital. Like all firms they must either raise equity in the markets or grow their capital bases internally through retained earnings. Therefore, regulatory limits on banking leverage (the ratio of a bank's capital base to its total assets) can potentially

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<sup>47</sup> Kindleberger and Aliber, Chapter 4.

<sup>48</sup> Minsky, "Central Banking and Money Market Changes."

limit the ability of banks to extend credit. However, as Minsky frequently observed, regulators are often unwilling to enforce strict limits on bank leverage. Additionally, modern banking regulations allow firms considerable flexibility in determining both their asset books and their levels of capital.<sup>49</sup> Thus, when combined with the opacity of today's "shadow banking system" Minsky argued that financial institutions face minimal limits on their ability to expand credit.<sup>50</sup>

### **The Financial Instability Hypothesis**

Hyman Minsky's most enduring and consequential work focused on the tendency of modern capitalist economies toward boom and bust cycles of expansion and contraction. In particular, Minsky emphasized the role of private finance and debt accumulation in the pro-cyclical amplifying and perpetuating of this cycle. For Minsky the neoclassical argument for equilibrium, a state of maximum output and employment, was a myth. Moderations of the business cycle were not the gravitational center of capitalism, constantly pulling the economy toward its maximal state, but only brief "periods of tranquility."<sup>51</sup> He conceptualized these ideas into an encompassing theory of economic crises referred to as the *financial*

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<sup>49</sup> Minsky, "The Financial Instability Hypothesis: A Clarification."

<sup>50</sup> Minsky, "Finance and Profits," The significance of finance.

<sup>51</sup> Hyman Minsky, *Stabilizing an Unstable Economy*, (New York: McGraw-Hill, 2008), 197.

*instability hypothesis* (FIH), Minsky's most durable and renowned contribution to modern economic thought.<sup>52</sup>

Central to Minsky's theory of the business cycle is the "two-price system" that he adopted from Keynes' *General Theory*.<sup>53</sup> He argued that there are two interrelated prices that determine the level of aggregate investment in the economy. The first is the price for current output. This is a supply price that represents the current price of goods and services sold on the market. Minsky stated that current output is priced on a "cost plus markup" basis.<sup>54</sup> He argued that since all capitalist firms are driven by the profit motive they set the price of their goods relative to their cost structures; the output price must cover the cost of materials, labor, overhead, and debt payments. The magnitude of markups on a firm-by-firm basis is often the result of market power (monopoly, patents, government subsidies, etc.) and microeconomic variables (advertising, product quality, availability, etc.). However, in the aggregate the markup represents total profits available to the owners of capital, and is a sign of the relative power of labor and business within the economy. Minsky noted that investment goods are particularly important when analyzing the pricing of output, because their market price represents the supply price of capital.<sup>55</sup>

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<sup>52</sup> Minsky laid out his financial instability hypothesis in a series of three books, see Hyman Minsky, *John Maynard Keynes* (New York: Columbia University Press, 1975), *Can "It" Happen Again* published in 1982, and *Stabilizing an Unstable Economy* originally published in 1986.

<sup>53</sup> Minsky, *Stabilizing an Unstable Economy*, 194-96.

<sup>54</sup> Minsky, *Stabilizing an Unstable Economy*, 176.

<sup>55</sup> Minsky, *John Maynard Keynes*, 95.

The second price that Minsky focused on was the price of assets, specifically the market price of the investable assets that compete for a capitalist's funds. All of these assets are similar in that they promise future streams of income in compensation for large sums of upfront investment. The only exceptions are cash and cash-like securities, which are valued for their safety and liquidity over their prospective yield. All other investable assets, from bonds, to equities, to factories and machinery are priced based on the discounted value of their future income streams. Potential capital gains from the selling of assets also factor into their pricing, but are not their fundamental source of value. Importantly, this future stream of income is necessarily uncertain. While the future income from bonds is surely more reliable than income from a factory, both are dependent upon future economic circumstances that cannot be known at the time of purchase. Therefore, an important component of the pricing of all long-term assets is the expectation of future business conditions and cash flows.<sup>56</sup> These expectations are an unwieldy mixture of, among other things; recent history, current newspaper headlines, and capitalist's best guesses concerning future business conditions.

Like the aforementioned supply pricing of output, Minsky placed great importance on the demand pricing for investment assets in particular. This price represents the demand price for capital, and when combined with the supply price of investment goods it forms the central supply and demand relationship that drives the investment cycle. In a cash or barter economy this would be the extent of the analysis, but Minsky realized that in capitalist economies both the supply and

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<sup>56</sup> Minsky, *Stabilizing an Unstable Economy*, 200.

demand prices need to incorporate the financial costs that are associated with the expensive and long-lived assets that dominate modern investment.

To accomplish this Minsky utilized the concepts of “borrower’s risk” and “lender’s risk.”<sup>57</sup> He argued that the production of capital goods is financed through the banking system; the construction of fixed assets is financed through bonds, while subsequent inventory is financed through short-term credit lines. Therefore, the supply price of these goods incorporates lender’s risk. This encompasses the credit terms, covenants, and interest rates used by banks to offset the risk associated with their lending, and must be compensated for in the firm’s markup of investment goods in order to maintain its profitability. The purchase of these goods is also frequently financed through the banking system, and consequently must also be adjusted for financial risk, in this case referred to as borrower’s risk. Minsky states that the more financing a buyer requires the lower they will set their demand price for investment assets. The lower price reflects the buyer’s desire for a higher prospective rate of return to compensate the firm for the increased risk of financial distress that accompanies a larger debt burden.

Both lender’s risk and borrower’s risk are included within the larger margin of safety that influences the supply and demand prices of investment.<sup>58</sup> For suppliers the margin of safety is expanded by leaner operations and lower debt burdens, while buyers increase their margin of safety through lower demand prices and less reliance on debt financing. Minsky notes that these margins of safety, meant

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<sup>57</sup> Minsky, *Stabilizing an Unstable Economy*, 198.

<sup>58</sup> Minsky, *John Maynard Keynes*, 106-13.

to provide buffers against the business cycle, in reality are decidedly pro-cyclical. Economic history clearly shows that capitalist's expectations of prospective returns and their willingness to leverage their balance sheets both tend to reach their pinnacle at the peak of the business cycle. When subsequent downturns have destroyed capital, lowered asset prices, and dramatically increased the potential profitability of lending and investment capitalists are often timid, frequently bemoaning the uncertain business environment and speculating that another recession is right around the corner.

This means that margins of safety are at their widest at the bottom of the business cycle. Minsky noted that this results in a rising supply cost for investment goods at the same time that demand prices for investment assets are being lowered, resulting in stagnant levels of investment. Therefore, in the aftermath of financial crises recoveries can often be substandard, as weak investment holds back employment and places downward pressure on wages. As recovery gradually does emerge margins of safety will compress, fueling investment, and providing a tailwind for expansion as current profits justify rising expectations and further investment in a virtuous cycle. It is this self-fulfilling progression of expanding investment, rising profits, and increasing expectations that Minsky focused on, paying particular attention to the evolution of firms' capital structures across the cycle.

Through the *financial instability hypothesis* Minsky related private finance and aggregate demand through the impact of financial markets on business

investment and the subsequent impact of investment on incomes, money flows, and asset prices.<sup>59</sup> According to Minsky economic stability is inherently destabilizing over the long term, primarily based upon the devaluing of liquidity, the easing of lending standards, and the ensuing accumulation of private debt in order to support inflated asset values and the buildup on increasingly expensive capital stock. Profit-seeking firms are incentivized to become increasingly indebted, as those employing liquid and conservative capital structures are tempted by higher prospective returns on equity capital and the potential for higher profit margins that can come from debt financing. Liquidity is devalued as costly long-term assets are financed through progressively shorter-term debt, increasing the possibility that any shock to the financial system could result in a liquidity crisis that exposes underlying structural insolvency.<sup>60</sup>

As Minsky noted, “A capitalist economy can be described by a set of interrelated balance sheets and income statements.”<sup>61</sup> Within the economy all economic units, whether they be businesses, households, or governments, take positions in assets that are financed through liabilities. The decision to finance through debt rather than equity is made for various reasons, among them a lack of available cash, the presence of attractive interest rates, preferential tax treatment, or a desire for financial engineering through balance sheet leveraging. However, the

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<sup>59</sup> Minsky, “The Financial Instability Hypothesis: A Clarification.”

<sup>60</sup> Minsky, “The Financial Instability Hypothesis: A Clarification.”

<sup>61</sup> Hyman Minsky, “The Essential Characteristics of Post-Keynesian Economics,” *Hyman P. Minsky Archive*, Paper 19 (1993).

end result is the same: the creation of money obligations extending far into an uncertain future.

Minsky defined the dynamic process of private debt accumulation by identifying three different levels of private borrowing transactions, as well as their respective locations in time within the business cycle. In “hedge” transactions the borrower can make all debt payments, principal and interest, from current asset cash flows. These are typified by businesses with a relatively large percentage of equity financing who are able to remain solvent in all but the worst market environments. “Speculative” transactions involve a borrower whose probable cash flows can cover interest payments but is not able to fully repay the principal. A speculative borrower needs to continually refinance part of its debt in order to avoid a potentially ruinous cash shortfall. It is important to note that in Minskian analysis all financial institutions are fundamentally speculative; they finance long-term assets largely through short-term borrowings that must be continually refinanced in the marketplace. Finally, “ponzi” transactions involve borrowers who cannot depend on asset cash flows to fulfill either interest or principal payments. These debtors must continually issue new debt and equity, or sell liquid marketable assets, to meet their obligations. Consequently, ponzi borrowers are dependent on both asset price appreciation as well as liquid and stable debt markets for their future solvency.<sup>62</sup>

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<sup>62</sup> Hyman Minsky, “The Financial Instability Hypothesis.” *Jerome Levy Economics Institute of Bard College*, Paper 74 (1992).



In a Minskian analysis modern capitalism, with its innate boom and bust progression and profit-seeking firms, is driven toward a more unstable and leveraged capital structure over the course of the business cycle. As leverage increases the size of the shock needed to induce a financial crisis declines. Something as simple as a flattening of asset prices, or a marginal rise in interest rates, will cause the ponzi borrower to default. At this point Minsky identifies a chain reaction that spreads through modern financial markets. Ponzi borrowers liquidate marketable assets to meet obligations, this magnifies the downward pressure on asset prices; collateral previously pledged by other borrowers is then devalued, forcing further selling of assets in a vicious cycle. This ripple of forced selling and liquidation spreads through the financial system causing lenders and borrowers alike to rush for liquidity and safety, devaluing risk assets and perpetuating a series of margin calls and defaults.<sup>63</sup>

Helping to perpetuate this cycle is the Keynesian idea of uncertainty, which was central to Keynes' theory of the business cycle according to Minsky, who famously stated that, "Keynes without uncertainty in something like hamlet without the Prince."<sup>64</sup> Uncertainty for Keynes, and for Minsky as well, was centered on the idea that capitalists and households make economic decisions whose consequences are dependent upon the future outcomes of variables that those individuals have no reasonable chance of knowing. This uncertainty has particular influence on private sector investment decisions, and therefore is a key component of the investment-

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<sup>63</sup> Minsky, "The Financial Instability Hypothesis."

<sup>64</sup> Minsky, *John Maynard Keynes*, 57.

driven business cycle. Minsky argued that because modern capital investment is both increasingly expensive and long-lasting uncertainty plays an increasing role in the decision making that surrounds capitalist investment.

Minsky adopted Keynes' view that economic uncertainty is fundamentally different from risk, although neoclassical economists frequently speak of the two interchangeably.<sup>65</sup> He pointed to Keynes' 1921 *Treatise on Probability*, in which he argued that not only were uncertainty and risk fundamentally different, but the former can never be properly reduced to the latter.<sup>66</sup> Consequently, an uncertain future cannot be expressed in the language of business risk, meaning it cannot be modeled, hedged against, or reduced to a simple mathematical variable. Economic prognostications are rife with uncertainty; investment patterns, taxation, labor productivity, etc. can scarcely be foreseen in the best of times, yet their future development will be the principal factor in the justification of current investment through future profits.

The role of fundamental uncertainty in inhibiting investment is compounded by what Keynes referred to as the "fetish of liquidity." In the *General Theory* he noted that capitalism incentivizes investors to hold liquid assets, ranging from stocks and bonds to treasuries and cash. This desire is directly related to the aforementioned role of uncertainty, as Keynes states, "our desire to hold Money as a store of wealth is a barometer of the degree of our distrust of our own calculations

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<sup>65</sup> Keynes' own views on the role of uncertainty in the business cycle were highly influenced by the work of economist Frank Knight, for example see, Frank H. Knight, *Risk, Uncertainty and Profit* (New York: Sentry Press, 1964).

<sup>66</sup> John Maynard Keynes, *A Treatise on Probability* (London: MacMillan & Co., 1921).

and conventions concerning the future.... The possession of actual money lulls our disquietude; and the premium which we require to make us part with money is the measure of the degree of our disquietude.”<sup>67</sup>

This disquietude and liquidity fetishism leads capitalists to place a higher value on holding liquid assets over long-term fixed assets, and therefore requires a greater potential return on investment to induce the spending on capital equipment and structures needed to reignite the business cycle and spur growth. Minsky updated and revised this concept when he noted that every institutional innovation that leads to both new ways to finance business and new substitutes for cash assets, decreases the volume of liquidity available to redeem the debts incurred in investment as well as to provide a true source of liquidity as a buffer during crisis. This Keynesian vision of the liquidity paradox implies that while throughout the boom period the distinction between near money and money might fade away, it comes rushing to the forefront again when distress rises and crisis erupts.

According to Minsky, “A financial crisis leads to an economic crisis when investment declines so that a decline in profits as well as output, employment, and wages takes place.”<sup>68</sup> The decline in profits leads to a further decline in asset prices, financial firms pull back on lending for investment, and businesses cut capital expenditures and employment to protect margins. For this aspect of the financial instability hypothesis Minsky is fusing the work of two of the early twentieth

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<sup>67</sup> John Maynard Keynes, *The Collected Writings of John Maynard Keynes*, D.E. Moggridge, ed. Vol. XIV (London: Cambridge University Press, 1973), 116.

<sup>68</sup> Minsky, “The Financial Instability Hypothesis: A Clarification.”

century's most distinguished economists, John Maynard Keynes and Michal Kalecki. Minsky adopts Keynes' view that changes in interest rates and the real price of employment cannot be counted on to realign the economy toward equilibrium, spurring investment and therefore employment.<sup>69</sup> There is no natural tendency toward full employment or the maximizing of aggregate demand. To better illustrate this, and to provide a framework for tracking the effects on money flows through the economy, Minsky utilized Kalecki's profit equation. Kalecki showed that in a capitalist economy the primary sources of private sector aggregate profits are business investment, the government deficit, and the reduction of labor's savings.<sup>70</sup>

The financial instability hypothesis illustrates the adverse effects of financial crises on the real economy through their affects on the level of gross investment and aggregate demand. As asset prices fall and credit contracts the level of business investment and employment declines, leading to a fall in aggregate profits. At this point the economy risks plummeting into what economist Irving Fisher described as a downward spiral of debt deflation.<sup>71</sup> Falling prices raise the real debt burden on businesses and households while rising loan defaults and asset impairments lead banks to further tighten lending and shrink the money supply. The cycle becomes self-perpetuating as pessimism and dire expectations are reinforced.

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<sup>69</sup> For a more detailed explanation of Keynes thoughts on the business cycle see John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (BN Publishing, 2008), Book 4 and Book 5.

<sup>70</sup> For a more detailed explanation of Kalecki's profit equation see Michael Kalecki, *Selected Essays on the Dynamics of the Capitalist Economy 1933-1970* (New York: Cambridge University Press, 1971).

<sup>71</sup> For further discussion on Fisher's debt deflation theory, which Minsky mentioned multiple times as an influence on his own work, see Irving Fisher, "The Debt-Deflation Theory of the Great Depressions," *Econometrica* (1933).

Declining profit leads to a further reduction in investment and wages, as Keynes' "animal spirits" are dampened and liquidity and capital preservation take precedence over investment and expansion. Since investment is the primary driver of business profits; and investment is only made if there is a reasonable chance of expanding profits in the future, this creates a vicious cycle of cost cutting and declining aggregate profit.<sup>72</sup> For Minsky, as well as Keynes and Kalecki, this is why counter-cyclical government deficits are vital. They supplant private investment with deficit fueled aggregate demand, supporting business profits and breaking, or preventing altogether, the aforementioned cycle of cost cutting, capital preservation, and rising unemployment.<sup>73</sup>

For Minsky the importance of the government deficit in supporting aggregate demand during recessions was just one facet his larger argument concerning "Big Government and the Big Bank." He argued that America's relatively stable and expansive economic growth in the post-World War II era (particularly notable for its lack of financial crises) was the result of two recent shifts in fiscal and monetary policy. As the economic influence of the government increased, the countercyclical nature of its budget expanded to the point that it could aid in smoothing the capitalist business cycle. Transfer payments, infrastructure investments, and military spending filled the gap left by plunging private investment during recessions (not including the added support of recession-specific stimulus). While

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<sup>72</sup> Keynes, *The General Theory*, Chapter 20.

<sup>73</sup> Minsky, *Stabilizing an Unstable Economy*, Part 5: Policy.

rising tax receipts and falling aid and unemployment benefits restrained economic growth during expansions.

The increasingly activist role of the Federal Reserve also counters the cycle, primarily through its now widely accepted role as a lender of last resort to the financial system. For Minsky, who placed such great emphasis on the banking system, the Fed's evolving policy of providing limitless liquidity at a discounted rate during financial panics was a significant evolution of central bank policy. Substantial monetary injections into the interbank market could relieve financial stress, lowering lending rates and ensuring that speculative borrowers could refinance their expiring debts at acceptable spreads. By intervening early and forcefully the central bank could avert a large-scale credit contraction and lessen the impact that the convulsions within the financial market had on the real economy.

Minsky argued that these combined actions of the Fed and Treasury, while helping to ameliorate the harsher features of the capitalist business cycle, have also institutionalized the risky and speculative behaviors that inevitably destabilize the system. In particular, he noted that when the Federal Reserve bails out financial institutions two unfortunate side effects arise. First, disastrously high leverage is maintained (as impaired loans are papered over and emergency funding is used to refinance debts), and second, newly developed forms of credit creation and speculation are validated as their adverse conditions are concealed by the appearance of solvency and profitability engineered by the central bank. The continuation of these policies creates an environment of financial consolidation and

increased speculation, a development that Minsky would progressively devote his attention to in the latter stage of his career.

### **Money Manager Capitalism**

In the tradition of Keynes, Minsky believed that political economy was useful to the extent that it informed effective policy-making and aided the formation of political and economic institutions that could help produce a more prosperous and egalitarian society. By the end of his career the degraded state of economic policy in America led him to conclude that amongst the nation's economic advisors, "Nobody 'up there' understands American capitalism" and to deride mainstream macroeconomics by stating that "In the neoclassical school, even in its most modern forms, it is not clear that the economy under analysis is capitalist."<sup>74</sup> This situation was all the more dire due to Minsky's belief that the fundamental underpinnings of the successful post-WWII American capitalism that had created the nation's burgeoning middle-class were already eroding. America's quarter-century of steady growth, relative stability, and shared prosperity was being replaced by a new evolution of capitalism dominated by the financial industry.<sup>75</sup>

As Minsky observed the rising centralization of economic power and political influence within the financial sector, he began to broaden his theory of the business cycle into a more encompassing theory of modern capitalist development. In his

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<sup>74</sup> Minsky, *Can "It" Happen Again*, 202.

<sup>75</sup> Charles Whalen, "Money-Manager Capitalism and the End of Shared Prosperity," *Journal of Economic Issues* XXXI, No. 2 (1997).

view the historical evolutionary stages of capitalism can best be understood by looking at the role that financial institutions have played within the economy over time. Specifically, he adapted the Schumpeterian concept of “creative destruction” and posited that destabilizing innovation in the pursuit of profit is more evident in banking and finance than any other sector of the economy.<sup>76</sup> In justifying his argument Minsky noted that “Innovations and entrepreneurship are not restricted to process and product in Schumpeter. Innovation and entrepreneurship are characteristics of capitalist finance. Because credit is essential to the process of development, a theory of economic development needs to integrate money into its basic formulation.”<sup>77</sup> With this framework Minsky advanced an evolutionary theory of capitalism that presented finance and credit as driving forces of long-term development. Within this progression he identified the following five distinct stages: commercial capitalism, industrial capitalism, financial capitalism, managerial capitalism, and money manager capitalism, and differentiated them based upon what investments were being financed, how they were being financed, and the relative balance of power between capitalists and financiers.<sup>78</sup>

Commercial capitalism developed in America at the beginning of the seventeenth-century and was characterized by a banking system that was largely

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<sup>76</sup> For more on Schumpeter’s theories regarding the evolution of capitalism and creative destruction see, Joseph Schumpeter, *Theory of Economic Development* (Cambridge, Mass.: Harvard University Press, 1934), and Joseph Schumpeter, *Capitalism, Socialism, and Democracy*, 3<sup>rd</sup> Edition (New York: Harper Perennial Modern Classics, 2008).

<sup>77</sup> Hyman Minsky, “Schumpeter: Finance and Evolution,” In *Evolving Technology and Market Structure*, edited by Arnold Heerje and Mark Perlman, (Ann Arbor: University of Michigan Press, 1990), 61.

<sup>78</sup> Hyman Minsky, “Money Manager Capitalism, Fiscal Independence and International Monetary Reconstruction,” in *The Future of the Global Economic and Monetary System*, edited by M. Szabo-Pelsoczi (Budapest: Institute for World Economics, 1990).



local and based around the financing of inventory and trade. Merchants drove the private economy, while bankers focused on specialized lending, either regionally or based on certain goods. Local knowledge and personal relationships trumped economic scale. Banks were equity financed by their owners and extended credit conservatively, and almost always against collateral. Production was built around manual labor and tools, and investment was focused on raw-material extraction. Minsky noted that private economic power was “fragmented and dispersed.”<sup>79</sup> Large-scale investment in productive capacity was rare, and when it was undertaken the financing and marshaling of resources was largely the domain of governments.

This era came to a close with the industrialization of America in the early nineteenth-century. The rise of more capital-intensive means of production meant that businessmen were in need of banks that could extend large amounts of credit for prolonged periods of time. Consequently, Minsky stated that industrial capitalism “was characterized by the emergence of financial organizations that could mobilize vast resources for projects such as railroads, utilities, mills, and mines.”<sup>80</sup> Wealth was increasingly concentrated into fewer hands, and with the increasingly important role of financiers in the investment process financial institutions rose to national prominence alongside their industrial counterparts. However, unregulated competition and cutthroat pricing were leading to a

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<sup>79</sup> Minsky, “Schumpeter: Finance and Evolution,” 67.

<sup>80</sup> Minsky, “Schumpeter: Finance and Evolution,” 67.

competitive process that was destroying industrial profitability and jeopardizing the economic feasibility of large amounts of invested capital.

In response, Minsky argued that by the end of nineteenth-century industrialists began to focus on concentrating their economic and political powers while at the same time reducing competition through a wave of mergers and acquisitions. The movement was so pervasive that by 1904 either one or two firms controlled at least half the output in seventy-eight different industries.<sup>81</sup> Traditional financial institutions and emerging investment banks welcomed the development as it provided them with ample profits while also further amplifying their economic importance. This was the era of financial capitalism, when, as Minsky stated, “banking structures became the centers of economic power. This was the era of the houses of Rothschild and Morgan.”<sup>82</sup> Meanwhile, rapid increases in economic productivity combined with little regulation in labor markets to further widen the income and wealth gaps between common workers and the bankers and industrialists that drove the economy. Post-consolidation profits rose considerably and by the 1920s bankers were introducing new forms of consumer credit and engaging in asset price speculation on unprecedented levels.

The subsequent deflationary collapse of the Great Depression exposed the underlying fragility of a newly modern capitalist economy. Borrowers defaulted at incredible rates, banks failed across the country, and large amounts of industrial

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<sup>81</sup> Robert Heilbroner and Aaron Singer, *The Economic Transformation of America: 1600 to the Present* (New York: Harcourt Press, 1994), 208.

<sup>82</sup> Minsky, “Schumpeter: Finance and Evolution,” 67.

capital went idle as a growing percentage of labor found itself unemployed. In response the Roosevelt administration enacted large-scale financial reforms, introduced stringent banking regulations, and engaged in counter-cyclical deficit spending in an attempt to stabilize prices and reemploy large segments of the population. Additionally, firms and households spent well over a decade deleveraging their respective balance sheets and developing a healthy skepticism toward financial innovation and debt-financed investments. As a consequence, by the end of World War II there was a fertile domestic environment for a prolonged and expansive cycle of economic growth and prosperity.<sup>83</sup>

The ensuing era, known as managerial capitalism, was characterized by the relative stability of a tempered financial sector and the rise of the federal government's economic influence through both fiscal and monetary policy. Deposit insurance and a host of new financial regulations restored Americans' confidence in the banking system while at the same time limiting the speculative pursuits of financial institutions. Furthermore, after years of massive federal deficits the balance sheets of private firms and households were awash in highly liquid and secure government bonds. When combined with a general aversion to debt this meant that American businesses and investors were far more financially stable than in past economic cycles.

Minsky argues that because firms were internally financed and highly liquid they were not as beholden to the whims of the financial sector as they had

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<sup>83</sup> Minsky, "Schumpeter: Finance and Evolution," 68.

previously been. He states, “the finance capitalism model of banker dominance of capitalist development was not relevant.”<sup>84</sup> Corporate managements were able to pursue long-term goals, negotiate in good faith with labor, and generally engage in more socially responsible business practices. However, this evolution of American capitalism was fragile in the sense that its sustained existence was predicated on the continuation of unique trends in both the domestic and international environments. In particular, the restricted competition of domestic business would inevitably come into conflict with the reemergence of international competition.<sup>85</sup> Meanwhile, the repression of the America’s banks was gradually subsiding as a combination of moral hazard arising from Federal Reserve interventions combined with the gradual reduction of both borrower’s and lender’s margins of safety allowed financial firms to begin regaining their previous influence.

Minsky states, “In the postwar era, managed-money capitalism, a new form, was born out of the success of managerial capitalism.”<sup>86</sup> During the era of managerial capitalism America experienced no serious economic downturns, while economic growth was robust and income and wealth were widely distributed across the economic spectrum. The period was particularly notable for the dramatic rise of managed-money; pension funds, mutual funds, and money-market funds became the dominant means of allocating financial capital across the economy. The growth of private pensions accompanied the rise of unions, while mutual funds and money-market funds were increasingly seen as the safest ways to ensure the future

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<sup>84</sup> Minsky, “Schumpeter: Finance and Evolution,” 68.

<sup>85</sup> Minsky, “Schumpeter: Finance and Evolution,” 68.

<sup>86</sup> Minsky, “Schumpeter: Finance and Evolution,” 69.

purchasing power of private savings in an increasingly inflationary environment. As a result, Minsky noted “a large portion of the outstanding shares of major corporations are now owned by these large institutional holders, who actively manage their funds with the objective of maximizing the total portfolio return over each short period.”<sup>87</sup>

The rise of managed-money funds has provoked two large-scale shifts in the role America’s financial institutions play within the economy. First, as Minsky argues, “Managed money capitalism has diminished the financial independence of corporate management.”<sup>88</sup> America’s corporations have become increasingly short-term oriented as their focus has gradually shifted toward maximizing current profits and stock market valuations. Corporate downsizing and restructurings have also become more frequent, as more easily adaptable cost structures are needed in order to better maintain profits and share prices across the business cycle.<sup>89</sup> These reorientations of American capitalism are fervently pursued under the banner of “maximizing shareholder value.”<sup>90</sup> As a consequence job security has fallen steadily and wage growth in many labor-intensive sectors of the economy has been nonexistent; meanwhile corporate profits and stock prices soared.<sup>91</sup>

American business has also become increasingly “financialized.” Non-financial firms have adopted the widespread belief that financial engineering is

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<sup>87</sup> Minsky, “Schumpeter: Finance and Evolution,” 69.

<sup>88</sup> Minsky, “Schumpeter: Finance and Evolution,” 70.

<sup>89</sup> Minsky, “Schumpeter: Finance and Evolution,” 71.

<sup>90</sup> Ruth Bender and Keith Ward, *Corporate Financial Strategy, 3<sup>rd</sup> Edition* (Oxford: Elsevier Butterworth-Heinemann, 2009).

<sup>91</sup> Stiglitz, *The Price of Inequality*.

desirable in the pursuit of increasing stock market valuations. An incredible rise in mergers, acquisitions, leveraged buyouts, corporate spinoffs, and stock buybacks has followed, all in the name of maximizing shareholder value.<sup>92</sup> The expansion of managed-money funds has also encouraged a rapid rise in financial innovation. In particular Minsky argued, “Money managers are a large part of the market for securitized instruments...that mete out the cash flow from a corpus of assets...in a way that is tailor-made to suit the objectives of particular funds.”<sup>93</sup> He also noted that as managed-money funds became increasingly global their influence in international capital markets would intensify. Specifically, he argued that the international trading of managed-money funds had already “rendered obsolete the view that trade patterns determine the short-run movement of exchange rates.”<sup>94</sup>

For Minsky, money manager capitalism increased both the speed and frequency of financial instability. This is mainly attributed to the increased role of debt and finance in the modern economy. Spurious “financial innovation” has driven the proliferation of credit-based instruments throughout the private sector, resulting in financial and household leverage ratios far beyond those seen in previous business cycles.<sup>95</sup> Consumption booms related to increased indebtedness are self-defeating, and corresponding recoveries are historically weak and fragile, as accumulated debt stocks weigh on future consumption and investment. From a

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<sup>92</sup> For further reading on this trend in corporate finance see Dan Krier, “Speculative Profit Fetishism in the Age of Finance Capital,” *Critical Sociology* 35:5 (2009): 657-675.

<sup>93</sup> Minsky, “Schumpeter: Finance and Evolution,” 71.

<sup>94</sup> Minsky, “Schumpeter: Finance and Evolution,” 71.

<sup>95</sup> L. Randall Wray, “Minsky’s Money Manager Capitalism and the Global Financial Crisis,” *Jerome Levy Economics Institute of Bard College*, Paper 661 (2011).

Minskian perspective, the overall “financialization” of the economy can only lead to increasing debt, extreme price volatility, and more frequent and pronounced bouts of financial instability and subsequent recession.<sup>96</sup>

### **Minskian Theory in Perspective**

Minsky’s theories regarding money, banking, and their relation to the capitalist business cycle rest far outside of mainstream economics. Yet his theoretical foundations are clearly traceable to some of economics most prominent and influential theorists.<sup>97</sup> Minsky argued that he was creating an “investment theory of the cycle and a financial theory of investment.” He refused to accept the neutrality of money and instead positioned financial institutions at the core of a modern capitalist economy. In doing so he plainly argued for what Keynes called “a monetary theory of production,” a concept whose origins can easily be seen in some of the most significant economic writings of the late-nineteenth century.

A clear forerunner to Minsky’s credit-based theory of capitalist instability can be found in Marx’s *Capital*, where he provides the foundations for a monetary circuit theory of capitalist production. Within Marx’s famous equations for capitalist accumulation he explicitly rejects the classical arguments for barter-exchange and the neutrality of money as the foundations of market transactions. He argued that the fundamental model for capitalist transactions is not C-M-C, where money only

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<sup>96</sup> Minsky, “Finance and Profits.”

<sup>97</sup> For example, see Knut Wicksell, *Interest and Prices: A Study of the Causes Regulating the Value of Money* (New York: Augustus Kelley, 1965).

serves to facilitate the exchange of commodities. Instead, in a capitalist economy characterized by “the circulation of money as capital” the former clearly affects behavior and plays a role in economic development.<sup>98</sup> Knowing this Marx argued that “the general formula for capital, in the form in which it appears directly in the sphere of circulation” is M-C-M’, where money capital (M) is transferred through the capitalist mode of production (C) into money capital plus surplus value (M’).<sup>99</sup> It is through this process that capitalists realize the monetary profits that are the basis for capital accumulation: simultaneously providing the justification of past investments and the means for current investment as well.

By re-characterizing capitalist production as beginning with the extension of money capital Marx allows for a modern credit-based economy where debt-financed investment is only later validated through monetary profits that exceed the initial debts. This framework of capitalist production resembles Minsky’s financial theory of the investment cycle. Even greater similarities can be seen in *Capital III* where Marx provides an overview of capitalist financial crises. He notes that during economic expansions “a period of brisk business is simultaneously, a period of most elastic and easy credit.” However, he notes that rising indebtedness and overinvestment will eventually bring about a crisis in which “prices fall, similarly wages; the number of employed laborers is reduced, the mass of transactions

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<sup>98</sup> Karl Marx, *Capital: A Critique of Political Economy, Vols. 1-3*, translated by Samuel Moore and Edward Aveling, edited by Frederick Engels (Moscow: Progress Publishers, 1867, 1885, 1894), 103.

<sup>99</sup> Marx, *Capital*, 125.



decreases.”<sup>100</sup> A self-perpetuating cycle of debt deflation takes hold as financiers restrict credit. Marx states, “It is by no means the strong demand for loans which distinguishes the period of depression from that of prosperity, but the ease with which this demand is satisfied in prosperity, and the difficulties it meets in times of depression.”<sup>101</sup> With this analysis Marx provided a debt-driven business cycle that hinged on the pro-cyclical aspects of the expansion and contraction of money capital within the economy.

Picking up on Marx’s work, Keynes began to develop his own theory of monetary capitalism in the early 1930s. By 1932 he had renamed his Cambridge lecture series from “The Pure Theory of Money” to “The Monetary Theory of Production,” and in 1933 he published an essay by the same name.<sup>102</sup> Keynes focused on Marx’s “realization problem” formulated in M-C-M’ and noted that capitalists only invest money capital into production when they are certain they can realize a higher level of money capital in the future. Therefore, as Keynes began writing the *General Theory* to propose his investment-driven business cycle he was well aware of the important role money played in the process.

Keynes made the importance of money to capitalist production clear in an early draft of his *General Theory*. He further addressed Marx’s M-C-M’ formula, designating it as the fundamental force behind an “entrepreneurial economy.” Concerning Marx, Keynes noted, “He pointed out that the nature of production in the

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<sup>100</sup> Marx, *Capital*, 309.

<sup>101</sup> Marx, *Capital*, 310.

<sup>102</sup> Keynes, *The Collected Writings*.

actual world is not, as economists seem often to suppose, a case of C-M-C... That may be the standpoint of the private consumer. But it is not the attitude of business, which is a case of M-C-M', i.e. of parting with money for commodity (or effort) in order to obtain more money."<sup>103</sup> He went on to illuminate the capitalist's desire to accumulate money capital as being the driving force behind his desire to invest in production and employ labor. This is a fundamental aspect of a capitalist economy, and played a notable role in Minsky's formulation of the *financial instability hypothesis*. In many ways Minsky's work can be seen as an attempt to supplement the businessman's drive for profit featured in Marx and Keynes with the banker's desire for the same.

The theoretical foundation for this kind of analysis can be seen in Rudolf Hilferding's *Finance Capital*, published in 1910.<sup>104</sup> Like Minsky, he sought to construct a developmental model of capitalism that could account for the growing influence of financial capital in the economy. At the time Hilferding's work was seen as a logical extension of Marx's arguments in *Capital*. He posited that the internal contradictions that Marx highlighted within capitalism were becoming more acute, as the growing concentration of capital (predicted by Marx) and the increasing power of finance were widening social inequality and the disparity of economic opportunity.<sup>105</sup> For Hilferding the dire situation was primarily due to the rise of

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<sup>103</sup> Keynes, *The Collected Writings*, 81-82.

<sup>104</sup> Rudolf Hilferding, *Finance Capital: A Study of the Latest Phase of Capitalist Development*, edited by Tom Bottomore (London: Routledge & Kegan Paul, 1981).

<sup>105</sup> Hilferding, writing in Pre-WWI Germany, was describing the ills of Germany's burgeoning imperial state and the closely intertwined relationship between monopoly businesses, particularly in finance, and the state. For Hilferding this was a direct threat to the economic and political power of the Social Democratic Party of Germany, of which he was a prominent member.

finance capital, which he felt was the latest developmental stage of capitalism on the road to eventual socialism.

In *Finance Capital* Hilferding argued that the evolution of highly capital-intensive industry fueled the growth of finance capital due to the need for extensive financing to construct increasingly large economies of scale for production. Fierce competition drove industrial and commercial capital to heavy concentration in order to monopolize markets and preserve profitability. Throughout this process industry became increasingly reliant on banks for financing. Hilferding argued that as financiers acquired larger proportions of industry through financing, their relative power within the economy soon eclipsed their capitalist brethren. Building on Marx's *Capital* he further argued that because finance capital is characterized by a fairly steady rate of interest, while the capital intensity of industry accelerates the falling rate of profit, the financial share of profits in developed capitalist economies will rise.<sup>106</sup> This further solidifies the dominance of financial institutions within the economy.

Hilferding went on to argue that because financial institutions hold increasingly large stakes in industrial and commercial industry they have an interest to limit competition within those industries in an effort to maximize profits.<sup>107</sup> Banks accomplished this by pushing for increased centralization and the further monopolizing of markets. Hilferding referred to this process as cartelization and noted, "As a result...the relations between the banks and industry become still

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<sup>106</sup> Hilferding, *Finance Capital*, 103-104.

<sup>107</sup> Hilferding, *Finance Capital*, 95.

closer, and at the same time the banks acquire an increasing control over the capital invested in industry.”<sup>108</sup> He argued that there is a constant tendency toward cartelization in finance capital and that eventually entire industries would be subsumed in the process.<sup>109</sup>

Eventually Hilferding extended his argument overseas and declared that European imperialism was largely driven by the need to find external outlets for the profitable operation of finance capital’s burgeoning industrial centers. He argued that this is the final stage of finance capital, and that it was characterized by three distinct objectives: “(1) to establish the largest possible economic territory (2) to close the territory to foreign competition by a wall of protective tariffs, and consequently (3) to reserve it as an area of exploitation for the national monopolistic combinations.”<sup>110</sup> The eventual undoing of finance capital, in Hilferding’s analysis, was to come via the revolt of the masses due to the high cost in blood and treasure that was required of them to financially and militarily support such extensive overseas empires. Eventually, the highly concentrated nature of the means of production within financial institutions would allow society “through its conscious executive-organ—the state conquered by the working class—to seize

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<sup>108</sup> Hilferding, *Finance Capital*, 224.

<sup>109</sup> Hilferding’s argument concerning the internal drive toward state-based monopoly that permeated modern capitalism was supported from an American-centric position by Thorstein Veblen, *The Theory of the Business Enterprise* (New Brunswick, New Jersey: Transaction Books, 1904). Both would later form the theoretical foundation for the rise of Monopoly Capital in Marxist theory. See Paul Sweezy and Paul Baran, “Monopoly Capital: An Essay on the American Economic and Social Order,” *Monthly Review Press*, (1966).

<sup>110</sup> Hilferding, *Finance Capital*, 326. Hilferding’s discussion of the role of the militaristic state in aiding the foreign expansion of capital into developing markets was reminiscent of John Hobson, *Imperialism: A Study* (London: James Nisbet & Co., 1902), and both were highly influential in the later writing of Vladimir Lenin, *Imperialism: The Highest Stage of Capitalism* (Newtown, Australia: Resistance Books, 1999), first published in pamphlet form in 1917.

financial capital in order to gain immediate control of these branches of production.”<sup>111</sup>

There are clear connections between Hilferding’s concept of finance capital and Minsky’s theory of money-manager capitalism. In particular, both focus primarily on the rise of capital-intensive means of production as chief aids in the formation of large-scale banking institutions. Both also note how industry can become “financialized,” in Minsky’s terminology, as it is increasingly owned by financial institutions, and therefore operated with their primary interests in mind. Importantly, both also note the tendency of financial institutions to drive concentration and to limit the competitive powers of markets in order to maximize profits. Hilferding also notes the need for a strong state for the taxation and military might needed to support finance capitalism. This is very reminiscent of Minsky’s argument that money-manager capitalism requires an increasingly interventionist Treasury and Federal Reserve to contain financial instability and maintain corporate profits in order to validate past investments and current debt burdens.

Ernest Mandel was another economic theorist who developed an evolutionary model of capitalism.<sup>112</sup> Mandel based his theory around Marx’s volumes of *Capital*, noting that even modern capitalism is still, at its heart, capitalism; and consequently that Marx’s laws of capitalist motion must form the foundation of a coherent theory. In particular, Mandel placed great emphasis on the tendency of the rate of profit to fall over time in capitalist production, as well as the

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<sup>111</sup> Hilferding, *Finance Capital*, 367.

<sup>112</sup> Ernest Mandel, *Late Capitalism* (London: Humanities Press, 1975).

inherent drive for capitalist accumulation that underlies the economic system. However, Mandel added a unique perspective to these fundamental tenets of classic Marxism when he integrated them alongside the long and short waves of capitalist development that were popularized by Russian economist Nikolai Kondratiev.<sup>113</sup>

In Mandel's theory the initial stages of capitalist development play out similarly to those in *Capital*. As the business cycle expands the money value of the capital stock grows at a rate faster than the relative rate of surplus value. As a consequence capitalists must invest proportionately increasing amounts of money capital to produce additional profit. Mandel argues that this falling rate of profit deters capitalists from reorganizing production and investing in new technologies.<sup>114</sup> Subsequently, investment falls, unemployment rises, and greater quantities of capital go idle for want of profitable opportunities. Where Mandel diverges from Marx and *Capital* is in his argument that as these short cycles continue an increasing level of "excess capital" builds up so that, when combined with large amounts of unemployed labor, its redeployment can spark a generational surge of investment.

This surge of technological development and capital investment is predicated on the restoration of the rate of profit during the preceding years of slow growth and high unemployment. Provided these conditions have weakened labor and devalued real wages (generally accomplished by an expansion of the reserve army

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<sup>113</sup> Nikolai Kondratiev, *The Major Economic Cycles*, translated and published as *The Long Wave Cycle* (New York: Richardson & Snyder, 1984), and later in Nikolai Kondratiev, "The Long Waves in Economic Life," *Review of Economic Statistics* 17.6 (1935): 105-115.

<sup>114</sup> Mandel, *Late Capitalism*, 111.

of the unemployed) or prompted a sudden fall in the organic composition of capital (usually through a dramatic fall in price of capital assets) the environment will be fertile for capitalist expansion. Investment in new technology will provide a strong, secular countercurrent against the falling rate of profit, as recessions are shallow and infrequent while expansions are broad-based and plentiful. Still, eventually the internal contradictions of capitalism rise to the surface once more. As the economy moves toward full employment labor gains new power and confidence, meanwhile increasing levels of competition and rising investment lead to a flattening of the rate of profit. The cycle is now primed to repeat itself.

Utilizing this wave-based model of development Mandel argued, “The history of capitalism on the international plane thus appears as not only a succession of cyclical movements every 7 to 10 years, but also as a succession of longer periods, of approximately 50 years, of which we have experienced four up to now.”<sup>115</sup> In tracing these past epochs Mandel resembles Minsky, the former focusing on technological shifts and the latter on financial shifts. Both also focus on the growing influence of the state in stabilizing an increasingly volatile economic system.<sup>116</sup> Mandel, on growing state capitalism, argued, “In the framework of this private capitalist economic order, state direction and guidance of the economy are only makeshifts to patch up fissures and postpone explosions. But behind the façade the decay is

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<sup>115</sup> Mandel, *Late Capitalism*, 120.

<sup>116</sup> Recently there have been interesting attempts at melding K-Waves together with long-term credit cycles, as opposed to Mandel’s primary focus on capital innovation, for example see Steve Keen, “The Economic Case Against Bernanke,” *Steve Keen’s Debtwatch*, No. 42 (February 2010).

spreading.”<sup>117</sup> Like Minsky, Mandel also noted the ability of the state to support capitalist profits through counter-cyclical spending and transfer payments.<sup>118</sup> However, he also noted a more sinister motive behind the government’s stabilization of private profits and support of labor income during economic downturns. Mandel argued, “the entire logic of a managed economy is precisely to avoid strikes and attempted improvements *during the only phase of the cycle in which the relationship of class forces favors the working class.*”<sup>119</sup>

Hyman Minsky’s theoretical framework was constructed upon the foundation of heterodox economics that was highly prominent in the late-19<sup>th</sup> and early-20<sup>th</sup> centuries. In many ways his greatest contribution to the history of economic thought was his ability to fully comprehend and absorb these different theories, assimilating them into a brilliant theory of capitalist development and business cycles. Minsky’s *financial instability hypothesis* was based on his realization that financial institutions play an outsized role in modern industrial and post-industrial economies. Meanwhile, his ideas regarding money-manager capitalism led him to conclude that modern capitalism was at a unique developmental stage: at not other time has international financial capital been able to flow so freely across borders, and at no time has the direction of such a large portion of those flows been guided by so few individuals. When faced with a combination of these two factors

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<sup>117</sup> Mandel, *Late Capitalism*, 502.

<sup>118</sup> Mandel tends to focus on the role of state spending on arms and defense in supporting private employment and “the state guaranty of profit.” This form of “military Keynesianism” has been a prominent Marxist explanation for the post-WWII economic expansion in the developed world. For example, see T.N. Vance and Walter Oakes, *The Permanent War Economy* (Alameda, California: Center for Socialist History, 2008).

<sup>119</sup> Ernest Mandel, *An Introduction to Marxist Economic Theory* (New York: Pathfinder Press, 1969), 101.



Minsky found it entirely reasonable to predict steadily increasing bouts of financial crisis and turmoil.<sup>120</sup> His predictions proved prescient, and nowhere have they been seen to a greater degree than within the developing economies that have become the targets of the financial flows that Minsky warned about decades ago.

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<sup>120</sup> Hyman Minsky, "Uncertainty and the Institutional Structure of Capitalist Economies," *Jerome Levy Economics Institute of Bard College*, Paper 155 (1996).

### III. THE ASIAN FINANCIAL CRISIS OF 1997-98

The Asian financial crisis was an intense and volatile period beginning in mid-1997 that wreaked havoc throughout developed and emerging world markets and triggered widespread fears of financial contagion and global recession. The crisis, which lingered throughout Southeast Asia until early 1999, was characterized by the destabilizing and violent spasms of the financial markets. Seemingly uncorrelated asset prices began moving in unison as the global marketplace attempted to digest the hourly reports of default, bankruptcy, and capital flight that turned what many thought was only a typical developing world currency crisis into a full-scale financial panic.

At the onset of the Asian financial crisis a majority of investors and firms held the developing East Asian economies in the highest regard. Decades of stellar growth in the region had conditioned them to believe that the region's path to future growth was clear and sustainable. Much like the vaunted "Asian Tigers" who dominated the post-WWII expansion within the region the newly designated "Asian Cubs" were seen as inevitable successors and the backbone of a future Asian Century.<sup>121</sup> This view was crystalized in 1993 with the release of a highly influential paper from the World Bank titled, "The East Asian Miracle," that praised the

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<sup>121</sup> Eun Mee Kim, ed., *The Four Asian Tigers: Economic Development and the Global Political Economy* (Bradford, United Kingdom: Emerald Group Publishing, 1999).

development models of East Asia and posited that economies from Africa to Central and South America should readjust their own policies to mimic the East Asian countries.<sup>122</sup>

This miraculous growth, however, was powered by decidedly routine endeavors. Much like their larger Asian brethren, the small developing nations of the region were rapidly industrializing and urbanizing on an incredible scale. To aid in their economic development the East Asian nations were enacting an export-driven growth strategy that centered on developing low-tech manufactured goods for sale in the developed West.<sup>123</sup> This strategy would provide multiple benefits, including 1) the importing of foreign demand to maintain employment and wages, 2) the importing of foreign capital to revolutionize technological and manufacturing industries, 3) the development of “manufacturing clusters” that spurred domestic innovation, and 4) the importing of developed world currencies and resulting lack of reliance on foreign debt for trade financing.<sup>124</sup>

Specifically, the importing of foreign income provided a net stimulus to the domestic private economy in much the same way that government deficits do.<sup>125</sup> As a consequence while the East Asian nations were developing through export-driven growth models they were able to subsidize domestic demand without running large

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<sup>122</sup> “The East Asian Miracle,” *The World Bank* (New York: Oxford University Press, 1993).

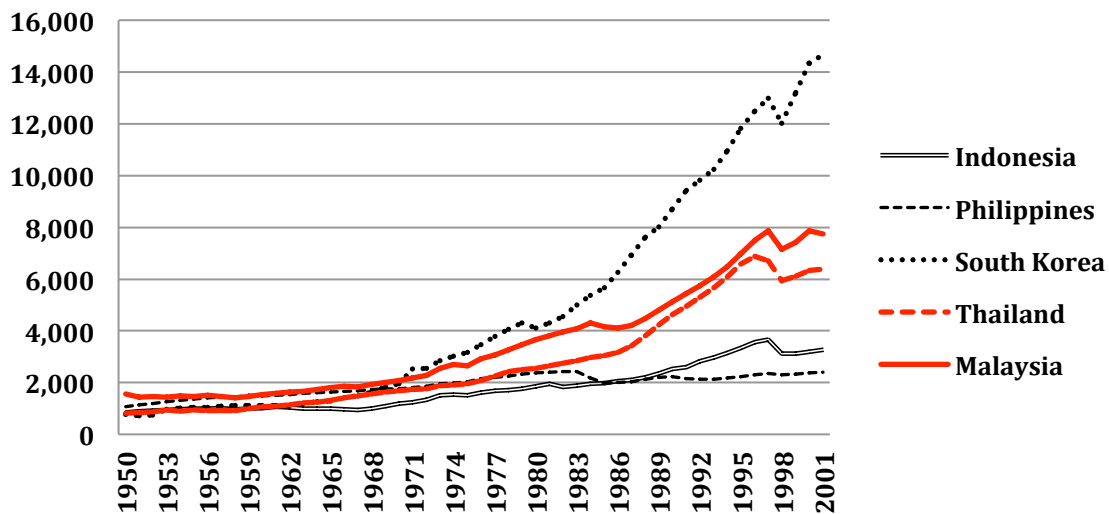
<sup>123</sup> For a prominent critique of this development model see, Paul Krugman, “The Myth of Asia’s Miracle,” *Foreign Affairs*, vol. 73, no. 6 (1994): 62-75.

<sup>124</sup> Joseph Stiglitz, “Some Lessons From the East Asian Miracle,” *The World Bank Observer* vol. 11, no. 2 (1996): 151-177.

<sup>125</sup> For an example of the “sectoral balances” approach to macroeconomics see Wynne Godley, “Money, Finance and National Income Determination: An Integrated Approach,” *Jerome Levy Economics Institute of Bard College*, Paper 167 (1996).

government deficits, a vital aspect of successful development for any emerging economy. The end result was a secular growth boom, as illustrated in Figure 1, that brought rising prosperity and better standards of living to many throughout East Asia.

**Figure 1. Real GDP Per Capita for Select East Asian Countries, 1950-2001**



Source: Angus Maddison, *The World Economy, Historical Statistics* (Paris: OECD, 2003)

While this form of development is theoretically sound in many ways, at its core the model relies on keeping domestic prices (land, labor, and capital) growing at rates lower than the total productivity of the economy. This ensures that goods produced under domestic prices are structurally underpriced relative to their international competition.<sup>126</sup> To accomplish this the domestic economy must restrain household consumption in multiple ways. First, tariffs are typically utilized

<sup>126</sup> Steven Radelet, Jeffrey Sachs, Richard Cooper, and Barry Bosworth, “The East Asian Financial Crisis: Diagnosis, Remedies, Prospects” *Brookings Papers on Economic Activity*, Vol. 1998, No. 1 (1998): 1-90.

to artificially inflate the prices of foreign goods (while also serving to redirect purchases toward domestic producers). Meanwhile, the state's fiscal and monetary policies are structured to punish consumption and promote industries associated with coastal exports and fixed-capital investment. These policies include government regulated negative interest rates, the maintenance of a fundamentally undervalued currency, subsidized loans to state-operated firms, and tax subsidies and credits for select industries.<sup>127</sup> As such, the system weighs heavily on the domestic citizenry, requiring an ever-increasing rural-to-urban migration to fuel industrial production, while also requiring households to shoulder the implicit subsidies that are required to maintain international competitiveness alongside rising income and investment.

To accomplish this most nations that pursue a combination of export-led growth and import substitution tend to be relatively undemocratic. This can range from a general political environment of single-party dominance to outright authoritarianism. However, the internal pressure that develops alongside rising education levels (a prerequisite for higher technological productivity) and growing incomes tends to mitigate this situation over time. This was certainly the case within the East Asian economies in the second half of the 20<sup>th</sup> century. In fact, it was the

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<sup>127</sup> Thomas Palley, "The Rise and Fall of Export-led Growth," *Jerome Levy Economics Institute of Bard College*, Paper 675 (2011), and Arslan Razmi and Gonzalo Hernandez, "Can Asia Sustain an Export-led Growth Strategy in the Aftermath of the Global Crisis? An Empirical Exploration," *ADB Working Paper Series*, No. 329 (2011).

subsequent Asian financial crisis that proved to be the final political tipping point for several of these countries.<sup>128</sup>

Still, economic factors tend to be the driving forces behind the development of these economies, and the East Asian nations were no different. After a generation of substantial growth and rising standards of living the Tiger Cubs became the favorite investment destination of the large managed-money funds that Minsky frequently warned were coming to dominate international capital flows. International banks and investment brokers began funneling incredible sums of money into East Asian economies that were still comparatively small and unprepared for the potentially harmful effects that could arise from a flood of Western capital coming across their borders.<sup>129</sup>

### **The “East Asian Miracle” and Minsky**

The idea that an “Asian” financial crisis took place in 1997-98 is a bit of a misnomer, if not an outright mischaracterization of events. It is certainly true that an economic tremor reverberated throughout the region, however; there was a wide disparity between those nations most affected by the crisis and those who emerged relatively unscathed. The former, specifically the nations of Indonesia, Malaysia, South Korea, Thailand, and the Philippines, were highly vulnerable at the onset of

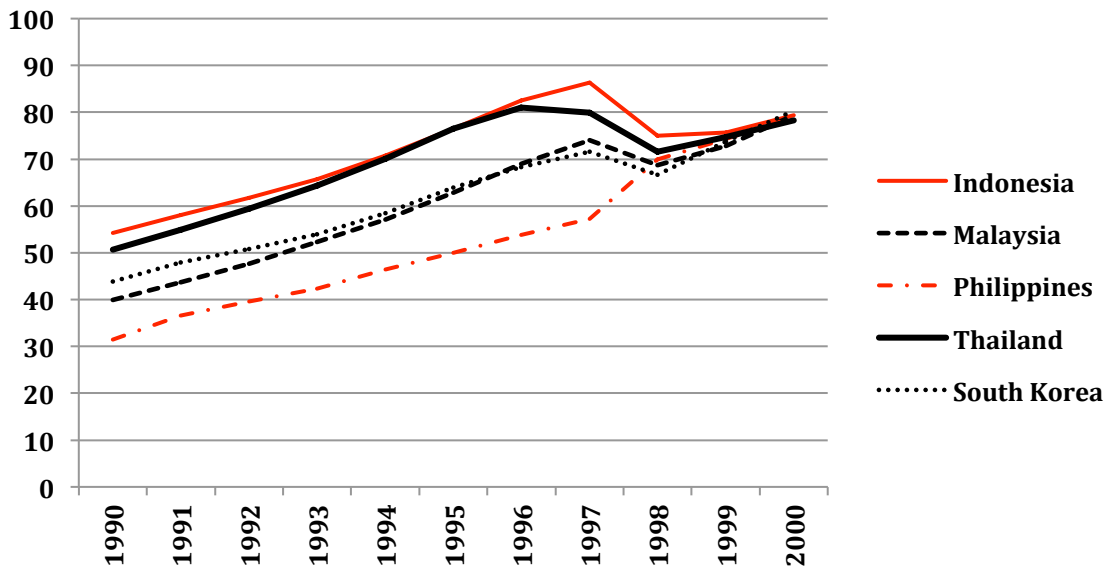
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<sup>128</sup>See T.J. Pempel, ed., *The Politics of the Asian Economic Crisis* (Ithaca: Cornell University Press, 1999.), and Stephen Haggard, *The Political Economy of the Asian Financial Crisis* (Washington: Institute for International Economics, 2000).

<sup>129</sup> John Harvey, *Currencies, Capital Flows, and Crises: A Post Keynesian Analysis of Exchange-Rate Determination* (Florence, Kentucky: Routledge, 2008).

the crisis due to the accumulated fragility within their respective financial systems. This was the direct result of a prolonged process of accumulation built around financial liberalization, and private investment cycles financed through increasingly illiquid and short-term foreign debt. The outcome was a cyclical boom of fixed-capital investment and asset price speculation, contributing to a steady surge in GDP, as illustrated by Figure 2.

**Figure 2. Asian Real GDP in the 1990s as Indices (2005=100)**



Source: *International Financial Statistics Yearbook*, IMF, (2000).

By the mid-1990s, the aforementioned Asian countries were hastily progressing through the economic liberalization programs designed for developing economies that is collectively known as the Washington Consensus.<sup>130</sup> These reforms included the deregulating of interest rates, the lowering of bank capital and reserve requirements, the removal of capital controls, and the promotion of financial innovation and the importing of Western financial products. As a

<sup>130</sup> Phillip Arestis and Murray Glickman, “Financial crisis in Southeast Asia: dispelling illusion the Minskian way.” *Cambridge Journal of Economics* 26(2), (2002): 237-260.

consequence private sector financial institutions were able to import foreign savings in order to help finance domestic investment-driven asset booms. Concurrently, foreign financial institutions were able to flood the Asian Tigers with ever-increasing amounts of short-term and highly speculative money flows, increasing financial volatility and driving further asset price spikes. The following (Table 1) illustrates both how commercial banks dominated the external financing of these respective nations, as well as the sharp and severe reversal of money flows that occurred at the onset of the crisis.

**Table 1. Total External Financing (\$bn.)**

	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>
<b>External financing, net</b>	47.4	83.0	99.0	28.3	-4.2
<b>Private flows, net</b>	40.5	80.4	102.3	0.2	-27.6
<b>Private creditors, net</b>	28.2	65.1	83.7	-4.2	-41.3
<b>Commercial banks, net</b>	24	53.2	62.7	-21.2	-36.1
<b>Non-banks, net</b>	4.2	12.0	21.0	17.1	-5.3
<b>Official flows, net</b>	7	2.6	-3.3	28.1	23.4
<b>Currency reserves ex. Gold ("-" = An increase)</b>	-5.4	14.1	16.9	-31.5	42.1

Source: *Capital Flows to Emerging Market Economies*, IIF, (1999).

As a consequence of these rapid inflows of managed-money the comparatively small East Asian economies experienced large-scale assets price bubbles. As Minsky's *financial instability hypothesis* predicts, surges in investment inevitably lead to credit booms in capitalist economies with developed financial structures, which in the modern world of free-flowing capital and international managed-money funds encompasses the vast majority of the globe. In East Asia foreign capital fueled the expansion of local bank credit at a spectacular rate.



Privatization and deregulation allowed profit-seeking financial institutions to extend local currency loans, financed through foreign-denominated inflows, at a rate that drove debt levels to increasingly larger percentages of the economy, as seen in Table 2.

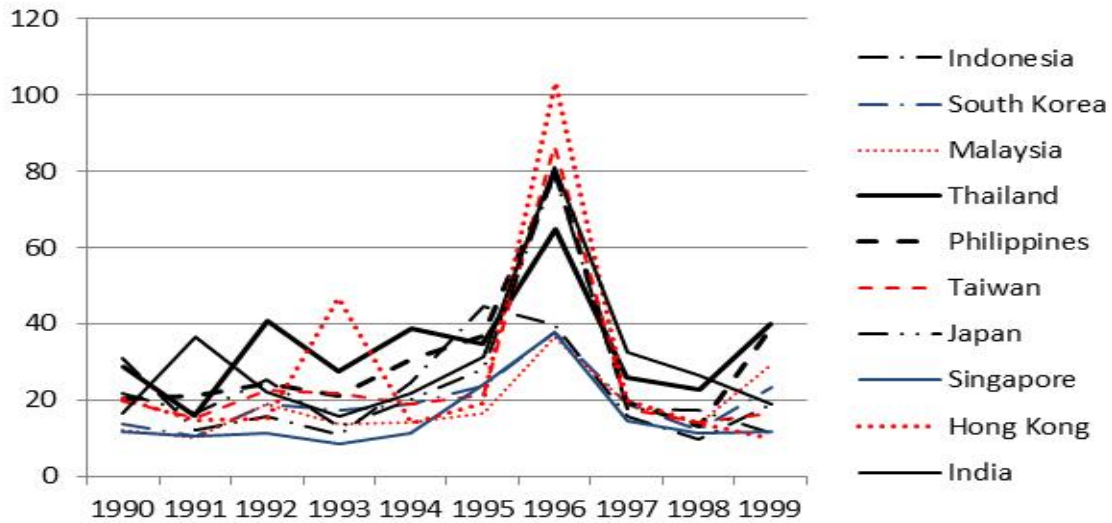
**Table 2. Bank Lending to Private Sector as a Percentage of GDP**

<b>Year</b>	<b>South Korea</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Malaysia</b>	<b>Thailand</b>
<b>1990</b>	52.5	49.7	19.2	71.4	64.3
<b>1991</b>	52.8	50.3	17.8	75.3	67.7
<b>1992</b>	53.3	49.5	20.4	74.7	74.2
<b>1993</b>	54.2	48.9	26.4	74.1	80
<b>1994</b>	56.9	51.9	29.1	74.6	91
<b>1995</b>	61.8	55.4	49	93.4	102
<b>1996</b>	69.8	69.2	56.5	107	116

Source: *International Financial Statistics Yearbook*, IMF, 2000.

In East Asia this expansion led to large dislocations in domestic asset markets. The capital gains of the day validated previous speculative investments while easy credit and rising expectations drove the speculation of tomorrow. As money-managers flocked to the newest “paradigm-shifting” market trend, rising prices became self-fulfilling as Keynes’ animal spirits took over and fundamental concepts of cash-flow valuation and margins of safety were replaced by “greater fool theory” speculation and mania. This trend is clearly visible in Figure 3 on the following page, which highlights the absurd valuations that Asia’s domestic equity markets were driven to at the height of the bubble.

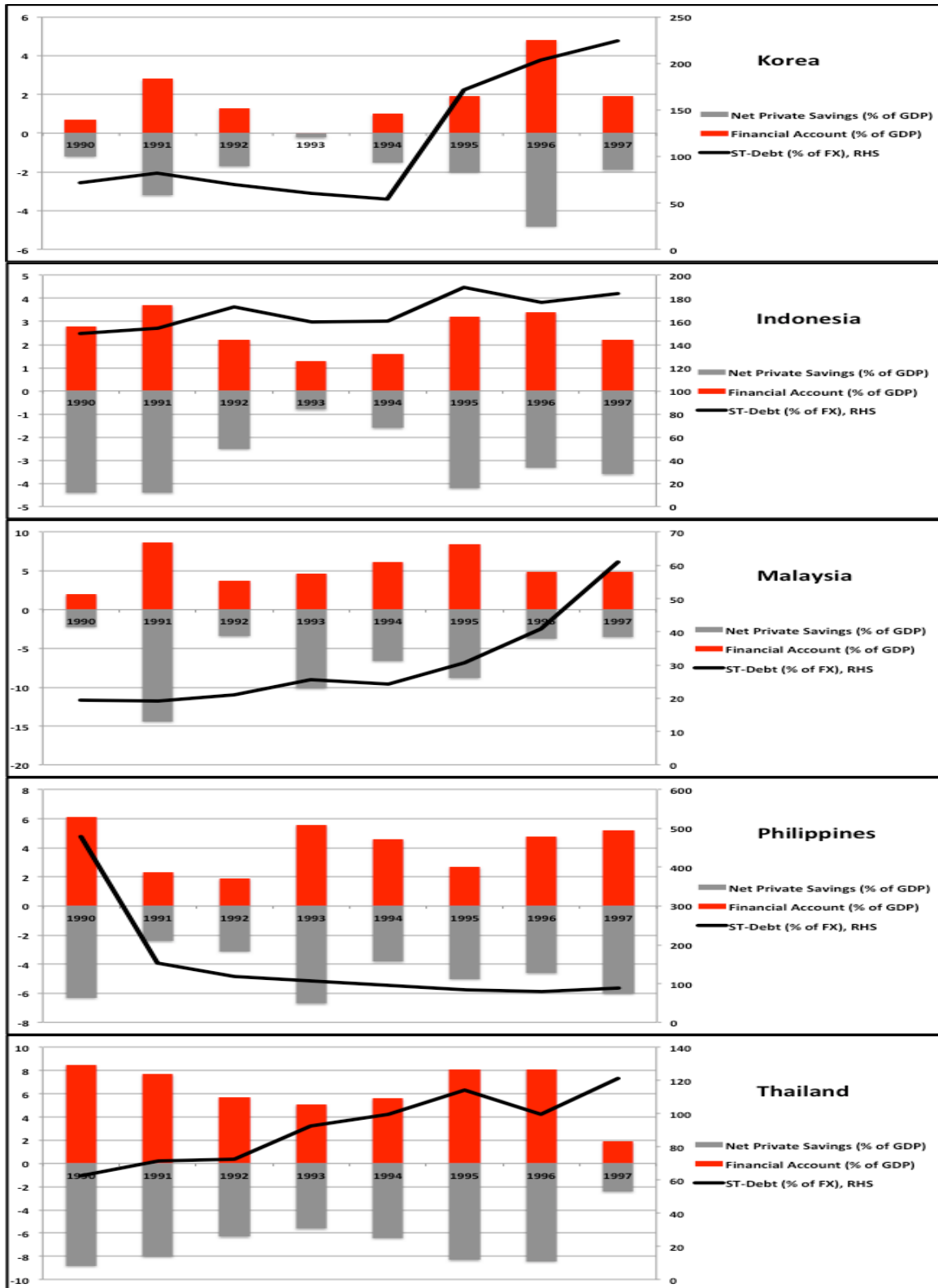
**Figure 3. P/E Ratios for Select Asian Countries, 1990-99**



Source: "Global Financial Data," *Encyclopedia of Global Financial Markets, 7<sup>th</sup> Edition* (2000) <http://www.globalfinancialdata.com>.

As credit-fueled speculation continued and assets prices surged the international competitiveness that was at the core of East Asia's development model was gradually eroded. Central banks were forced to keep interest rates high to attract foreign capital for external debt payments, while currencies were artificially inflated to protect domestic businesses from the potential revaluation of their foreign debts. As a consequence the East Asian economies with the largest speculative booms saw their balance of payments deteriorate. In order to continue financing their investment-driven growth strategies they needed to import increasingly large amount of foreign capital. This dynamic is illustrated in Figure 4 on the following page, which shows the level of domestic investment in excess of savings that was financed by external capital flows along with the resulting rise in short-term debt obligations as a percentage of central bank reserves.

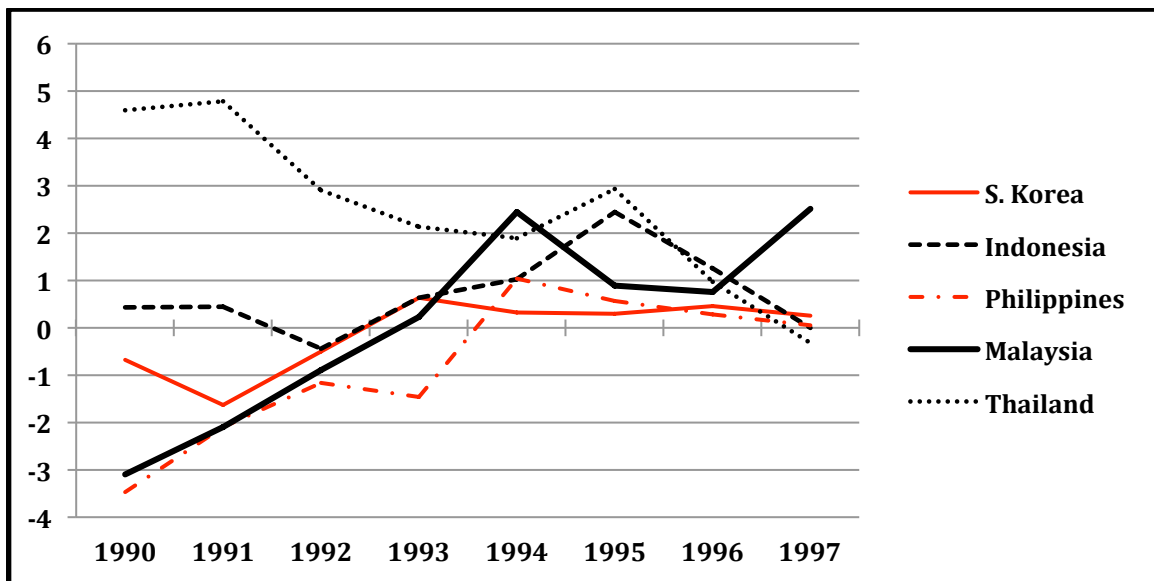
Figure 4. Foreign Capital, Domestic Investment, and FX Reserves



Source: *International Financial Statistics Yearbook*, IMF, 2000.

The private sector, largely financial institutions and commercial firms, dominated this mania of overleveraging. Speculation in domestic real estate and stock markets were the primary result of these large inflows of foreign capital. In particular, it is important to note that the domestic governments of East Asia were entirely self-financing at the time of the crisis. The governments of each of the five countries that exhibited Minskian financial instability were running structural budget surpluses and therefore had no need to import foreign capital for financing. This fact is clearly illustrated in Figure 5, which shows that all five nations were running persistent government surpluses at the onset of the crisis.

**Figure 5. Government Balance as a Percentage of GDP**



Source: *International Financial Statistics Yearbook*, IMF, 2000.

The rapid rise in external financing for the East Asian nations was further aided by the fact that each of these respective countries was pegging its currency to the US dollar (\$). The central governments were effectively backstopping the accumulation of foreign denominated debt by promising, through the maintenance

of the currency peg, to ensure that foreign loans would not suffer from possible exchange rate risks. If anything, the continual inflows of foreign currency through the capital account were seen as a reliable source of upward pressure on the East Asian currencies. Domestic businesses had every reason to believe they would be paying back foreign loans with a stronger currency. While international investors believed they would be reconverting their investments at a higher exchange rate, adding gains from currency appreciation to their gains already reaped from higher interest rates and booming asset prices.

The currency peg also provoked debt-financed capital investment from foreign loans by decreasing the amount of Keynesian uncertainty involved in the financing process. By removing the specter of exchange-rate risk from foreign debt contracts national governments were providing the private sector with an artificially high sense of security. They were encouraging the proliferation of increasingly complex financial instruments and the buildup of growing levels of fragility at the exact time they should have been reigning in these very activities. The debt-fueled expansion soon reached the point that even the historically high growth rates experienced in these countries were not enough to stabilize outstanding debt as a percentage of the economy, as seen in Table 3 on the following page. The end result of this kind of “financialization” is an increasingly large amount of the national income is diverted to interest payments, in this case to foreign lenders, and not into productive investment.

**Table 3. Foreign Debt as a Percentage of GDP**

<b>Year</b>	<b>South Korea</b>	<b>Indonesia</b>	<b>Philippines</b>	<b>Malaysia</b>	<b>Thailand</b>
<b>1990</b>	13.79	65.89	69.02	35.8	32.8
<b>1991</b>	13.51	68.21	71.45	35.48	38.38
<b>1992</b>	14.34	68.74	62.29	34.51	37.51
<b>1993</b>	14.18	56.44	66.09	40.74	34.1
<b>1994</b>	14.32	60.96	62.42	40.4	33.31
<b>1995</b>	23.8	61.54	53.21	39.31	33.78
<b>1996</b>	28.4	56.74	49.75	40.06	50.05

Source: *International Financial Statistics Yearbook*, IMF, 2000.

The currency pegs also introduced a distinctly Minskian dynamic as well, because pegging ones national currency to a foreign currency can only last as long as the domestic central bank has the needed foreign exchange reserves to support the national currency at the given exchange rate. In order to know if a domestic central bank has the needed financial firepower to protect the peg one must estimate the potential capital outflows that may need to be converted. A good proxy for this estimation is the total level of short-term debt within the domestic economy that has been funded through external sources. These are loans maturing in less than twelve months that, if not rolled over or refinanced domestically, will result in capital outflows that will need to be cleared at the central bank at the given exchange rate.

If private businesses operating within a fixed-rate economy accumulate too high a percentage of these foreign loans relative to the central bank's foreign exchange reserves they are effectively engaging in an international version of

Minsky's speculative finance. Just like the speculative borrowers who cannot reasonably expect to pay the principal on their debts, these firms are entering contracts that they cannot realistically repay at the contracted rate, as doing so would drain the central bank's reserves to an unacceptable level. Therefore, they are dependent on continually rolling over their upcoming loans or refinancing them with newly issued debt. This was clearly the case in East Asia at the onset of the financial crisis, as illustrated in Table 4.

**Table 4. Short-term External Debt (June, 1997, \$bn.)**

<b>Country</b>	<b>ST-Debt to BIS</b>	<b>Reserves</b>	<b>Percent of Reserves</b>
<b>South Korea</b>	70.2	31.3	224
<b>Indonesia</b>	34.7	18.9	184
<b>Thailand</b>	45.6	37.7	121
<b>Philippines</b>	8.3	9.4	88
<b>Malaysia</b>	16.3	26.6	61

Source: *Capital Flows to Emerging Market Economies*, IIF, (1999).

As assets prices rose, speculation ensued, and increasingly high amounts of national income were diverted to paying foreign creditors and bidding up financial shares. However, despite this increasingly fragile economic environment domestic businesses were still taking out large foreign-denominated debts. The perilous currency pegs that were adopted only made these speculative financial endeavors that much worse, as they exposed borrowers to high levels of foreign exchange risk, on top of the leverage risk of the debt itself, and the general operating risk involved in managing a firm within an investment mania. Eventually the self-reinforcing credit mechanism that both Minsky and Kindleberger highlighted as a driving force

of economic bubbles had finally reached a level of instability that could not be sustained.

Beginning in Thailand in mid-1997 and soon spreading throughout the region, a financial panic engulfed East Asia as asset prices plunged. Managed-money funds began pulling short-term credit out of the region while simultaneously selling domestic securities. The pressure on central banks eventually led to large-scale devaluations, as foreign exchange reserves could not meet the demand for outflows from speculators and the alternative measure of higher interest rates was destroying domestic demand. When combined with falling asset prices these devaluations led to further defaults within the East Asian economies. The same self-perpetuating credit cycle that inflated the financial bubble, once reversed, led to its ultimate collapse. As illustrated in Table 4 on the following page, the simultaneous shocks experienced within the stock, bond, and currency markets within these nations was truly incredible in size and scope.



**Table 5. The Collapse**

	3-Month Interest Rates			Real Dollar Ex. Rate Change (6/97 – 9/98)	Stock Market Decline During 1997
	Average in 1996	Peak Level	Date of 97' Peak		
<b>S. Korea</b>	13.3%	25%	October	-33.8%	-42.6%
<b>Indonesia</b>	13.8%	27.7%	October	-77.7%	-37%
<b>Thailand</b>	13%	26%	December	-36.7%	-55.2%
<b>Philippines</b>	11.7%	85%	October	-38.3%	-40.3%
<b>Malaysia</b>	7.3%	8.8%	November	-39.8%	-52.2%

Source: 68<sup>th</sup> Annual Report, The Bank of International Settlements, 1998 and *International Financial Statistics Yearbook*, IMF, 2000.

The quantitative overview provided within this data reinforces the Minskian nature of the Asian economies, the underlying weaknesses of these economies in historical terms, and the overleveraging of the 1990s in particular. Some, like Indonesia or the Philippines, were less developed by the time of the crisis, and were a bit less influenced by it (although the political ramifications were severe), whereas others, like South Korea, were already so developed and relatively stable politically that they did not suffer long lasting aftereffects of the crisis. It seems that the countries that were most impacted by the crisis were those in the “middle of the pack,” like Thailand and Malaysia, who were the most prone to overleveraging in the 1990s and also felt the crisis the deepest. One could argue that modern capitalist economies, and perhaps especially those that are rapidly developing by more intense utilization of economic resources, are indeed prone to financial instability and business cycles, despite Keynesian and monetarist ideas alike. Beneath the

veneer of unparalleled economic growth the Asian economies were becoming increasingly unstable in the 1990s, until the bubble finally burst. They exploited artificially cheap foreign debt and government subsidized domestic lending to fuel increasingly speculative investments that were only deemed rational through the rose-colored glasses that have adorned financial bubbles throughout history.

## CONCLUSION

Minsky's *financial instability hypothesis* provides a timely theoretical framework for examining the recent bout of financial crises that have plagued the global economy after the abrupt ending of the Great Moderation. Specifically, this thesis applies Minsky's theoretical framework to the Asian financial crisis of 1997, and argues that it was largely investment-driven growth, financed through increasingly speculative methods, that led to the accumulated economic fragility and asset bubbles that were the eventual downfall of the high-flying economies of East Asia. Consequently, the crisis provides a clear prism through which we can better analyze both the contributing and perpetuating factors of a Minskian collapse.

The Asian financial crisis exhibited all of the classic signs of a credit-driven financial bubble. From unrestrained optimism on behalf of investors to rising leverage within domestic firms it is clear that the East Asian crisis was yet another example of the trend identified by Kindleberger decades ago, namely, that capitalist economies with profit-seeking firms and unrestrained banking systems have an incredible propensity toward financial instability and subsequent crisis. Thus, it is vital that both economists and economic historians alike work to rediscover the works Minsky as a means of better investigation and analysis of both modern and historical capitalism.

There are obvious avenues for further research that could be highly rewarding for the economic historian with a solid grasp on both Minsky's theory, as well as the aforementioned economists and political theorists who influenced him. Both the Great Depression and the panic of 1907 offer tantalizing possibilities for the application of a Minskian framework, particularly considering the relative rise of finance capital in the preceding years of both events. The panic of 1873 and subsequent Long Depression also appears to be fertile ground. This is due primarily to the prominent role played by post-Civil War speculation and the early rise of finance capitalism that coincided with the surge in capital investment that drove the railroad expansion.

However, the clearest examples of Minskian financial panics can be seen in the wave of manias and crashes that have plagued developed and emerging economies alike in the post-Bretton Woods era. Indeed, Minsky's prescient thoughts on the rise of the financial sector and the inevitability of more recurrent financial crises should provide a strong impetus for economic historians to seek out further applications for his work in the litany of recent crises. For example, the Asian financial crisis was not by any means a singular event. Within a year of East Asia's collapse financial turmoil spread across the globe: to Russia in 1998, then to Argentina in 1999, and finally to America with the collapse of the NASDAQ bubble in 2000. While there are many factors that differentiate these events there is also an underlying economic framework binding them together that centers around free-flowing international capital, the rise of managed-money and concentrated pools of

investment funds, and the increasingly prominent role of financial institutions in the business cycle.

Therefore, it seems imprudent for an economic historian, particularly one versed in the works of Kindleberger, to dismiss the idea that these events could share a common underpinning. Economic historians must remain open to the possibility of new or rediscovered analytical tools that can help better elucidate the recent turmoil that seems to have engulfed the global economy. The field must continually reappraise and reexamine past theories in the light of new developments. In particular, the work of Minsky must be brought into the mainstream discussion in order to provide timely and credible opposition to the dominant schools of economic thought that appear to have led us astray.

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## VITA

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