Book Review: The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It

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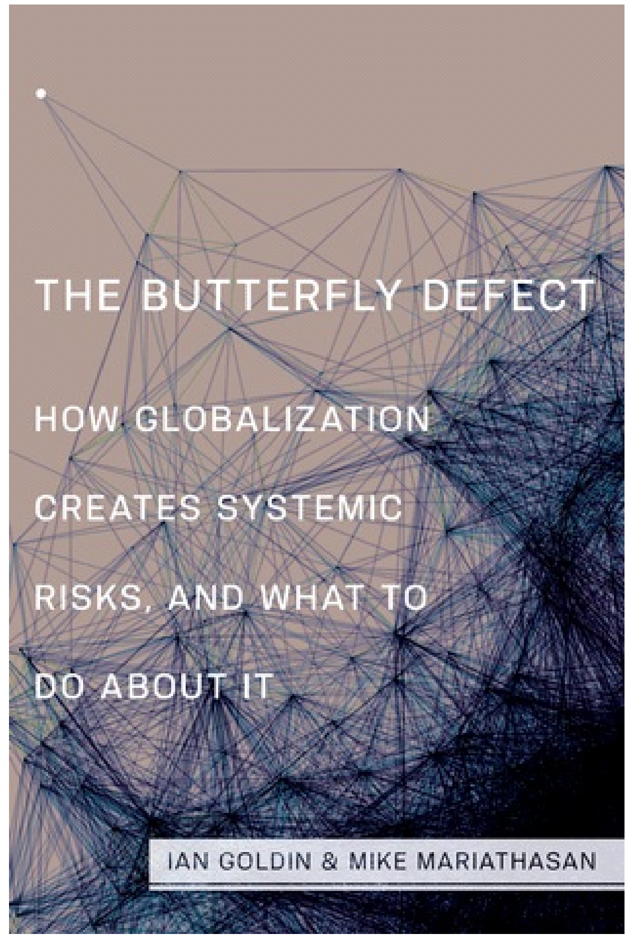
The increasing connectivity of people in the world is cause for joy and concern, according to scholars Ian Goldin and Mike Mariathasan in their new book, ***The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It*** *writes* ***Alex Verkhivker****. The authors draw on the premise that micro distresses in any economic system, whether it be energy or finance, are increasingly likely to pose systemic risk as a result of increased connectivity and globalization across individuals, businesses, and governments.*



The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It. Ian Goldin and Mike Mariathasan. Princeton University Press. 2015.

The increasing connectivity of people in the world is cause for joy and concern, according to scholars Ian Goldin and Mike Mariathasan in their new book, *The Butterfly Defect: How Globalization Creates Systemic Risks, and What to Do about It*. Technological advancements have made it possible for more people than ever before to stay abreast of one another's lives. With ever increasing speed, this global connectedness produces more innovation, global income growth and increasing educational attainment. Nevertheless, systemic risk as a result of such interconnectedness is a big cause for concern according to the authors of *The Butterfly Defect.*

Specifically, the duo of scholars argue that the recent fallout from the Global Financial Crisis reveals the increasing susceptibility of the world economy to systemic risk that makes its present felt in global supply chains, corporate infrastructures and political debate. While highlighting the unquestionable benefits from the increased flow of physical and human capital across world economies, *The Butterfly Defect* does a superb job of reminding us that with increased movement comes more complex risk and that, undoubtedly, globalization is a double-edged sword.

The book is organized splendidly. The authors discuss, in detail, how financial globalization helped trigger the financial crisis of 2007-08. In the beginning pages, the discussion bears on the rise of securitized financial products by large financial institutions. Beginning in 2005, the majority of large institutional banks issued more asset-backed securities than corporate debt. Between 2002 and 2006, the authors note, collateralized debt obligations were issued at five times the rate as compared with the year 2000. It was the *excess* of such financial securitizations, as opposed to simply their origination, that resulted in a number of financial leakages across global capital markets. Prudence and stability in the financial sector gave way to a toxic blend of excess risk and myopic trading behavior by those working on Wall Street. Excess risk was being shared across a network of transnational corporations (TNCs) that were taking advantage of cheap credit in the housing market by providing structured mortgage products to households that were simply too financially fragile to be able to afford the homes these TNCs were helping them buy.

Having set the stage for disturbances in globalization from fragilities in the financial sector, the authors remind readers that infrastructure risks for increasingly connected corporations are found in other industries as well, including: transportation, energy, and the internet. The blackout in the United States Northeast that occurred on August 14, 2003 provides yet another example of how risk can cascade throughout a production network in the energy sector. The problem started in an Ohio generating plant. A bug in an alarm system caused system maintenance workers to overlook the fact that transmission lines were overloaded. As a result, a number of transmission lines throughout the Northeast failed and the power outage trickled down to the New York power grid. The economic fallout from the bug in Ohio is estimated to have ranged from 6 to 10 billion US dollars. The point Professors Goldin and Mariathasan convincingly make is that energy networks are increasingly aged ones, and the interconnectedness of energy systems is outpacing the resilience for any isolated part in the energy network to sustain itself. A power grid does not just collapse from a single cause, but rather from the deficiencies across a host of power stations.

The Butterfly Defect draws on the premise that micro distresses in any economic system, whether it be energy or finance, are increasingly likely to pose systemic risk as a result of increased connectivity and globalization across individuals, businesses, and governments. In essence, these micro deficiencies are more likely to aggregate themselves to pose real risk to individuals and households, thereby producing systemic risk. The researchers build their thesis for *The Butterfly Defect* through several chapters outlining environmental, pandemic and health risks. In order to move forward and address the concerns the researchers outline, the last chapter of the book is geared as a guidepost for how governments and businesses can more aptly address systemic risk.

The guiding principles the authors promote are *transparency*, *inclusivity* and *resilience* for stemming the tide of systemic risk. Specifically, the renewal in regulation and policymaking ought to be such that the geography of network activities ought to be more visible to public and private leaders. It is here, in the lessons for preventing the downside from globalization, where I have the most criticism with the book. The authors speak more in generalities for the reform and guidance they provide, as compared with providing concrete examples that are able to illustrate how to go about solving a particular problem. Simply espousing accountability and proper risk management does not get to the heart of the matter in mitigating the micro perturbations from deficiencies in one-off failures in a dynamic system, whether that system is the internet, the economy, or the environment.

I would welcome a discussion with concrete examples in concrete networks for how to stem the tide in systemic risk. Notwithstanding this shortcoming, the book is a magnificent work of scholarship that truly gets readers engaged and curious about where globalization will lead us. The takeaway is indisputable: mitigating systemic risk in the global economy is fundamental for our very own well-being.

Alex Verkhivker is a contributor to *Capital Ideas* at The University of Chicago Booth School of Business. In prior work, he has worked as an economic researcher with the Federal Trade Commission in Washington and as an Associate Economist at the Federal Reserve Bank of Chicago. He has written for the Becker Friedman Institute For Research In Economics at The University of Chicago, *Forbes*, *Huffington Post*, *Washington Examiner*, and *Economics 21* – the economics portal of the Manhattan Institute for Policy Research. Alex holds degrees in economics and management from The University of Chicago and UCLA, respectively. You can follow him on twitter @averkh.

Author Ian Goldin gave a public lecture at the LSE about his book; you can listen here.