The Global Derivatives Market as a Social Innovation

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Abstract

The growth of the international market in financial derivatives over the past 40 years has radically changed the governance of the global economy. Prior to the publication of the Black-Scholes options pricing model and the creation of the Chicago Board Options Exchange, both in 1973, derivatives were marginal part of the financial system. By December 2012 the global total notional amount of over-the-counter derivatives exceeded $630 trillion, about nine times the $73.1 trillion value of world domestic product in 2012. Most of these derivatives are tied to either interest rates or exchange rates, and have become the primary means of managing international currency transactions. Following the 1971 Nixon Shocks this market replaced Bretton Woods institutions and has proven remarkably resilient and has avoided being replaced by either a Bretton Woods-style centrally managed exchange system or an interwar-style system of rival currency blocs. However, the global derivatives market also highlights the ambiguous nature of many social innovations, as the political and economic resilience of this market has not necessarily translated to an increase in social-ecological resilience as well.

As an example of a social innovation with a global impact the derivatives market raises a number of conceptual issues for theories of socio-technical transitions and social innovation. In particular, the notion of scale is problematic. While the global derivatives market has largely replaced the Bretton Woods system of international currency management, it did not do so by design. Instead when the Nixon Shocks caused the collapse of the Bretton Woods system there was no alternative and the fear was that the unstable pre-war system of rival currency blocs would be the most likely replacement. However, with the development of the Black-Scholes-Merton options pricing model and the advancement of information and communication technologies, the previously marginal derivatives market found a new and potent use in managing international currencies. The market started relatively small, but as it grew it coevolved ideologically with the deregulatory movement, was enabled by and provided funding to advances in computing, and was reinforced by the profitability of derivative trading. Eventually there was a shift away from governments as the key players in regulating the global derivatives system towards government regulators competing to attract actors in the derivatives industry. This flip raises interesting questions about the nature of cross-scale interactions.

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