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Debate

Financialization and Economic Development: A Debate on the Social Efficiency of Modern Finance

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ABSTRACT

The shift in financial intermediation from banks to financial markets, and the introduction of financial market logic into areas and domains where it was previously absent, have not just led to negative developmental impacts, but also changed the 'rules of the game' and facilitated rent-seeking practices of a self-serving global elite. Establishment (financial) economics has helped to depoliticize and legitimize this financialized mode of social regulation by invoking Hayek's epistemological claim that (financial) *markets* are the only legitimate, reliably welfare-enhancing foundation for a stable social order and economic progress. This article forms the Introduction to a set of 10 articles which assess the logic and consequences of 'financialization' across a range of geographic, economic and social scales, and confront Hayek's grotesque claim — deep down, at the level of 'ideas', but also by providing 'knock-out evidence' on the social inefficiency of a capitalism 'without compulsions' for finance. The authors in the Debate challenge the 'ruling ideas' and expose how establishment economics has been hiding its reactionary political agenda behind the pretence of scientific neutrality. The financial emperor wears no clothes.

THE FINANCIALIZATION OF EVERYTHING

Ours is, without a doubt, the age of finance — of the supremacy of financial actors, institutions, markets and motives in the global capitalist economy. Finance's rise to domination was enabled by the confluence of a supportive ideology ('neoliberalism'), historical circumstance (the 'stagflation' of the 1970s), the development of sophisticated mathematical tools for valuing financial assets (specifically, the Black-Scholes options pricing model),

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and the information technology revolution which lowered the cost of financial engineering, facilitated round-the-clock global financial trading and increased its speed (Davis and Kim, 2015; Epstein, 2005; van der Zwan, 2014). What is most distinctive about the present era of finance, however, is the shift in financial intermediation from banks and other institutions to *financial markets* — a shift from the 'visible hand' of relationship banking, to the axiomatic 'invisible hand' of supposedly anonymous, self-regulating financial markets.

Working people, for instance, increasingly have their (pension) savings invested in mutual funds and stock markets, while their mortgages and other debts are turned into securities and sold to global financial investors (Epstein, this issue; Krippner, 2011). At the same time, the 'under-banked' poor have become entangled, or if one wishes, 'financially included', in the 'web' of global finance through their growing reliance on microloans, micro-insurance and M-Pesa-like 'correspondent banking' (Keucheyan, this issue; Mader, this issue). More generally, individual citizens everywhere are invited to 'live by finance', in the evocative words of Martin (2002: 17): that is, to organize their daily lives around 'investor logic', active individual risk management, and involvement in global financial markets. Citizenship and rights are being reconceptualized in terms of universal access to 'safe' and affordable financial products (Kear, 2012) — redefining Descartes' philosophical proof of existence as: 'I am indebted, therefore I am' (Graeber, 2011). Financial markets are opening 'new enclosures', deeply penetrating social space — as in the case of so-called 'viaticals', the third-party purchase of the rights to future payoffs of life insurance contracts from the terminally ill (Quinn, 2008; van der Zwan, 2014); or of 'healthcare bonds' issued by insurance companies to fund healthcare interventions, in which the payoff to private investors depends on the cost savings arising from the healthcare intervention for the insurers. And what are we to think of 'humanitarian impact bonds' used to finance physical rehabilitation services in countries affected by violence and conflict (Lavinas, this issue) — an instrument created in 2017 by the International Red Cross in cooperation with insurer Munich Re and Bank Lombard Odier?

Conglomerate corporate entities, which used to provide long-term employment and stable retirement benefits, were broken up under the pressure of financial markets and replaced by disaggregated global commodity chain structures (Wade, this issue), operating according to the principles of 'shareholder value maximization' (Lazonick, 2014), with the result that today real decision-making power is to be found no longer in corporate boardrooms, but in global financial markets. As a result, accumulation — real capital formation which increases overall economic output — has slowed down, as profit owners, looking for the highest returns, reallocate their investments to more profitable financial markets (Jayadev, Mason and Schröder, this issue). An over-abundance of (cash) finance is used primarily to fund a proliferation of short-term, high-risk (potentially high-return) investments in newly

developed financial instruments — Warren Buffett's 'financial weapons of mass destruction' that blew up the global financial system in 2007–08. Financial actors (ranging from banks, bond investors and pension funds to big insurers and speculative hedge funds) have taken much larger roles on bigger geographic scales in markets of items essential to development such as food (Clapp and Isakson, this issue), primary commodities, healthcare (insurance), education and energy. These same actors are hunting the globe for 'passive' unearthed assets which they can re-use as collateral for various purposes in the 'shadow banking system' — the complex global chains of credit, liquidity and leverage with no systemic regulatory oversight that has grown to a size as large as the regulated 'normal' banking system (Gabor, this issue; Pozsar and Singh, 2011). Pressed by the international financial institutions and their own elites, states around the world have embraced finance-friendly policies which include reducing cross-border capital controls, promoting liquid domestic stock markets, reducing the taxation of wealth and capital gains, and rendering their central banks independent from political oversight (Bortz and Kaltenbrunner; Chandrasekhar and Ghosh; Wade, all in this issue).

This displacement of financial institutions by financial markets has had a pervasive influence on the motivations, choices and decisions made by households, firms and states as well as fundamental quantitative impacts on growth, inequality and poverty — far-reaching consequences which we are only beginning to understand. For this Forum issue, we therefore solicited 10 contributions to debate the economic scholarship on how and why (global) financial markets have spread since the 1970s and with what effects on economic development and on the space for developmental policies and practices. What does the dominance of financial markets and financial motives mean for growth, inequality and poverty, and what is the future of this 'financialized' global capitalist system? More pointedly, the 10 Debate articles offer a cool and detached analysis of the antecedents and the consequences of the recent rise to supremacy of financial markets — and they do this in explicit opposition to the Panglossian view of modern mainstream economics that financial markets, warts and all, provide the best possible mode of social regulation, superior in any case to alternative, state-led or state-coordinated modes of social regulation (Wade, this issue).

Setting the Stage

Joseph Schumpeter (1934: 74), the Austrian-American theorist of capitalist development and its eventual demise, called the banker 'the ephor of the exchange economy'[1] — someone who by creating credit (*ex nihilo*) to

1. An 'ephor' was one of five highest magistrates of ancient Sparta who were elected each year by the city-state's Assembly to exercise supervisory powers over Sparta's kings. The

finance new investments and innovation, 'makes possible the carrying out of new combinations, authorizes people, in the name of society as it were, to form them'. This same banker has, in Schumpeter's vision, 'either replaced private capitalists or become their agent; he has himself become the capitalist par excellence. He stands between those who wish to form new combinations and the possessors of productive means'. This way, the banker becomes 'essentially a phenomenon of development', as Schumpeter (ibid.) argued, fostering the process of accumulation and directing the pace and nature of economic growth and technological progress (Festré and Nasica, 2009; Mazzucato and Wray, 2015). Alexander Gerschenkron (1968/2000: 137) concurred, comparing the importance of investment banks in 19th century Germany's industrialization drive to that of the steam engine in Britain's Industrial Revolution:

> [T]he German investment banks — a powerful invention, comparable in its economic effects to that of the steam engine — were in their capital-supplying functions a substitute for the insufficiency of the previously created wealth willingly placed at the disposal of entrepreneurs. ... From their central vantage point of control, the banks participated actively in shaping the major ... decisions of individual enterprises. It was they who very often mapped out a firm's path of growth, conceived farsighted plans, decided on major technological and locational innovations, and arranged for mergers and capital increases.

Schumpeter and Gerschenkron celebrated the developmental role played by *bank-based* financial systems, in which banks form long-run (often personal) relationships with firms, have insider knowledge and (as they are large creditors) are in a position to exert strategic pressure on firms, impose market rationality on their decisions and prioritize the repayment of their debts. However, what Schumpeter left unmentioned is that the absolute power of the ephors could fail terribly; and when the wrong people were elected to the 'ephorate', their leadership and guidance did ruin the Spartan state.[2] Likewise, the personalized relationship-based banking system could ruin the development process: it could fatally weaken the corporate governance of firms, because bank managers would be more reluctant to bankrupt firms with which they have had long-term ties, and lead to cronyism and corruption, as it is relatively easy for bank insiders to exploit other creditors or

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ephors, or 'guardians', had extensive executive powers: to name — and recall — Sparta's military commanders and to mobilize its troops, to draft bills for debate in the Assembly, to preside at the Assembly, and to enforce the decisions taken there. Perhaps most importantly, the ephors were expected to keep an eye on Sparta's kings, especially during military campaigns, and to overrule them in case of unconstitutional behaviour. Their mere presence was supposed to curb whimsical and unlawful actions by Sparta's kings.

2. As Aristotle observed, 'certain "ephors" were corrupted with money and so far as lay in their power ruined the whole state. And because the office was too powerful, and equal to a tyranny, the kings also were compelled to cultivate popular favor, so that in this way too the constitution was jointly injured' (1944, *Politics Book II*: 1270b). There was a considerable risk of corruption because often 'men who are not at all well-off find themselves holding this office, and their lack of means makes them open to bribery' (ibid.).

taxpayers (Levine, 2005). Schumpeter's relationship-banker may be fallible, weak (when it comes to disciplining firms), prone to mistakes and errors of judgement, and not necessarily immune to corruptible influences. In short, there are reasons to believe that a bank-based financial system is inferior to an alternative, market-based financial system (Demirgüc-Kunt et al., 2012; Levine, 2005; see Hardie and Howarth, 2013, for a critique).

This view of the superiority of a 'market-based' financial system rests on Friedrich Hayek's grotesque epistemological claim that 'the market' is an omniscient way of knowing, one that radically exceeds the capacity of any individual mind or even the state. For Hayek:

> the market constitutes the only legitimate form of knowledge, next to which all other modes of reflection are partial, in both senses of the word: they comprehend only a fragment of a whole and they plead on behalf of a special interest. Individually, our values are personal ones, or mere opinions; collectively, the market converts them into prices, or objective facts. (Metcalf, 2017)

After his 'sudden illumination' in 1936 that the market is the best possible and only legitimate form of social organization, Hayek had to find an answer to the dilemma how to reformulate the political and the social in a way compatible with the 'rationality' of the (unregulated) market economy. Hayek's answer was that the 'market' should be applied to all domains of life. *Homo œconomicus* — the narrowly self-interested subject who, according to Foucault (2008: 270–71), 'is eminently governable' as he/she 'accepts reality and responds systematically to systematic modifications artificially introduced into the environment' — had to be universalized. This, in turn, could be achieved by the financialization of 'everything in everyday life', because financial logic and constraints would help to impose 'market discipline and rationality' on economic decision makers. After all, borrowers compete with one another for funds — and it is commercial (profit-oriented) banks and financial institutions that do the screening and selection of who gets funded. Hayek proved to be extremely successful in hiding his reactionary political agenda behind the pretence of scientific neutrality, by elevating the verdict of the market to the status of a natural fact, while putting any value that cannot be expressed as a price 'on an equally unsure footing, as nothing more than opinion, preference, folklore or superstition' (Metcalf, 2017). Hayek's impact on economics was transformative, as can be seen from the way Lawrence Summers sums up 'Hayek's legacy': 'What's the single most important thing to learn from an economics course today? What I tried to leave my students with is the view that the invisible hand is more powerful than the [un]hidden hand. Things will happen in well-organized efforts without direction, controls, plans. That's the consensus among economists. That's the Hayek legacy' (quoted in Yergin and Stanislaw, 1998: 150–51).

This Hayekian legacy underwrites, and quietly promotes, neoliberal narratives and discourses which advocate that authority — even sovereignty — be conceded to (in our case, financial) 'markets', which act

as an unbiased and transparent judge, collecting and processing information relevant to economic decision making and coordinating these decisions; and as a guardian, impartially imposing market discipline and market rationality on economic decision makers, thus bringing about not just socially efficient outcomes but social stability as well. This way, financialization constitutes progress — bringing 'the advantages enjoyed by the clients of Wall Street to the customers of Wal-Mart', as Nobel-Prize winning financial economist Robert Shiller (2003: 1) writes: 'We need to extend finance beyond our major financial capitals to the rest of the world. We need to extend the domain of finance beyond that of physical capital to human capital, and to cover the risks that really matter in our lives. Fortunately, the principles of financial management can now be expanded to include society as a whole' (ibid.: 1–2).

Attentive readers might argue that faith in the social efficiency of financial markets has waned: after all, Hayek's grand epistemological claim was falsified, in a completely unambiguous manner, by the Great Financial Crisis of 2007–08 which brought the world economy to the brink of a systemic meltdown. Even staunch believers in the (social) efficiency of self-regulating financial markets, including most notably former Federal Reserve chair Alan Greenspan, had to admit a fundamental 'flaw in their ideology'. And yet, I beg to disagree. The economic ideology that created the crash remains intact and unchallenged. There has been no reckoning and no lessons were learned, as the banks and their shareholders were rescued, at the cost of just about everyone else in society, by massive public bailouts, zero interest rates and unprecedented liquidity creation by central banks. Finance staged a major comeback — profits, dividends, salaries and bonuses in the financial industry have rebounded to where they were before, while the re-regulation of finance became stuck in endless political negotiations. Stock markets are, meanwhile, notching record highs, derivative markets are soaring and underpriced risk taking in financial markets gathers steam (again), this time especially so in the largest emerging economies of China, India and Brazil (BIS, 2017; Gabor, this issue). In the process, global finance has become more concentrated and even more integral to capitalist production and accumulation. The reason why even the Great Financial Crisis left the supremacy of financial interests and logic unchallenged, is simple: there is no acceptable alternative mode of social regulation to replace our financialized mode of coordination and decision making. After all, the 'ideas of the ruling class are in every epoch the ruling ideas', as Karl Marx (1846: 46) wrote in *The German Ideology*.

Accordingly, instead of a long overdue rethinking of Hayek's legacy, the economics profession has gone, with renewed vigour, for an even broader push for 'financial inclusion' (Chandrasekhar and Ghosh, this issue; Mader, this issue). Backed by the international financial institutions, 'social business' promoters (such as the World Economic Forum) and FinTech corporations, it proposes to extend financial markets into new areas including

social protection and poverty alleviation (Chandrasekhar and Ghosh, this issue; Lavinas, this issue) and climate change mitigation (Arsel and Büscher, 2012; Keuchyan, this issue). Most economists were already persuaded, by a voluminous empirical literature (reviewed by Levine, 2005), to believe, with ample qualification and due caution, that finance and financial markets do contribute to economic growth — a proposition that Nobel Laureate financial economist Merton Miller (1998: 14) found 'almost too obvious for serious discussion'. But now greater financialization is argued to be integral to not just 'growth' but 'inclusive growth', as World Bank economists Demirgüc-Kunt, Klapper and Singer conclude in a recent review article: 'financial inclusion allows people to make many everyday financial transactions more efficiently and safely and expand their investment and financial risk management options by using the formal financial system. This is especially relevant for people living in the poorest 40 percent of households' (Demirgüc-Kunt et al., 2017: 18). The way to extend the good life to more people is not to shrink finance nor restrain financial innovation, writes Robert Shiller (2012) in a book entitled *Finance and the Good Society*, but instead to release it. Shiller's book celebrates finance's 'genuine beauty' and exhorts *idealistic* (sic) young students to pursue careers in derivatives, insurance and related fields.

'REALLY-EXISTING' FINANCE CAPITALISM: A REGIME OF SOCIAL REGULATION

Financialization underwrites neoliberal narratives and discourses which emphasize individual responsibility, risk taking and active investment for the benefit of the individual him/herself — within the 'neutral' or even 'natural' constraints imposed by financial markets and financial norms of creditworthiness (Kear, 2012; Palma, 2009). This way, financialization morphs into a 'technique of power' to maintain a particular social order (Palma, 2009; Saith, 2011), in which the delicate task of balancing competing social claims and distributive outcomes is offloaded to the 'invisible hand' which operates through anonymous, 'blind' financial markets (Krippner, 2005, 2011). This is perhaps illustrated most clearly by iconoclast economist Michael Hudson (2012: 223):

> Rising mortgage debt has made employees afraid to go on strike or even to complain about working conditions. Employees became more docile in a world where they are only one paycheck or so away from homelessness or, what threatens to become almost the same thing, missing a mortgage payment. This is the point at which they find themselves hooked on debt dependency.

Paul Krugman (2005) has called this a 'debt-peonage society', while J. Gabriel Palma (2009: 833) labelled it a 'rentiers' delight' in which financialization sustains the rent-seeking practices of oligopolistic capital — as a

system of discipline as well as exploitation, which is 'difficult to reconcile with any acceptable definition of democracy' (Mann, 2010: 18).

In this regime of social regulation, income and wealth became more concentrated in the hands of the rentier class (Goda et al., 2017; Saith, 2011) and, as a result, productive capital accumulation gave way before the increased speculative use of the 'economic surplus of society' in pursuit of 'financial-capital' gains through asset speculation (Davis and Kim, 2015). This took the wind out of the sails of the 'real' economy, and firms responded by holding back investment, using their profits to pay out dividends to their shareholders and to buy back their own shares (Lazonick, 2014). Because the rich own most financial assets, anything that causes the value of financial assets to rise rapidly makes the rich richer (Taylor et al., 2015). In the USA, arguably the most financialized economy in the world, the result of this was extreme income polarization, unseen after World War II (Palma, 2011; Piketty, 2014). The 'American Dream', writes Gabriel Palma (2009: 842), was 'highjacked by a rather tiny minority — for the rest, it has only been available on credit!'. Because that is what happened: lower- and middle-income groups took on more debt to finance spending on healthcare, education or housing, encouraged by the deregulation of financial markets and changes in the tax code which made it easier and more attractive for households with modest incomes to borrow in order to spend. This debt-financed spending stimulated an otherwise almost comatose US economy by spurring consumption (Cynamon and Fazzari, 2015). In the 20 years before the Great Financial Crisis, debts and 'financial excess' — in the form of the asset price bubbles in 'New Economy' stocks, real estate markets and commodity (futures) markets — propped up aggregate demand and kept the US and global economies growing. 'We have', Paul Krugman (2013) concludes, 'an economy whose normal condition is one of inadequate demand — of at least mild depression — and which only gets anywhere close to full employment when it is being buoyed by bubbles'.

But it is not just the US economy: the whole world has become addicted to debt. The borrowings of global households, governments and firms have risen from 246 per cent of GDP in 2000 to 327 per cent, or US$ 217 trillion, today — which is US$ 70 trillion higher than 10 years ago.[3] It means that for every extra dollar of output, the world economy cranks out almost 10 extra dollars of debt. Forget about the synthetic opioid crisis: the world's more dangerous addiction is to debt. China, which has been the engine of the global economy during most of the post-2008 period, has been piling up debt to keep its growth process going — the IMF (2017) expects China's non-financial sector debt to exceed 290 per cent in 2022, up from around 140 per cent in 2008, warning that China's current credit trajectory is 'dangerous

3. This is according to data from the Global Debt Monitor, April 2017, published by the Institute of International Finance, based in Washington, DC. See: www.iif.com/publication/global-debt-monitor/global-debt-monitor-april-2017

with increasing risks of a disruptive adjustment'. China's insatiable demand for debt fuelled growth, but also led to a property bubble and a rapidly growing shadow banking system (Gabor, this issue), raising concerns that its economy may face a hard landing and send shockwaves through the world's financial markets. The next global financial catastrophe may be just around the corner.[4]

HOW FINANCE IS RESHAPING THE 'RULES OF THE GAME'

To understand this debt explosion we must comprehend what is driving the financial hyper activity, and how this is changing the way our economies work. For a start, the growth of the financial industry, in terms of its size and power, its incomprehensible complexity and its penetration into the real economy, is inseparably connected to the structural increase in income and wealth inequalities (Cynamon and Fazzari, 2015; Foster and McChesney, 2012; Goda et al., 2017; Storm and Naastepad, 2015). Richer households have a higher propensity to save and are more likely to hold financial wealth in risky assets (such as mutual funds, shares and bonds) and, hence, more money ends up with the management of institutional investors or 'asset managers' (Epstein, this issue; Gabor, this issue). As a result, a small core of the global population, the so-called 'High Net Worth Individuals' (Goda, 2018; Lysandrou, 2011), controls an increasingly larger share of incomes and wealth (Palma, 2011; Piketty, 2014; Saith, 2011; Taylor et al., 2015). This trend was strengthened by the shift towards capital-based pension schemes (Krippner, 2011) and the structural increase in the liquidity preference of big shareholder-dominated corporations, which came about under pressure from activist shareholders wanting to 'disgorge the cash' within these firms (Epstein, this issue; Jayadev et al., this issue; Lazonick, 2014). However, with few sufficiently profitable investment opportunities in the 'real economy', cash wealth — originating out of a higher profit share, dividends, shareholder payouts and capital gains on earlier financial investments — began to accumulate in global centrally managed 'institutional cash pools', the volume of which grew from an insignificant US$ 100 billion in 1990 to a systemic US$ 6 trillion at the end of 2013 (Pozsar, 2011, 2015).[5] Against the backdrop of the low interest rate environment, the global 'asset management complex' intensified its search for financial returns — using the liquidity to

4. According to BIS (2017) data, non-financial sector debt (as a percentage of GDP) increased from 108 per cent in 2008 to 141 per cent in 2016 in Brazil, and from 106 per cent in 2008 to 126 per cent in 2016 in South Africa. India's non-financial sector debt remained more or less unchanged at 128 per cent of GDP during the years 2008–16.
5. Note that these US$ 6 trillion global cash balances, stored in and managed by the global shadow banking system, are larger than the GDP in 2016 of India (US$ 2.3 trillion), Brazil (US$ 1.8 trillion) and sub-Saharan Africa (US$ 1.8 trillion) combined.

'make more money from money', or 'M → M' — mostly through short-term (overnight) securities lending and 'innovative' over-the-counter (OTC) derivatives-based investing[6] — the notional volume of which is currently over US$ 500 trillion (or eight times the value of global GDP), with little transparency or oversight (Pozsar, 2011). In the Appendix to this article, the logic of (naked) interest rate swaps, the biggest financial derivative, is explained in greater detail. But what it means is that many of the recent 'financial innovations' (in OTC instruments) have come about in 'demand-pull' fashion, that is, in response to the intensified search for (quick) financial returns.

OTC derivative trading requires the availability of *cheap liquidity on demand* (Mehrling, 2012); this means that the 'asset management complex' cannot invest the cash pools into long-term assets, but has to keep the liquidity available — ready to use when the possibility for a profitable deal arises. But doing this poses enormous risks, because the global cash pools are basically uninsured: they are far too big to fall under the coverage of normal deposit-insurance schemes offered by the traditional banking system (Pozsar, 2011). Securing 'principal safety' for the cash pools under their management thus became the main headache of the asset managers, and proved to be a far greater challenge than generating adequate rates of return for the cash owners. This is because the traditional way of securing principal safety of one's cash was by putting it in very short-term government bonds which were credit-rated as being 'safe' (such as US T-Bills or German Bunds). This way, the cash pool became 'collateralized' — backed up by sovereign bonds. But as inequality increased and global institutional cash pools expanded, the demand for safe collateral began to permanently exceed the availability of 'safe' government bonds (ibid.).

The only way out was by putting the cash into newly developed, privately guaranteed instruments: *asset-backed securities*. These instruments were secured by collateral — that is, the cash pools were lent, on a very short-term basis (often overnight), to securitization trusts, banks and other asset owners in exchange for safe and secure collateral — on the agreement that the borrower would repurchase the collateral some time later (often the next day). This is called a repurchase or 'repo' transaction (Gorton and Metrick, 2009) or an 'asset-backed commercial paper' deal (Covitz et al., 2013).

6. OTC derivatives are securities which are privately negotiated and traded between two parties, without going through a public exchange or other intermediary. OTC derivatives consist mainly of interest rate swaps (with a share of 57 per cent in the notional value of OTC trading in the second quarter of 2016), foreign exchange and currency swaps (13 per cent) and credit default swaps (2 per cent), in addition to options (with a share of 9 per cent). OTC trading was enabled by the development of sophisticated mathematical tools for valuing financial assets (from discounted cash flow analysis, the capital asset pricing model, and credit-rating systems to the Black-Scholes options pricing model). These tools proved to be 'performative' (MacKenzie and Millo, 2003) as they enabled the creation of markets for completely new financial instruments.

Normally, the cash loan would be over-collateralized, with the cash provider receiving collateral of a higher value than the value of the cash. (The basic workings of the 'repo' market are further explained in the Appendix.) These (short-term) deals are generally done within the shadow banking system, the mostly 'self-regulated' sphere of the financial sector which arose in response to the growing demand for risk intermediation on behalf of — and the prioritization of a 'safe parking place' for — the global institutional cash pools (Pozsar, 2011; Pozsar and Singh, 2011). The repo lender and the securities borrower each lends cash and gets back securities, and can re-use those securities as collateral to get repo loans for themselves. The next cash lender, which gets the same securities as collateral, can re-use them again as collateral to get a repo loan for itself. And so on. This creates a 'chain' in which one set of securities gets re-used several times as collateral for several loans: this is called *re-hypothecation* (Pozsar and Singh, 2011). In practice, these securities were increasingly used as 'money', a means of payment in inter-bank deals, within the shadow banking system.

It should be clear that 'securities', which are privately 'manufactured' and guaranteed money-market instruments, form the feedstock of this complex and opaque 'profit-generating machine' of inter-bank wheeling and dealing, both by providing 'insurance' to the global cash pools and by acting as a (privately guaranteed) means of payment in OTC trading. 'Securitization' is the most critical, yet under-appreciated, enabler of financialization (Davis and Kim, 2015). What then is securitization? It is the process of taking 'passive' assets with cash flows, such as mortgages held by commercial banks, and commodifying them into tradable securities. Securities are 'manufactured' using a portfolio of hundreds or thousands of underlying assets, all yielding a particular return (in the form of cash flow) and carrying a particular risk of default to their buyers. Due to the law of large numbers, the payoff from the portfolio becomes predictable and suitable for being sliced up in different 'tranches', each having a different risk profile. In the Appendix, I provide a simple numerical illustration of how a security is manufactured using a two-asset example based on Coval et al. (2009) — it is worth the effort to go through it. As Davis and Kim (2015) argue, securitization represents a fundamental shift in how finance is done. In the old days of 'originate-and-hold' (before the 1980s), (regulated) commercial banks would originate mortgage loans and keep them on their balance sheets for the duration of the loan period. But now in our era of 'originate-and-distribute', (de-regulated) commercial banks originate mortgages, but then sell them off to securitization trusts which turn these mortgages into 'securities' and vend them to financial investors. Securitization thus turns a concrete long-term relationship between a bank (Schumpeter's ephor) and the loan taker into an abstract relationship between anonymous financial markets and the loan taker (in line with Hayek's legacy). Commercial banks are now mere 'underwriters' of the mortgage (which is quickly sold and securitized), while households which take out mortgages are now de facto 'issuers of securities' on (global)

financial markets. This is the essence of the shift in financial intermediation from banks to financial markets.

This securitization fundamentally transformed the 'rules of the capitalist game', often in rather perverse directions. For one, as finance expanded, the demand for 'investment-grade' (AAA-rated) securities grew — and the result was a hunt for additional collateral akin to earlier gold rushes, in the words of Pozsar and Singh (2011: 5): 'Obtaining collateral is similar to mining. It involves both exploration (looking for deposits of collateral) and extraction (the "unearthing" of passive securities so they can be re-used as collateral for various purposes in the shadow banking system)'. Collateral is the new gold: this explains why banks (before the Great Financial Crisis) gave loans to non-creditworthy (sub-prime) customers (Epstein, this issue) and why these same banks are now eager to include the poor in the financial system (Mader, this issue) and to enclose ever new spaces for profit making (Arsel and Büscher, 2012; Keucheyan, this issue; Sathyamala, 2017). Mortgage loans (sub-prime or prime) or microcredit deals derive their systemic importance from the access they provide to the underlying collateral, either in the form of residential property or of high-return cash flows on microloans, made low-risk by peer pressure. This systemic importance (to the financial system, that is) by far exceeds the value of these loans to the actual borrowers; it has led — and is still leading — to an overdose of finance, with ruinous consequences.

Likewise, one cannot understand what is going in commodity and food markets unless one appreciates that trading in 'commodities' and 'food' is not so much related to (present and future) consumption needs, but is increasingly dictated by the market's alternative collateral, store-of-value, and safe-asset role in the global economy (Clapp and Isakson, this issue). That is, the commodity option or futures contract derives its value more from its usefulness as 'collateralized securities' to back-up speculative shadow-banking transactions than from its capacity to meet food demand or smoothen output prices for farmers. We can add a fourth law to Zuboff's Laws (2013), namely that anything which can be collateralized, will be collateralized. This even includes 'social policies', because the present value of future streams of cash benefits for the poor can serve as collateral (Lavinas, this issue). And because the major OTC markets require price volatility and spreads, exchange rate volatility and uncertainty — which are 'bad' for the economic development of countries attempting to industrialize (Bortz and Kaltenbrunner, this issue) — constitute a *sine qua non* for the profitability of major OTC instruments including forex swaps and credit default swaps (to 'hedge' the risks of the forex swaps).[7] Perverse incentives, excessive

7. Most of these OTC derivative markets 'only exist because of the ability to draw upon public money to support [them]', writes Joseph Stiglitz (2010: 175). That is, the banks and financial institutions participating in these markets know that they are too big to fail and too big for jail, and will be bailed out in case of a financial market collapse.

risk taking, fictitious financial instruments — it appears finance capitalism has reached its nadir. 'In the way that even an accumulation of debts can appear as an accumulation of capital', as Marx (1981: 607–08) insightfully observed, 'we see the distortion involved in the credit system reach its culmination'.

THE DEBATE CONTRIBUTIONS: CHALLENGING THE 'RULING IDEAS'

The articles in this Debate set out to demonstrate that the introduction of the logic of financial markets into areas and domains where it was previously absent has profoundly changed the 'rules of the game', as well as conduct and outcomes, to the detriment of 'inclusive' economic development, and in ways that have helped to legitimize what Palma (2009) appositely called a 'rentiers' delight' — a financialized mode of social regulation which has facilitated ever-increasing rent-seeking practices of a self-serving global financial elite and at the same time enabled a sickening rise in inequality. The Debate articles thus scrutinize, each in their own political-economy manner, the 'social efficiency of finance' by assessing the impacts of the 'really existing' financialized mode of social regulation, rather than some Hayekian 'ideal' of socially efficient financial markets.

The first five articles are macro-economic analyses of the impacts and political-economy ramifications of the shift to dominance of market-based finance. **Gerald Epstein**'s article explores the question of the social efficiency of modern, unregulated — market-based — finance, or what Epstein himself calls 'roaring banking', using the US economy as his case. Epstein quotes James Tobin, the 1981 Nobel Laureate, who wrote in the mid-1980s that 'we are throwing more and more of our resources ... into financial activities remote from the production of goods and services, into activities that generate high private rewards disproportionate to their social productivity' (Tobin, 1984: 14). Epstein concurs and documents how market-based finance (in the US and elsewhere) has grown relative to the real economy, how debt (or leverage) has increased, how this has led to Minskyan cycles of asset-price inflation and deflation, and how innovations including 'securitization' and 'repo transactions' have facilitated the utilization of collateral to grease the wheels of the whole system. Importantly, non-financial corporations have become financialized, legitimized by 'shareholder value' ideology, and households have been incorporated into the 'circuits' of financial markets. Epstein carefully reviews the (often heterodox) literature on the macro-economic impacts of 'roaring banking' and provides a new (incremental) benefit-cost analysis of the social efficiency of the US financial system. He estimates the incremental macroeconomic, industry-level and microeconomic financial rents (including excess profits) obtained by modern finance, and the damage due to the misallocation of resources to the financial industry, and concludes (still excluding the cost of the recession

caused by the Great Financial Crisis of 2008) that every dollar of banker rents represents a loss of income to the US economy of about US$ 1. Modern finance has been cannibalizing the rest of the economy, in other words. This not only confirms that Tobin was right, but it disproves Hayek's epistemological claim that 'things will happen in well-organized efforts, without direction, controls and plans' when left to the market (Summers, quoted in Yergin and Stanislaw, 1998: 150–51).

The second article, authored by **Arjun Jayadev, Joshua Mason and Enno Schröder**, scrutinizes the political economy of financialization in the USA, Europe and India. Their starting point is 'Foucauldian': finance is a form of social authority, or a weapon by which the claims of wealth owners (or rentiers) are asserted against the rest of the economy, which in turn involves the recasting of social ties as financial claims. In the US, this recasting of social ties manifests itself in the form of student debt, in the way family homes are being redefined as an object of speculation or a basis of collateralized borrowing, and in the manner in which shareholders treat corporations as 'ATMs'. The result is 'debt peonage': households borrow more (mostly) to pay the interest, and the indebtedness of firms rises, as they no longer retain profits to fund their investments but instead fully disgorge the cash (= profits) to their shareholders (Lazonick, 2014). As finance started to increasingly finance itself, the links between the real 'productive' economy and finance weakened — which has made it harder, even impossible, to stabilize (or revive) the real economy by means of just monetary policy. Finance is asserting its power in Europe in similar ways, but there is one difference. Unlike the US government, European governments have become tied to the mast, as their fiscal policy sovereignty (which includes the democratic autonomy to 'redistribute') was replaced by the discipline imposed by 'rational' deregulated (no longer 'repressed') financial markets (or what Wolfgang Streeck, 2014, has called the 'marktvolk'). The results have been disastrous: an unsustainable credit boom, driven by the largest European banks, followed by a crash and collapsing economies in Southern Europe. Like Sparta's ephor, financial markets proved fallible — and their mistakes did ruin whole countries including contemporary Greece. Jayadev, Mason and Schröder finally turn to India where, despite all the talk about financial liberalization, the need to provide and direct credit in areas of political and/or social priority means that some state control is necessary and remains in place. In effect, India did not liberalize its financial sector to the same degree as the US or Europe; in India, the social authority of finance remains relatively circumscribed. Hayek would have disapproved, but it has helped the Indian economy to navigate relatively unscathed through the deepest crisis in the post-war world economy.

In the third macroeconomic article, **Pablo Bortz and Annina Kaltenbrunner** assess the international financialization of developing and emerging economies (DEEs). Their focus is on the changes in financial relations and practices of old and new actors. They highlight how financialization

(driven by shareholder value maximization) slowed down corporate investment, lowered wage growth and increased (wealth and income) inequalities, while non-financial corporations began to amass large cash holdings and financial assets. The authors carefully document how and why capital inflows to and outflows from the DEEs have grown so strongly after the DEEs abolished cross-border capital controls. Unsurprisingly, large parts of these flows were of a speculative nature — and short term. Using insights from John Maynard Keynes, Bortz and Kaltenbrunner argue that the DEEs occupy the lower ranks of the international currency hierarchy, as they have to offer (foreign) funders higher interest rates, experience greater exchange rate volatility (and risk) and suffer to an excessive degree from external vulnerability (as capital inflows are mostly short term). The authors call this a position of 'subordinated financialization' and argue that the vast accumulation of forex reserves by central banks of major DEEs must be seen as a rational response to this structural subordination — but with high opportunity costs, because these resources cannot be used for productive investments. Subordinated financialization thus leads to uneven development, in structuralist fashion. To illustrate: the international currency hierarchy forces DEEs to adopt higher interest rates to maintain the value of their currencies, but the higher interest rates induce national agents to (over-)borrow in (cheaper) international markets, which raises external indebtedness, debt-servicing obligations and vulnerability to shocks in external financial markets. 'Structure' (meaning a country's position in the international currency hierarchy) here conditions 'conduct' (over-borrowing in international markets) and results in particular 'outcomes' (external financial vulnerability). The only way to escape from this 'doom loop' is to reintroduce capital controls and establish development banks and specialized financial institutions to fill the domestic financing gap. The authors re-articulate the argument of Keynes (1933: 758) who wrote in his essay on 'National Self-sufficiency' that 'Ideas, knowledge, science, hospitality, travel — these are the things which should of their nature be international. But let goods be homespun whenever it is reasonably and conveniently possible, and, above all, let finance be primarily national'.

Daniela Gabor's article analyses how the supremacy of financial markets has been restored and strengthened after the Great Financial Crisis of 2008. Her contribution focuses on the global and Chinese shadow banking systems — an initially largely unregulated system of inter-bank exchanges that intermediate, based on collateralized lending, between pension funds, insurance firms and multinational corporations (all three having large cash reserves) and leveraged investors hungry for higher returns and in need of cash. The fact that the epicentre of the Great Financial Crisis of 2008 was located in the US shadow banking system led to calls by the global regulatory community for regulation and downsizing of the parallel banking sector. But as soon as a new (still light-touch) regulatory regime for shadow bank activities was put in place, the global asset management industry started to push for a new agenda: to transform shadow banking into (securities) market-based

finance as part of a drive toward a further liberalization of global finance. Gabor zooms in on the Chinese economy where, since 2010, a shadow banking system with strong US characteristics (including a liberalized repo market) has been growing very rapidly. Crucially, global regulators and global asset managers are pushing China to (further) open up its securities and repo markets to foreign investors, to improve 'liquidity', and allow lenders to sell collateralized securities. Gabor warns that China's financial system will become more fragile and crisis-prone if it decides to re-engineer its shadow banking system along these lines. The risk of a repeat of the Great Financial Crisis of 2008, this time centred on China, will be considerable.

Demonetization and the push for cashlessness could — and should — be seen as perhaps the pinnacle of financialization, argue **C.P. Chandrasekhar and Jayati Ghosh** in their article on India's demonetization experiment of 8 November 2016, when 'high-value' rupee notes were abolished with only four hours' notice. The sudden move disrupted the economy and led to considerable losses of jobs and incomes. The monetary reform was initially justified in terms of enabling greater tax collection in future, eliminating 'black money' and reducing corruption, but was later framed as a means to speed up the digitalization of exchange through credit and debit cards, mobile banking and e-wallets. Helped by USAID and India's Ministry of Finance, global banks and information technology companies (and their foundations) are pushing for such digitalization as they make money directly from the (high) fees they charge on digital payments, or indirectly from the associated (big) data generation on users. In this way, Chandrasekhar and Ghosh argue, the FinTech corporations are enclosing a new space for private profit making: the privatization of the systems of payment as the capstone of Palma's (2009) 'rentiers' delight'. Even if we leave aside the thorny issues of how this digitalization impacts individual privacy and how it gives meaning to a 'Panopticon of Finance', it is clear that the social outcome will be regressive. Close to half of India's population will have no access to the digital payment system because of its high costs, the limited (regional) spread of banking branches and the internet connectivity constraint (see also Mader, this issue). With the state backtracking and handing over the reins of the formal payment system to a band of FinTech oligopolists, half of India's population is forced to continue its reliance on cash-based and often usurious informal credit sources.

The next three articles in the Debate focus on how financialization has transformed specific markets and how financial motives and logic, specifically the prioritization of adequate returns to shareholders over other corporate and social values, have trickled down into everyday practices and processes. In the first of the three papers, **Jennifer Clapp and S. Ryan Isakson** examine the financialization of the agrifood system. Based on detailed documentation, they show how, following deregulatory changes (such as the much-maligned US Commodity Futures Modernization Act of 2000), agriculture and food became a new arena for financial speculation (see also,

e.g., Sathyamala, 2017). This came about through the entry of big financial investors into agricultural commodities trading (which pushed up food prices), the establishment of equity-based funds trading in shares of agribusiness corporations (which reinforced the model of 'high-tech' industrial agriculture and fast-food chains), and through capital's entry into agricultural real estate markets (which drove up farmland prices). This enclosure of the global agrifood system offers new rents to FinTech corporations — quite in line with Epstein's analysis for the US (this issue). Alongside all of this, more concentrated agrifood corporations and food retailers, branching out into purely financial activities, began to prioritize the interests of their shareholders, cutting wage costs and externalizing social and environmental damages (through outsourcing in global supply chains) and offloading risks to workers, farmers, consumers and suppliers. Insurance for farmers is being privatized: farmers now must manage their own (price and weather) risks by using (derivative) commodity exchanges as hedging tools after government buffer stocks and international commodity agreements were phased out. These trends, Clapp and Isakson argue, reinforce growing inequalities in power and wealth within the food system, create more volatile food markets, undermine resilience and sustainability of the food system, and have been impeding collective action to address these issues.

Phil Mader critically assesses the recent turn in development policy towards the 'financial inclusion' of the 'unbanked' poor in formal financial markets (often in the form of microcredit). Does financial inclusion promote broad-based economic development? Do poor people benefit in meaningful ways from being included in formal finance? Going through the large literature on finance and growth, Mader argues that if there is any causal connection, it is more plausible that 'growth' drives 'financial inclusion' than vice versa. His review of the impact literature leads him to conclude that there is no evidence that financial inclusion is having transformative or positive effects on the living standards of the poor (as Chandrasekhar and Ghosh also argue). There are, finally, good grounds why the 'business case' for financial inclusion is not strong: financial businesses require direct and indirect government support to make inclusion a profitable proposition in ways that amount to what Nicholas Hildyard (2016) has called 'licensed larceny'. Mader's contribution thus challenges the much-hyped 'promises' of this supposedly pro-poor private-sector led development intervention, and arrives at the sober but fair conclusion that this agenda, when left unchallenged and uncontested, will grant more power to rentier capital to 'extract rents and reshape politics, and subordinate social development to capital market development'. This repeats, in a microeconomic context, the macroeconomic argument of Jayadev, Mason and Schröder (discussed above) that finance has to be seen as a form of social authority. Furthermore, Mader's conclusions echo, at the micro level, the macroeconomic thesis of 'subordinated international financialization' argued by Bortz and Kaltenbrunner.

Like food, nature is a recent 'arena' for financial speculation. This is illustrated by **Razmig Keucheyan**'s analysis of what he labels (using a French term) the *assurantialisation* of climate risk, which follows from the deliberate 'privatization of risk': the elimination of the protection previously provided by governments against personal misfortune, in favour of the rise of market-based individualized insurance for farmers, workers and households (Hacker, 2008). The leitmotif of Keucheyan's article comes from billionaire financial speculator Warren Buffett: 'when you are thinking ... as a shareholder of a major insurer, climate change should not be on your list of worries'. Keucheyan argues that insurance firms were forced to innovate in response to the occurrence of new risks (for example, due to global terrorism or climate change), which are characterized by hyper-correlation and therefore imply costs that are beyond the capacity of individual insurers. One such financial innovation is the catastrophe bond or 'cat bond': a market-based instrument (belonging to the class of insurance-linked securities) issued by an insurer, bought by financial investors and rated by the credit-rating agencies. The investors pocket the interest paid on the bond by the insurer and get the principal back once the bond reaches its maturity date. However, if a catastrophe (for instance, a hurricane or a flu pandemic) occurs, the investors lose the principal to the insurer — which uses the money to reimburse those affected by the catastrophe, while still making a profit for its shareholders. Investors including pension funds are buying cat bonds (the risks of which are not correlated with the default risks of traditional assets) to diversify their portfolios. Pressed by the 'fiscal crisis of the state' and encouraged by the World Bank and the OECD, as Keucheyan documents, states including Mexico and the ASEAN countries have begun to issue 'sovereign' cat bonds — ostensibly in order to protect the public finances from the potentially non-trivial costs of a (climate) catastrophe. In a similar offloading of sovereign responsibility to the 'market', states are promoting microinsurance, often lowering insurance premiums by means of subsidies (Arsel and Büscher, 2012). Crucially, 'insurability' is a political construction, or a technique of power, as Keucheyan explains, created by a conglomerate of big insurance companies, a small number of risk-modelling firms and high-tech firms, all with the consent of neoliberal states. This system is difficult to reconcile with any acceptable definition of democracy.

The next Debate article examines how the financialization of social policy in middle-income democracies in Latin America is leading to a recommodification of their welfare regimes. **Lena Lavinas** focuses on the examples of microfinance and the much-hyped conditional cash transfers (CCTs) in Brazil — and provocatively argues that these interventions have led to the 'collateralization' of Brazil's social policy, as debt has become the cornerstone of social protection. Accounting for two-thirds of Brazil's social spending, CCTs, financed mostly by consumption taxes, have been regressive (increasing inequality). CCTs have 'crowded out' decommodified forms of direct provision and, by drawing households into the cash

economy, expanded the reach of financial logic and discipline on the poor. Social policy thus advances the 'financial inclusion' of the poor (see Mader, this issue). Their market incorporation, as Lavinas explains, has led to a heightened appreciation of having 'collateral' — something to pledge as a security for repayment of a loan — because collateral enables the poor to access (consumer) credit as a means to withstand the vagaries of the market. The regular income flow to previously marginalized groups in the form of social security benefits (from welfare programmes such as Bolsa Família) constitutes 'collateral', as it is guaranteed ('underwritten') by the state. Due to this 'collateralization', these lower-income households all of a sudden became creditworthy and, in response, commercial banks began to massively lend to them on commercial terms. The outcome has been a sharp increase in debt-to-income ratios and debt-servicing obligations of the lowest-income groups. '[S]ocial protection systems ... become a new frontier by which finance may disseminate new devices for risk management and mitigation', is the bottom line of Lavinas' trenchant critique of the welfare regimes, which in her opinion are more appropriately called 'debt-fare states' (see also Soederberg, this issue, Focus section).

The final Debate contribution, a provocative think-piece by **Robert H. Wade**, investigates the space for a developmental state in our era of financialization, global production chains and knowledge monopolies. Wade brings us back to Hayek's illumination that market competition is the only legitimate, reliably welfare-enhancing organizing principle for human activity. In this neoliberal mindset, states can only do wrong, as Mrs. Thatcher explained: 'You will always spend the pound in your pocket better than the state will'. Wade revisits the debate on the role of the state and of (selective) industrial policy in creating the East Asian development miracles, and concludes that despite all the counter-arguments and a sizeable body of counter-evidence, mainstream's deep hostility to a developmental state and industrial policy has not changed — 'for every Korea there are a hundred failures' — and the key to the East Asian miracle is seen as resource allocation through (undistorted) markets. Wade outlines the alternative — developmental state — understanding, based on an elite consensus underlying a 'developmental mindset'. He analyses the institutional arrangements and political settlements creating the 'embedded autonomy' of the East Asian state, acknowledges historical circumstances (or 'luck') conducive to rapid economic growth and structural transformation, and brings in recent 'knock-out evidence' of the effectiveness of industrial policy and directional thrust by the state in South Korean growth, provided by Nathan Lane (2017).

Unlike the East Asian miracle economies, today's middle-income countries face a number of new or stronger forces which Wade calls 'anti-catchup factors'. These include hierarchical centre–periphery structures inherent in global value chains (Fischer, 2015), the high concentration of patented knowledge in the hands of OECD corporations (Baker et al., 2017), the financialization of non-financial corporations (Lazonick, 2014), the tighter

integration of domestic and global financial markets (Bortz and Kaltenbrunner, this issue), and the asymmetric adjustment pressure on trade deficit countries. However, as no peripheral country has successfully industrialized and caught up with the 'core' by following neoliberal economics (see also Storm, 2015), today's middle-income countries must learn from the East Asian experiences. Wade concludes his contribution by providing nine guidelines, all geared toward creating and sustaining a 'developmental mindset'.

A 'ONE-FOOT' CONCLUSION

The global financial crisis has been followed by 10 dire years of economic stagnation, high and rising inequalities in income and wealth, historically unprecedented levels of indebtedness, and mounting uncertainty about jobs and incomes in most nations. The crisis conditions crystallized into a steadily increasing popular dissatisfaction with the political and economic status quo of those supposedly 'left behind by (financial) globalization'; a dissatisfaction which amplified into a 'groundswell of discontent' — to use the exact words of the IMF's Managing Director Christine Lagarde (2016). Angry and anxious electorates were transformed by demagogues into election-winning forces, as the British Brexit vote, Trump's (2016) and Erdogan's (2017) election victories in the US and Turkey, and recent political changes (toward authoritarianism) in Brazil, Egypt, the Philippines and India all attest. Secular stagnation and political instability are feeding a widespread sense that capitalism, as a historical phenomenon, is now in a critical condition — and to some the question is no longer *whether* but *how* capitalism will end (see Streeck, 2014). This is not the question of the present Debate, however, which instead asks how and why the global political economy morphed from post-WWII 'mixed' industrial capitalism to a neoliberal 'rentiers' delight', and how to confront the Panglossian logic and arguments used by (financial) economists to legitimize the financialized order as the 'best of all possible worlds'.

Taken together, the 10 contributions in this Debate lay to rest the Hayekian claim that unregulated market-based finance is socially efficient — the macro- and microeconomic impacts of the rise to dominance of financial markets on capital accumulation, growth and distribution have overwhelmingly been found to be deleterious (Epstein). Market-based finance is no longer funding the real economy (Epstein; Jayadev, Mason and Schröder), but rather engaging in a self-serving strategy of rent-seeking (Chandrasekhar and Ghosh; Mader), licensed larceny à la Hildyard (Chandrasekhar and Ghosh; Mader), exchange rate and global stock market speculation (Bortz and Kaltenbrunner), derivatives speculation (Keucheyan; Clapp and Isakson) and collateral mining (Gabor; Lavinas) — asphyxiating economic development in the process. As John Maynard Keynes (1972: 131) wrote in

his article 'The Grand Slump of 1930', 'there cannot be a real recovery ... until the ideas of lenders and the ideas of productive borrowers are brought together again .... Seldom in modern history has the gap between the two been so wide and so difficult to bridge'. As the Debate articles show, the gap between finance and the real economy may be even wider today than in the 1930s.

This does not mean, however, that Schumpeter and Gerschenkron were wrong in calling the banker the 'ephor' of capitalism and a 'phenomenon of development'. Finance *can* positively contribute to economic development, something which indeed is 'almost too obvious for serious discussion' as Miller wrote, but only when the 'ephor' is 'governed' and 'directed' by state regulation to structure accumulation and distribution into socially useful directions (Epstein; Jayadev, Mason and Schröder). The East Asian miracle economies prove the point that finance can be socially efficient if bankers can be made to work within the 'developmental mindset', the institutional arrangements and political compulsions of a 'developmental state', as argued by Wade. China's recent move to (securities) market-based finance may be the beginning of the unravelling of its growth miracle (Gabor; see also BIS, 2017). Rather than letting financial markets discipline the rest of the economy and the whole of society, finance itself has to be disciplined by a countervailing social authority which governs it to act in socially desirable directions.

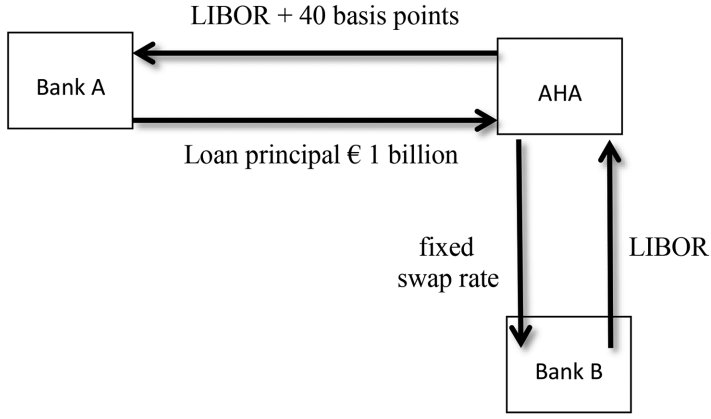
One famous account in the Talmud tells about Rabbi Hillel, a great sage, who, when he was asked to explain the Torah in the time that he could stand on one foot, replied: 'Do not do unto others that which is repugnant to you. Everything else is commentary'. If there is a one-foot summary of the 10 articles in the Debate, reviewed in this Introduction, it is this: 'Finance is a terrible ephor, but, if and when domesticated, can be turned into a useful servant. Everything else is commentary'.

APPENDIX

What Is an Interest Rate Swap?

Almost 60 per cent of global OTC derivatives trade involves setting up, and buying and selling, interest rate swaps (IRS). Trading in IRS is one of the most liquid global derivatives markets. So what is an IRS? An IRS is a contractual arrangement between two 'counterparties' who agree to exchange interest rate payments on a defined principal amount, for a fixed period of time. The principal amount is not exchanged between the counterparties; rather, the interest payments are 'swapped' based on a 'notional principal' and only net interest payments are transferred. The buyer of the swap exchanges fixed for floating interest payments, while the seller of the swap agrees to become a fixed rate receiver and a floating interest rate payer.

Figure A1. An Interest Rate Swap



Interest rate swaps do not generate any new sources of funding themselves; they convert one (fixed) interest basis to a different (floating) interest rate basis (or vice versa). These so-called 'plain vanilla' swaps are by far the most common type of IRS. Let us consider an example.

A privatized *for-profit* housing corporation, appositely named 'Affordable Housing for All' or AHA, borrows € 1 billion from Bank A for five years. The loan is a floating (variable) interest rate loan which is cheaper than taking a loan with the fixed five-year interest rate of (say) 4 per cent. In the contract it is stipulated that AHA pays the annual forward LIBOR + 40 basis points (which equals 0.4 percentage points). LIBOR stands for London Inter-Bank Offered Rate and it is the world's most widely-used benchmark for short-term (floating) interest rates. Let me assume that the LIBOR is 3 per cent. AHA faces an interest rate risk, as the LIBOR may rise during the five years of the loan contract. To hedge this risk, AHA decides to purchase an IRS from Bank B. According to the swap contract, AHA swaps its floating interest rate for a 'fixed swap rate' which we here fix at 3.5 per cent.[8] AHA pays this fixed swap rate to Bank B in return for the receipt of the periodic payment of the floating LIBOR rate by Bank B. Figure A1 illustrates this graphically.

With the IRS, the *effective* interest rate paid by AHA becomes:

$$(\text{LIBOR} + 40 \text{ basis points} + \text{fixed swap rate}) - \text{LIBOR}$$
$$= \text{fixed swap rate} + 40 \text{ basis points} = 3.9 \text{ per cent}$$

Through the IRS, AHA can enjoy the best of both worlds. The housing corporation is effectively paying less than the fixed five-year interest rate of 4 per cent, while its (floating) interest rate risk has been fully hedged (as it

8. The fixed swap rate is in practice chosen so that the present value of all net cash flows between AHA and Bank B equals zero.

is paying the *fixed* swap rate). But hedging interest rate risks is not the only, or most important, *raison d'être* for an IRS. The dominant use of IRS is speculation. This can be seen most clearly in the case of a 'naked' IRS. In a 'naked' IRS, AHA decides to set up an IRS with Bank B without first taking a € 1 billion loan from Bank A. There is, in other words, no *real* interest rate risk to hedge — this is a speculative *zero-sum* deal on a fictitious principal sum of € 1 billion between AHA and Bank B in which AHA is betting that the LIBOR goes up (relative to the contractually agreed fixed swap rate), whereas Bank B is gambling that the LIBOR goes down (relative to the fixed swap rate) during the loan period of five years. Let us suppose that LIBOR increases. This is good for AHA which is paying the fixed swap rate but receiving the LIBOR. The IRS is now 'in the money' and AHA could sell it off to a third party, and capitalize on this IRS. But positive returns are — clearly — not guaranteed, the LIBOR might after all decline. There is no risk-free speculation and past performance does not guarantee future results.

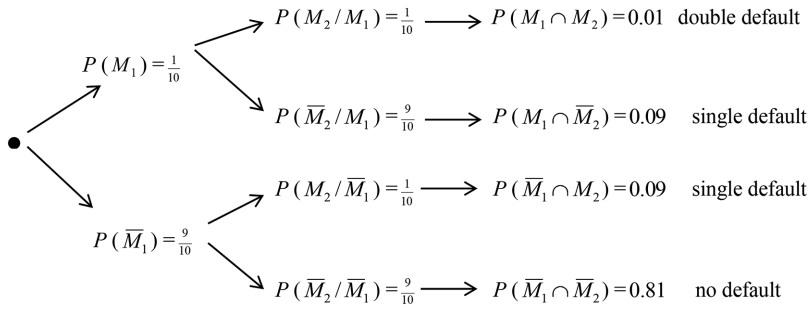
What Is a Repo Deal?

A repurchase or repo transaction takes place between the owner/manager of an institutional cash pool, which is looking to find 'insurance' for its liquidity and acts as the lender of cash, and a counterparty (a bank or a money market fund), which owns safe assets and is in need of short-term liquidity. The cash pool buys some asset (= collateral) from the bank or money market fund for € X, and the bank or money market fund agrees to repurchase that same asset some time later (often just the next day) for € Y. The percentage (Y – X)/X is the 'repo' rate and it is comparable to the interest rate on a bank deposit. Generally, the repo deal is 'rolled over' in time — the asset is not repurchased the next day, as the loan period is extended by another day. Securities, often mortgage-backed, are widely used in such repo transactions. Typically, the loan is over-collateralized, that is, the total amount of the loan will be less than the value of the underlying asset, with the difference called a 'haircut'. For example, as Gorton and Metrick (2009) explain, if an asset has a market value of € 100 and a bank sells it for € 80 with an agreement to repurchase it for € 88, then the repo rate is 10 per cent (= (88 – 80)/80), and the haircut is 20 per cent ((100 – 80)/100). If the bank or money market fund defaults on the promise to repurchase, then the cash pool keeps the collateral. This way, the institutional cash pool manages to obtain privately-guaranteed insurance for its (otherwise uninsured) liquidity.

How Does Securitization Work?

The 'manufacturing' of securities can be illustrated using a simple two-asset example. Let us consider two identical (sets of) mortgage loans, both of

Figure A2. 'Manufacturing' a Structured Security: A Two-mortgage Example



Notes:
M_i is mortgage i ($i = 1, 2$).
$P(M_i)$ is the probability of a default of mortgage i.
$P(\bar{M}_i)$ is the probability of a non-default of mortgage i.
$P(\bar{M}_i/\bar{M}_j)$ is the probability of a non-default of mortgage i conditional upon the probability of a non-default of mortgage j.
$P(M_i \cap M_j)$ is the probability of a double default, calculated as $\frac{1}{10} \times \frac{1}{10} = \frac{1}{100} = 0.01$ or 1%.
The probability of a single default is 18%. The probability of no default (of both mortgages) is 81%. The 'event of a default' of mortgage 1 is assumed to be independent of the 'event of a default' of mortgage 2.

which have a probability of default, *P*, of 10 per cent and pay € 0 conditional on default and € 1 otherwise. We assume that there is no correlation in default risks between the two mortgages; this means that the default of the first mortgage is not making it more likely that the second mortgage will default as well. The practical point is that because each mortgage generates a cash flow (the interest paid by the mortgage taker) and represents underlying collateral (the house of the mortgage taker), it constitutes an asset from the perspective of financial investors. In the simplest instance of securitization (without 'structuring') the two mortgages are sold separately and the default probability *P* is 10 per cent for each newly minted 'security'. We can, however, 'structure' risk by 'pooling' and 'tranching' the security. Pooling means we put the two mortgages in one portfolio, such that the notional value of the underlying asset is € 2, and we then issue two € 1 tranches against this asset — one (higher-risk) junior tranche and one (lower-risk) senior tranche. The probability tree associated with this € 2 portfolio appears in Figure A2. What it shows is that the portfolio has three possible outcomes: (1) neither of the mortgages default, which has a probability of 81 per cent; (2) both mortgages default at the same time, which has a probability of 1 per cent; and (3) one of the two mortgages defaults, while the other does not; the risk of a single default is 18 per cent (or two times 9 per cent in Figure A2). The next step is tranching, which means cutting up the portfolio of assets into tranches which are prioritized in how they absorb losses from the underlying

portfolio. Specifically, the contract for the junior tranche can be written such that the buyer of this tranche bears the first € 1 of losses to the portfolio: put differently, the buyer of the junior tranche accepts the risk of a single plus a double default and will only get her return if both mortgages *avoid* default. The default risk of the junior tranche therefore equals 19 per cent. Clearly, the junior tranche offers protection to the senior tranche through over-collateralization. The reason is that the senior tranche only bears losses if the capital of the junior tranche is exhausted and hence only defaults if both mortgages default. The joint probability of default is only 1 per cent (which is the risk associated with the senior tranche).

'Structuring' allows highly risky securities to be repackaged, with some of the resulting tranches sold to investors seeking only safe investments — hence the claim that securitization leads to a better allocation of risks. However, by using a larger number of securities in the underlying pool, a progressively larger fraction of the tranches end up with lower default risk. For example, if we extend the two-mortgage example of Figure A2 by adding a third € 1 mortgage (also having P of 10 per cent), three claims can be issued against this underlying capital structure. Now, the senior-most tranche defaults only if all three mortgages default, the joint probability of which is just $\frac{1}{10} \times \frac{1}{10} \times \frac{1}{10} = \frac{1}{1000} = 0.001$ or 0.1 per cent. The second (or *mezzanine*) tranche defaults if two or more of the mortgages default which has a probability of only 2.8 per cent. The junior tranche defaults if any of the three mortgages default, which has a probability of 27.1 per cent. Thus, in a structured security based on three mortgages, two of the three tranches are far less risky than the underlying mortgages (each having a default risk of 10 per cent).

The problem with structured finance securities is that they magnify the effects of an imprecise or incorrect estimate of default probabilities, default correlations, as well as model errors due to the potential misspecification of default dependencies (Coval et al., 2009). Consider, for instance, the two-mortgage case of Figure A2 and now assume that the defaults are perfectly correlated, which means that both mortgages either survive or default simultaneously. The senior tranche now inherits the risk of the underlying assets, i.e. 10 per cent — which is 10 times the risk in case the default risks are uncorrelated. Intermediate levels of correlation will lead to default risks of the senior claim between 1 per cent and 10 per cent. Simulation studies (Coval et al., 2009) show that even slight changes in default probabilities and default correlations — the credit-rating model's baseline parameters — can have significant impacts on expected payoffs of even the most senior claims. Credit-rating agencies did not at all appreciate the fragility of their estimates and methods, and this deep lack of understanding was shared by banks, regulators and the public at large. Perverse incentives, in addition, induced questionable behaviour and too much risk taking by bankers and credit raters alike (Coval et al., 2009).

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