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The Spatialisation
of the Future

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Abstract

This paper argues that the growth of the securities markets signifies the spatialisation of the future. The possibility of this spatialisation is explained in terms of Marx's commodity principle: it is because that principle has been expanded to encompass financial securities that the future now exists as a socially constructed space that parallels physical space. The necessity for this spatialisation is explained in terms of the financial pressures on the world's major public and private organisations: security-issuing governments and corporations need to use the future to escape financing constraints in the present just as security-buying institutional investors need to use the future to meet financial commitments in the present. As the precondition for the continuing growth in scale of the securities markets is compliance with the rules of commodity exchange, and as the 'liberal market economy' variety of capitalism is the only one in which this condition is unreservedly met, it follows that a key by-product of the increasing need to colonise the future to take the overspill of the pressures of the present will be an increasing convergence on this variety of capitalism.

Keywords

Spatiality; Marx's commodity principle; varieties of capitalism; convergence of capitalisms

1. Introduction

The fact that the future cannot be known with certainty would seem to rule out its transformation into a structured and thus potentially habitable space. This is the position taken by all current economic theories. The contrary position put here is that the growth of the world's securities markets to the point where these now dominate the world's product markets essentially signifies the spatialisation of the future. The possibility of this spatialisation is explained in terms of Marx's commodity principle: it is because that principle has been expanded to encompass equity and debt securities – claims on the future outputs of governments and corporations – that the future now exists as a socially constructed space that parallels physical space. The necessity for this spatialisation is explained in terms of the growing financial pressures bearing down on the world's major economic organisations: security-issuing governments and corporations need to use the future to escape financing constraints in the present just as security-buying institutional investors need to use the future to meet financial commitments in the present. As the precondition for the continuing expansion

of the securities markets is compliance with the rules of commodity exchange, and as the ‘liberal market economy’ (LME) variety of capitalism is the only one in which this condition is unreservedly met, it follows that a key by-product of the increasing need to colonise the future to take the overspill of the pressures of the present will be an increasing convergence on this variety of capitalism.

The layout of the paper is as follows. Section two explains why the treatment of uncertainty in current economic theories rules out the spatialisation of the future. Section three expands Marx’s commodity principle into the contemporary era and, in so doing, explains the importance of institutional investors to the spatialisation of the future. Section four explains why a key implication of the spatialisation of the future is the convergence of capitalisms on the LME variety. Section five concludes.

2. Uncertainty as a barrier to the spatialisation of the future

Of the three phases of time – past, present and future – only the future has the potential to be turned into a structured space that can be permanently inhabited by economic agents. The past can shape the present activities of agents either subjectively, through the power of memory, or objectively, through the inheritance of the material artefacts necessary for economic activity, but, as it is unrecoverable, it cannot be occupied as a space. Neither can the present, because this only exists as a single point in time and one cannot occupy a point. Only the future, as an unbounded flow of successive time points that are yet to happen, but which will happen, is capable of being spatialized. Although this spatialisation has, as we shall argue, become a reality with the growth of the world’s equity and debt securities stocks to the point where these stocks now completely dominate the world’s output base to which they lay claim, it is a reality that is not captured either in mainstream neo-classical economics or in any of the theories on the non-mainstream wing of the economics profession. There are two reasons for this omission. One is that all current economic theories continue to persist with the assumption that the representative agent on the demand side of the securities markets is the household investor when the actual reality is that that demand side is now dominated by an array of large institutional investors. This observation has an important bearing on the spatialisation of the future because only institutional investors have sufficient motive to treat financial securities in a way that causes them to become the constituent building blocks from which the future is constructed as a habitable space. Before expanding on this argument, we first look at the other

and more long-standing reason for the failure to admit the possibility of the spatialisation of the future. That reason comes down to the issue of uncertainty.

To deal with the future, one has to deal with uncertainty. In general equilibrium theory, which has long been the dominant paradigm in mainstream economics, the approach has been to abolish uncertainty in any genuinely meaningful sense. Genuine uncertainty means that there will be gaps in individuals' knowledge of the future because of the unpredictability of future events. However, there are no such knowledge gaps in general equilibrium theory because of the assumption that agents are provided with market clearing prices not only for goods delivered at the current time and under the current state of the world but also for goods to be delivered at any future date and under any future state of the world. Thus, agents in these theories are posited not only as rational but also as forward-looking agents able to formulate at a single point in time consistent decisions regarding not only all current choices but also all possible future choices. In abolishing genuine uncertainty, general equilibrium theory in effect ends up abolishing the future as a distinct time frame. As Frank Hahn once put it: "The assumption that all inter-temporal and all contingent markets exist has the effect of collapsing the future into the present" (Hahn, 1984, p.81).

In Austrian and Post-Keynesian economic theories there appears to be a very different approach to the future because there is a very different approach to time. Time in mainstream general equilibrium theories is mechanical or Newtonian time, time that, emptied of real-world experiences, merely consists of a succession of points along a line that differ only in terms of distance. To quote O'Driscoll and Rizzo, two leading proponents of the Austrian school of economics: "The Newtonian conception of time is spatialized time; that is, its passage is represented or symbolised by 'movements' along a line ... time is fully analogized to space, and what is true of the latter becomes true of the former" (O'Driscoll and Rizzo, 2014, p.33). By contrast, time in non-mainstream economics is real or historical time, time not as a succession of empty and homogenous and thus potentially reversible points along a line, but as a forward facing and irreversible flow of historically conditioned experiences that serves to both distinguish the different phases of time and at the same time link them together¹. Where

¹ Termini (1981) subsumes the distinction between 'mechanical' and 'historical' time under a broader ('absolute') distinction between a logical (causal) structure of sequences and a chronological structure. Thus, economic theories using 'logical time' sequentiality abstract from time in that the variables in these models need not be dated. By contrast, variables are dated in theories following a chronological path, the distinction here being that 'mechanical time' sequentiality abstracts from any qualitative difference between past, present and future while 'historical time' sequentiality respects the qualitative difference between these time periods.

memory is the key link between the past and the present, expectations are the key link between the present and the future. As these expectations can never equate with perfect foresight because real processes in time always produce unpredictable change, novelty and surprise, the future cannot be collapsed into the present but must, on the contrary, be recognised as a time frame that exists in its own right.

Important as are the differences separating the mainstream and non-mainstream approaches to the future, they nevertheless share one basic proposition: the inadmissibility of the future as a structured and thus potentially habitable space. Newtonian time in general equilibrium theory may be classified as spatialized time, but spatialisation here is only meant in the sense of analogizing time with space, not in the sense of ascribing properties to time that enable it to exist as a space as such. If the future exists at all, it is only as a point in the present when rational and forward-looking agents plan all their current and future actions and, as we say, one cannot inhabit a point. Neither is the future a habitable space in Austrian and other non-mainstream economic theories for although they allow for the existence of the future as a genuinely distinct time frame because they take uncertainty and ignorance of the future seriously, the contradiction is that this very same standpoint reinforces the idea that the future cannot possibly be structured in a way that would allow it to serve as a space fit for permanent occupation².

The fact that non-mainstream theories take uncertainty seriously means that they give an importance to rules of behaviour and institutions that is not given in general equilibrium theory. To again quote Driscoll and Rizzo: “Rules provide, as it were, safe bounds for behaviour in a relatively unbounded world. Institutions are the social crystallisation of rule-following behaviour or, in other words, the overall pattern of many individuals following a similar rule. Thus, the circle is closed. Time and genuine uncertainty promote the following of rules and the development of institutions. The latter, in turn, serve to reduce, but not eliminate, the unboundedness of the economic system by providing the stable patterns of interaction” (ibid, p.72)³. What is made clear here is that in those economic theories where time is real time and

² The Post-Keynesian critique of mainstream theory’s assumptions about a knowable future is typically framed as a critique of the ‘ergodic’ axiom, which postulates that all future events are actuarially certain, that is, that the future can be accurately forecasted from an analysis of existing market data (see e.g. Davidson, 1972; Arestis, 1996). In the contrary position of ‘non-ergodicity, the future is unknown and unknowable because decisions taken today will alter the way the future looks.

³ Godley and Lavoie similarly state that in their post-Keynesian model, agents “display a kind of procedural rationality” in that “they set themselves norms and targets, act in line with these and the

where there is genuine uncertainty about the future, behavioural rules and institutions fulfil an important role as coping mechanisms. Our view is that while this proposition is correct it is also incomplete inasmuch as behavioural rules and constraints now serve not only as mechanisms for coping with an uncertain future but also as tools for structuring that uncertain future. If none of the current economic theories go so far as to recognise the new structuring role played by these rules and constraints it is because none of them look closely at their systematic application to a particular class of entities, financial securities, and none of them do so because none of them separate out that particular class of agents who have the motive and drive to push for the application of these rules and constraints to financial securities, namely, institutional investors. This point was made above, and we shall return to it again below, but before doing so we first provide an analytical framework which can help shed light on why institutional investors hold the key to the spatialisation of the future. This framework is based on Marx's commodity principle.

3. Marx's commodity principle and its global expansion in the contemporary era⁴

Although Marx's theory of capitalism has class relationships in production as its central focus of attention, it does not, contrary to conventional wisdom, take the aggregative category of class as its basic unit of analysis. Rather, that analytical unit is a single, disaggregated category, the commodity⁵. As we see it, this highly distinctive form of methodological reductionism serves two fundamental purposes. The first is to establish a generalising insight into the capitalist economic system: to reduce the system to a single representative unit is to see across the system and identify what all its constituent parts have in common and that is not the class relation in production or any other economic counterparty relation so much as the impersonal commodity exchange relation. Only having first established this generality of commodity exchange relations, does Marx then proceed to discuss particular types of counterparty relations, beginning with the production relation in the fourth chapter of volume 1 of Capital.

expectations that they may hold about the future. These norms, held by agents, produce a kind of autopilot. Mistakes, or mistaken expectations, bring about piled-up (or depleted) stocks – real inventories, money balances, or wealth – that signal a required change in behaviour” (Godley and Lavoie, 2011, p.16)

⁴ This section draws heavily on Lysandrou (2016; 2019)

⁵ This point regarding the micro-foundations of Marx's economic theory was first developed in Lysandrou (1996).

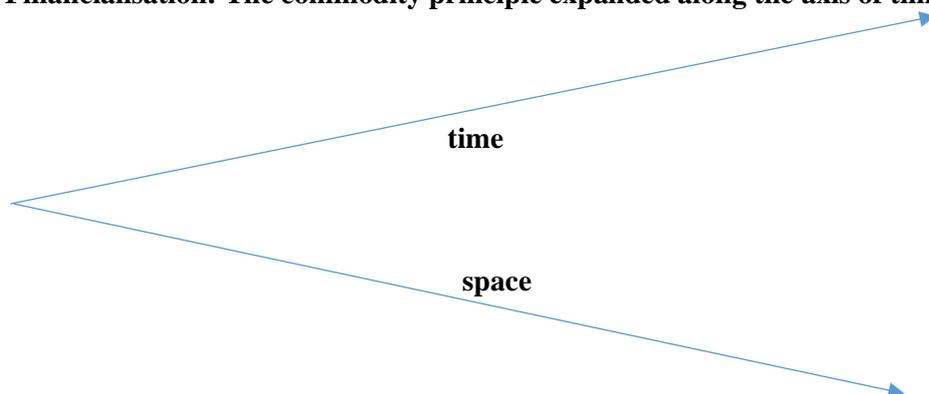
The second fundamental purpose behind Marx's reductionist commodity principle is to permit an understanding of any new emergent phenomena under capitalism as an evolving commodity system. It can do this because what is unique about that principle is its highly unusual combination of the opposing properties of *exclusivity* and *inclusivity*. Its exclusivity is readily apparent in regard to material products. Thus, where all goods and services are usually classified as commodities on account of their materiality, this is not the case with Marx. Only those that are priced and exchanged against socially sanctioned production standards qualify as commodities whereas those that are priced and traded on privately negotiated terms do not so qualify. This exclusivity property of the commodity principle explains the essentiality of money in Marx's commodity theory: in a decentralised production and exchange economy it is only through the functions of money that production and pricing standards are set and become binding on producers. The inclusivity property of Marx's commodity principle lies in the fact that the principle can encompass entities other than material products. Notable amongst these, to begin with, are the capacities for production, the capacity for labour that is sold for a wage and the capital capacity, the ability to combine human and nonhuman inputs together to produce outputs for a profit. It is in regard to the inclusivity property that the historically contingent element in Marx's commodity principle can be seen to be as important as its socially contingent element: entities may have the potential to become commoditised but it is only under specific circumstances that that potential is realised as was the case with the labour power and capital capacities. These capacities may have long had the potential to become commoditised because their deployment may have long pre-dated the advent of industrial capitalism, but it was only with the agrarian and industrial revolutions of the 18th century, which enabled the formation of mass markets and the corresponding establishment of production standards set through decentralised monetary exchanges, that the deployment and pricing of the capacities for production also became themselves subject to these same standards.

Commodity systems in the mid-19th century, at the time that Marx was writing, remained restricted in two senses: in a geographical sense in that such systems only operated in a few regions of the world, and in a categorical sense in that these regional systems consisted only of the labour power and capital capacities and their material outputs. Both of these restrictions have since been lifted. Following the collapse of colonialism in the mid-20th century and the collapse of communism at the end of that century, production for the market and against market standards is now the norm in virtually all of the world's national economies. Globalisation has been defined in many ways but, as illustrated in figure 1, from a Marxian commodity

perspective it can be defined as the globalised extension of the commodity principle along the axis of geographical space. On the categorical front, the closing decades of the 20th century also sees the further expansion of the commodity principle to encompass not only capacities and their material outputs but also equity and debt securities, claims on the future outputs of capacities. If financialisation broadly refers to the growth in the scale of the world's financial markets relative to the world's product markets, from a Marxian commodity perspective this same development can also be said to signify the extension of the commodity principle along the axis of time given that securities are nothing other than financial claims on future outputs and given that the application of the commodity principle to these claims can therefore be said to result in the transformation of the future into an habitable economic space. Uncertainty and risk are not thereby eliminated, because they can never be eliminated, but as will be observed below, the transformative power of the commodity principle when applied to financial securities is such as to make uncertainty and risk sufficiently manageable as to make the future sufficiently fit for permanent occupation. Before expanding on this observation, it first helps to explain what the commoditisation of financial securities involves, what difficulties stand in the way of their commoditisation and, finally, what particular groups of agents have sufficient motive to surmount those difficulties.

Figure 1. The expansion of the commodity principle in the contemporary era

Financialisation: The commodity principle expanded along the axis of time



Globalisation: The commodity principle expanded along the axis of space

As stated, entities only become commoditised at the point where their prices are determined against socially sanctioned standards rather than set by private negotiation. From this standpoint,

the commoditisation of material products is relatively straightforward in that in their case only one set of social standards are required for pricing purposes, namely, production standards. By contrast, the commoditisation of financial securities is more complex in that in their case two distinct sets of social standards are required for pricing purposes, governance standards in addition to production standards. As securities have no intrinsic value, their value storage function for investors depends entirely on the degree to which their prices are held firm and made tangible, a condition that in turn depends on the rate and on the regularity with which cash is returned by the security issuing organisations to the investors holding the securities. In this context, the essential purpose of social standards in relation to financial securities is to act as social constraints on the degree of discretion exercised by security issuers regarding cash return. Production standards are necessary for the obvious reason that without some demonstrable commitment to them on the part of security-issuing organisations there can be no reasonable guarantee of the size and stability of the income flows against which claims are made. However, while necessary to the commoditisation of securities, production standards are not sufficient. Corporations can excel in production but still decide not to distribute cash to investors for one reason or other. Similarly, governments can excel in service provision and generate tax revenues accordingly but still give a low priority to the payment of interests on bonds. For these reasons, governance standards are an additional precondition for the commoditisation of securities. Broadly speaking, the governance of an organisation concerns the way in which it conducts its affairs so as to meet the different priorities of its various stakeholders. From the standpoint of investors, the question of corporate or public sector governance essentially comes down to the level of priority given to their interests as shareholders or bondholders: high priority means that there is a reasonably good guarantee that cash will be returned to them in the required amounts and at the required intervals, whereas a low priority means that there is no guarantee that cash will be returned⁶. In short, where

⁶ According to the World Economic Forum (see e.g. The Global Competitiveness Report, 2019), the individual governance institutions that comprise a country's governance infrastructure (the first 'pillar' of a country's economic competitiveness) broadly divide into two categories: the public institutions that include efficiency of legal framework, judiciary independence and reliability of police, and the private institutions that include investor protection, protection of minority shareholder interests, auditing and reporting standards and efficacy of corporate boards. It is well established that public institutions are a key determinant of a country's business sector success: the higher their quality, the lower are the various risks of doing business. The point that is emphasised here is that for pension funds and other institutional asset managers, who need to hold diversified portfolios and are thus necessarily minority shareholders or bondholders in firms, it is the quality of the private institutions in addition to that of the public institutions that is essential to limiting the risks on their investments.

compliance with production standards underpins the *ability* of security issuing organisations to return cash, compliance with governance standards underpins the *readiness* to return cash.

While production and governance standards stand on a par as preconditions for the commoditisation of financial securities, there is no corresponding parity as regards the processes by which these contrasting standards become established. The emergence of production standards is relatively straightforward in that these tend to be perpetually altered and set in the course of market competition. The opposite is the case with governance standards because there is no straightforward process by which these standards that are essential to the commoditisation of securities become socially sanctioned. They do not emerge spontaneously out of any decentralised competitive processes, and nor are they enforced through hard law because there is no law that explicitly requires corporations or governments to prioritise the interests of investors over the interests of all other groups who have a stake in their operations⁷. Indeed, a further complication is that corporations and governments and any other security issuing organisations have strong reasons for objecting to being tied to strict behavioural rules and constraints because these can narrow down their room for manoeuvre when executing their production or service provision activities. In view of these manifold difficulties standing in the way of the commoditisation of financial securities, it follows that only that group of investors for whom that commoditisation is absolutely essential to their investment function will have sufficient strength of purpose to bring into existence the type of governance infrastructure necessary to that commoditisation. That group are institutional asset managers whose large size not only requires them to hold large volumes of investable assets but also whose role as financial intermediaries requires them to hold the majority proportion of these assets in the form of financial securities⁸, the only assets that can combine a value storage property with the properties of liquidity and portability but which can only achieve this combination on the back of a supporting governance infrastructure.

⁷ To quote Simon Deakin: “shareholder primacy ... is not so much the result of the core content of company law, but rather the cumulative impact of changes in complementary regulation of corporate governance in recent decades. The relevant changes are mostly to be found in ‘soft law’ codes and standards, made by financial actors themselves, principally institutional shareholders, to which governments have ceded rule-making authority” (Deakin, 2018, p.26)

⁸ Thus, according to a recent OECD report on pension funds: “In most countries, bonds and equities are the two main asset classes in which pension assets were invested at the end of 2018, accounting for more than half of all investments in 32 out of 36 OECD countries, and 39 out of 46 other reporting jurisdictions” OECD (2019), *Pension Markets in Focus*, p.29

From its origins as a small industry catering for the investment needs of wealthy clients, institutional asset management has become in many countries a mass industry catering for the retirement and other welfare needs of large sections of the population. It is a general rule that whenever a particular industry grows in size it shifts towards more standardised forms of product or service provision, and institutional asset management is no exception. To facilitate mass access to asset management on an affordable basis, managers have inverted the traditional relation between client objectives and investment outcomes: rather than advise household clients on how best to invest their money to attain certain investment targets, the more cost effective approach is to put on offer a wide selection of portfolios managed to pre-advertised combinations of risk and return and then invite clients to place funds in those portfolios that match their risk appetites. The commoditisation of securities ties in with this transformation of portfolios into standardised, off the peg investment products. As the risk profile of an equity or bond portfolio that is marketed to the public depends on the risk characteristics of the constituent individual securities, it follows that asset managers need to tie security issuers to strict governance and transparency standards, firstly, in order to compare their behaviour and thus judge which securities are suitable for inclusion in a portfolio and, secondly, in order to continue monitoring that behaviour so as to monitor the securities' continuing contribution to the risk profile of a portfolio. A further important consideration is that governance standards serve as tools for monitoring and controlling the risk on securities not only while these are being held in institutional portfolios but also while these are being traded between institutional investors. In the absence of such standards, risk can only be calculated and priced into financial instruments on an associative and privately negotiated basis, which then makes it difficult if not impossible to trade these instruments away from their initial conditions of issuance. By contrast, when the behavioural risks that are priced into securities are calculated against socially sanctioned behavioural standards, these securities then effectively become stand-alone stores of value that can be continuously traded, and institutional asset managers need to engage in continuous trading in order to keep portfolios to their specified investment rules or targets while accepting fresh cash inflows from clients or when disbursing cash to clients.

It is here that we come to the spatialisation of the future, for it is at the point in capitalism's history where financial securities begin to circulate alongside material commodities as commodities in their own right that the future also becomes a space in its own right, a space that is both dependent on physical space inasmuch as this is where organisations produce the material outputs to which financial securities lay claim but at the same time distinct from

physical space inasmuch as it is a social construction that owes nothing to nature. The crux of the matter is the indispensability of the commodity principle to the solidification of securities' prices and hence to the solidification of their quantitative value storage capacities. Strip securities of their commodity attributes and they reduce to nothing but air. The security issuing organisations may promise to repay the borrowed sums with interest on the expectation that their sales of products or services will generate the necessary revenues, while the investors that lend the sums expect those promises to be kept. However, in the absence of any comprehensive system of governance rules and constraints that help to reinforce any legal obligations, the promises to return cash remain just that: promises. Only when there is a comprehensive system of governance rules and constraints in place, do securities acquire a certain solidity as determinate quantities of value. It is this solidity that allows us to say that the future has become spatialized because in acquiring a palpable value storage capacity that they cannot otherwise have in the absence of a supporting governance infrastructure, equities and bonds in effect become the individual building blocks from which the future is constructed as a habitable space. Devoid of matter when only existing subjectively in the minds of agents forming expectations about future possibilities and outcomes, the future becomes a space filled with matter with the objectification of expectations about the future in the form of commodities.

Where it is the portfolio needs of institutional investors that lead to a system of social standards and constraints that constitute the infrastructure of the future as an economic space, it is the financing needs of governments, banks and non-bank corporations that determine the mass of securities that fill that space, a mass that has grown at an exponential rate in recent decades (see appendix, figure 1A). Given that the various behavioural rules and constraints that security issuing organisations must comply with are now far tighter than anything seen in the past and can thus severely restrict the degree of discretion that the latter can exercise in the course of their productive activities, there has to be a good reason why they are prepared to comply with these rules and constraints. That reason, stripped down to essentials, is that borrowing costs can be contained even while borrowing volumes are systematically increased. The point is that the borrowing organisations not only do not have to compensate investors for loss of liquidity but also that they are not constrained by the time scale of cash repayments to the same extent that they are when resorting to other forms of borrowing. Equities are undated, while bonds have finite maturities, but the maturity range of bonds is now wider than ever with 30 year, 50 year and even 100 year bonds now being acceptable to institutional investors. Thus, while substantial sums can be raised immediately at the point of sale of the securities, the repayments

of these funds can be spread over long spans of time, with some being made in the near future and the rest at intermittent points into the distant future. In short, the upside to the acceptance of the restrictive conditions necessary to the commoditisation of financial securities is that the issuing organisations can thereby use the future as a repository where they can store their many different-dated liabilities until their redemption just as, on the other side of the equation, institutional investors need to hold those liabilities so as to meet their own different-dated liabilities as and when they fall due.

It is the pivotal role played by institutional investors in the spatialisation of the future that explains why no current economic theory allows for this spatialisation because, to repeat the point made at the very outset, no current theory analytically separates out institutional investors as an investor group with its own distinctive needs and priorities. There was a time when any such analytical separation was irrelevant because when asset management was a small industry catering for the wealthy, any differences between institutional and household investors were merely differences of degree (for example, institutional investors could exploit their advantages of size and professional expertise to generate higher returns subject to a given level of risk than was possible for household investors). However, that time is over. With the mass growth in size and corresponding structural transformations in the asset management industry, the differences separating out institutional investors have become differences of kind and not just of degree, a fact that has not, as we say, found reflection in economic theory. In mainstream economics, the representative investor continues to be the household investor. In Austrian economics, investors may have bounded rather than unbounded knowledge but the representative investor is, again, the household investor. Post-Keynesian and other heterodox economic theories may eschew methodological reductionism in favour of an aggregative approach that takes the sector rather than the individual agent as their unit of analysis, but the representative investor sector is, yet again, the household sector. Like institutional investors, households are faced with a range of assets in which they can invest their savings, and, like institutional investors, households can add financial securities to their mix of savings assets. But unlike institutional investors, there is nothing in their role as households that forces household investors to hold at all times a significant proportion of their assets in the form of financial securities. If yields on securities compare favourably with the yields on other assets then that is where they will place their savings, but if yields on other assets compare more favourably with those on securities there is nothing stopping households from withdrawing their savings from securities altogether. As households are not financial intermediaries that

market asset portfolios to the public, they have no cause to impose on security issuers the type of strict governance rules and constraints that can solidify the prices of securities to the extent that they can reliably serve as stand-alone and portable quantities of value. In other words, they have no cause to bring about the type of conditions under which securities become the building blocks from which the future is constructed as a habitable space. All of which in turn means that any economic theory that takes the household investor as its representative investor will also inevitably fail to admit the possibility of the spatialisation of the future.

This failure is not without consequence. If we are right in saying that the future has effectively been spatialized with the advent of institutional investors as the dominant holders of financial securities, then we will also be right in saying that this new development will have serious ramifications for contemporary capitalism's ongoing trajectory as a global commodity system. One of those ramifications will be the closing down of any possibility for two substantively different varieties of capitalism to coexist on a permanent basis. Rather, the more likely outcome of a continuing expansion of the future as a parallel, socially constructed space will be the convergence of capitalist systems on that variety that most fully accords with the rules of commodity exchange.

4. The implications of the spatialisation of the future for the varieties of capitalism paradigm

Although there has long been a tradition of comparing different capitalist systems, the collapse of communism in the 1990's brought a noticeable change of focus in that tradition. If a capitalist system is broadly defined as a system of production for the market, then it can be said that prior to communism's collapse the main criterion against which capitalist systems were compared was one that concentrated attention on the *production* side of the production-market nexus. The key questions raised concerned the way in which different institutional structures, labour relation arrangements and policy initiatives served to give capitalist firms a competitive edge at the micro level and capitalist countries a comparative advantage at the macro level. A notable example in this context is the French regulation school that was highly influential in the 1980's and that compared different capitalist economies according to what were termed their accumulation regimes and modes of regulation. The change following the collapse of communism was that the main comparator criterion became one that foregrounded the *market* side of the production-market nexus, as exemplified by the 'varieties of capitalism' (VoC)

paradigm, now the dominant paradigm for comparing capitalist systems, which pays far more attention to differences in the degree to which the market principle is allowed to influence and shape firm's productive activities. Thus to quote from Hall and Soskice's classification of the two opposing ideal types of capitalist economies: "liberal market economies" (LMEs) are those in which "firms coordinate their activities primarily via hierarchies and competitive market arrangements" ..and in which .. "market relationships are characterized by the arms-length exchange of goods or services in a context of competition and formal contracting", while by contrast, "coordinated market economies" (CMEs) are those in which "firms depend more heavily on non-market relationships to coordinate their endeavours with other actors and to construct their core competences" and in which "non-market modes of coordination generally entail more extensive relational or incomplete contracting, network monitoring based on the exchange of private information inside networks, and more reliance on collaborative, as opposed to competitive, relationships to build the competencies of the firm" (Hall and Soskice, 2001, p.8)

Hall and Soskice's characterisation of the current binary divide between capitalisms finds perfect reflection in the financial sphere. Of the two main forms of finance, bank deposit money versus equities and bonds, one should expect the former form, as a non-tradable credit relation between known counter-parties to fit in with the relational or network principle that is the core CME principle; and one should equally expect the latter form of finance, in which securities constitute stand-alone value containers that can be traded anonymously and away from the initial conditions of issuance to fit in with the arm's length exchange principle that is the core LME principle. And, indeed, these expectations are fully borne out by current financial data. Thus, if we take the current global stocks of financial securities, which in 2018 amounted to \$77.5 trillion, i.e over twice the \$85 trillion figure for world GDP for that year, we find that the lion's share of these stocks was contributed by the US, the leading exemplar of the LME variety of capitalism (see appendix figure 2A). That the far smaller CME contribution to global securities stocks is in large part motivated by a greater preference for the alternative, bank-based form of finance is most clearly shown in the data for corporate finance in general and for corporate debt borrowing in particular. Thus, where the overwhelming bulk of US corporate debt is financed through bond issuance, with bank borrowing accounting for a small proportion of debt financing, for the corporations of continental Europe and Japan the exact reverse is the case (see appendix, figure 3A).

While there is today a significant divide separating the LME and CME varieties of capitalism, the question is whether this divide will continue tomorrow. To answer this question, we first set it in the commodity framework as developed above. Recall that according to this framework, there are essentially three types of entity that have the potential to become commoditised: the human capacities for production, the current material outputs of those capacities and equity and debts securities, financial claims on the future outputs of capacities. From the standpoint of this commodity classification system, different economic systems can be arranged along a spectrum where communist-type systems occupy a position at one end in that they suppress the commodity principle in all three respects, LME-type capitalist systems occupy a position at the other end in that they give free rein to the commodity principle in all three respects, and CME-type capitalist systems occupy a position somewhere in the middle of the spectrum in that they give free rein to the commodity principle in respect to material outputs but restrict its application in respect to financial securities, a restriction that results in the capacities for production being only weakly exposed to the pressures of commodity exchange. The communist systems that flourished for much of the 20th century ultimately imploded for reasons that were principally, if not exclusively, caused by the economic inefficiency and stagnation that inevitably resulted from their total suppression of the commodity principle. In light of this fact, it might seem that the partial suppression of the commodity principle in CME countries will prove at some point to be detrimental to their production efficiency. Indeed, several scholars working within the mainstream neo-liberal tradition have argued that in the current era of globalisation marked by increasing international competition and high factor mobility, the close-knit relational institutional structures of the CME countries will likely be a hindrance to their economic competitiveness and will therefore, at some point, have to be replaced by the more open and liberal institutional structures modelled on those of the LME countries.

This particular convergence thesis can be refuted as was done by Peter Hall in a recent reassessment of the of the VoC paradigm (Hall, 2015). Proceeding from the observation that aggregate economic performance, as measured by rates of economic growth and productivity, can be as high in CME countries as in LMEs countries (as notably attested by the post-war performances of Germany and Japan), Hall went on to make the point that high economic performance can be secured in different ways. Indeed, the whole point of the VoC paradigm, as he put it, is to shed light on how “different types of political economies have distinctive competitive advantages they can exploit to prosper in an open global economy” (ibid. p.3).

Thus, as Hall went on to elaborate on the different advantages offered by the different types of political economies: “by virtue of their fluid labour and capital markets, which make it easy for firms to begin new ventures knowing that they can quickly be unwound, LMEs offer more support for radical innovation, understood as the development of entirely new products or technologies. By contrast, CMEs are said to be better at incremental innovation, involving quality control and continuous improvements to products or production processes, because strong trade unions and longer job tenures encourage firms to make long-term commitments to workers that elicit higher levels of cooperation and encourage investment in the high skill levels that make such innovation feasible. In sum, LMEs should produce radical innovations more successfully, while CMEs are better at quality control and incremental innovation” (ibid. p.5).

In one important sense, Hall is absolutely right. In terms of our commodity framework, the CME semi-suppression of the commodity principle in regard to financial securities will not force CME convergence on the LME variety of capitalism on grounds of production inefficiency. On the contrary, that semi-suppression of the commodity principle in the financial realm is as much a source of advantage for the CME form of production efficiency as is the full development of that principle in finance a source of advantage for the LME form. As Hall states, to be competitive in production it “pays to be different”. The problem is that production efficiency is not the only type of efficiency that is at issue. Another type that is today is just as important is *financial efficiency*, efficiency which pertains not so much to the manner in which organisations’ capacities are deployed in production as to the manner in which these capacities for production are financed over time. In this connection, it does not pay to be different because the competitive advantages here all run just one way, in the direction of the LME variety of capitalism, and they do so because to give the commodity principle free rein in the financial realm is to give organisations the means of accessing on the most cost efficient terms possible such volumes of external funds as may be needed to maintain their productive capacities over time. There is no better way of illustrating this point than by going back to the reasons why it is the corporations, governments and banks of the LME countries that today account for the overwhelming majority of the world’s outstanding stock of equities and bonds.

Take first the LME corporate sector. Although this sector continues to account for a smaller percentage share of global bond supplies as compared with those of the government and banking sectors (see appendix, figure 1A), the overall size of the non-bank corporate bond market has nevertheless increased significantly in recent decades. In an era of rapid technological change and thus ever intensifying competition business corporations must have

constant access to large external sources of funds to finance research and product development, or to finance mergers and acquisitions, or to finance any of the other measures needed for survival. LME corporations have always tended to rely on a mix of debt and equity forms of external finance to supplement their funding needs in order to avoid an excessive concentration of risk on the one hand and an excessive dilution of the benefits of ownership and control on the other. What is now happening is that while the ratio of debt to equity forms of external funds raised by corporations remains fairly stable the ratio of bank borrowing to security market forms of funding is declining. The fact that bonds are tradable in a way that bank loans are not, and thus the fact that institutional investors do not need to be compensated for loss of liquidity in the way that banks must be when they extend loans, means that LME corporations are increasingly relying on the bond markets for all but very short period borrowing requirements.

In the case of LME governments, it is not so much the pressures of technological change so much as broader socio-economic pressures, chief of which are those associated with demographic change, that are the chief drivers behind the recent rise in government bond issuance. As regards demography, what sets all advanced market economies (AMEs) apart from the rest of the world is the combination of low birth rates with high rates of population ageing⁹, a combination that has led to a trend rise in old-age dependency ratios across the AMEs¹⁰. Closely correlated with this rise over recent decades has been the rise in government social spending as a percentage of GDP (from an average percentage share of just 8% in 1960, that share had risen to an average of 17% across the OECD countries by 1990 and to an average of 20% in 2018)¹¹ and as a percentage share of total government expenditure (the average share for the EU-28 countries in 2018 was 40%, but closer to 50% for the UK and other northern European countries, a figure similar to that for the US) with pensions and health care provision

⁹ The median age of the population in North America and West Europe rose from 32 in 1980 to 41 in 2010, while the median age in Africa over that same period only rose from 18 to 20. United Nations (2019)

¹⁰ The dependency ratio is defined as the number of individuals aged over 65 per 100 individuals aged between 20 and 64. According to recent OECD estimates the dependency ratio across all OECD countries roughly doubled from 13.9 in 1950 to 27.9 by 2015 and is expected to reach 35.2 by 2025, OECD (2017). A further striking statistic concerns the number of individuals aged over 80 as a percentage share of the population. In 1950 less than 1% of the global population was aged over 80 whereas by 2050 that share is expected to quadruple to 4%. The more important increase, however, is expected for the OECD countries where by 2050 some 10% of their population will be over 80. OECD, (2011).

¹¹ General Government Spending, OECD Data (Annual Series); OECD (2019), *Social Expenditure Update*

being the two largest components of government social spending.¹² Faced with rising pension and healthcare costs in addition to other spending commitments, while at the same constrained from increasing tax revenues at a commensurate due to the falling percentage numbers of working taxpayers, AOE governments, and most notably those of the LME countries, have had to increase their rate of bond issuance to make good their budgetary gaps. Government dependence on the bond markets is not new, but where prior to 1980 governments would typically issue small amounts of securities or, if issuing large amounts would only do so as a temporary measure to confront a particular emergency or to fund a particular project, their dependence on the bond markets has since then become both significant and permanent with the need to cope with the exigencies of demographic change being a key factor in this development.

To have been able to do so, there needed to be on the demand side of the government bond markets an investor body large enough to accommodate the increased scale of government borrowing. The reality is that such a body does now exist courtesy of the very same demographic and other pressures that have forced governments into continually increasing their supply of bonds in the first place. While other factors have played a role in the transformation of asset management into a mass industry, by far the most important is the move away from universal government provision of social and welfare services towards more selective forms of provision that give priority to the needs of the poorest and most vulnerable sections of the population. It is because increasing numbers of mid-income households in these countries are now forced to make their own pension and healthcare arrangements, in addition to any expectations that they may have of a longer post-retirement life, that explains why they are moving their savings funds out of bank deposits and into securities in the search for higher yield, while the fact that most of these households remain risk averse explains why savings are typically channelled into securities via professional asset managers.

In helping to boost the asset management industry, governments have helped to create a strong and stable demand not only for their own bonds and for those of corporate sector but also for the bonds issued by the commercial banking sector, which, classified as ‘financial bonds’, now constitute the largest single component of outstanding global bond volumes (see appendix, figure 1A). LME commercial banks have traditionally relied on household deposits to fund their loans to businesses and households, but now find that reliance under serious threat. Forced

¹² Ortiz-Ospina (2016); OECD (2019); Kenworthy (2019)

to make their own pension and welfare arrangements, while at the same expecting to live much longer after retirement, households have generally become more yield oriented, a fact that then explains why they are increasingly shifting savings out of bank deposits and into securities. It is primarily because of this radical change in household savings behaviour, that banks need to increase their issuance of long-term bonds and money market instruments to fill the gaps in the liability side of their balance sheets. A further point to note is that the changes in household savings behaviour, taken in combination with the tightening of capital reserve requirements, have also caused changes on the asset side of LME banks' balance sheets. While the large LME corporations have their own motives for engaging in bank 'disintermediation' as discussed above, the commercial banks have largely welcomed this development as it helps to free up space on their balance sheets. As for the small retail borrowers who cannot directly access the securities markets and must rely on bank loans as their principal source of credit, a major way in which the US and other LME banks are accommodating the demand for small business loans, mortgage loans and other types of credit loans while also keeping to capital reserve requirements is by taking large parts of these loans off their sheets and passing them on to special purpose vehicles (SPVs) where these are used as collateral for securities (asset backed securities) that are then sold on to an assortment of institutional investors.

To summarise, if it is generally true that the increasing issuance of long dated securities by corporations, governments and banks signifies their use of the future as a repository for storing liabilities, what is also true is that is specifically the LME corporations, governments and banks that are using the future in this way. On this same logic taken in reverse, it must follow that, by restricting their dependence on the securities markets, the major private and public organisations of the CME countries are in effect closing down the use of the future as a repository of storing liabilities, which means that a substantial proportion of their financial obligations must continue to be met from their current income streams. This situation may last in the short to medium terms but it is doubtful whether this can continue to be the case over any longer term. Faced with ageing populations and a corresponding rise in dependency ratios, the governments in these countries will need to issue increasing amounts of long term bonds to bridge the financing gaps that will likely widen in tandem with these developments. Similarly, faced with increasing gaps in the liability side of their balance sheets as households who live longer go elsewhere to earn better returns on their retirement savings, banks will have to issue increasing amounts of bonds to cover these gaps. Finally, corporations who need to be able to borrow large sums so as to finance any of the measures that are required to maintain a

competitive position in the global product markets will increasingly switch from bank loans to bond issuance as a means of containing borrowing costs. In other words, those countries with the potential to have large, deep and liquid securities markets must at some point or other realise that potential because as their economies grow and mature and as the financial burdens on their governments and private corporations grow accordingly, so will these organisations need to find ways of coping with these burdens and by far the most effective way is by dividing financial commitments into separate time compartments, some that can be dealt with in the present and the rest that can be dealt with at intermittent points in the future.

In the final analysis, it is because every large economy must at some point colonise the future so as to make it take the overspill of the financial pressures of the present that explains why there cannot long continue to be alternative varieties of capitalism in any meaningful sense. As things now stand, the major organisations in CME countries act as the main barriers to convergence on the LME variety of capitalism because they restrict their financial dependence on the securities markets. But as this dependence rises, so will these same organisations inevitably become the conduits through which the pressures for convergence will be transmitted. The logic is remorseless. The regulatory relations between governments and private corporations, or the credit relations between banks and non-bank corporations, or the input-output relations between business corporations, will at some point no longer be able to remain opaque and determined by privately ordered priorities and by privately negotiated terms of association. Rather, they will have to be opened up to scrutiny and made to conform with market set standards of conduct because these are the preconditions imposed by the institutional asset management industry that is best positioned to absorb the volumes of securities on the scale required by issuers but which can only do this absorption on the basis of the commoditisation of financial securities, their transformation into self-standing and portable value containers that can be passed from hand to hand and inserted into and extracted from institutional portfolios at will.

In drawing this conclusion, it must be emphasised that it does not pertain to the ground-level local peculiarities that continue to distinguish capitalist economies. The differing culturally embedded social customs, rules and traditions that have historically shaped and coloured the various institutional linkages and complementarities in different countries will persist because these are all ultimately essential to the social and political cohesion that is necessary to the continuity of production and other economic activities. Indeed, it is principally because of this

fact that several authors have identified and classified more than two varieties of capitalism (see e.g. Whitley, 1999; Amable; 2003; Becker 2009). While recognising the importance of the manifold local differences separating national capitalisms, Hall and Soskice nevertheless argue that the latter can still be grouped together as sub-types of two generically different ideal types of capitalism, the LME type that gives prominence to the arms-length market exchange principle while relegating the relational principle to a secondary position, and the CME type that has the reverse ordering of these opposing organisational principles. However, the fundamental contradiction in Hall and Soskice's position is that in order to distinguish between two different types of capitalism at a sufficiently high level of abstraction from locally embedded customs and traditions as to allow for the inclusion of several sub-types of capitalism within each opposing ideal type, that very same level of abstraction opens the door to the possibility of convergence. This is because when one ideal type of capitalism is shown at some point to be in some way economically inferior to the alternative ideal type and consequently collapses into this alternative type, there can then just as easily continue to be several sub-types of capitalism within the one remaining ideal type of capitalism as there were previously within the two opposing ideal types.

5. Conclusion

In Marx's day economist systems based on the commodity principle, as he defined it, only existed in a few regions of the world and only encompassed the human capacities for production and their material outputs. By the end of the 20th century the commodity principle had been geographically expanded to cover virtually the entire globe and categorically expanded to also cover financial securities, claims on the future outputs of capacities. This paper has concentrated attention on the second line of commodity expansion with the purpose of drawing out two of its important implications: the spatialisation of the future and the advantages that this spatialisation holds for many of the world's major organisations. While uncertainty may seem to rule out the structuring of the future, the systematic application of the commodity principle to the prices and hence quantitative value storage capacities of financial securities makes uncertainty sufficiently manageable as to allow the future to become sufficiently fit for permanent occupation. At a time when rapid technological, demographic and other socio-changes are imposing rising financial burdens on the world's corporations and governments, the annexation of the future as an auxiliary economic space gives these

organisations an opportunity to off-load much of their financial burdens into that space. As the condition for exploiting this opportunity is compliance with the commodity principle in the financial realm as much as in the productive realm, and as the liberal market economy variety of capitalism is the only one in which this condition is fully met, it follows that the convergence of capitalisms on this particular variety will likely be a key by-product of the spatialisation of the future.

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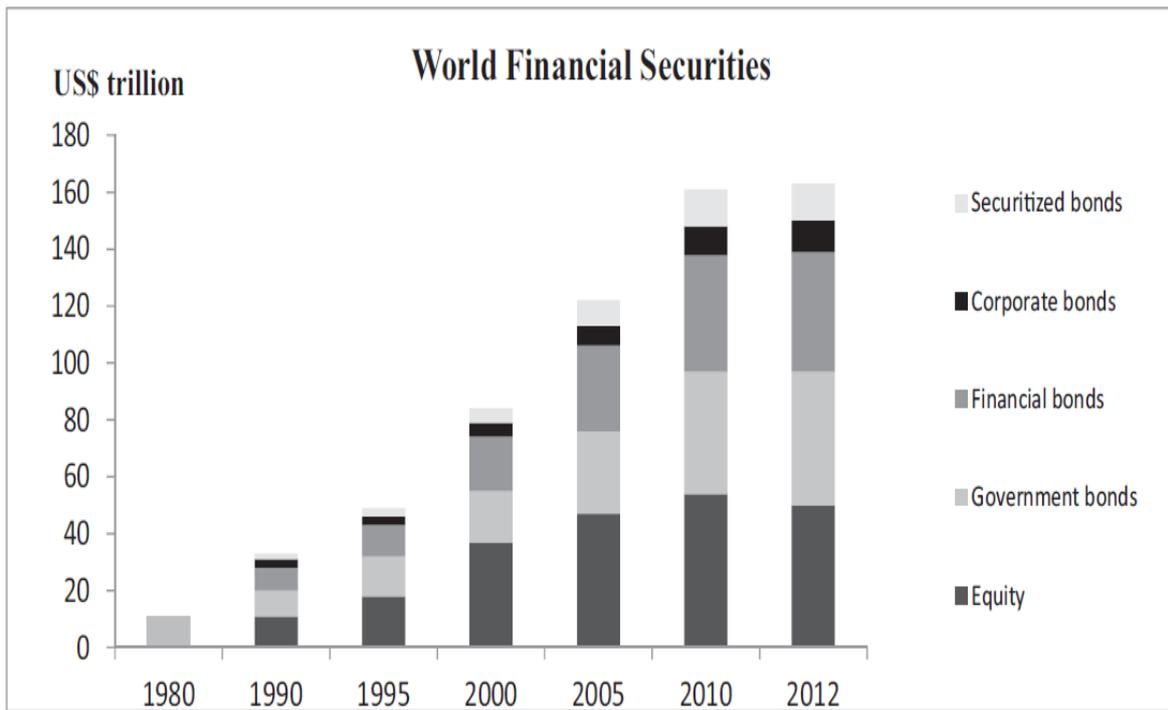
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Appendix

Figure 1A

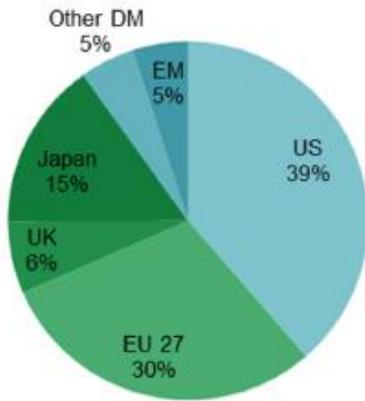
Growth of World Financial Securities Stocks 1980-2102



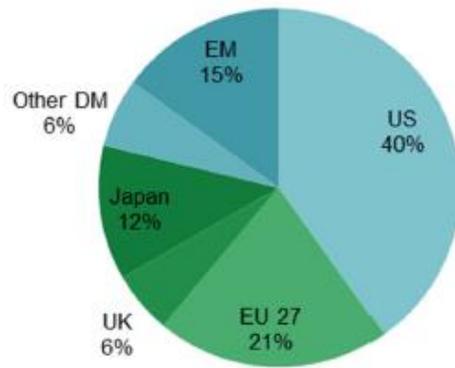
Source: Karltunbrunner and Lysandrou (2017)

Figure 2A

**Global Bond Market Outstanding
2009
\$80.9 Trillion**

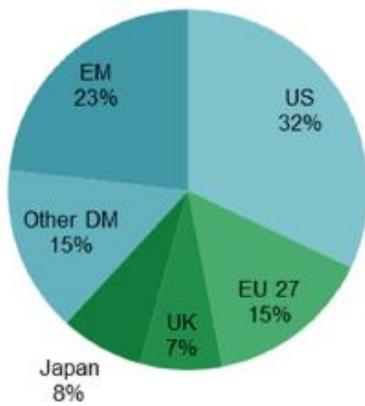


**Global Bond Market Outstanding
2018
\$102.8 Trillion**

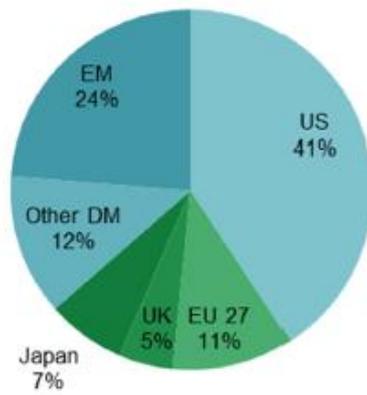


Source: Bank of International Settlement (BIS)

**Global Equity Market Capitalization - 2009
\$47.1 Trillion**



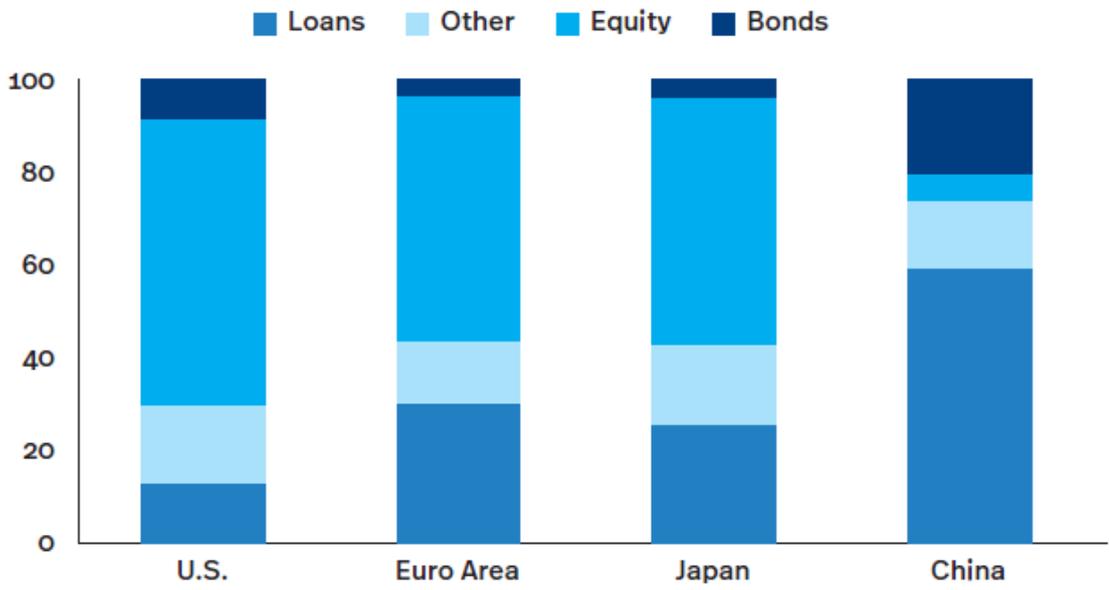
**Global Equity Market Capitalization - 2018
\$74.7 Trillion**



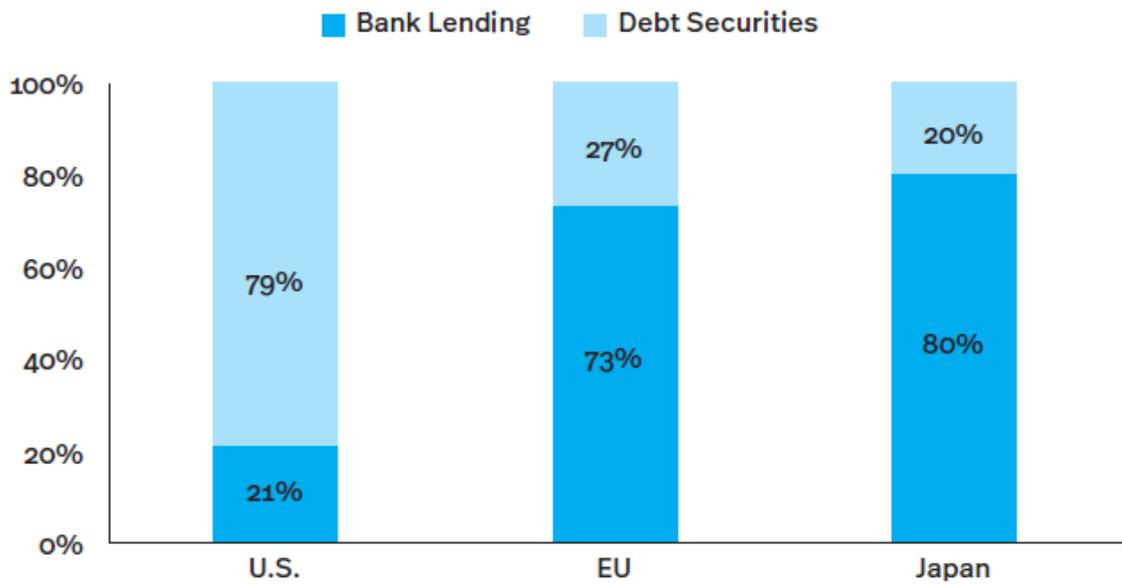
Source: SIFMA (2019)

Figure 3A

Financing of Non-Financial Corporations



Debt Financing of Non-Financial Corporations



Source: SIFMA (2020)