What does the state do in China's state-led infrastructure financialisation?

Citation for published version:
Liu, IT & Dixon, AD 2022, 'What does the state do in China's state-led infrastructure financialisation?', *Journal of Economic Geography*, vol. 22, no. 5, pp. 963-988. https://doi.org/10.1093/jeg/lbac009

Digital Object Identifier (DOI):
10.1093/jeg/lbac009

Published In:
Journal of Economic Geography

Journal of Economic Geography (2022) **22**, 963–988 https://doi.org/10.1093/jeg/lbac009
Advance Access Publication 2 May 2022

What does the state do in China's state-led infrastructure financialisation?

Imogen T. Liu † and *Adam D. Dixon*

Faculty of Arts and Social Sciences, Maastricht University, The Netherlands
†Correspondence to: *imogen.liu@maastrichtuniversity.nl*

Abstract

China's state-led financialisation of infrastructure is an alternative narrative to prevailing accounts of neoliberal financialisation in the advanced capitalist core, where the expansion of private market-based finance-led growth is theorised to transform traditional forms of public infrastructure development and production-based growth. Drawing on the case of Chinese state capital investment in Europe, we demonstrate empirically how the imperative to financialise infrastructure development is emergent from and contingent upon a productivist mode of capitalist development. We articulate two key transformations in which Chinese state capital is being used to leverage financial best practice and its network properties in service of the real economy.

Keywords: Financialisation, infrastructure, China, state capitalism
JEL classifications: O16, O18, H54, R51
Date submitted: 23 July 2021 **Editorial decision:** 6 April 2022 **Date Accepted:** 8 April 2022

1. Introduction

Financialisation is heralded as an independent phenomenon transforming traditional forms of infrastructure development and production-driven growth. This article develops a more circumspect view. We conceptualise China's state-led financialisation of infrastructure as a multi-layered phenomenon that originates outside the advanced capitalist core. State-led or state capitalist forms of financial market development are unfolding in China, where financial institutions, networks and markets are being used as instruments of public design and purpose (Töpfer, 2018; Chen, 2020; Petry, 2020; Feng et al., 2021). Along the Belt and Road Initiative (BRI), the state has begun to encourage private, market-based infrastructure financing through the introduction of public–private partnerships (PPPs) and government-guided investment funds that signals a growing role of the state in financialising China's global infrastructure development (Jones and Bloomfield, 2020; Pan et al., 2020).

Starting from the analytical premise of two ideal-type modalities of Chinese transnational state-owned investment that, for heuristic ease, might be characterised as (1) the 'neoliberal financialised' modality of institutional investment by financial intermediaries in global capital markets and (2) the 'state-coordinated' modality of bank-based debt-financed infrastructure projects along the BRI, we articulate two key transformations in the state-led financialisation of infrastructure. First, Chinese state-owned financial intermediaries are coordinating development in a way that signals a departure from neoliberal characterisations of their purely transaction-cost minimising role as profit-seeking brokers in global capital markets. Second, bank-based debt-financing as it has predominated in China's global infrastructure development where the state-coordinated complex of ministries, policy banks and state-owned enterprises (SOEs) are collectively coordinating infrastructure projects in BRI countries, is being financialised through the introduction of PPPs to recalibrate the risk-return profile on overseas infrastructure projects.

Based on 98 semi-structured interviews and observational fieldwork conducted between October 2019 and November 2020, in Beijing, Hong Kong and Serbia, we demonstrate through Chinese state capital flows into the variegated geographies of Europe, these two transformations that signal China's state-led financialisation of infrastructure. Europe has gained greater economic and geopolitical significance for the transnational expansion of Chinese state capital in recent years. Western European markets have been an attractive destination for equity investment considering the intensifying US–China rivalry, while the Western Balkans is seen as a strategic thoroughfare for the delivery of Chinese goods and services to the west and thus a geographical hotspot along the BRI (Pavlićević, 2019; Rogelja, 2020). More importantly, Europe is a landmass contiguous from the east to the west and therefore highlights the spatial complementarity of bringing capital markets in Western Europe in alignment with infrastructure development in the eastern states.

Methodologically, we adopt a practice-based approach inspired by the relational turn in economic geography (Jones and Murphy, 2011; Coe and Yeung, 2019). Investment takes place through micro-level relational processes that are context specific and contingent in nature that higher-level institutional approaches fail to capture. Such fine-grained analysis offers a view from the ground from which we can extend extant macro-level understandings of China's state-led development. We analyse two empirical cases: (1) the investment activities of the China Investment Corporation (CIC), the world's second largest sovereign wealth fund (SWF) in Western Europe and (2) debt-financed EPC+F[1] projects in the Western Balkans backed by China Import–Export Bank (Exim) and China Communications Construction Company (CCCC). We find, in the case of the CIC, that it is responsive to the BRI and leveraging its centrality in global financial networks to facilitate the entry of Chinese companies into Western Europe. In the case of Exim-financed, CCCC implemented EPC+F projects, we find state-led promotion and proliferation of blended financing arrangements between Chinese SOEs and private partners in the Western Balkans.

The article is as follows. In the next section, we embed the concept of China's state-led infrastructure financialisation in the existing literature on financialisation and outline our analytical approach in which we juxtapose the ideal-type modalities of a 'neoliberal financialised' institutional investment and 'state-coordinated' infrastructure development. After a methodological overview, we present and analyse changes in the investment and project cycles of the CIC's global investments in Western Europe and Exim-CCCC EPC+F projects in the Western Balkans, respectively. We conclude with implications and ruminations on future research.

2. Beyond the advanced capitalist core: financialisation and the real economy

Late-developing economies beyond the advanced capitalist core, like China, present an opportunity to interrogate the premises of our understanding of contemporary financialisation

1 Engineering, Procurement, Construction + Finance (EPC+F) are turnkey construction contracts with tied Chinese financing where the investor state (host country) entity need only 'turn the key' to operate the facility once the contractor has completed construction on the infrastructure project.

as a form of capitalist development that is (1) neoliberal and predominately led and directed by private investors and (2) divorced from the real economy of industrial production.

First, prevailing accounts of financialisation largely characterise neoliberal financialisation wherein the spread of neoliberalism in the 1980s represented a shift in the role of the state in the economy from leading development to regulating competition, coinciding with a recalibration of the distribution of systemic risk from the state to the market after the collapse of Bretton Woods (French et al., 2011; Sawyer, 2013). As such, existing work has tended to locate financialisation in geographies where successive waves of neoliberal reform—banking deregulation, welfare state restructuring, privatisation and lowered barriers to free movement of capital—have rolled back the state and paved the way for the development of large capital markets in which finance, as an engine of growth, is led by private investors. These 'neoliberal space economies' (Hall, 2012, 408) of the advanced capitalist core, notably the USA, UK, Western Europe, the settler colonies of Canada, Australia and New Zealand, have serviced the proliferation of financial intermediaries—investment banks, fund partnerships, SWFs and their ilk—in global circuits of capital, and who have created ever-more complex financial products (e.g. securitisation practices) that de-politicise and legitimate the growing centrality of intermediaries at the nexus of economic and social life (Hall, 2009; Pike and Pollard, 2009).

Public infrastructure, such as road, rail and energy utilities, presents something of a crucial case of financialisation, as it is so fundamental to a productivist mode of capitalist development. Since the advent of the concept in 18th century Britain, infrastructure or 'public works' has been regarded as the responsibility of the state which must provide the structures necessary to support supply chains and worker mobility, essential to production-based growth and development (O'Neill, 2013, 443). The financialisation of infrastructure has entailed the privatisation and assetisation of public works, wherein, with the spread of neoliberal ideology, infrastructure as a public good provided by the state has been abstracted into infrastructure as an asset class designed to maximise profits beholden to short-termist shareholder-value logics in global capital markets (O'Neill, 2010). In the context of neoliberal globalisation, the global (read advanced capitalist) savings glut and declining yields, the role of financial intermediaries has been instrumental in designing, collecting, managing and investing financial assets on a global scale (Sheppard, 2017). For private investors, infrastructure has become an attractive source of returns (Halbert and Attuyer, 2016; Clark, 2017).

However, this depiction of the dynamics of infrastructure financialisation largely draws from experiences in the advanced capitalist economies where the neoliberal mode of capitalist development is arguably entrenched (O'Neill, 2019; Anguelov, 2020). Here, the active intervention of the state is well documented (Langley, 2018), but where the relationship between the state and private investors has been characterised as one of dependency wherein states have facilitated the transformation of infrastructure into an asset class in order to attract private investors. A case in point is the proliferation of PPPs, in which the state has sought to secure off-balance sheet funding and outsource service provision for public infrastructure development (O'Brien and Pike, 2017). These blended financing arrangements are intended to shift risk from the state to the private sector, but where such a characterisation largely originates from neoliberal state transformations in the advanced capitalist economies in which private capital is given greater steering capacity in the economy (Jones and Bloomfield, 2020). As detailed in the case of Indonesia, only in recent years have emerging economies been coaxed into adopting the regulatory structures to support engagement of financial intermediaries in assetising local infrastructure for global investors (Anguelov, 2020).

Financialisation has been sustained by neoliberal globalisation beyond the core, leading to geographically uneven conjunctures between the global circulation of capital and territorially bounded state authority. The internationalisation of financial intermediaries in search of returns (Boussebaa and Faulconbridge, 2019) and the proliferation of financial technologies circulated as worldwide best practice through the international financial system (Faulconbridge and Muzio, 2012) have given way to new centres of finance, such as in Asia, endowed with their own particularities of practice (Lai et al., 2020; Petry, 2020). The integration of Chinese political economy into global circuits of capital in recent decades has produced distinctly state-led global financial networks emanating from the mainland (Töpfer, 2018). The Greater Bay Area is one such illustrative instance. A political project in origination, it represents a state-led financialisation of the major cities of Guangdong province via economic integration with the former British and Portuguese colonies of Hong Kong and Macau, which developed as 'free market' economies embedded in imperialist circuits of finance and trade more than a century ago (Peck, 2021). These 'missing geographies' (French et al., 2011, 809) have the potential to reinvigorate the conceptual underpinnings of the cannon.

Second, neoliberal financialisation is often, implicitly, theorised as a force external to and superimposed on the real economy. Unproductive, extractive financial logics, institutions, actors and practices are characterised as redirecting earnings away from reinvesting in the productive capacity of the industrial corporation towards capital markets, 'hollowing out' production, presenting finance and production as mutually exclusive modes of capitalist development (Pike and Pollard, 2009; Maher and Aquanno, 2021, 56). The financialisation of public infrastructure is often depicted as a process of usurpation in which traditional bank-based debt-financing of public infrastructure works is being replaced by market-based financing wherein networks of financial intermediaries like Macquarie Group package, trade and administer the infrastructure asset via global capital markets (O'Neill, 2010; Furlong, 2020). The going concern vis-à-vis the state has been how a process initiated by states ('financialisation by the state') is leading to the co-optation and usurpation of the state by global private investors that reduce the remit of local public authority and democratic accountability ('financialisation of the state') (Peck and Whiteside, 2016; Alami, 2019; Karwowski, 2019; Aalbers, 2020; Schwan et al., 2020, 821; August et al., 2021).

However, production has historically been and remains integral to the reproduction of the financial system. Financialisation has been a process inherent to the evolution of the industrial corporation. As Maher and Aquanno (2021) detail, financialisation was an adaptive response reflected in the diversification and internationalisation strategies adopted by US corporations in the post-war era, which then paved the way for tighter linkages between industry and finance. The evidence to date has been exaggerated against theoretical prognosis of a wholesale financialisation of the economy where finance as a mode of capitalist development has shed its productivist underpinnings (Pike and Pollard, 2009). In infrastructure development, Furlong (2020) questions the discontinuity with which recent accounts have depicted financialisation, which mischaracterises how traditional forms of financing have evolved in relation to processes of financialisation in the broader context of global capitalist development where both debt-based and financialised infrastructure development have done little for marginalised communities while strengthening the links between local stakeholders and transnational bankers and investors.

This article goes a step further in conceptualising financialisation in which the state in its multi-layered multi-faceted forms is leading the process of capital market expansion, applying financial logics and broadening the remit of financial institutions, actors and practices in a way that emphasises the inherent compatibility and complementariness of market-based finance-led growth to the productivist mode of capitalist development.

3. China's state-led infrastructure financialisation

China's state-led financialisation of infrastructure represents a purposeful and multi-layered attempt by the state to bring market-based finance, state-owned financial intermediaries and private capital into the service of the real economy. In the following, we identify two key transformations in which the state is attempting to use financialisation to service long-term production-based growth and development. This speaks to the need to understand infrastructure financialisation as a process embedded and contingent on existing forms of infrastructure development. First, is the role of state-owned financial intermediaries in coordinating development, whereby operational investment decision-making and the state's global infrastructure development are increasingly aligned and the centrality of state-owned financial intermediaries in global capital networks is being leveraged to open new markets for Chinese firms that complement national developmental prerogatives. Second, we articulate attempts by the state to financialise China's traditional bank-based debt-financing of overseas infrastructure projects by enlisting private capital in an effort to rejig the risk-return dynamics of China's global infrastructure development.

A common feature of China's state-led financialisation is the role of state-owned financial intermediaries in coordinating development. Intermediation, in its functional essence, brings together savers and assets in financial markets. In mainstream financial theory, intermediation is assumed to minimise the transaction costs for savers to self-select assets. Intermediaries pool resources, coordinate saver interests and manage asset portfolios to maximise return on investment (ROI) (Clark and Monk, 2017, 147–48). Profitability derives from the centrality of the intermediary at the nexus of global circuits of capital where the process of bundling myriad asset streams into structured financial products places them between banks, clients, markets and regulators (Hall, 2009). This consolidates the relationship between intermediaries and their clients as one characterised by independence of decision-making. Separation between ownership (the ultimate sponsor of the capital, whether state or private) and possession (executive managers who oversee the allocation) is institutionalised, lest the capital be at risk of non-commercial investment motives and moral hazard. Chinese state-owned financial intermediaries conform in large part to these conventions of best practice because their primary mandate is to yield returns from the market. A major impetus for Chinese state capital to 'go global' in the first place was back dropped by the accumulation of surplus national savings generated from export revenues in the past three decades. The financialised response has been to facilitate the circulation of state capital into global markets where higher returns can be earned (Clark, 2005; Rolf, 2021). The state has established new state-owned financial intermediaries including SWFs, government-guided funds, portfolio investment departments within production-intensive SOEs and investment management divisions of state-owned banks, whose practices are geared to service the accelerated and transnational circulation of state capital (Alami and Dixon, 2022).

At the same time, this is a largely neoliberal conception that assumes the interest for savers and intermediaries is the minimisation of transaction costs while achieving target rates of return (Sheppard, 2017). When the financial asset in question is also a public good, intermediation is not just about financial return but returns to societal stakeholders. Lee (2018) articulates this combination of financial and social return as 'profit plus' interests in her account of China's state-owned mining operations in Zambia where in comparison to private firms, Chinese SOEs have had to make more compromises to accommodate Zambian state and labour interests.

Chinese state-owned financial intermediaries are increasingly deployed in the development of public infrastructure. Their role in bringing together sources of national savings with viable assets abroad is not solely a matter of financial return but also implies delivering on the developmental prerogatives of the state. Domestically, they have played a role as a means to mitigate the impact of financial crises and catalyse urban development (Feng et al., 2021; Wu, 2021). Existing literature has also documented how state-owned financial intermediaries have guided the selection of assets desirable for long-term growth and prosperity. Haberly (2011) has shown how the CIC, through its direct stakes (between 15% and 20%) in oil, gas and mining companies in resource-rich advanced capitalist economies, is not simply investing for profit, but also as a strategic investor responding to China's demand for energy security. In recent years, however, it has become increasingly apparent that the CIC services national development in a way that extends beyond those benefits derived from direct ownership of strategic assets, a practice that has in the last decade been precluded by the geopoliticisation of Chinese investment in critical infrastructure like energy. The CIC is one such organisation within the multi-layered complex of the state that, in addition to seeking commercial returns in global capital markets, is also coordinating development.

The state is actively coordinating the investment of state capital to open new markets pertinent to China's long-term growth and prosperity. Recall, the state has traditionally provided infrastructure to support the creation of new markets for production and consumption (O'Neill, 2013). In addition to steady returns, China's global infrastructure development is an adaptive response to develop the structures necessary to further couple Chinese industrial production to global supply chains, enhance Chinese labour mobility and open new markets for production and consumption of Chinese goods and services (Lim, 2018; Coe and Yeung, 2019; Schindler and Kanai, 2021). In Europe, Chinese infrastructure projects concentrate in the Western Balkans where road, rail and energy infrastructure opens up new nodes in the supply chain for the delivery of Chinese goods and services to the larger markets of Western Europe. In contrast, state-owned financial intermediaries like the CIC possess a European portfolio of passive stake infrastructure assets concentrated in Western European mature and brownfield projects (CIC, 2019).

What renders state coordination distinct in the case of China is the state-coordinated complex, that is, the concerted, collective and competitive intervention of state institutions to deliver development. For example, bank-based debt-financing is the preferred modality of China's global infrastructure development, where policy banks evaluate the risk and return profile of infrastructure projects not on the merits of an individual project but a cluster of projects to service a particular sector, region or both with different streams of associated benefits and grant loans at semi-commercial interest rates. Chin and Gallagher (2019) theorise the role of the main policy banks, Exim and China Development Bank, in financing SOE implemented infrastructure projects as coordinators of entire credit spaces. Similarly, the identification of infrastructure projects and the choice of SOEs that are contracted to the project are jointly coordinated by state institutions who ensure the project lines up with broader developmental objectives (e.g. National Development and Reform Commission) and the most appropriate SOEs (e.g. Ministry of Commerce (MOFCOM)) based on industrial compatibility and capacity. For example, Chinese infrastructural projects in Serbia are majority road, rail and coal-fired power plants. All of the major projects are being carried out by China's largest SOE contractors that specialise in these sub-sectors, such as China Railway International and China Machinery Engineering Company.

Tellingly, in recent years, the state has demonstrated increasing coherence in coordinating development, disciplining SOEs in line with strategic policy. With Xi Jinping incumbent, leading small groups or *xiaozu* have been revived. *Xiaozu* are coordinative bodies headed by either Xi Jinping or senior politburo members over key policy areas and tranches of the state to build consensus and translate an overarching governance strategy into concrete policy (Leutert, 2018). Notably, the BRI is afforded its own *xiaozu*. In China, the introduction of market mechanisms and financial logics in the past few decades to the economic governance repertoire of the state has naturally devolved power within the state, which when left unchecked has resulted in firm-maximising but state-minimising benefits (Hameiri and Jones, 2021). As such, greater coherence of coordination has been deemed necessary because SOEs, while state-owned, are also autonomous economic agents that vie for capital, state or private. In the process of transnationalisation, SOEs may decouple from state prerogatives (Shi, 2015).

Considering the consolidation of state coordinative capacities, there are two processes that locate the role of state-owned financial intermediaries vis-à-vis state-led infrastructure financialisation. First, state-owned financial intermediaries are orienting towards delivering development. In contrast to the neoliberal prescription that financial intermediaries, whether state-owned or private, are to demonstrate independence of decision-making, Chinese SWFs like the CIC are increasingly responsive to state developmental imperatives in the firm's own strategic decision-making that reflect 'profit plus' interests. This aligns with the establishment (by the state) of a plethora of state-owned funds in recent years that respond to China's global infrastructure development like the Silk Road Fund and the China Africa Development Fund, both of which are intended as complementary market-based funding mechanisms that redistribute some of the risk burden away from China's policy banks (Liu et al., 2020; Pan et al., 2020).

Second, state-owned financial intermediaries are coordinators of development. They leverage their network power in a way that feeds into China's global infrastructure development. While state-owned financial intermediaries are heavily invested in capital markets for profit, matching national savings to profitable assets, they are also acting like brokers of development in which the overriding logic is to support Chinese production and consumption. As such, the brokerage function of the intermediary is also about matching Chinese firms to relevant markets, and vice versa, foreign firms to Chinese markets, in a way that complements global infrastructure development. Curiously, it is this very set-up, in which its conventional return-seeking investment has placed state-owned intermediaries central to global financial networks, that can allow SWFs like the CIC to leverage their centrality and attendant technical knowledge, access and legitimacy to service the real economy.

The second transformation revealing of the state-led financialisation of infrastructure is more reflective of financialisation dynamics within the advanced capitalist core. Financialisation up to a point is beneficial to long-term growth and development where vibrant capital markets provide improved access to financing (Sawyer, 2013). In the last few years, there is increasing awareness among policymakers of the financial risks of China's traditional bank-based debt-financing of overseas infrastructure projects (MOFCOM, 2020a). Rumours of sovereign default have followed several BRI projects, such as the now infamous Sri Lankan port of Hambantota and the Bar-Boljare highway in Montenegro (Brautigam, 2020). Though estimates of Montenegro's debt to China have been overstated, only one of three sections of the highway has thus far been completed due to lack of Montenegrin fiscal capacity to pay down the loan (Grgić, 2019). In response, the Chinese state has attempted to shift some of this risk to the market through the promotion of PPPs.

Although PPPs in the context of China's global infrastructure development are relatively nascent, PPPs in the domestic economy have received significant policy backing where the dynamic between state- and private domestic capital is one where private partners are largely seen as a source of additional revenue and a means to enhance state power. This is reflected in the absence of value-for-money metrics, which in the advanced capitalist core have been used in the assessment of PPPs to ensure shared benefits and equal exchange between the state and private investors. No such metrics have been issued in China, which has kept fluid the definition and provision of benefits to private partners (Jones and Bloomfield, 2020). If they are any indication, the efforts of the state to promote PPPs abroad are likely to follow the same logic: private partners are largely seen as a means to diversify the risk of debt-financed development and secure additional capital from private partners. However, the state will curb the extent to which private partners may divert earnings away from their intended and eventual productive function. The introduction of PPPs in China is nothing new. But taken together with the role of state-owned financial intermediaries in coordinating development, they demonstrate how state-led infrastructure financialisation does not boil down to a single process of more market-based privately driven financial growth at the expense of production-based growth and rather how it is complementary and contingent on existing forms of infrastructure development.

4. A conceptual framework: ideal-types and transformations of state-led infrastructure financialisation

Just what China's state-led financialisation qualitatively entails, requires that we examine the micro-processes and actors involved in the actual investment of infrastructure. As the relational turn in economic geography was intended to introduce dynamism to the depiction of network phenomena by focusing on the actors within them (Jones and Murphy, 2011; Coe and Yeung, 2019), zooming in on the micro-processes of state capital investment are revealing of the complex dynamics at play. Any large phenomenon is by necessity reproduced and reinterpreted through a series of routinised, everyday actions, performed by individuals (Reckwitz, 2002). Neoliberal logics of financial best practice have served a pivotal role in facilitating the expansion and embedding of Chinese state capital into global markets where non-state actors, often of the private variant, have been acknowledged as important practitioners servicing its circulation (Chen and Rithmire, 2020; Liu and Dixon, 2021b). Similarly, where state-centred accounts attribute China's global infrastructure development to the top-down directed BRI, how BRI projects actually materialise requires that we disaggregate pronouncements of grand strategy into its constituent parts where locally embedded operational decisions can shape the behaviour of SOEs in investor states (Oliveira et al, 2020). Such fine-grained analysis offers a view from the ground from which we can extend extant macro-level understandings of Chinese state-led development and their financialisation therein.

We construct two ideal-type modalities of infrastructure investment: (1) 'neoliberal financialised' institutional investment by state-owned intermediaries in global financial markets and (2) 'state-coordinated' bank-based debt-financing of public infrastructure investment within the state-coordinated complex. These two modalities of investment are intended to illustrate, for analytical purposes, the juxtaposing investment logics that underpin them and therefore present a baseline from where we might begin to map out the aforementioned transformations of state-led infrastructure financialisation. Where institutional investment is primarily geared towards servicing the integration of Chinese capital into global financial markets and yielding healthy ROIs, bank-based debt-financed public infrastructure development is principally concerned with delivering on state developmental prerogatives (see Table 1).

Chinese state capital as it is invested in global financial markets conforms in large part to global financial best practice and serving the 'profit' in 'profit plus'. State-owned financial intermediaries and associated financial professionals have practiced finance in a way that mediates the flow of state capital and its associated political baggage into global

Table 1. Two modalities of Chinese transnational state-owned investment

	Primary rationale for transnational expansion	Best practice	State organisational form	Geographies
Institutional investment in global financial markets	Surplus national savings; ROI in global capital markets	Financial intermediary identifies assets based on ROI metrics and via their centrality in global capital networks; independence of operational decision-making	State-owned financial intermediaries (SWFs, government-guided funds, SOE portfolio investment departments, state-owned investment banks)	Developed capital markets
Bank-based debt-financed public infrastructure projects	Strategic coupling to global supply chains, enhanced Chinese labour mobility; new market creation for production and consumption of Chinese goods and services	Dispersed yet collective intervention by relevant state institutions in China and investor states; ministries, agencies and SOEs play a coordinative function, identifying markets, creating projects (assets), securing funds and contractors, and implement projects in line with the BRI; EPC+F contracting model	The state-coordinated complex (National Development and Reform Commission, MOFCOM, Ministry of Finance, Ministry of Foreign Affairs, policy banks, construction SOEs (CCCC, China Railway International, China Machinery Engineering Company) in China and investor states)	Emerging economies, BRI countries, e.g. the Western Balkans

Source: Author's own formulation.

markets such that it becomes indistinguishable from private capital (Liu and Dixon, 2021a). This requires independence of operational decision-making and enhancing the centrality and legitimacy of state-owned financial intermediaries in global financial networks. In contrast, Chinese state capital as it is used for bank-based debt-financing of public infrastructure projects is highly state coordinated. The practices associated with this modality are performed by the state-coordinated complex in both home and investment-receiving country where the key organisations involved in infrastructure development—MOFCOM, the National Development and Reform Commission, the Ministry of Finance, Ministry of Foreign Affairs, the policy banks and SOEs—work together to identify markets, create projects (assets), coordinate funds and contractors and implement projects in line with the BRI. In this modality, EPC+F is the preferred contracting model for debt-financed public infrastructure projects, which differ from standard EPC contracts in that they entail credit provision from China's state-owned banks to the investment-receiving country.

Table 2 maps out the two key transformations indicative of state-led financialisation. In attempts to bring financialisation in service of infrastructure and ultimately the real economy, the function of institutional investment extends beyond financial intermediation pure and simple. We would expect state-owned financial intermediaries to be further responsive to state developmental policy and take on a coordinative role, matchmaking SOEs to global markets that they have become central to. This is likely to materialise in the adoption of brokerage practices that resemble the coordinative dynamic of bank-based debt-financed infrastructure projects in a way that will facilitate Chinese firms access to markets in sectors and geographies that complement the BRI.

In the context of the broader state-led financialisation of infrastructure, we furthermore expect the adoption of PPPs in the governance of bank-based debt-financed infrastructure

Table 2. Two transformations in China's state-led infrastructure financialisation

	Rationale for state-led financialisation	Best practice	State organisational form	Geographies
Institutional investment in global financial markets	'Profit plus': brokering to service China's production-based growth and development	Responding to strategic policy, i.e. the BRI at the operational level; matchmaking Chinese firms to global markets and vice versa that complements infrastructure development in BRI countries	State-owned financial intermediaries, Chinese firms and banks in the state-coordinated complex	Developed capital markets that complement BRI infrastructure development, e.g. Western Europe
Bank-based debt-financed public infrastructure projects	Recalibrating the risk-return profile of debt-financed infrastructure development; fiscal enhancement	Introduction of PPPs and other blended financing arrangements involving private funding	The state-coordinated complex and private partners	Emerging economies, BRI countries, e.g. the Western Balkans

Source: Author's own formulation.

development that represents moderated attempts by the state to shift some of the risk of sovereign lending from the state to the market and tap into an additional source of fiscal revenue. Combined, these two transformations demonstrate the multi-faceted nature of state-led infrastructure financialisation in leveraging financial intermediaries and (private) financial markets to service the real economy.

5. Methodology

We situate the investment of Chinese state capital within the context of flows into Europe where (1) the US–China rivalry has reoriented equity flows towards the capital markets of Western Europe and (2) the Western Balkans, comprising Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia. The Western Balkans is the fastest growing regional market for Chinese construction projects, seeing a 125.5% year on year growth in newly contracted projects in the period 2019–2020 (MOFCOM, 2020a). Importantly, the variegated geographies of Europe highlight the multi-faceted and contingent transformations that constitute China's state-led infrastructure financialisation. Infrastructure development in the Western Balkans is of direct geo-strategic consequence for the embedding of Chinese production and consumption into regional supply chains leading into Western European markets along the proposed China–Europe Land-Sea Express Route that runs from the Port of Piraeus through the Western Balkans and Central Eastern Europe into the EU (Pavlićević, 2019; Rogelja, 2020). This infrastructural corridor is complementary to the activities of state-owned intermediaries that, through their centrality in the capital markets of Western Europe, can facilitate the market entry of Chinese firms whose goods can eventually be transported along the Express Route from the east.

We ground the two investment modalities in the activities of specific organisations within these European geographies. The modality of institutional investment in global financial markets is exemplified by the global portfolio management of the CIC. The CIC has the capacity to move markets and ranks second in the world of SWFs with USD 1.2 trillion under management. Of the total assets under management, 37% is in non-US developed markets, a proxy for the CIC's Western European portfolio (CIC, 2020; Capapé, 2021). Relative to other Chinese SWFs like the National Social Security Fund, the CIC manages a larger global portfolio and is thus a more typical case of transnational state capital investment. We identify the set of practices associated with bank-based debt-financed public infrastructure in the form of the popular EPC+F contract model. We situate these EPC+F projects in the Western Balkans as conducted by the SOE CCCC, China's number one, and the world's fourth largest international contractor (ENR, 2020), and financed by Exim, which together with China Development Bank accounts for 70% of BRI lending (Liu et al., 2020).

We then draw on Jones and Murphy's (2011, 385) three criteria of a practice-oriented methodology to isolate the 'wheat from the chaff' within the infinite choice set of empirical phenomena. Those steps in the investment or project cycle relevant for analysis are (a) identifiable as discreet practices that (b) have a discernible impact on the investment outcome and (c) can be generalised, that is, function as instances of best practice in the transnational investment of Chinese state capital. The choice set is refined through a dialectical process of comparison between the cases and the data, 'quasi-closing' the phenomenon of interest (Jones and Murphy, 2011, 381).

The data collected originate from extensive fieldwork completed in Beijing, Hong Kong and Serbia between November 2019 and January 2020, and October and November 2020, where 98 semi-structured interviews were conducted in Mandarin and English in Beijing (32), Hong Kong (19), Serbia (28), and elsewhere (7), and via (video) call (16) with investment managers (19), operational managers (16), government officials (7), diplomats (5), financial analysts (4), translators (4), policy analysts (4), corporate lawyers (2), management consultants (2), engineers and construction workers (3), journalists (10) and academics (22) who had contact with or knowledge of the relevant organisations. Of the investment and operational managers, 19 were incumbent or former employees of state-owned institutions and enterprises.

Many of these interviews were based on relationships cultivated through close dialogue with financial professionals (Clark, 1998). Complementary to interviews with financial professionals were six site visits to infrastructure projects under construction in Serbia, providing a rare opportunity to observe the doing of infrastructure and speak to project managers and construction workers in their professional setting. Observations drawn from field data were corroborated with official documents from sources including the CIC, MOFCOM and the Serbian Ministry of Construction, Transportation and Infrastructure, as well as media articles and secondary academic sources.

6. Two modalities of Chinese transnational state-owned infrastructure investment

The following sections present the two ideal-type modalities of Chinese state-owned infrastructure investment through the empirical lens of the CIC's global portfolio and Exim-financed, CCCC-implemented EPC+F projects in the Western Balkans (6.1 and 6.2), followed by an analysis of how emergent practices within each modality are indicative of China's state-led infrastructure financialisation (6.3 and 6.4).

6.1. Institutional investment in global financial markets with the CIC

Established in 2007 by a handful of reformist policy makers and Wall Street returnees, the CIC's financialised beginnings set the tone for its subsequent operation as a state-owned financial intermediary of global stature. The impetus to set up a SWF arose from the question of what to do with the concentration of surplus national savings that was China's growing foreign exchange reserves. At the time, this pool of idle capital that was majority held as low yield US treasury bonds were administered by the State Administration of Foreign Exchange under the central bank. The Ministry of Finance sought to arrest control and institute more aggressive reserve management, and which eventually won the political-administrative tussle for allocative control and the CIC was established with an initial capital injection of USD 200 million. CIC would also absorb Central Huijin, a major shareholder of the state's banking assets which in itself symbolised an encroaching financialisation of the banking sector (Walter and Howie, 2012, 148–53; Liu and Dixon, 2021a). Tellingly, CIC has made a number of placements in Western European infrastructure including Thames Water, Eutelsat Communications, Heathrow Airport and Logicor (Liu and Dixon, 2021b). However, the majority of these holdings are passive stakes with less than 10% shareholding where the stated objective is to 'gear investments towards lower risk assets, such as steady return assets and resource-related assets' (CIC, 2017a). CIC holds no direct stakes in the emerging markets of the Western Balkans.[2]

Across the various asset classes under management today, which include portfolio and direct investments, the investment cycle of the CIC's global portfolio can be grouped into five stages: project sourcing, appraisal and selection, project approval, investment and exit (Figure 1). In contrast to bank-based debt-financing where the locus of decision-making regarding the allocation of state capital is far more dispersed across the state-coordinated complex, the CIC is endowed with its own source of dollars and is afforded relative autonomy over fund allocation, figuring central in the execution of portfolios and within global capital networks.

First, the sourcing of viable projects is the most determinative step in the investment cycle because they limit the choice set of potential investments upon which the other stages are contingent. Here, the relationship between CIC investment managers and other financial intermediaries is key for effective deal sourcing. They reproduce financialised logics of accumulation through the provision of knowledge and access to the global capital network. Importantly, deal-sourcing practices are highly situated to foster knowledge transfer (Faulconbridge, 2006). The CIC maintains relationships with a gamut of name-brand firms, including Goldman Sachs, HSBC, Blackstone, Carlyle Group and private equity (PE) firms like KKR and TPG, all of whom are highly connected to one another (Yue and Lu, 2018; Wei, 2019).[3] Some firms may be placed under retainer, wherein a certain number of capital commitments are guaranteed by the investor. In such cases, knowledge transfer can take place via digital means, but the most impactful relationships require in situ exchange. Senior executives of name-brand firms often go out of their way to arrange face-to-face meetings.[4] When CIC was outbid by Mitsubishi UFJ for a 21% stake in Morgan Stanley at the height of the financial crisis (Morgan Stanley, 2008), Morgan Stanley chief executive officer John Mack personally travelled to Beijing to patch things over with CIC who was still a major client and shareholder, having acquired 9.9% of the bank the previous year.[5] Subsequent to this, CIC then upped their stake with a USD 1.2 billion purchase of Morgan Stanley common stock in 2009 (Liu and Dixon, 2021b).

Second, the appraisal and selection of projects is a feature of allocation that often occurs in tandem with project sourcing, but where sourcing is in large part determined by the inter-subjective performance of CIC managers and other institutional investors, appraisal and selection is predicated on the execution of technical expertise required to command the ever-growing complexity of financial instruments. The application of seemingly universal and reproducible risk and return metrics and sophisticated portfolio allocation models are decisive. Where infrastructure is ultimately intended to sustain the production of goods and services, the 'product' in financial capital is the risk-adjusted rate of return on the assets under management (Clark and Monk, 2017). Here, private intermediaries matter because when their services are engaged to conduct due diligence or provide advice on specific investments, they become agents of appraisal and selection.[6]

Third, the approval of projects is an iterative process that can take upwards of two months (Figure 2). We identify approval to be a series of meetings that amount to situated inter-

2 Investment manager, state-owned financial institution, 28 September 2020.
3 Operational manager, state-owned financial institution, 6 November 2019.
4 Investment manager, state-owned financial institution, 31 December 2019.
5 Operational manager, investment bank, 6 December 2019.
6 Financial analyst, institutional investor, 11 December 2019.

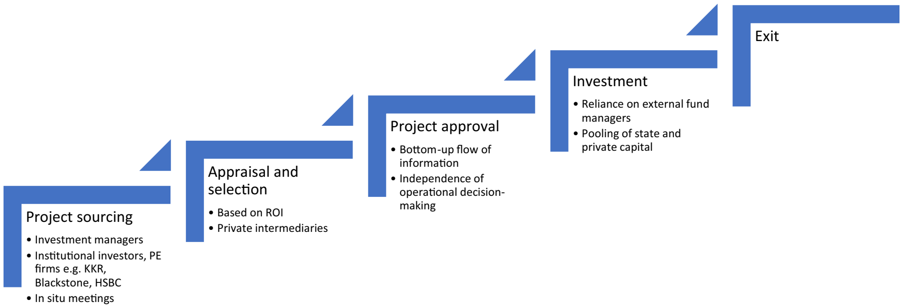

Figure 1. The investment cycle of the CIC.

subjective encounters where key allocative decisions are made (CIC, 2019). The flow of information is bottom-up and the allocation of individual investments lies in the realm of day-to-day operations (Clark and Monk, 2017). The separation of powers between operational decision-making and corporate strategy where senior political leaders contribute reflects the independence of decision-making that is corporate best practice under neoliberal financialisation, and is a means to disembed state capital from its political–institutional moorings. The onus of project approval is on the investment committees where managers table viable investments at the relevant committee meetings once sufficient due diligence has been conducted. Beyond these operational fora, summary reports are circulated from the respective investment departments to the Board of Directors. Similarly, while the CIC is answerable to the State Council (eq. the Cabinet), the latter does not figure in individual investments. Weekly reports travel upwards to the State Council, supplemented by quarterly meetings with CIC's Board of Directors. Only in exceptional circumstances or deals of significant size does the State Council and relevant ministries weigh in, such as would have been the case for the USD 13.83 billion acquisition of European logistics firm, Logicor (CIC, 2017a, 43).[7]

Fourth and fifth, the management of the investment and exit are the two final stages that round out the investment cycle. In both cases, the key agents are the partner institutions and managers. In the case of PE, CIC typically commits six to ten years over which time CIC capital is parked with the fund. Traditionally run as blind funds, state capital is pooled with other commitments, private or otherwise, such that the PE firm is managing state capital in the same way as private capital. Where investments are managed in-house as is the case with direct or minority investments, CIC managers may attend Board of Director meetings where directors may entertain some limited operational influence over the investment, but it is not in the interests of scaling the managerial expertise of its staff to exercise such operational interventions in individual investments.[8] Lastly, unlike infrastructure governance, the ease of exit reaffirms the mobility of money in institutional investment.

6.2. The state-coordinated complex and infrastructure development in the Western Balkans

The other, arguably more politicised, form of investment has been the export of Chinese infrastructure development via EPC+F projects. Supported by the BRI and 17 + 1

7 Operational manager, state-owned financial institution, 6 November 2019.
8 Investment manager, state-owned financial institution, 31 December 2019.

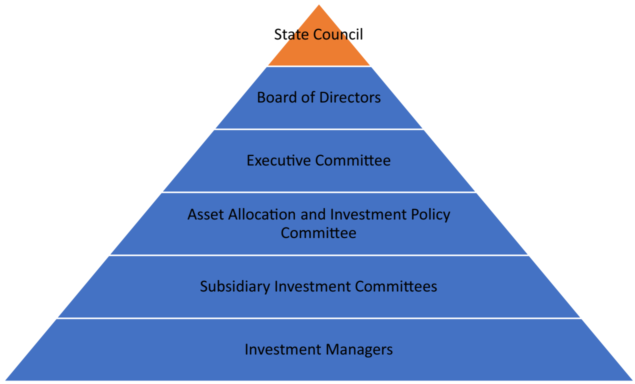

Figure 2. Independence of decision-making in CIC's corporate governance structure.

connectivity platform between China and 17 Central and Eastern European (CEE) Countries, the Western Balkans is a strategic thoroughfare and thus a geographical hotspot for infrastructure development (Pavlićević, 2019; Rogelja, 2020). A steady risk-adjusted infrastructure portfolio may favour mature and brownfield acquisitions in the developed markets of Western Europe, but the fastest growing region for large-scale Chinese infrastructure projects, especially transport, is the Western Balkans (MOFCOM, 2020a).

The project cycle is dispersed across a wide range of actors and institutions from the initial policy frameworks that are determined at senior government level down to the selection of local sub-contractors in investor states. The state demonstrates coherence in coordinating EPC+F projects where both investor state (Western Balkan state) and investee states (China) are heavily involved in the project cycle. We group the Exim-financed CCCC-implemented EPC+F infrastructure project cycle into five stages: government-to-government (G2G) policy fora and agreements, intra-ministerial interactions, feasibility assessment and technical negotiations, signing of the commercial agreement and determination of financing and construction and delivery (Figure 3). Collectively these stages create the market, identify viable projects and coordinate industrially appropriate SOEs to implement these projects.

First, infrastructure governance is strongly shaped by the industrial and geographical priorities of the BRI, and begins before the identification of specific projects in the framework agreements that arise out of various national and bilateral policy fora. The BRI identifies CEE as an important market for EPC+F projects and the 17 + 1 is a platform to host high-level bilateral and trilateral meetings between leaders where framework agreements are signed. The Belgrade–Budapest high-speed railway began with talks in late 2013 at the Bucharest Summit of the 16 + 1 initiative, a month after the announcement of the BRI. A year later the memoranda of understanding was signed in 2014 at the 16 + 1 Belgrade summit, and the general contract in 2015 between the national rail operator Serbia Railways Infrastructure (the investor) and the consortium of CCCC-China Railways International (the main contractor) (Investment Plan Serbia, 2018).

Bilateral encounters have also produced agreements that shape the nature of accumulation on infrastructure projects. The 2009 Agreement on Economic and Technical Cooperation in the Area of Infrastructure between China and Serbia ties financing to construction, clearing the need for pre-selection and open tender of the main contractors, allowing Chinese firms to bypass the hurdle of competitive pre-selection against other

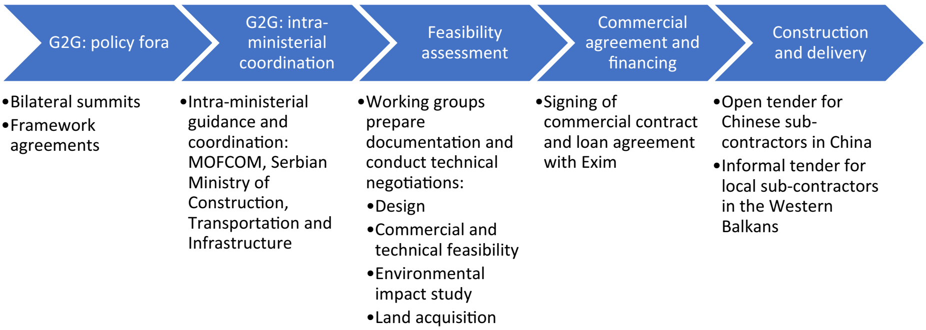

Figure 3. The project cycle of Exim-financed CCCC-implemented EPC+F projects in the Western Balkans.

firms (Rogelja, 2020). The Law on Confirmation of Agreement on Social Security was adopted in 2018, which allows the application of Chinese labour law to Chinese workers in Serbia for the first five years of stay. On top of already favourable tax terms, these agreements facilitate the reallocation of Chinese productive capacity and wage labour to Serbia without burdening CCCC with the transaction costs.

Second, the BRI, like most of these framework agreements, are vague in formulation and broad in scope (Manuel, 2019). The ministries provide clarity and interpret strategy and more generally mediate the investment process. MOFCOM lies at the centre of an intra-state network governing China's global infrastructure projects. In addition to providing concrete guidance to CCCC for the identification and implementation of projects, MOFCOM arranges match-making meetings between firms, projects and investors based on the fit between the industrial capacity of the SOE, the project in question and geography of the investor (MOFCOM, 2020a, 2020b).[9]

Third, whether memoranda of understanding and general contracts materialise into deliverable projects is dependent on the commercial and technical feasibility of the project. Inter-ministerial working groups involving key ministries, the investor and main contractor coordinate the preparation of a host of related documents required before construction can proceed (Investment Plan Serbia, 2019). Largely intended to clarify the technical parameters of the build, these documents also determine the commercial feasibility of the project upon which the signing of the commercial contract and financing are contingent. The Bar–Boljare highway in Montenegro encountered major delays due to the outcome of two earlier, unfavourable feasibility assessments, which precluded the possibility of alternative forms of financing such as private concession contracts (Grgić, 2019, 6–7). Exim commissioned a third, favourable feasibility study that has justified its role as 'lender of last resort' and the ability to stipulate financing provision on the condition that China Road and Bridge Corporation, a subsidiary of CCCC, be selected as the main contractor. Feasibility assessment is therefore a crucial practice that legitimates the entry of Chinese firms into the Western Balkans market.

Fourth, the signing of the commercial and loan agreements are important steps because they proxy the certainty of project implementation. Financing in almost all cases is the most difficult aspect of project realisation. The naming of CCCC as the main contractor

9 Operational manager, state-owned enterprise, 7 December 2019.

may procedurally precede the determination of financing, such as for the Belgrade–Budapest railway, but the loan agreement is a key stage because the commercial contract is conditional on the loan agreement coming into force. It is therefore an indication of how important the securing of loan financing is for the selection of a Chinese contractor. CCCC projects in the Western Balkans are almost always conditional on 85% Exim financing (Investment Plan Serbia, 2018, 2019). The policy bank selectively opens up credit space in the interests of opening up new markets for Chinese SOEs (Chen, 2020).

Fifth, sub-contractor selection, which is ongoing throughout construction, has distributional consequences for the allocation of surplus labour (Figure 4). Central-level SOEs predominate as the main contractor because they have the *zizhi*, connoting calibre, legitimacy or qualification, to take final responsibility on the delivery of the overall project, but they rarely employ workers directly.[10] An EPC+F project mobilises a cluster of associated Chinese construction firms and surplus labour to whom sections of construction are delegated (Gonzalez-Vicente, 2019).[11] The building construction works are typically carried out by Chinese workers who are sub-contracted in China through open tender,[12] but if there is a condition on local labour participation, it is to be realised in the proportion of the total value of the project awarded to local sub-contractors in the investor state (Grgić, 2019). The relevant investor ministries may weigh in on the selection of local sub-contractors, such as in the case of Pupin bridge in Serbia.[13] In other accounts, local sub-contractors approached the main contractor through existing contacts in an informal tender process, suggestive of local market agency.[14] Local state and market dynamics thus impact the allocation of both Chinese and local state capital.

6.3. The CIC as a coordinator of development

In a CIC party committee meeting held in November 2017, Chairman Tu Guangshao identified three strategy themes for the CIC in the wake of the 19th National Congress and 5th National Financial Work Conference: BRI, the 'China perspective' and the Central Huijin 'model', suggesting a greater level of policy coherence between the party and government to discipline the CIC in line with state policy (CIC, 2017b). At the same time that the CIC institutes an investment cycle that resembles 'neoliberal financialised' institutional investment in global markets, it is also embracing of a logic of state-coordination, orienting day-to-day financial practice to China's global infrastructure development and introducing practices that enable the SWF to leverage its centrality in global financial networks to service the entry of Chinese firms into European markets.

First, the CIC has established bilateral and multilateral partnerships with other SWFs like the Russia Direct Investment Fund that prioritises infrastructure (CIC, 2013). These foreign bilateral partnerships allow the CIC to leverage the 'China perspective' and Central Huijin 'model', a strategy where CIC provides invested foreign firms with access to Chinese markets and credit through the networks of the SWF, including its shareholdings in the domestic banking sector. In exchange, foreign partners provide state-supported access to and knowhow of priority sectors abroad, like infrastructure in the case of the

10 Operational manager, state-owned enterprise, 7 December 2019.
11 Sub-contracting is specified in the Regulations on the Administration of Foreign Contracted Projects (2017).
12 Workers, state-owned enterprise, October 2020.
13 Translator, freelance, November 2020.
14 Operational manager, state-owned enterprise, 21 October 2020.

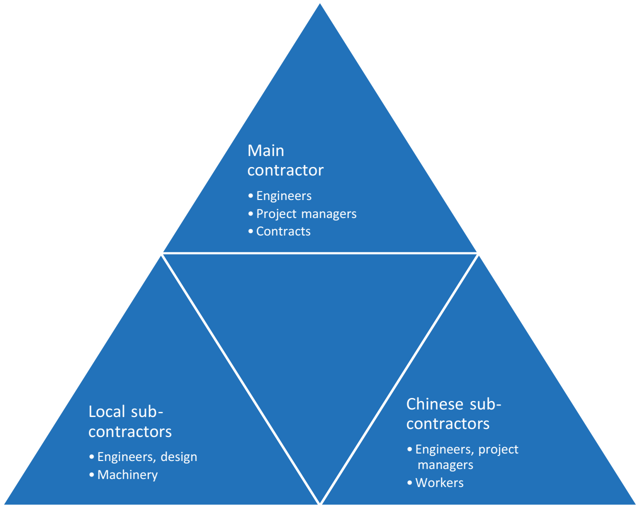

Figure 4. Social relations of sub-contracting on CCCC projects.

Russian Direct Investment Fund, which requires in-depth local knowledge and governmental support to clear the complex property rights involved (Torrance, 2009; O'Neill, 2013).

Second, in Western Europe, CIC has established partnerships with SWFs like the Ireland Strategic Investment Fund (ISIF) and the Belgian Federal Holding and Investment Company (SFPI-FPIM) with a focus on innovation and technology firms. Both cases highlight the centrality of the CIC within global capital networks and how the SWF has attempted through its positionality and these bilateral partnerships to facilitate entry for Chinese firms into the competitive EU marketplace. Negotiations for the China–Ireland Technology Innovation Fund began in 2012 when, tellingly, the initial connection between ISIF and the CIC had been bridged by AMP Capital, a financial intermediary specialising in infrastructure and real-estate *prior* to high-level meetings between Irish and Chinese dignitaries took place to formalise the partnership (ISIF, 2018).[15] Similarly, CIC's relationship with BNP Paribas has played a significant role in a number of Sino-Belgian funds, such as the Mirror Fund established in 2012 and the recent France–China Cooperation Fund with Eurazeo announced in 2020 (FPIM, 2020).[16] While international partnerships are de rigueur in institutional investment, these funds have been set up with mandates to invest in both Chinese and European growth stage innovation and technology firms which coheres with Beijing's strategy shift towards indigenous innovation and the digital silk road (Hillman, 2021). Access to the China market for European firms is the quid pro quo for fund-facilitated access for Chinese firms to Western European markets.

Third, these bilateral partnerships are embedded in the promotion of a 'CIC ecosystem' of 1 + 3+N comprised of CIC and its three organisational divisions (1 + 3), and its partners and the holding companies of Central Huijin (N), which deliberately positions CIC as a gateway between international and domestic markets (CIC, 2018, 4). Like MOFCOM, the CIC is positioning itself as a selective matchmaker, connecting industrially relevant foreign firms to Chinese markets and credit and, reciprocally, Chinese firms to

15 Investment manager, state-owned financial institution, 8 November 2021.
16 Investment manager, state-owned financial institution, 18 October 2021.

international markets. The SWF is committed to the Silk Road Fund, launched in 2014 together with the State Administration of Foreign Exchange, Exim and CDB. It has exclusively invested in BRI projects, bringing CIC capital into developing markets and further into the state-coordinated complex that services bank-based debt-financed infrastructure projects. Alibaba has also been a beneficiary, with CIC facilitating the use of Alipay in offshore markets through its holdings in Western Europe (Steger, 2012).[17] CIC's networks have accelerated the proliferation of Alipay and of Renminbi internationalisation through the digital infrastructures it provides. The CIC has become a strategic fund of funds, opening up new markets for Chinese goods in Western Europe that can be ultimately supplied via the China–Europe Express Route.

In sum, the practice of finance within the CIC reflects both global financial best practice indicative of the search for higher returns under neoliberal financialisation and practices that serve the 'profit plus' interests of national development. This is made apparent in CIC's investment strategy. The CIC operates three portfolios in ascending order of risk-return profile: the reference portfolio, essentially public market equity and fixed income assets, and the policy and actual portfolios, for alternative assets and more active investments (CIC, 2020). The more market-driven public equities and G2G bilateral partnerships sit comfortably within the same framework, yet the latter is clearly more evocative of the type of state coordination in bank-based debt-financed infrastructure projects where policy and operational decision-making are highly integrated. The CIC reveals the role of state-owned financial intermediaries in state-led infrastructure financialisation. By leveraging its positionality between global markets and the state coordinated complex, the CIC is coupling global financial markets to China's real economy.

6.4. Financialising China's global infrastructure development with PPPs

The willingness of the state to embrace the financialisation of infrastructure has not only materialised as an increasing state coordination of institutional investment. At the same time that the CIC has come to mimic match-making practices that resemble China's infrastructure development, the EPC+F model is losing ground to more financialised forms of infrastructure development where both China and investor states have tried to crowd in private capital (MOFCOM, 2020a, 17). This has culminated in authoritative guidance from 28 state departments on overseas construction projects citing financial service capability as a key area of development, where financial institutions are encouraged to 'innovate and enrich financial products, investment and financing models to serve the development of overseas construction projects' (MOFCOM, 2018). Although implementation by firms is still nascent, a proliferation of blended financing forms has arisen. Build, operate and transfer (BOT) and concessionaire contracts, both of which entail equity ownership by the contractor on Chinese construction projects, have become more prevalent in the Western Balkans. In Bosnia, the Banja Luka–Prijedor–Novi Grad highway was contracted in 2018 to a subsidiary of Shandong Hi-Speed Group with a 33-year concession to operate, while the Ulog hydropower plant, contracted to Sinohydro, is operated by the private Serbian firm EFT Group, who holds a 30-year concession to operate and sell on the private energy market (Ralev, 2018; EFT, n.d.). Still more stillborn PPPs have previously been in development, such as the Kovin Energy Complex, a proposed underwater

17 Investment manager, state-owned financial institution, 31 December 2019.

coalmine and thermal power plant in Serbia and the Western Balkan state that has been most receptive to bilaterally negotiated EPC+F projects with China. China Huadian Corporation would have been the majority shareholder and operator of Kovin in which the electrical energy produced would ultimately be sold on the private market through the multinational oil and gas trader, Aupec, and not to Elektroprivreda Srbije, the public provider in Serbia. Although the deal fell apart, it is illustrative of the financialisation of infrastructure in one of the Balkan states in which bank-based debt-financed infrastructure projects have been most favoured by the investor state.

The role of Aupec also illustrates how the networks of professionals who package infrastructure projects into tradeable assets and broker between investors are just as central to PPP-based infrastructure development as they are in institutional investment. The value of such professional networks has been recognised by the Chinese state. The 28-department guidance release on overseas construction also emphasised the delivery of professional financial and engineering services by Chinese firms in line with international standards such as the International Federation of Consulting Engineers. Project managers that were interviewed had experience managing construction projects in other regions such as North Africa, prior to the Western Balkans.[18] Accelerating Chinese professionals' adoption of international standards is a means to enhance the global mobility of their expertise and standardise project implementation in a manner that has the potential to erode local particularities of public infrastructure governance and that is already taking place in the advanced capitalist core. They resemble the financial intermediaries capable of packaging infrastructure facilities and their associated revenue streams into tradable assets, catering to a global clientele of emerging economies.

7. Conclusions

China's state-led financialisation of infrastructure is an alternative narrative to dominant characterisations of neoliberal financialisation unfolding in the advanced capitalist economies. Unlike prevailing accounts which tend to place emphasis on the role of private capital and market-based finance in driving growth, we have shown how a financialisation of infrastructure beyond these geographies can be contiguous and complementary to bank-based debt-financed infrastructure development. More broadly, the significance of this article for financialisation studies has been to articulate a specific set of practices, institutional configurations and network properties, and to demonstrate empirically, how the imperative to financialise infrastructure development is emergent from and contingent upon the productivist mode of capitalist development. In doing so, we build upon the work of economic geographers who have expressed reticence in embracing the conceptual and geographical expansiveness of financialisation in transforming wholesale economic and social life (Pike and Pollard, 2009; Christophers, 2015; Furlong, 2020; Maher and Aquanno, 2021).

China's state-led financialisation of infrastructure is a multi-layered phenomenon. First, state-owned financial intermediaries are coordinating development. Departing from its 'neoliberal financialised' beginnings, the CIC has come to embrace its role within the state-coordinated complex. In addition to performing the role of a commercial broker, identifying profitable assets based on ROI metrics in the capital markets of Western

18 Project manager, state-owned enterprise, 20 October 2020.

Europe, the CIC is increasingly responsive to the BRI in its operational strategy. Through bilateral fund-of-fund partnerships with European SWFs, and the newly created CIC ecosystem, the SWF is leveraging its centrality in the capital markets of Western Europe to facilitate the entry of Chinese firms whose goods and services can ultimately be transported along the China–Europe Express Route that is of geo-strategic concern of Chinese infrastructure development in the Western Balkans. The CIC is attempting to bring about the strategic coupling of global financial markets to infrastructure development through institutional investment.

Second to the role of state-owned financial intermediaries, we further find bank-based debt-financing to be making room for alternative, financialised forms of infrastructure development. However, this does not harken a wholesale abandonment of EPC+F, or what O'Neill (2010) has characterised as a changing role of the state in infrastructure from provision to procurement. Chinese SOEs have experimented with varying PPPs from BOT to concessionaire contracts in the Western Balkans, which have been encouraged by the state as a means to offset some of the risks of sovereign default that have been plaguing Chinese EPC+F projects in recent years. While PPPs in the context of state attempts to financialise the domestic economy have been around for some time (Jones and Bloomfield, 2020), PPPs in the context of China's global infrastructure development have not been explored in detail. More to the point, the introduction of PPPs should be contextualised within China's multi-faceted, multi-layered state-led financialisation of infrastructure. Collectively, the twin transformations documented here identify financialisation as a political construction whereby the state is purposefully leveraging the access of state-owned financial intermediaries to capital markets and recalibrating the risk-return dynamics of infrastructure development by enlisting the private market, which work in tandem to facilitate the continued production and consumption of Chinese goods and services.

The case of China, which we could dismiss as a unique case of state capitalism, is a test of scope conditions. Financialisation is transforming the provision of public infrastructure, but the findings generated here prompt us to revisit our understanding of how financialisation is reconfiguring power relations between the state, society and the market, a question that goes to the heart of financialisation studies. The verdict on neoliberal financialisation is that the growing power of private, market-based capital has slowly eroded public authority and democratic accountability (Peck and Whiteside, 2016; Alami, 2019; Karwowski, 2019; Aalbers, 2020; Schwan et al., 2020). In contrast, China's state-led financialisation of infrastructure seems to indicate an amplification of state power not only in China but investor states like Serbia. However, this has gone hand in hand with democratic backsliding because the flow of Chinese state capital has not only bolstered the capacity of the Serbian state to deliver development through infrastructure, it has also bolstered the power of the incumbent regime against governance reform (Liu, 2020). Deserving of further exploration is how state-led forms of financialisation are reconfiguring state–society relations.

Outside the advanced capitalist economies, varying forms of state coordination can be found in other emerging economies like Indonesia where the state is still very much leading infrastructure provision (Anguelov, 2020). The spread of infrastructure financialisation across these geographies may add to the findings generated here. Further research might also be undertaken to explore the role of the state across different modalities of investment. While this article has considered the changing dynamics between two variants, the growing prevalence of PPPs and commercial banks in financing infrastructure may draw out additional insights concerning the role of the state in infrastructure financialisation.

What is becoming increasingly apparent, however, is that such configurations represent ever-intensive interactions between the state and the market.

Acknowledgements

Special thanks are due to Ilias Alami, Milan Babić, Aneta Spendzharova as well as the participants of the SASE mini-conference 'State capitalism and state-led development before and after Covid-19: New pathways and challenges' held in July 2021, the 2nd FinGeo Summer School and the 6th PhD Dissertation Workshop in Global Political Economy hosted by the Balsillie School of International Affairs.

Funding

This article was written with grant funding from the *SWFsEUROPE* project provided by the European Research Council under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 758430). Additional funding support was provided by the European Cooperation in Science Technology (COST) Action CA18215, China in Europe Research Network (CHERN).

Conflict of Interest

There is no conflict of interest to disclose.

References

Aalbers, M. B. (2020) Financial geography III: the financialization of the city. *Progress in Human Geography*, 44: 595–607.
Alami, I. (2019) *Money Power and Financial Capital in Emerging Markets: Facing the Liquidity Tsunami*. London: Routledge.
Alami, I., Dixon, A. D. (2022) "Expropriation of capitalist by state capitalist:" Organizational change and the centralization of capital as state property. *Economic Geography*, 1–24.
Anguelov, D. (2020) Banking 'development': the geopolitical–economy of infrastructure financing, *Area Development and Policy*, 6: 271–295.
August, M., Cohen, D., Danyluk, M., Kass, A., Ponder, C., Rosenman, E. (2021) Reimagining geographies of public finance. *Progress in Human Geography. (*doi: 10.1177/03091325211054963)
Boussebaa, M., Faulconbridge, J. R. (2019) Professional service firms as agents of economic globalization: a political perspective. *Journal of Professions and Organisations*, 6: 72–90.
Brautigam, D. (2020) A critical look at Chinese 'debt-trap diplomacy': the rise of a meme. *Area Development and Policy*, 5: 1–14.
Capapé, J. (ed.) (2021) *Sovereign Wealth Funds 2020: Fighting the Pandemic, Embracing Change*. IE University Center for the Governance of Change.
Chen, H., Rithmire, M. (2020) The rise of the investor state: State capital in the Chinese economy. *Studies in Comparative International Development*, 55: 257–277.
Chen, M. (2020) Beyond donation: China's policy banks and the reshaping of development finance. *Studies in Comparative International Development*, 55: 436–459.
Chin, G. T., Gallagher, K. P. (2019) Coordinated credit spaces: the globalization of Chinese development finance, *Development and Change*, 50: 245–274.
Christophers, B. (2015) The limits to financialization. *Dialogues in Human Geography*, 5: 183–200
CIC. (2013) *CIC, Vnesheconombank, RDIF and RCIF Signed MOU to Promote Investment into Infrastructure and Russian Far East Projects*, 25 March. Available at: http://www.china-inv.cn/chinainven/Media/2013-03/1000514.shtml (accessed 11 May 2020).

CIC. (2017a) *Annual Report 2017*. Available at: http://www.china- inv.cn/china_inv/xhtml/ztnb/2017EN/index.html (accessed 11 May 2020).
CIC. (2017b) *Guided by Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, Strive to Create a New Situation for CIC Business: CIC Party Committee Launches the 16th study*. Available at: http://www.china-inv.cn/china_inv/Media/2017-11/1000115.shtml (accessed 12 April 2021) (in Chinese).
CIC. (2018) Annual Report 2018. Available at: http://www.china-inv.cn/china_inv/xhtml/ztnb/2018EN/index.html (accessed 11 May 2020).
CIC. (2019) *Annual Report 2019*. Available at: http://www.china-inv.cn/chinainven/xhtml/Media/2019EN.pdf (accessed 11 May 2020).
CIC. (2020) *Annual Report 2020*. Available at: http://www.chinainv.cn/chinainven/xhtml/Media/2020EN.pdf (accessed 21 December 2021).
Clark, G. L. (1998) Stylized facts and close dialogue: Methodology in economic geography, *Annals of the Association of American Geographers*, 88: 73–87.
Clark, G. L. (2005) Money flows like mercury: the geography of global finance, *Geografiska Annaler: Series B, Human Geography*, 87: 99–112.
Clark, G. L. (2017) Financial intermediation, infrastructure investment and regional growth, *Area Development and Policy*, 2: 217–236.
Clark, G. L., Monk, A. H. B. (2017) *Institutional Investors in Global Markets*. 1st edn. Oxford: Oxford University Press.
Coe, N. M., Yeung, H. W. (2019) Global production networks: mapping recent conceptual developments, *Journal of Economic Geography*, 19: 775–801.
EFT. (n.d.) HPP Ulog. Available at:http://www.eft-ulog.net/index.php/english/hpp-ulog (accessed 12 April 2021).
ENR. (2020) ENR's 2020 Top 250 International Contractors. Available at: https://www.enr.com/toplists/2020-Top-250-International-Contractors-Preview (accessed 6 March 2021).
Faulconbridge, J. R. (2006) Stretching tacit knowledge beyond a local fix? Global spaces of learning in advertising professional service firms, *Journal of Economic Geography*, 6: 517–540.
Faulconbridge, J. R., Muzio, D. (2012) Professions in a globalizing world: towards a transnational sociology of the professions. *International Sociology*, 27: 136–152.
Feng, Y., Wu, F., Zhang, F. (2021) Changing roles of the state in the financialization of urban development through *chengtou* in China. *Regional Studies*, 1–12.
French, S., Leyshon, A., Wainwright, T. (2011) Financializing space, spacing financialization. *Progress in Human Geography*, 35: 798–819.
FPIM. (2020) *Jaarverslag 2020*. Available at https://www.sfpi-fpim.be/sites/default/files/attachments/sfpi_annualreport_2020_nl.pdf (accessed 21 December 2021).
Furlong, K. (2020) Geographies of infrastructure 1: Economies, *Progress in Human Geography*, 44: 572–582.
Gonzalez-Vicente, R. (2019) Make development great again? Accumulation regimes, spaces of sovereign exception and the elite development paradigm of China's Belt and Road Initiative, *Business and Politics*, 21: 487–513.
Grgić, M. (2019) Chinese infrastructural investments in the Balkans: Political implications of the highway project in Montenegro. *Territory, Politics, Governance*, 7: 42–60.
Haberly, D. (2011) Strategic sovereign wealth fund investment and the new alliance capitalism: a network mapping investigation. *Environment and Planning A: Economy and Space*, 43: 1833–1852.
Halbert, L., Attuyer, K. (2016) Introduction: the financialisation of urban production: conditions, mediations and transformations, *Urban Studies*, 53: 1347–1361.
Hall, S. (2009) Financialised elites and the changing nature of finance capitalism: Investment bankers in London's Financial District, *Competition & Change*, 13: 173–189.
Hall, S. (2012) Geographies of money and finance II: Financialization and financial subjects. *Progress in Human Geography*, 36: 403–411.
Hameiri, S., Jones, L. (2021) *Fractured China: How State Transformation is Shaping China's Rise*. New York: Cambridge University Press.
Hillman, J. E. (2021) *The Digital Silk Road: China's Quest to Wire the World and Win the Future*. London: Profile Books.

Investment Plan Serbia. (2018) *Deputy Prime Minister and Minister of Construction Transport and Infrastructure, Belgrade*. Available at: https://www.mgsi.gov.rs/sites/default/files/The%20Book%20of%20Projects%20-%20Ministry%20of%20construction%2C%20transport%20and%20infrastructure-%20September%202018.pdf (accessed 21 December 2021).

Investment Plan Serbia. (2019) *Deputy Prime Minister and Minister of Construction Transport and Infrastructure, Belgrade*. Available at: https://www.mgsi.gov.rs/sites/default/files/The%20Book%20of%20Projects%20-%20Ministry%20of%20construction%2C%20transport%20and%20infrastructure-%20September%202018.pdf (accessed 21 December 2021).

ISIF. (2018) *ISIF and China's CIC Capital Announce €150 Million Fund to Focus on High-Growth Companies Seeking Access to Irish and Chinese Markets*. Available at: https://isif.ie/news/isif-and-chinas-cic-capital-announce-150-million-fund-to-focus-on-high-growth-companies-seeking-access-to-irish-and-chinese-markets (accessed 21 December 2021).

Jones, A., Murphy, J. T. (2011) Theorizing practice in economic geography: Foundations, challenges, and possibilities. *Progress in Human Geography*, 35: 366–392.

Jones, L., Bloomfield, M. J. (2020) PPPs in China: Does the growth in Chinese PPPs signal a liberalising economy? *New Political Economy*, 25: 829–847.

Karwowski, E. (2019) Towards (de-)financialisation: The role of the state. *Cambridge Journal of Economics*, 43: 1001–1027.

Lai, K. P. Y., Pan, F., Sokol, M., Wójcik, D. (2020) New financial geographies of Asia. *Regional Studies*, 54: 143–148.

Langley, P. (2018) Frontier financialization: Urban infrastructure in the United Kingdom. *Economic Anthropology*, 5: 172–184.

Law on Confirmation of Agreement on Social Security. (2018) Available at: http://www.parlament.gov.rs/upload/archive/files/lat/pdf/zakoni/2018/2828-18-lat.pdf (accessed 9 March 2021) (in Serbian).

Leutert, W. (2018) Firm control: Governing the state-owned economy under Xi Jinping. *China Perspectives*, 2018: 27–36.

Lim, K. F. (2018) Strategic coupling, state capitalism, and the shifting dynamics of global production networks. *Geography Compass*, 12: e12406.

Liu, I. T. (2020) Sino state capital and the strengthening of Serbian stabilitocracy. *Developing Economics*. Available at: https://developingeconomics.org/2020/12/21/sino-state-capital-and-the-strengthening-of-serbian-stabilitocracy/ (accessed 21 December 2021).

Liu, I. T., Dixon, A. D. (2021a) Legitimating state capital: How the global financial professions transnationalise Chinese sovereign wealth, *Development and Change*, 52:42–49.

Liu, I. T., Dixon, A. D. (2021b) SWFs in-depth. The great experiment: China Investment Corporation in Europe and beyond. In Javier, C. (Eds.). *Sovereign Wealth Funds 2020: Fighting the Pandemic, Embracing Change*. Center for the Governance of Change: 42–49. Available at: https://docs.ie.edu/cgc/research/sovereign-wealth/SOVEREIGN-WEALTH-RESEARCH-IE-CGC-REPORT_2019.pdf (accessed 21 December 2021).

Liu, W., Zhang, Y., Xiong, W. (2020) Financing the belt and road initiative. *Eurasian Geography and Economics*, 61: 137–145.

Maher, S., Aquanno, S. M. (2021) The new finance capital: Corporate governance, financial power, and the state. *Critical Sociology*, 48(1): 55–73.

Manuel, R. (2019) Twists in the belt and road, *China Leadership Monitor*. Available at: https://www.prcleader.org/manuel-belt-road (accessed 24 June 2020).

MOFCOM. (2018) *Guiding Opinions of 28 Departments Including the National Development and* Reform Commission and the Ministry of Commerce on Strengthening the Construction of Credit Systems in the Field of Foreign Economic Cooperation Going Global Public Service Platform. Available at: http://fec.mofcom.gov.cn/article/jwjmhzq/zcfg/201801/20180102693267.shtml (accessed 10 March 2021) (in Chinese).

MOFCOM. (2020a) Annual Report on China International Project Contracting, *2019–2020*. Available at: http://images.mofcom.gov.cn/fec/202012/20201201171840137.pdf (accessed 28 February 2021) (in Chinese).

MOFCOM. (2020b) Market Report on China Contracting Projects by Country (*Region) 2019–2020*. Available at: http://images.mofcom.gov.cn/fec/202012/20201201174252820.pdf (accessed 21 December 2021) (in Chinese).

Morgan Stanley. (2008) *Mitsubishi UFJ Financial Group to Invest $9 Billion in Morgan Stanley*. Available at: https://www.morganstanley.com/press-releases/mitsubishi-ufj-financial-group-to-invest-9-billion-in-morgan-stanley_6962 (accessed 5 March 2021).

O'Brien, P., Pike, A. (2017) Governing infrastructure funding and financing. In R. Martin and J. Pollard (eds) *Handbook on the Geographies of Money and Finance*, pp. 223–252. Edward Elgar Publishing.

O'Neill, P. M. (2019) The financialisation of urban infrastructure: A framework of analysis. *Urban Studies,* 56: 1304–1325.

Oliveira G., de L. T., Murton, G., Rippa, A., Harlan, T., Yang, Y. (2020) China's belt and road initiative: Views from the ground. *Political Geography*, 82: 102225.

O'Neill, P. M. (2010) Infrastructure financing and operation in the contemporary city: Infrastructure financing and operation in the contemporary city. *Geographical Research*, 48: 3–12.

O'Neill, P. M. (2013) The financialisation of infrastructure: the role of categorisation and property relations. *Cambridge Journal of Regions, Economy and Society*, 6: 441–454.

Pan, F., Zhang, F., Wu, F. (2020) State-led financialization in China: the case of the government-guided investment fund. *The China Quarterly*, 247: 749–772.

Pavlićević, D. (2019) Structural power and the China–EU–Western Balkans triangular relations. *Asia Europe Journal*, 17: 453–468.

Peck, J. (2021) On capitalism's cusp. *Area Development and Policy*, 6: 1–30.

Peck, J., Whiteside, H. (2016) Financializing detroit. *Economic Geography*, 92: 235–268.

Petry, J. (2020) Financialization with Chinese characteristics? Exchanges, control and capital markets in authoritarian capitalism. *Economy and Society*, 49: 213–238.

Pike, A., Pollard, J. (2009) Economic geographies of financialization. *Economic Geography*, 86: 29–51.

Ralev, R. (2018) China's Shandong to build motorway section in Bosnia's Serb Republic, *SeeNews*. Available at: http://seenews.com/news/chinas-shandong-to-build-motorway-section-in-bosnias-serb-republic-628503 (accessed 12 April 2021).

Reckwitz, A. (2002) Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory*, 5: 243–263.

Regulations on the Administration of Foreign Contracted Projects (2017) Order No. 527 of the State Council of the People's Republic of China. Available at: http://fec.mofcom.gov.cn/article/ywzn/dwcbgc/zcfg/201810/20181002799147.shtml (accessed 9 March 2021) (in Chinese).

Rogelja, I. (2020) Concrete and coal: China's infrastructural assemblages in the Balkans. *Political Geography*, 81: 102220.

Rolf, S. (2021) China's uneven and combined development. *Palgrave Macmillan*, 10.1007/978-3-030-55559-7.

Sawyer Malcolm. What Is Financialization?. *International Journal of Political Economy*. 2013. 42 (4) 5–18. 10.2753/IJP0891-1916420401.

Schindler, S., Kanai, J. M. (2021) Getting the territory right: infrastructure-led development and the re-emergence of spatial planning strategies. *Regional Studies*, 55: 40–51.

Schwan, M., Trampusch, C., Fastenrath, F. (2020) Financialization of, not by the state. Exploring changes in the management of public debt and assets across Europe. *Review of International Political Economy*, 28: 820–842.

Sheppard, E. (2017) Beyond Europe: commentary on Gordon Clark's perspective on financial intermediation. *Area Development and Policy*, 2: 237–244.

Shi, W. (2015) *The Political Economy of China's Outward Direct Investments*. UC San Diego, San Diego. Available at: https://escholarship.org/content/qt3022286b/qt3022286b.pdf?t=o4hn02 (accessed 21 December 2021).

Steger, I. (2012) CIC invested about $2 billion in Alibaba. *Wall Street Journal*, 19 September. Available at https://online.wsj.com/article/SB10000872396390444620104578006090686413784.html (accessed 12 April 2021).

Töpfer, L.-M. (2018) China's integration into the global financial system: Toward a state-led conception of global financial networks. *Dialogues in Human Geography*, 8: 251–271.

Torrance, M. (2009) Reconceptualizing urban governance through a new paradigm for urban infrastructure networks. *Journal of Economic Geography*, 9: 805–822.

Walter, C., Howie, F. (2012) *Red Capitalism: The Fragile Financial Foundation of China's Extraordinary Rise*. John Wiley & Sons.

Wei, L. (2019) Goldman, China's sovereign-wealth fund begin investing in U.S. manufacturing. *Wall Street Journal*, 20 September. Available at: https://www.wsj.com/articles/goldman-chinas-sovereign-wealth-fund-begin-investing-in-u-s-manufacturing-11568978734 (accessed 12 January 2021).

Wu, F. (2021) The long shadow of the state: Financializing the Chinese city. *Urban Geography*, 1–22.

Yue, Y., Lu, S. (2018) CIC to launch $1.27 billion investment fund with HSBC. *Caixin*, 17 November. Available at: https://www.caixinglobal.com/2018-11-17/cic-to-launch-127-billion-investment-fund-with-hsbc-101348243.html (accessed 11 May 2020).