

Revolution, evolution, progress: Finance & Space manifesto

Wojcik, Dariusz; Bassens, David; Knox-Hayes, Janelle; Lai, Karen

Published in:
Finance and Space

Publication date:
2024

Document Version:
Accepted author manuscript

[Link to publication](#)

Citation for published version (APA):
Wojcik, D., Bassens, D., Knox-Hayes, J., & Lai, K. (2024). Revolution, evolution, progress: Finance & Space manifesto. *Finance and Space*, 1(1).

Copyright

No part of this publication may be reproduced or transmitted in any form, without the prior written permission of the author(s) or other rights holders to whom publication rights have been transferred, unless permitted by a license attached to the publication (a Creative Commons license or other), or unless exceptions to copyright law apply.

Take down policy

If you believe that this document infringes your copyright or other rights, please contact openaccess@vub.be, with details of the nature of the infringement. We will investigate the claim and if justified, we will take the appropriate steps.

Revolution, Evolution, Progress: Finance & Space Manifesto

Please cite as:

Wójcik, D., Bassens, D., Knox-Hayes, J., Lai, K.P.Y. (2023) Revolution, Evolution, Progress: Finance & Space Manifesto. *Finance and Space*, 1(1), pp.1-12, doi: 10.1080/2833115X.2023.2275952

Dariusz Wójcik
National University of Singapore
dwojck@nus.edu.sg (corresponding author)
0000-0003-2158-284X

David Bassens
Vrije Universiteit Brussel
0000-0002-5368-7884

Janelle Knox-Hayes
Massachusetts Institute of Technology
0000-0003-0378-5811

Karen P.Y. Lai
Durham University
0000-0003-4654-9819

Abstract

Finance needs a revolution to respond to the existential crisis facing humanity, a shift to a path of more sustainable development, and more equitable forms of scholarly interventions. To achieve this, we need a dramatic and wide-reaching change in the scope and directions of financial research. In this inaugural editorial, we focus on revolution, evolution and progress to present how *Finance & Space* will contribute to a vision of finance in which people and the environment matter. We propose a new definition of finance and discuss intellectual journeys that have led to this journal. These directly shape the aims and scope of the journal and its emphasis on diversity of research, relevance to policy and strategy, interdisciplinarity, engaged pluralism, and global coverage.

Keywords: finance, space, financial geography, sustainable finance, interdisciplinarity, society, environment, engaged pluralism

Revolution

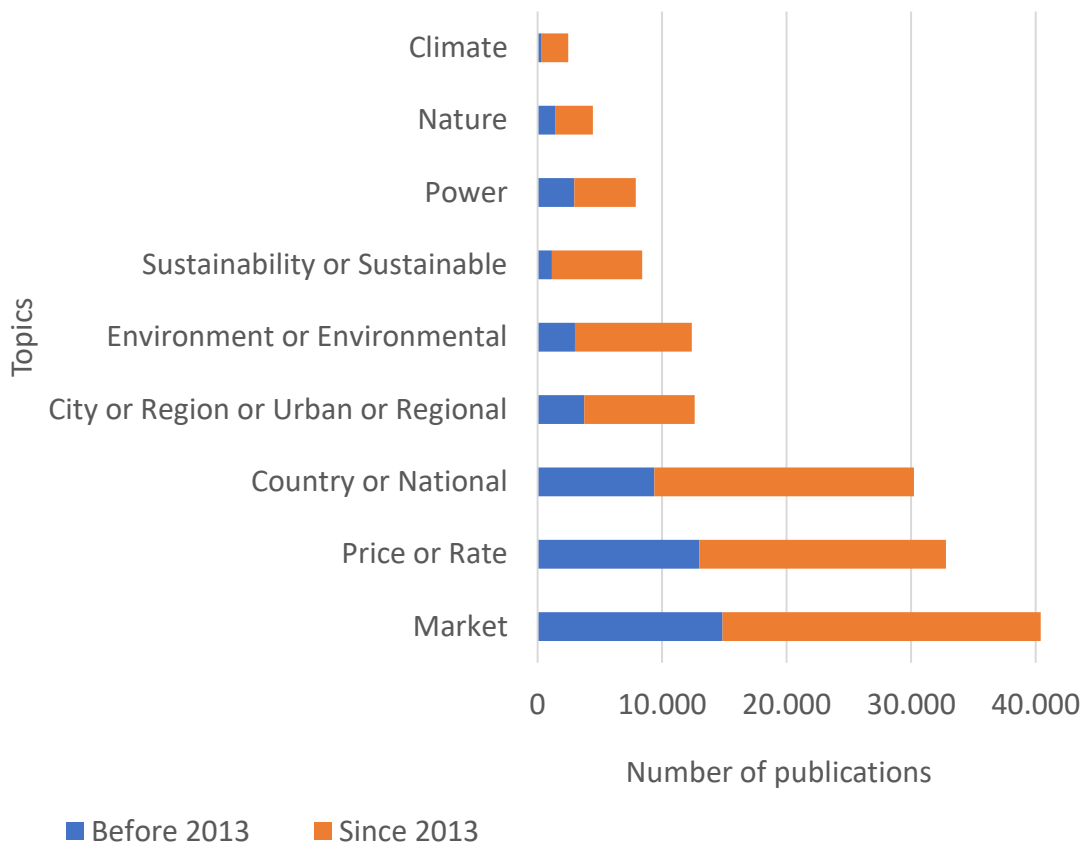
A spectre is haunting the world – that of an environmental catastrophe driven by economic exploitation. A catastrophe that is further exacerbated by the immense but extremely uneven distribution of wealth. Global GDP is currently estimated at US\$100 trillion, but is dwarfed by the global financial system, which includes assets exceeding US\$400 trillion and credit exceeding US\$200 trillion (Financial Stability Board, 2020). This global financial system, alas, appears unable to generate and channel even a small fraction of those resources towards the survival of humanity.

It is estimated that to achieve sustainable development goals by 2030 US\$13 trillion a year is needed, while US\$5 trillion a year is needed to reach net zero emissions by 2050 (Force for Good, 2021; International Energy Agency, 2021). Only about 30% of these sums is currently mobilised. A further challenge is delivering the resource to combat climate change in a manner that is just and equitable. The Justice40 initiative in the U.S. requires that 40 percent of the benefits of federal investments, such as the \$2 trillion Inflation Reduction Act and Bipartisan Infrastructure Law, flow to historically underserved communities (US EPA, 2023). The initiative is sound in intent, but mechanisms to ensure access to these funds and delivery to the most disadvantaged communities are lacking.

In the early part of this year, the US government easily procured US\$22 billion to bail out local banks in California and Montana (Gura, 2023). This stands in contrast to the fact that total pledges to the world-leading multilateral climate fund to finance projects in developing countries only amount to half of that sum (Climate Investment Funds, 2023). This is rendered all the more puzzling when we consider that there is already precedence for international financial mobilization to ensure survival; in 2020, central banks printed trillions of US\$ worth of money to address the existential threat posed by the Covid-19 pandemic (Ioannou and Wójcik, 2020).

Even if governments and financial institutions are unable or unwilling to act on averting a climate catastrophe, researchers should be able to offer analysis and expertise in their work that would contribute to better understanding as well as recommendations for potential solutions. However, research on finance remains obsessed with markets, prices, and rates (figure 1), and dominated by national level data and analysis, which tend to be incompatible with the multi-scalar nature of the catastrophe we are facing. Financial research interested in environment, sustainability, power relations, nature or climate is on the rise, but still lags behind in number and influence.

Figure 1. The number of publications on finance focusing on selected topics



Note: The figure covers all publications registered on Web of Science as of 11 September 2023. We identified 199,009 publications with finance, financial, money or monetary in the title. Within this sample, we identified publications with the selected words as the topic (i.e. in the title, abstract or keywords), and divided publications into those published by 31 December 2012, and those published since 1 January 2013.

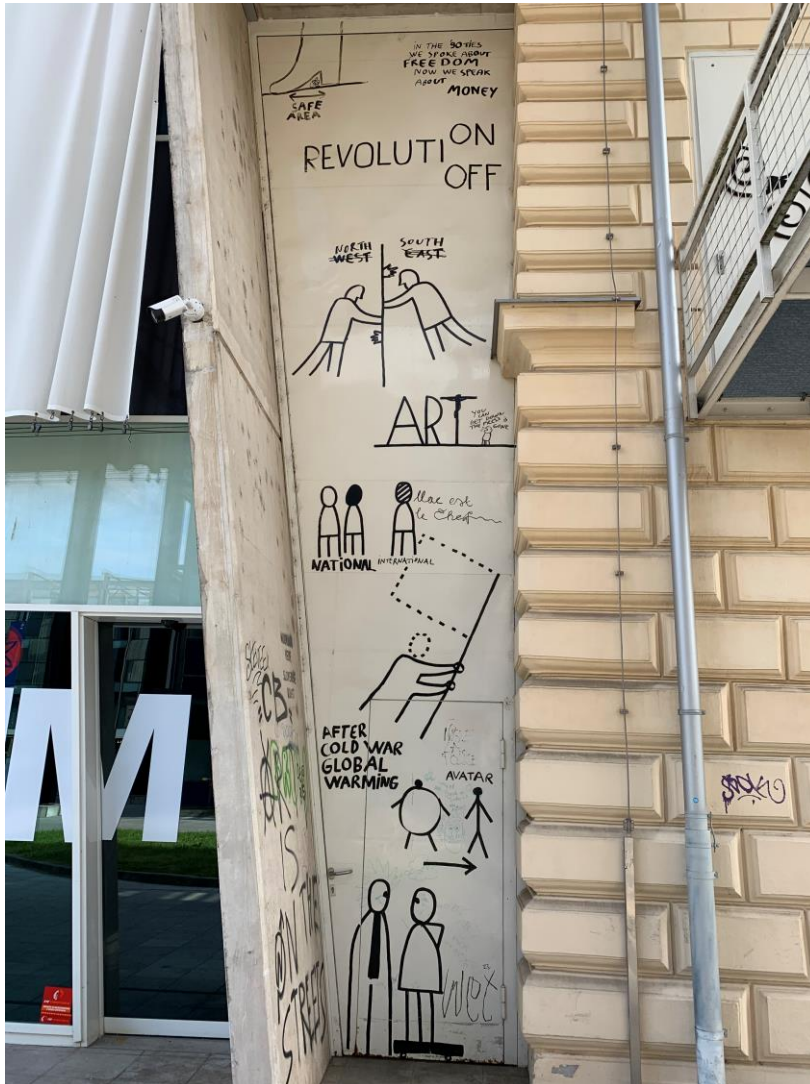
Source: The authors based on Web of Science.

The very process of financial research production and validation is problematic. Out of 195 authors of the 100 most cited publications on finance (as of March 2021), 184 were male, and 172 worked in the USA. More authors were from the University of Chicago than the entire group of authors outside the USA. Every single winner of the 19 Nobel Memorial Prize in Economic Sciences for contributions to research on finance is or was a white male who received his PhD in the USA and worked there at the time of the award (Wójcik et al., 2024). Financial research is possibly the most male- and US-dominated of all academic disciplines.

We need a dramatic and wide-reaching change in financial research. The call for revolution takes us to the capital of Slovenia, where we launched *Finance & Space* at the Annual Conference of the Regional Studies Association in June 2023. It was in Ljubljana, where we came across graffiti on the external wall of a national museum. The graffiti offers questions rather than answers but illustrates many themes relevant to the journal. Context, as any geographer knows, is vital. The independent Republic of Slovenia was created in 1990. The artwork questions whether the revolution that led to independence has since been betrayed and if another revolution is now needed. How limited or false was the freedom gained in

1990? Has the West-East divide been replaced by a North-South divide? Has art, even religion, become commodified? The picture also engages with scale, digitization, and global warming.

Figure 2. Graffiti on the external wall of a national museum in Ljubljana



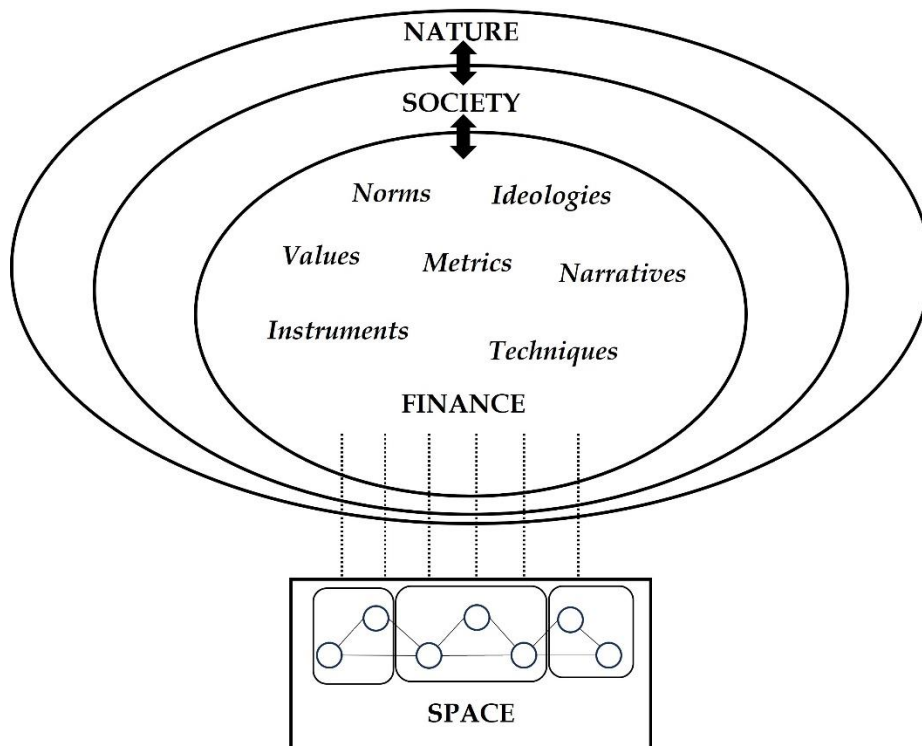
Source: The author's own photo.

Remember the context again. Slovenian independence was enabled by the dissolution of the Federal Republic of Yugoslavia as part of the collapsing communist bloc in Eastern Europe. In their Manifesto of the Communist Party, Friedrich Engels and Karl Marx identified money as a problem that society needed to overcome and called for the centralisation of money and credit in the hands of the state through a national bank with state capital, and a suppression of all private banks and bankers (Marx and Engels, 1848). A communist revolution, they predicted, would make money superfluous. Except, it did not. The communist bloc in Eastern Europe was dismantled by the revolution of workers against a system of oppression that pretended to do without money. As Georg Simmel in 1900 explained, there is an essential relationship between money and freedom. Or in the words of Geoffrey Ingham (2004, 20),

“money is the basis for the progressive rationalization of social life”. We cannot be sure that our analysis exactly corresponds with the artist’s or artists’ intended critique. We would love to hear from the artist(s) if they see this editorial and invite them to develop this further as a piece for the FinVis section of the journal.

Finance will not be revolutionised by ignoring or rejecting money. We must begin with a new and bold definition of the poorly (if ever) defined concept of finance. At *Finance & Space* we see finance as a spatially and temporally articulated system of human-environment relationships, in which people interact with and experience each other and their environment and create systems of value through the medium of money (see Figure 3). The spatial articulation of finance implies that the world of finance is not accessible to all, that power is concentrated in certain individuals and in particular transnational organizations (both public and private) across a web of interconnected onshore/offshore places, that it is being mediated by advanced digital technologies rooted in specific jurisdictions. The world of finance has enduring ties to states and their political representatives and regulators (Coe et al., 2013; Bassens & van Meeteren, 2015). Finance is creating ‘insiders’ in terms of who shares the spoils of financial investment and intermediation as well as creating ‘outsiders’ in terms of who does *not* have access to said social and material infrastructures. Finance is inextricably connected to systems of material production and their intended and unintended social and environmental externalities. There are places and time periods with too much investment, producing bubbles, next to those deprived of finance, but it is often the latter that bear the price when the bubbles burst.

Figure 3. Studying Finance and Space



Source: The authors

Analysing the production and consequences of the historical, current and emerging spatial articulation of finance is a key project for the journal. Such efforts will enable better understanding of the hegemony of current forms of finance and its values, norms, ideologies, metrics, etc. that inhibit a transition away from environmental and human catastrophe. This project entails studying the spatially- and temporally-mediated mechanisms by which financialization occurs; that is, how, when, and where finance inserts its value logics into wider society and nature. It is also about pluralizing our understanding of finance as potentially being anchored in value systems that are more attuned to social equity, environmental justice, and stewardship rather than capitalist logics of extraction. What could be gathered from community finance initiatives? What new priorities, standards and metrics could emerge from ethical finance? How might religious values and frameworks, as in the case of Islamic finance, help to reset financial value systems? What prospects do decentralized forms of finance offer? In short, how do counterhegemonic forms of finance work, how can they be nurtured and who would they benefit?

As a system of relationships, finance has immense transformative potential, crucial in our evolution from groups of hunter-gatherers to agricultural settlements, which in turn begat cities, countries and colonies, and our current global and digital networks. Work became labour, homes became real estate, the whole environment turned into assets or derivatives. The scale of interaction and integration has expanded exponentially, while the rate and flow of finance has accelerated from the movement of physical goods to the transaction of digital representations at the speed of light. Finance has bounded space and time together, linking the past, present, and future.

Finance has, however, throughout history also been a driving force behind intense environmental and human exploitation resulting in shifting patterns of uneven development. *Specific* forms of finance have dominated in the hands of the few who have settled and moved between interconnected places—from early financial centres to contemporary global cities like London, New York, and Hong Kong. These prominent nodes have brought particular values, norms, instruments, techniques, and narratives that further challenge opportunities for justice and equity. Finance is society's current Janus, with a face looking back at a mixed history of societal evolution as well as the most inhumane forms of exploitation, while also facing forward and urging us to question whether finance can be mobilized to serve society or whether it will continue the current path of the privatization of profits through the socialization of risk and losses.

In pursuing this broad definition of finance, we seek to free finance from the grip of financial economists and a technocratic view on finance as technical, arcane, and best left to specific financial experts. To understand finance (broadly defined), geography and other social sciences, humanities and the arts are essential, in addition to economics. We need new concepts, definitions, theories, and methods. New technology and financial reporting regulations offer a potential tsunami of financial data in the near future, for which we need all the quantitative and qualitative techniques we can muster, including artificial intelligence, and collaborations with data scientists and digital humanities. We need insights from and dialogue with those practicing finance, from everyday consumers of finance to strategic decision-makers. The path to harness the power of finance for the common good requires diverse forms of visualization that will help develop new frameworks for understanding and

communicating finance. We need to literally and metaphorically draw and map over the museum of conventional financial research, just as the unknown artist(s) inscribed the wall of the national museum in Ljubljana.

Evolution

Launching *Finance & Space* in Ljubljana was particularly meaningful because of the roots of the Global Network on Financial Geography (FinGeo) - the driving force behind this journal. The origins of FinGeo go back to the Geographies of Finance and Post-Socialist Transformations Research Network organised by Martin Sokol, Zoltan Gál, Tim Heinemann and Dariusz Wójcik in 2010-13 and funded by the Regional Studies Association (RSA). With further support from the RSA, Vrije Universiteit Brussel, and University of Oxford among others, that network developed into FinGeo in 2015, and grew to a nearly 1,000 strong membership, spanning six continents and dozens of countries today. The journal is the culmination of FinGeo's journey to-date. Note that the proto-FinGeo network was not anchored in the experience of the Global North or West. Martin, Zoltan, and Dariusz (coming from Slovakia, Hungary, and Poland, respectively) wondered how money and finance were changing their home regions and vice versa. Just as the Ljubljana graffiti says: "in the 90's we spoke about freedom, now we speak about money."

Intellectually, *Finance & Space* builds on much earlier and broader developments. We need to stand on the shoulders of giants, including Adam Smith, Karl Marx, Max Weber, John Maynard Keynes, Joseph Schumpeter, Joan Robinson, and Anna Schwartz. Arguably, their contributions to understanding finance are still not fully recognized, not least because almost everyone thinks they know what they wrote, but never reads them. Neither is the geographical context in which they reflected on finance sufficiently appreciated. Smith was influenced by Amsterdam as the leading European financial centre of the 18th century, and wrote about it, using knowledge from his correspondence with Amsterdam's most powerful banker Henry Hope (Ioannou and Wójcik, 2022). Marx's financial thoughts revolved around London as the world capital of capital, and the shadow it casts on the rest of England and beyond. Weber studied financial exchanges in Germany, compared them across cities (Weber, 1894), and later referred to money as a weapon in the struggle for economic existence (Ingham, 2004). Keynes literally lived the hegemonic financial transition from the UK to the USA, with the rising power of the latter informing his radical ideas, including a genuine global currency and a world central bank. Schumpeter was a finance minister of Austria who campaigned for a capital levy to help the country repay its debts (Blumenthal, 2008). Joan Robinson, who extended Keynes's work and led investigations on the nature of capital goods, was influenced deeply by her trips to China (1956). Anna Schwartz co-wrote the opus magnum of Milton Friedman, which earned him a Nobel Memorial Prize in Economics, while she was not even mentioned in the press release (Nobel Prize, 1976). Her work was dedicated to comparing monetary histories across countries (1987). While *Finance & Space* does not want to adhere to old labels, it welcomes new readings of classical texts on finance. In our heterodox approach to a revolution in financial research, we are open to and seek to encourage conversations with established heterodox schools of thought, including Marxist, Post-Keynesian, feminist, institutionalist and others.

Fast forward to the late 20th century, we build on pioneering geographical accounts of finance, including those by David Harvey (1982), Saskia Sassen (1991), Sue Roberts (1995), Andrew Leyshon and Nigel Thrift (1997), Ron Martin (1999) and Gordon Clark (2000). But we also follow in the tradition of pioneers from outside the Anglophone sphere, including Risto Laulajainen (1998), Eike Schamp (Lo and Schamp, 2001), and Xiaobin Zhao (2003). We want to go much further than that, by inviting and sharing scholarship from all parts of the Global North and the Global South. While most of the above names, as well as ours as editors, could be associated mainly with economic geography, we believe that understanding the finance-space-time nexus is relevant to all geographers, including urban, development, digital, cultural, environmental, political, social and so on. After all, geography as a whole is concerned with human-environment relationships, which have been increasingly shaped by finance. The reverse is also true. For financial geography to prosper, a broad-based intellectual effort must be leveraged, rather than restricting financial geography as a sub-discipline within a sub-discipline (i.e. economic geography).

The call to open up the black box of finance intensified when the plane of global finance crashed loudly in 2008. We have embraced the boom in financial geography since the 2008 global financial crisis, reflected in new textbooks and handbooks (Zademach, 2014; Martin and Pollard, 2017; Hall, 2018; Knox-Hayes and Wójcik, 2022) and a continuous stream of Progress in Human Geography reports (Hall, 2010; Christophers, 2014; Aalbers, 2018; Wójcik, 2021; Lai, 2023; just to note the first article in each set of three reports). With an intellectual home in human geography, regional studies, and urban studies, financial geography has attracted significant interest in political economy and political science, economics and regional science, sociology, anthropology, housing studies, environmental studies, financial history, development studies, and urban and regional planning (Gibadulina, 2021). In the process it has evolved and expanded from geographies of money and finance—focusing on the geographies of the financial sector and activity—to financial geography as a lens fundamental to understanding phenomena beyond money and finance itself in terms of wider economy, society, and the environment (Aalbers, 2018). This is also evident in the burgeoning interdisciplinary literature on financialization to which geographers made major contributions (Engelen et al., 2011; Bassens and van Meeteren, 2015; Fernandez and Aalbers, 2016). *Finance & Space* sees geographies of finance and financial geographies as inseparable. We need to understand the spatial and temporal production of finance and the financial production of space and time together rather than in isolation. The journal seeks to nurture these synergies.

Our vision for the journal is, however, not as a platform for financial geography 2.0, 3.0 or whatever the number. First, with a broad definition of finance in mind, and the social and environmental relationships it emphasizes, *Finance & Space* is about more than geography. Put differently, space and time are central to the journal, but geographers have no monopoly on analyzing it, and have always benefited from other disciplinary insights and approaches. While the proud roots of geographies of finance are in economic geography, financial geographies are born inter- and trans-disciplinary, and their boom after 2008 testifies to the virtues of such openness. Second, numbering the waves would do disservice to the respect we hold for prior financial geographical research, and our ambition to go beyond any wave. We do not relegate any research to history, and we believe in the value of historical research in financial geography and engagement with financial historians. Metaphorically, we rather

see the journal as a power plant harnessing wave energy, building on the understanding of past waves, and putting the energy of future waves to a good use for scholarship and society at large.

Finance & Space seeks to promote multi-scalar research. Finance matters at the micro scale, to bodies, individuals, and organisations; the meso scale, to localities, rural or urban, and regions; and the macro-scale, to nations, the planet as a whole and beyond. Money and finance, after all, are literally going to space with booming private funding for satellites, space travel and stations, and growing interest in spatial finance, whereby earth observation techniques are used to manage assets and associated risks (Spatial Finance Initiative, 2021). Finance is rooted in deep history, shapes the present, and is instrumental in determining the future. To research the finance-space-time nexus in a multi-scalar way theoretically, and not just empirically, we need psychology and behavioural science to understand the micro-foundations and a framework to relate them to context and the environment. Here we can build on Herbert Simon's scissors of context and cognition, emphasizing that both mind and the environment are essential to understand behaviour, as stressed by one of the pioneers of financial geography (Clark, 2011). Financial geography has evolved alongside and often in collaboration with the international political economy, and social studies of finance (Strange, 1986; Cohen, 1998; Mackenzie, 2006), engaged closely with those tracing everyday life and geographies of finance (e.g. Langley, 2008; Graeber, 2011), and other post-disciplinary approaches to evolving financial practices (Samman, Coombs and Cameron, 2015). However, in our view and as stated in our definition, finance has an intrinsically socio-environmental nature, and it is this quintessentially spatial, temporal, and geographical nature of finance that we want *Finance & Space* to develop and advocate.

Progress

It is a new dawn, a beautiful sunny morning in Ljubljana in June 2023. Four Editors of four nationalities, more than four citizenships and ethnicities, based across global time zones (Belgium, Singapore, UK, and USA), but united in purpose, proudly wearing *Finance & Space* T-shirts and youthful smiles (figure 3). We introduce the inaugural team of Editors, to be extended in the future.

Figure 4. Editors of Finance & Space at the RSA conference in Ljubljana, June 2023
(from the left: Dariusz Wójcik, Karen Lai, David Bassens, Janelle Knox-Hayes)



Source: The author's own photo.

Look at our T-shirts closely. The cover illustrates much of what we want to achieve. In the centre, finance and space are joined with an ampersand globe – our visual innovation, made possible by the designer Oliver Uberti. The ampersand evokes the style of currency symbols. The globe design expresses spatial thinking about money, and the vision of transformation. Look above the title. Straight lines and circles resemble beads on an abacus, a symbol of finance as a system of calculation, numbers in a spreadsheet. The dots also resemble bytes of information traversing beams of light, symbolic of the flow of finance in time. Below the title, these lines are transformed through the lens of the journal to orbits, marking time and spatializing finance. Multidirectional lines and colours express diversity and openness. Our publications do not need to toe the line ideologically, theoretically or methodologically.

In seeking intellectual progress in diversity, engaged pluralism and global coverage, we have assembled an inaugural editorial advisory board of 26 people, gender-balanced, from 6 continents, varied disciplinary backgrounds, and including finance practitioners. Like the editorial team, the advisory board is open to extension and diversification. We are grateful for their engagement and help with commissioning articles and encouraging submissions from a diverse pool of scholarship. The journal is sponsored by FinGeo and the RSA, which has supported the network for 13 years (with much of this support intermediated and managed by Martin Sokol). We would not have the journal without the tireless and passionate experience of Sally Hardy, the CEO of RSA, and support of others in the RSA leadership including David Bailey, Simona Iammarino, and Jessie Poon. We acknowledge the ideas and efforts of Manuel Aalbers in early formulations of the journal, especially in proposing Finance & Space as a potential title. We are grateful for the editorial prowess of Madeleine Hatfield, a geographer herself, and editorial assistance of Jenny Case at Yellowback Ltd, as well as the expertise of Sarah Bird and Carolyn Haynes at Taylor & Francis.

As we embark on this journey with *Finance & Space*, we want the aims and scope of the journal to convey a clear vision and ambition for new intellectual space and pluralist engagements on finance; these can be summarized in five key points.

First, we want to be a pioneering and pathbreaking journal, a home and a platform for research focusing on the diverse aspects of the finance defined broadly as a system of human-environmental relationships. Diverse aspects include both the spatial and temporal production of finance and the financial production of space and time. Thematically these include focus on various assets and markets (including land and housing), private and public finance (including health and welfare), investors and investments, intermediation and technology (including FinTech), cities and centres, bubbles and crises, regulation and governance, and the whole spectrum of societal and environmental impacts of finance.

Second, we want to advance research that addresses some of the most profound processes and pressing challenges of our times, including digitization, neoliberalization, financialization, globalization and deglobalization, uneven development, inequality, (lack of) diversity, (in)security and geopolitics, the climate and environmental crises, and the role of finance in building more sustainable economies. To this end we welcome research by and engagement with the producers and consumers of finance, in the public and private sectors. This includes investment professionals, and those interested in sustainable finance (including ESG, impact investing, green finance, and responsible finance), as well as spatial finance.

Third, while dedicated to a geographical imagination, the journal is founded on the belief that advancing our understanding of the changing finance-space-time nexus requires an interdisciplinary approach and heterodox thinking about finance across space and time. This includes, but is not limited to, political economy and political science, economics and regional science, sociology, anthropology, housing studies, environmental studies, financial history, development studies, and urban and regional planning, in addition to geography, regional studies, and urban studies. The distinctive purpose of *Finance & Space* is to connect insights across intellectual disciplines in a systematic and grounded way to understand how and why finance and space co-evolve, and impacts on economy, society, and the environment.

Fourth, in line with its interdisciplinarity, the journal is a pluralist forum, which showcases diverse perspectives and analytical techniques at various scales of enquiry. The diversity concerns ideologies, theories, methodologies, and means of expression and style. We want to promote robust qualitative, quantitative, and mixed-method approaches, including research that takes advantage of the proliferation of big financial data from established and emerging sources. The diversity of expression and style is promoted specifically through the Commentary and FinVis sections. The former invites reflections or provocations on recent developments in the finance-space nexus, including strategy and policy in private and public sectors. The latter showcases research-based innovative maps and other visualisations of the finance-space-time nexus. We encourage submissions of various types of images, including graphs, artwork, infographics, photographs, short videos, i.e. any form of visualisation that offers novel insights into particular dimensions of finance and its intersections with economy, society, and the environment. The ability of images and visualisations to 'travel' and communicate beyond academic circles, especially through digital media, is particularly

valuable in connecting academic, policy, industry and other diverse stakeholders to understand how finance matters for society and the environment.

Fifth, *Finance & Space* wants to promote a global coverage and diversity of the research, both in terms of authors and topics. Finance is one of the most globalized and impactful of human activities, but at the same time it functions in very place-specific contexts. A global, diverse, and inclusive perspective is necessary to improve its understanding. We welcome Special Issue proposals on any topics relevant to the finance and space-time nexus, and particularly those on and from geographies that are less represented in English language journals. With the support of FinGeo and RSA, we are also dedicated to global promotion of research published in *Finance & Space* through events, online dissemination and social media.

We believe in revolution based on evolution in financial research. We launch *Finance & Space* with this belief, proudly building on the foundations of FinGeo in its global network and diverse membership. Our priorities are to promote state-of-the-art research through full-length articles, practitioner engagement through commentaries, and artistic imagination and expression in FinVis. Our interdisciplinarity is based on a win-win attitude. There are boundless needs but also abundant opportunities to see and study finance in new ways, for all disciplines, and in many journals. Our journal is a forum to develop better access and understanding of these diverse (and underrepresented) perspectives to inspire teaching, policy, and strategy. We need to know what is the matter with finance to diagnose it, but to build a better financial system we must find out how finance matters to people and places. In establishing this intellectual space, we hope to achieve synergies and make a lasting contribution.

References:

- Aalbers, M. (2018). Financial geography I: Geographies of tax. *Progress in Human Geography*, 42(6), pp. 916-927.
- Bassens, D. and van Meeteren, M. (2015). World cities under the condition of financialized globalization: Towards an augmented world city hypothesis. *Progress in Human Geography* 39(6), 752-775.
- Blumenthal von, K. (2008). Economic theorist and 'entrepreneur of popularisation': Schumpeter as Finance Minister and journalist. *The European Journal of History of Economic Thought* 15(4), 641-671.
- Christophers, B. (2014). Geographies of finance I: Historical geographies of the crisis-ridden past. *Progress in Human Geography*, 38(2), pp. 285-293.
- Clark, G.L. (2011). Myopia and the global financial crisis: Context-specific reasoning, market structure, and institutional governance. *Dialogues in Human Geography* 1(1), 4-25.
- Clark, G.L. (2000) *Pension Fund Capitalism*. Oxford: Oxford University Press.
- Climate Investment Funds (2023). <https://www.cif.org>, accessed on 12 September 2023.
- Cohen, B.J. (1998). *The Geography of Money*. Ithaca (NY): Cornell University Press.
- Engelen, E. (2011). *After the Great Complacency: Financial Crisis and the Politics of Reform*. Oxford: Oxford University Press.
- Fernandez, R. and Aalbers, M. (2016). Financialization and housing: Between globalization and varieties of capitalism. *Competition & Change* 20(2), 71-88.

- Force for Good. (2021). Capital as a Force for Good: Capitalism for a Sustainable Future.
- Financial Stability Board. (2020). Global Monitoring Report on Non-Bank Financial Intermediation.
- Gibadullina, A. (2021). The birth and development of Anglophone financial geography: A historical analysis of geographical studies of money and finance. *Geoforum* 125, 150-167.
- Graeber, D. (2011). *Debt: The First 5,000 Years*. New York: Melville House.
- Gura, D. (2023). It cost \$22 billion to rescue two failed banks. 13 April. <https://www.npr.org/2023/04/13/1168360562/silicon-valley-bank-signature-bank-collapse-fdic-bailout>.
- Hall, S. (2018). *Global Finance: Places, Spaces and People*. London: Sage.
- Hall, S. (2010). Geographies of money and finance I: Cultural economy, politics and place. *Progress in Human Geography*, 35(2), pp. 234-245.
- Harvey D (1982). *The Limits to Capital*. Oxford: Blackwell.
- Ingham, G. (2004). *The Nature of Money*. London: Wiley.
- International Energy Agency. (2021). Net Zero by 2050: A Roadmap for the Global Energy Sector. https://iea.blob.core.windows.net/assets/20959e2e-7ab8-4f2a-b1c6-4e63387f03a1/NetZeroby2050-ARoadmapfortheGlobalEnergySector_CORR.pdf.
- Ioannou, S. and Wójcik, D. (2022). Was Adam Smith an economic geographer? *GeoJournal* 87(6), 5425-5434.
- Ioannou, S. and Wójcik, D. (2020). COVID-19 and finance: market developments so far and potential impacts on the financial sector and centres. *Tijdschrift voor economische en sociale geografie* 111(3), 387-400.
- Knox-Hayes, J. and Wójcik, D. (2022). *Routledge Handbook of Financial Geography*. New York: Routledge.
- Lai, K.P.Y. (2023). Financial geography I: The state-finance nexus. *Progress in Human Geography* 47(4), <https://doi.org/10.1177/03091325231170756>.
- Langley, P. (2008). *The Everyday Life of Global Finance: Saving and Borrowing in Anglo-America*. Oxford: Oxford University Press.
- Laulajainen, R. (1998). *Financial Geography: A Banker's View*. Gothenburg School of Economics and Commercial Law.
- Leyshon, A. and Thrift, N. (1997). *Money/Space: Geographies of Monetary Transformation*. Oxford: Routledge.
- Lo, V. and Schamp, E.W. (2001). Finanzplätze auf globalen Märkten – Beispiel Frankfurt/Main. *Geographische Rundschau* 53(7-8), 26-31.
- Mackenzie, D. (2006). *An Engine, Not a Camera*. Cambridge (MA): MIT Press.
- Martin, R. (ed.) (1999). *Money and the Space Economy*. London: Wiley.
- Martin, R. and Pollard, J. (2017). *Handbook on the Geographies of Money and Finance*. Cheltenham: Edward Elgar.
- Marx, K. and Engels, F. (1848). *Manifesto of the Communist Party*. February 1848. <https://www.marxists.org/archive/marx/works/download/pdf/Manifesto.pdf>, accessed on 12 September 2023.
- Nobel Prize (1976). Press Release on 14 October, <https://www.nobelprize.org/prizes/economic-sciences/1976/press-release/>, accessed on 17 October 2023.
- Roberts, S.M. (1995). Small place, big money: The Cayman Islands and the international financial system. *Economic Geography* 71(3), 237-256.
- Robinson, J. (1956) *The Accumulation of Capital*. Homewood (IL): D. Irwin Inc.

- Samman, A., Coombs, N. and Cameron, A. (2015). For a post-disciplinary study of finance and society. *Finance and Society* 1(1), 1-5.
- Sassen, S. (1991). *The Global City: New York, London, Tokyo*. Princeton (NJ): Princeton University Press.
- Schwartz, A. (1987) *Money in Historical Perspective*. Chicago: University of Chicago Press.
- Simmel, G. (1900) [2011] *The Philosophy of Money*. London: Routledge.
- Spatial Finance Initiative (2021). "Report: State and Trends of Spatial Finance 2021." Spatial Finance Initiative. https://www.cgfi.ac.uk/wp-content/uploads/2021/07/SpatialFinance_Report.pdf, accessed on 12 September 2023.
- Strange, S. (1986). *Casino Capitalism*. Oxford: Basil Blackwell.
- US EPA (2023). Justice40 at EPA. <https://www.epa.gov/environmentaljustice/justice40-epa>, accessed on 17 October 2023.
- Weber, M. (1894) [2000] Die Börse [Stock and Commodity Exchanges]. *Theory and Society* 29(3), 305-338.
- Wójcik, D. (2021). Financial geography I: Exploring FinTech – maps and concepts. *Progress in Human Geography* 45(3), 566-576.
- Wójcik, D., Iliopoulos, P., Ioannou, S., Keenan, L., Migozzi, J., Monteath, T., Pažitka, V., Torrance, M., Urban, M., Cheshire, J., and Uberti, O. (2024). *Atlas of Finance: Mapping the Global Story of Money*. New Haven (CT): Yale University Press.
- Zademach, H.-M. (2014). *Finanzgeographie*. Darmstadt: WGB.
- Zhao, X.B. (2003). Spatial restructuring of financial centers in mainland China and Hong Kong: a geography of finance perspective. *Urban Affairs Review* 38(4), 535-571.