A legal assessment of central bank currency swaps

Research proposal – Doctoral thesis

Doctoral candidate: Benjamin Letzler
Supervisor: Prof. Michael Waibel
Department of European, International and Comparative Law
Section for International Law and International Relations
University of Vienna

Contents

I. Introduction

Central bank currency swaps are liquidity lines between central banks that can be used to ease tensions in international funding markets. Legally, these central bank currency swaps are implemented as framework agreements that enable central banks to receive currencies issued by other central banks in exchange for collateral based on defined terms accompanied by payment of a fee, typically interest. The collateral will be the currency issued by the other central bank; under repurchase agreements, a similar form of liquidity line, the collateral will be financial assets denominated in the other central bank's currency.[1] Currency swaps are regarded as an effective tool allowing central banks to address temporary currency shortages during financial crises, avoiding disorderly deleveraging while minimizing the impact on currency values (as would occur, for example, were central banks to buy and sell relevant currencies directly and could further intensify financial crises).[2]

After a period of relative insignificance in the 1990s,[3] the use of liquidity lines between central banks has increased dramatically over the past two decades. Following the 11 September 2001 terrorist attacks, the Federal Reserve instituted a system of swap lines to ensure the continued functioning of global financial markets, at first time-limited to thirty days. On 12 December 2007, the Federal Reserve set up swap lines initially established for six months and subsequently renewed to run until 1 February 2010.[4] On 16 September 2008, two days after the collapse of Lehman Brothers, the Federal Reserve Open Market Committee ('FOMC') approved an uncapped power for its foreign currency subcommittee 'to enter into swap agreements with the foreign central banks as needed to address strains in money markets in other jurisdictions.'[5]

During the global financial crisis, the Federal Reserve lent striking amounts via swap lines. Usage by other central banks peaked at US $598 billion during the 2008 crisis, with the Federal Reserve supporting the international operations of national financial institutions at a time when a 'flight to

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[1] See, e.g., 'Central bank liquidity lines', available at https://www.ecb.europa.eu/mopo/implement/liquidity_lines/html/index.en.html (last visited 3 September 2022).

[2] Helpful technical and historical discussions are included in Emmanuel Farhi, Pierre-Olivier Gourinchas and Hélène Rey, *Reforming the International Monetary System,* 27 March 2011, Centre for Economic Policy Research, vol. 76, at 29ff., available at https://scholar.harvard.edu/farhi/publications/reforming-international-monetary-system (last visited 3 September 2022), Michael D. Bordo, Owen F. Humpage and Anna J. Schwartz, *The Evolution of the Federal Reserve Swap Lines Since 1962,* NBER Working Paper Series Working Paper 20755, available at http://www.nber.org/papers/w20755 (last visited 4 September 2022), and Robert N. McCauley and Catherine R. Schenk, *Central Bank Swaps Then and Now: Swaps and Dollar Liquidity in the 1960s,* BIS Working Papers No 851, April 2020, available at https://www.bis.org/publ/work851.pdf (last visited 5 September 2022).

[3] Catharina J. Hooyman, 'The Use of Foreign Exchange Swaps by Central Banks.' Staff Papers (International Monetary Fund) 41, no. 1 (1994), 149.

[4] Jon Hilsenrath, 'A Primer on the Fed's Swap Lines With Europe', *Wall Street Journal,* 10 May 2010, available at https://www.wsj.com/articles/BL-REB-10171 (last visited 3 September 2022).

[5] Council on Foreign Relations, 'The Spread of Central Bank Currency Swaps Since the Financial Crisis', available at https://www.cfr.org/central-bank-currency-swapssince-financial-crisis/#!/ (last visited 3 September 2022), quoting 'Transcript of the Federal Open Market Committee Meeting on September 16, 2008', available at http://www.federalreserve.gov/monetarypolicy/files/FOMC20080916meeting.pdf (last visited 3 September 2022).

quality' caused US Treasury Bills and other US dollar-denominated assets to become scarce, driving up interest rate spreads and threatening a further breakdown in financial markets. Adam Tooze described 'the swap lines with which the Fed pumped dollars into the world economy' as 'perhaps the decisive innovation of the [global financial] crisis.'[6]

After swap lines lapsed following the global financial crisis, the Federal Reserve reinstated them in 2010 during the Eurozone debt crisis and made selected swap lines permanent in 2013.[7] Swap lines again became a major part of the central bank response to market disruptions caused by the outbreak of the COVID-19 pandemic in 2020, with Federal Reserve swap line usage peaking at US $449 billion in May 2020.[8] Parallel networks of central bank swaps exist between the European Central Bank (ECB) and other central banks[9] and in arrangements between central banks of Southeast Asian and East Asian states, including China.[10] A central bank currency swap was also among the first measures of financial assistance to Ukraine in response to the Russian invasion. On 24 February 2022, the same day that the Russian invasion began, the National Bank of Poland granted a PLN4 billion (US $0.95 billion) swap to the National Bank of Ukraine to support financial stability. The IMF did not provide

[6] Alexander R. Perry, *Note: The Federal Reserve's Questionable Legal Basis for Foreign Central Bank Liquidity Swaps,* 120 Columbia L. Rev. 729, 730 (2020), quoting Adam Tooze, *Crashed: How a Decade of Financial Crises Changed the World* 11, 210–15 (Viking, 2018); Mark Choi, Linda Goldberg, Robert Lerman and Fabiola Ravazzolo, *The Fed's Central Bank Swap Lines and FIMA Repo Facility,* 28 Federal Reserve Bank of New York Economic Policy Review 93, 99 (June 2022), available at https://www.newyorkfed.org/medialibrary/media/research/epr/2022/epr_2022_fima-repo_choi.pdf (last visited 12 September 2022).

[7] Swap lines between the Federal Reserve and the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank have been standing liquidity swap lines since 31 October 2013, replacing prior time-limited arrangements. See 'Central Bank Swap Arrangements', available at https://www.newyorkfed.org/markets/international-market-operations/central-bank-swap-arrangements (last visited 3 September 2022), also providing redacted PDF versions of the 'U.S. Dollar Swap Agreements' and 'Bilateral Swap Agreements' (i.e., the agreements to swap each counterparty central bank's currency to the Federal Reserve) with each of the relevant jurisdictions.

[8] Gianluca Persi, 'US dollar funding tensions and central bank swap lines during the COVID-19 crisis', ECB Economic Bulletin, Issue 5/2020; Mark Choi, Linda Goldberg, Robert Lerman and Fabiola Ravazzolo, *The Fed's Central Bank Swap Lines and FIMA Repo Facility, supra* n. 6 at 99.

[9] An overview and map visualizing the ECB's network of swap lines is provided by 'Central bank liquidity lines', *supra* n. 1.

[10] Council on Foreign Relations, *The Spread of Central Bank Currency Swaps Since the Financial Crisis, supra* n. 5, provides the following summary: 'After the 1997–98 Asian financial crisis, the Association of Southeast Asian Nations (ASEAN), China, South Korea, and Japan established a network of bilateral currency swap agreements "to supplement the existing international facilities." In 2010, the Chiang Mai Initiative (CMI) was multilateralized, meaning that it was converted from a network of bilateral agreements between countries into one single agreement, the Chiang Mai Initiative Multilateralization (CMIM). A surveillance unit, the ASEAN+3 Macroeconomic Research Office (AMRO), was created to monitor member economies for signs of emerging risks and to provide analysis of countries requesting funds from the CMIM, much as the International Monetary Fund (IMF) does for its member countries. The fourteen countries participating in the CMIM agreed to a certain financial contribution and were thereafter entitled to borrow a multiple of this, ranging from 0.5 for China and Japan to five for Vietnam, Cambodia, Myanmar, Brunei, and Laos. In 2014, the size of the agreement was doubled from $120 billion to $240 billion, and the amount a country could access without being on an IMF program was raised from 20 percent to 30 percent. These swap lines have never actually been used.'

funds to Ukraine via the Rapid Financing Instrument for another two weeks, on 9 March 2022, when it approved US $1.4 billion in funding for Ukraine. [11]

Although swap agreements seek to protect both central banks involved in the swap from losses owing to currency fluctuations, risk exists that a central bank will be unwilling or unable to perform its obligations, and concerns have been expressed by academics, journalists and other commentators over central bank risk exposure through liquidity lines. In addition, swaps can be costly when a currency devalues with swaps outstanding. After the 1971 'Nixon shock' ended the Bretton Woods' system's convertibility of the US dollar into gold, the US dollar devalued significantly. Although pre-1971 USD swaps in British sterling and West German marks were unwound quickly and with limited losses, unwinding pre-1971 USD swaps in Belgian and Swiss francs took extensive international discussions over seven years, since Belgium and Switzerland asked the United States to extend the swaps repeatedly so as not to cause their respective currencies to appreciate further and negotiations were carried out on loss sharing. The Board of Governors of the Federal Reserve later estimated the total Fed and Treasury losses at US $986 million and US $1.5 billion, respectively, thus a total loss of approximately US $2.5 billion (equal to approximately US $12.19 billion today) as of April 1979, when the pre-1971 Swiss franc positions were finally unwound.[12]

II. State of research

The state of research on legal questions relating to central bank swap agreements is in general limited. Central bank swap agreements are in some cases publicly available and have attracted scholarly attention, including from economists and political scientists[13] on the one hand and, to a lesser extent,

[11] Oliver de Groot and Yevhenii Skok, *War in Ukraine: The financial defence* (17 March 2022), available at https://cepr.org/voxeu/columns/war-ukraine-financial-defence (last visited 6 September 2022).

[12] *Id.*; see also Bordo, Humpage and Schwartz, *supra* n. 2, at 11, citing Federal Open Market Committee, Task Force on System Foreign Currency Cooperation, Task Force Paper #10, *Profits and Losses in U.S. Foreign Currency Operations* (9 March 1990), available at https://www.federalreserve.gov/monetarypolicy/files/FOMC19900309memo01.pdf (last visited 4 September 2022). The total estimated losses vary slightly between Bordo, Humpage and Schwartz and the original Task Force Paper, with the original latter values included herein. The current value of the total estimated losses has been calculated with the US Bureau of Labor Statistics CPI Inflation Calculator, available at https://www.bls.gov/data/inflation_calculator.htm (calculated 4 September 2022).

[13] See, e.g., Joshua Aizenman, Yothin Jinjarak and Donghyun Park, *International reserves and swap lines: Substitutes or complements?,* 20 International Review of Economics & Finance 5 (2011), Naohiko Baba and Frank Packer, *From turmoil to crisis: dislocations in the FX swap market before and after the failure of Lehman Brothers,* 28 Journal of International Money and Finance 1350 (2009), Christophe Destais, *Central bank currency swaps and the international monetary system,* 52 Emerging Markets Finance and Trade 2253 (2016), Daniel McDowell, *Emergent international liquidity agreements: central bank cooperation after the global financial crisis,* 22 Journal of International Relations and Development 446 (2019), Maurice Obstfeld, Jay C. Shambaugh and Alan M. Taylor, *Financial Instability, Reserves, and Central Bank Swap Lines in the Panic of 2008,* 99 American Economic Review 480 (2009), Fabian Pape, *Governing Global Liquidity: Federal Reserve Swap Lines and the International Dimension of US Monetary Policy,* 27 New Political Economy 455 (2022), available at https://www.tandfonline.com/doi/full/10.1080/13563467.2021.1967912 (last visited 4 September 2022), and Lukas Spielberger, *The politicisation of the European Central Bank and its emergency credit lines outside the Euro*

writing by legal scholars on the other.[14] Ongoing and completed projects by legal scholars on international monetary law consider questions that are related to, but distinct from, those of the present doctoral project, working in some respects on a more theoretical level as well as on different topics, such as OTC derivatives.[15]

Only limited attention has been paid to date to concrete, low-level legal questions of central bank currency swap agreements, including classifying them through the lenses of public international law and private international law.[16] This dissertation will seek to identify, include and address these questions.

III. Research topics

The topics and sets of questions to be posed include:

1. As a matter of public international law, is each central bank swap agreement under consideration a 'treaty' between states (state organs) for purposes of the 1969 Vienna Convention on the Law of Treaties (VCLT) or (in particular in respect of agreements with the European Central Bank) a 'treaty' between states and international organizations for purposes of the 1986 Vienna Convention on the Law of Treaties Between States and International

Area, Journal of European Public Policy (2022), available at https://www.tandfonline.com/doi/full/10.1080/13501763.2022.2037688 (last visited 4 September 2022).

[14] See, e.g., Dan Awrey, *Brother, Can You Spare a Dollar? Designing an Effective Framework for Foreign Currency Liquidity Assistance,* 2017 Columbia Business Law Review 934 (2017), Colleen Baker, *The Federal Reserve's Use of International Swap Lines,* 55 Arizona Law Review 603 (2013), Daniel D. Bradlow and Stephen Kim Park, *A Global Leviathan Emerges: The Federal Reserve, COVID-19, and International Law,* 114 American Journal of International Law 657 (2020), Peter Conti-Brown and David T. Zaring, *The Foreign Affairs of the Federal Reserve,* 44 Journal of Corporation Law 665 (2018), and Rohinton P. Medhora, *Monetary Unions, Regional Financial Arrangements, and Central Bank Swap Lines: Bypasses to the International Monetary Fund,* 111 AJIL Unbound 241 (2017), available at https://www.cambridge.org/core/journals/american-journal-of-international-law/article/monetary-unions-regional-financial-arrangements-and-central-bank-swap-lines-bypasses-to-the-international-monetary-fund/85DB17909AB3F3A219886796B9D853DF (last visited 4 September 2022).

[15] Two example projects are the project 'Lex Financiaria: the market for OTC derivatives', a subproject of the University of Bremen ERC project Transnational Force of Law (now completed), https://www.tfl.uni-bremen.de/en/teilprojekte/lex-financiaria/ (last visited 28 September 2022) and the project 'Law of International Monetary Policy Coordination' at the Max Planck Institute for Comparative Public Law and International Law, Heidelberg, https://www.mpil.de/en/pub/research/areas/public-international-law/international-coordination-of.cfm (last visited 27 September 2022).

[16] Katharina Pistor (see section VI.2. below) examined central bank currency swap agreements in passing in her 'Legal Theory of Finance' and theorized that the brevity of the agreements is intentional to maximize discretion in interpretation ('elasticity'). See also Michael Waibel, *A Theory of Boilerplate in International Agreements,* at 5, available at https://extranet.sioe.org/uploads/sioe2021/waibel.pdf (last visited 4 September 2022): 'A good example are currency swaps between central banks. A network of 160 central bank swaps, the most important cross-border policy response to the global financial crisis, has involved hundreds of billions of euros, and now exceeds the resources of the IMF (Pistor 2013; Reis and Bahaj 2019; Steil 2019). Notwithstanding the importance of this policy instrument, its legal status is unclear. Executives may choose non-treaties and contracts in part to avoid the need for legislative involvement in the making of these agreements (which in many countries applies only to treaties), and/or to keep the terms of the agreements out of the public domain (Aust 2010, 54; Donaldson 2017). This lack of transparency and checks and balances could be problematic for democratic governance.'

Organizations or Between International Organizations (VCLTIO)? Alternately, should a relevant central bank swap agreement be classified as a contract governed by municipal law or soft law?

2. As a matter of private international law, assuming a relevant central bank swap agreement *arguendo* to be a contract and given the fact that publicly available central bank swap agreements typically omit choice of law provisions, what choice of law should apply in case of disputes? This question can be considered under a variety of potentially applicable systems of private international law and conflict of laws, including the US approach of the Restatement (Second) of Conflict of Laws, the Rome I Regulation and the UNIDROIT Principles in the Conflict of Laws.

3. To what extent are central bank swap agreements enforceable in different potential jurisdictions in view of due authorization, including statutory authorization, sovereign/state immunity and other relevant principles? The question of due authorization and the consequences of its potential absence is significant, since courts and legal scholars have raised serious concerns that each of the Fed[17] and the ECB[18] have acted *ultra vires* in their financial transactions. The question of immunity can be considered both as a matter of customary international law, including the 'commercial activity' exception, as a matter of existing statutes and caselaw in relevant jurisdictions (such as, in the US context, the Foreign Sovereign Immunities Act and the political question doctrine), and at the intersection of customary international law and its national understandings. In this respect, the divergent approaches on the 'commercial activity' exception between US caselaw and the caselaw of other jurisdictions can be considered in the central bank swap context.[19]

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[17] See, e.g., Conti-Brown and Zaring, *The Foreign Affairs of the Federal Reserve, supra* n. 14, at 34 ('Swap lines both exemplify the Fed's power, given the size and importance of these swaps, and the Fed's autonomy in deploying that power. Congress has never exactly blessed them, and the legal theory that would defend them is, to put it charitably, aggressive') and at 37-38 (discussion of statutory basis and the 1962 'Hackley Memo' by the Federal Reserve's general counsel).

[18] In the different but related context of open market transactions and quantitative easing, there is an extensive literature on the German Constitutional Court's controversial 2020 ruling on the ECB's public sector asset-purchase program (PSPP), finding that the CJEU had acted *ultra vires* in upholding the PSPP. See, e.g., Katharina Pistor, 'Germany's Constitutional Court Goes Rogue', 8 May 2020, available at https://www.project-syndicate.org/commentary/german-constitutional-court-ecb-ruling-may-threaten-euro-by-katharina-pistor-2020-05 (last visited 7 September 2022).

[19] Compare the US view in Republic of Argentina v. Weltover, Inc., 504 U.S. 607 (1992) (refinancing of Argentine sovereign debt, converted from private debt previously benefitting from Argentine central bank currency conversion support, as FSIA 'commercial activity' due to its commercial 'nature', notwithstanding a state 'purpose'), to the views of Austria, 'TF v Schweizerische Nationalbank AG, Interlocutory appeal judgment, 8Ob68/16g, ILDC 2587 (AT2016), 17th August 2016, Austria; Supreme Court of Justice [OGH]' in A Nollkaemper and A Reinisch, eds, *International Law in Domestic Courts* (Oxford University Press, 2016), Hong Kong/China, Shen Wei, 'FG Hemisphere Associates v. Democratic Republic of the Congo' 108 American Journal of International Law 776 (2014), Italy, Borri v Argentina, 21 May 2005, Cass. Sezioni Unite, No. 6532; ILDC 296 (IT 2005), discussed in Michael Waibel, *Sovereign Defaults Before International Courts and Tribunals* (Cambridge University Press, 2011), 122-23, and the UK, Taurus Petroleum Ltd v Iraq, [2017] UKSC 64, discussed at

4. What can the legal classification and (non-)enforceability of central bank liquidity lines teach us about the political and economic meaning of central bank liquidity lines? In addition, how can central bank liquidity lines be understood in the context of boilerplate and market practice, for example as compared against standard commercial currency swap agreements developed by the ISDA (International Swaps and Derivatives Association)[20]?

5. Based on the conclusions reached through investigation of the preceding topics, what revisions of central bank currency swap agreements should be proposed in the future? Aspects to consider include:

    a. maximising compliance with international law (e.g., registration as treaties or express recitals in the swap agreements that the swap agreements are not intended to constitute treaties);

    b. ensuring predictability in application under municipal law (e.g., via express choice of law clauses);

    c. transparency and risk considerations, noting that among private market participants, including banks, currency swaps are often accounted for as risk-free, notwithstanding value risk;[21]
    d. supporting central bank independence;

    e. supporting central bank legitimacy (considering potential tensions between independence and legitimacy, since independence can allow discretion to act beyond an original mandate); and

    f. the importance of global equity and state sovereignty, noting that a select group of for the most part wealthy countries have access to USD swaps with the Federal

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http://ukscblog.com/case-comment-taurus-petroleum-limited-v-state-oil-marketing-company-of-the-ministry-of-oil-republic-of-iraq-2017-uksc-64-part-one/ (last visited 5 September 2022).

[20] See, e.g., 'ISDA Legal Guidelines for Smart Derivatives Contracts: Foreign Exchange Derivatives', available at https://www.isda.org/a/bPYTE/ISDA-Legal-Guidelines-for-Smart-Derivatives-Contracts-FX.pdf (last visited 12 September 2022).

[21] See, e.g., International Swaps and Derivatives Association, 'SIMM Cross-Currency Swap Treatment' (27 February 2017), available at https://www.isda.org/a/FAiDE/simm-crosscurrencyswap-treatment-revised-27feb2017-public.pdf (last visited 12 September 2022) (principal exchange on cross-currency swaps exempt from Bilateral Initial Margin regulations) and Basel Committee on Banking Supervision / Board of the International Organization of Securities Commissions, 'Margin requirements for non-centrally cleared derivatives' (March 2015), available at https://www.bis.org/bcbs/publ/d317.pdf (last visited 12 September 2022) ('The monitoring group [will] evaluate the risks of not subjecting the fixed physically settled foreign exchange (FX) transactions associated with the exchange of principal of cross-currency swaps to the initial margin requirements, and consider whether any modifications to such arrangement are appropriate').

Reserve, whereas other states must rely on other sources of the US dollar as reserve currency, entrenching a core-periphery pattern in the international monetary system, an arrangement criticized by commentators from Turkey and China, among other states.[22]

Topics 1 through 3 above are conceived as addressing a gap in the descriptive legal scholarship to date. The author is not aware of existing studies of central bank swap agreements as legal texts, either from the perspective of public international law or from the perspective of private international law.

Topic 4 is conceived as a contribution to describing the political and economic functioning of central banks, seeking to better understand how central banks collaborate across borders institutionally and to trace hierarchy and power relationships through the legal implementation of such collaborations.

Topic 5 is generally normative, both on a procedural and technical level (proposing cleaner, clearer drafting approaches for agreements between central banks to increase legal certainty) and on a substantive level (suggesting policy goals).

IV. Sources

1. Primary sources

The primary sources to be considered are central bank currency swap agreements themselves. The Federal Reserve Bank of New York has made available on its website redacted USD and counterparty currency swap agreements for its network of swap agreements, namely agreements between the Federal Reserve Bank of New York (acting at the direction of the Federal Open Market Committee and as sole fiscal agent of the U.S. Department of the Treasury) and the Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, and the Swiss National Bank.

The European Central Bank's network of swap agreements has not yet been obtained for review. It may make sense to reach out to central banks directly to request their currency swap and other liquidity line documentation in the most current versions, on an informal level as a request for assistance for academic research and/or on a formal level as a legal request for government documents (e.g., via the US Freedom of Information Act).

In addition, informal contacts to and conversations with relevant academics and practitioners can be sought to shine additional light on legal agreements (in particular non-public agreements) governing central bank currency swaps.

[22] See, e.g., Karina Patrício Ferreira Lima, *Sovereign Solvency as Monetary Power,* Journal of International Economic Law (2022), available at https://academic.oup.com/jiel/advance-article/doi/10.1093/jiel/jgac029/6675098 (last visited 5 September 2022) and Xu Mingqi, *Central Bank Currency Swaps and Their Implications to the International Financial Reform,* 2 China Quarterly of International Strategic Studies 135 (2016).

Should agreements governing central bank liquidity lines other than currency swaps (for example, repurchase agreements) become available for review and analysis in the course of the doctoral project, these may be reviewed, classified and assessed as part of the dissertation project as well.

2. Secondary sources

Secondary sources include the literature on:

- the law of treaties;[23]
- the legal treatment of central banks, including their immunities;[24]
- how to cognize financial instruments, in particular derivative contracts, under conflict of law principles, including as mutual loan agreements, insurance contracts and barter/double sale agreements;[25] and
- the independence of central banks and legitimacy of central bank activities.[26]

V. Considerations on methods

1. Selection of central bank liquidity line agreements

A first focus of the dissertation will be on the Federal Reserve's network of central bank swap agreements. These swap agreements are publicly available, have been employed in practice (by comparison, some swap lines and other liquidity lines have been agreed but to date never drawn), show a high degree of standardization (suggesting a 'boilerplate' of Fed swap agreements) and invite

[23] See, e.g., Mark Villiger, *Commentary on the 1969 Vienna Convention on the Law of Treaties* (Brill, 2008), and Anthony Aust, *Modern Treaty Law and Practice,* 3d edition (Cambridge University Press, 2013).

[24] Ingrid Wuerth, 'Immunity from Execution of Central Bank Assets', in Tom Ruys, Nicolas Angelet and Luca Ferro (eds), *The Cambridge Handbook of Immunities and International Law* (Cambridge University Press, 2018); Ingrid Wuerth, 'Does Foreign Sovereign Immunity Apply to Sanctions on Central Banks', *Lawfare* (7 March 2022), available at https://www.lawfareblog.com/does-foreign-sovereign-immunity-apply-sanctions-central-banks (last visited 3 September 2022).

[25] See, e.g., Nikolaos Davrados, *OTC Derivatives and the Conflict of Laws,* 65 Revue Hellénique de Droit International (RHDI) 181 (2012), at 192 citing the support of German commentators for the 'double sale' characterization, e.g. W. Kenewig & H. Schneider, *Swap-Geschäfte der öffentlichen Hand in Deutschland,* WM 1992; A. Fülbier, *Zivilrechtliche Einordnung von Zins- und Währungsswaps,* ZIP 1990, 544, 546; and E. Decker, *Zur Rechtsnatur der verschiedenen Arten von Swaps,* WM 1990, 1001, 1004.

[26] See, e.g., Will Bateman, *Public Finance and Parliamentary Constitutionalism* (Cambridge University Press, 2020), Peter Conti-Brown, *The Institution of Federal Reserve Independence,* 32 Yale J. on Reg. 257 (2015), Athanasios Orphanides, *The Boundaries of Central Bank Independence: Lessons from Unconventional Times,* Institute for Monetary and Financial Stability, Working Paper Series No. 124 (2018), Adam Tooze, *The Death of the Central Bank Myth,* Foreign Policy (13 May 2020), Paul Tucker, *How the European Central Bank and Other Independent Agencies Reveal a Gap in Constitutionalism: A Spectrum of Institutions for Commitment,* German Law Journal 2021 vol. 22 Issue 6, 999, and Paul Tucker, *Unelected Power: The Quest for Legitimacy in Central Banking and the Regulatory State* (Princeton University Press, 2018).

analysis as agreements between state organs that omit recitals as to their intended legal classification and which do not contain provisions on choice of law or dispute resolution.

Other central bank swap agreements and liquidity agreements can be considered as well to the extent available. Neither the European Central Bank's network of currency swap agreements and repurchase agreements nor the Chiang Mai Initiative Multilateralisation (CMIM) Agreements relating to the ASEAN bilateral swap arrangements have yet been obtained for review.

Several ASEAN bilateral swap arrangements are publicly available and structured via memoranda of understanding (MOU). The ASEAN MOUs contain internal evidence that suggests greater input from foreign ministry legal advisors than do the Federal Reserve's swap agreements, in particular through an entry into force provision, self-classification as memoranda of understanding and express provisions on disputes. The ASEAN approach nonetheless raises similar questions to the Federal Reserve approach in respect of classification, applicable law, dispute resolution and intent to be bound, since the ASEAN legal advisors would seem to have spotted issues they have not resolved.

A key example is that the 2005 Memorandum of Understanding on the ASEAN Swap Arrangement, which with amendments remains in force, is not silent on dispute resolution, as the USD agreements are, but is silent in respect of actual disputes (i.e., disputes that cannot be resolved by consent), with Article XVII, headed 'Resolution of Dispute', containing a single sub-article 17.1 that reads in full: 'Any dispute or problem arising from the implementation of the Arrangement shall be resolved amicably among the participating members through consultations initiated by the Agent Bank.'

Likewise, the ASEAN self-designation 'Memorandum of Understanding' might suggest the absence of an intent to be bound, but the documents themselves govern potential multilateral financial obligations of currency equivalents of up to hundreds of billions of US dollars, such that a genuine absence of an intent to be bound seems improbable.[27]

Should a large volume of additional central bank agreements be obtained in the course of the doctoral project, it may be necessary to prioritise analysis of a subset of the materials available. A potential order of priority would be to prioritise for analysis agreements entered into by the central banks representing the largest economies by GDP.

2. Historical precedents on commercial dealings between states

It may be helpful to inform the dissertation project through historical parallels in which states (including governments, ministries and other instrumentalities) have entered into commercial dealings through legal arrangements that are partially or wholly non-public. There have been historical scandals involving non-public commercial dealings between states and private parties, resulting in

[27] An overview of ASEAN swap agreement materials is provided by 'ASEAN Legal Instruments', available at https://agreement.asean.org/home/index/8.html (last visited 4 September 2022); see also 'Overview of the CMIM', available at https://www.amro-asia.org/about-amro/amro-and-the-cmim/ (last visited 4 September 2022).

legal consequences. For the present context, the key would be to identify such cases involving states on both sides.

As noted above, the US engaged in over seven years of negotiations with Switzerland and Belgium to unwind its pre-1971 USD swap positions with the two states. It may be instructive to research this case further. Another potential historical parallel and legal precedent under international law would be the PCIJ's 1929 *Serbian Loans* judgment, which itself involved an early form of currency risk hedging (although in that case the creditors/counterparties were private persons, not states).

VI. Theoretical approaches

1. Normative frameworks

The value judgments and the drafting and policy proposals made by the dissertation in the course of answering the fifth research topic above should be supported by normative frameworks. The drafting and policy proposals should reflect both procedural and substantive aspects. Procedural goals include promoting legal certainty, including as to legal classification under public international law and private international law and an express choice of law and/or system of dispute resolution (a relevant national or international court or arbitral tribunal). Substantive goals include transparency, accountability, central bank independence and central bank legitimacy (goals also suggested by the 'doctrinal principles' within the global administrative law framework discussed in the next section below). A further consideration is the role played by central bank currency swap agreements in preserving the hegemonic status of reserve currencies, in particular the US dollar.

2. Theoretical frameworks

The topics and sets of questions to be posed by the doctoral project have a doctrinal foundation, focusing on the application of well-established legal principles to the texts of specific agreements between state organs. It may nonetheless be instructive to consider the topics and questions in the light of selected theoretical frameworks as well.

Legal theory of finance. Over the past decade, the legal theorist Katharina Pistor has developed an influential legal theory of finance[28] that is pertinent to the present subject matter in a variety of ways. To begin with, Pistor discusses central bank currency swap agreements expressly in her work and makes predictions on the basis of her theoretical assessments.

Pistor compares 'inelastic', specific ISDA standard currency swap agreements ('hundreds of pages that stipulate the conditions that trigger collateral calls and specify their amounts') against 'elastic', vague central bank currency swap agreements ('only seven pages of text even as they deal with billions of

[28] See Katharina Pistor, *A legal theory of finance,* 41 Journal of Comparative Economics 315 (2013), as well as the more recent book-length study, Katharina Pistor, *The Code of Capital: How the Law Creates Wealth and Inequality* (Princeton University Press, 2019).

dollars, euros, francs, pounds or yens [sic]'), arguing that central bank currency swap agreements, unlike private swap agreements, are not intended as ex ante 'credible commitments that are enforceable as written', but are instead intentionally brief and 'elastic', leaving space for the agreements to be 'relaxed or suspended in the future' through interpretation and variation ex post as necessary to ensure the stability of the financial markets:

> In general, law tends to be relatively elastic at the system's apex, but inelastic on its periphery. It is thus at the periphery where default is most likely to result in involuntary exit. In contrast, at the apex where the very survival of the system is at stake, law tends to be more elastic by design and/or because the system's ultimate backstop abrogates the discretionary power to do what it takes to rescue the system. […] What are in substance similar transactions (i.e. swaps) can take different forms depending on who the parties are and where they are located in the hierarchical financial system.[29]

Pistor makes a series of predictions on the basis of the legal theory of finance. Two predictions relevant in the present context are that:

> Law lends credibility and predictability to contracts, but under conditions of uncertainty this can turn into a source of financial instability – in particular when it lends full coercive enforcement powers to contracts based on assumptions that turn out to be wide off the mark and leave no room for adaptation.

and

> However, in times of crisis the periphery is more likely to face the full force of the law[,] generating higher default risks and greater economic stress.[30]

In the central bank currency swap context, Pistor would seem to suggest that central bank currency swap agreements may cause financial instability if enforced strictly. For example, given the fixed duration of currency swaps, subject to extension in the discretion of the parties, if a central bank were to decline to extend a swap and instead require it to be unwound against the wishes of the counterparty central bank, this could cause financial instability. Recall the scenario noted above of Belgium and Switzerland with the Federal Reserve after 1971, when Belgium and Switzerland asked the Fed to delay unwinding swap positions to avoid causing the Belgian and Swiss francs to appreciate even further against the US dollar, with adverse effects on exports.

Pistor would also seem to suggest that enforcement of central bank currency swap agreements will be more likely and more aggressive against weaker central banks than against stronger central banks. In the context of central bank currency swaps, this suggestion seems plausible legally and almost certain factually, given the fundamental asymmetry of central bank currency swap lines, which,

[29] Pistor, *A Legal Theory of Finance, supra* note 28 at 320 (citations omitted). The somewhat infelicitous apex/periphery binary (center/periphery and apex/base would seem more proper opposites) is due to Pistor.
[30] Id., 325.

although nominally bilateral, effectively exist as a source of emergency lending of reserve currencies. Even if central banks at the apex and at the periphery were 'to face the full force of the law' equally, the stakes will be very different for central banks that need Euro or US dollars, on the one hand, and the Federal Reserve or the ECB, which will not need, say, Brazilian reals or Polish złoty on the other.

It may be rewarding to discuss with central bank experts and other scholars in the course of the doctoral project their views both on Pistor's descriptive position that the vagueness and brevity of central bank currency swap agreements is by design and a way of preserving elasticity in interpretation and on Pistor's normative position that financial agreements, from the level of central banks down to the consumer level, should be modifiable in financial crises under an expanded notion of *clausula rebus sic stantibus* as a 'safety valve'.[31]

Global administrative law. On the basis of findings of the Global Administrative Law Research Project at New York University School of Law, Benedict Kingsbury and collaborators posited the existence of an 'embryonic field' of global administrative law in 2005, a set of concepts applicable to 'transgovernmental regulation and administration' including banking and financial regulation.[32]

Although central bank currency swap agreements are bilateral agreements between two central banks, and thus not a classic example of transnational soft law governance like the accords of the Basel Committee on Banking Supervision, central bank currency swaps may fall under Kingsbury et al.'s rubric of domestic regulatory decisions with international significance:

> A somewhat different but related issue arises when regulatory decisions by a domestic authority adversely affect other states, designated categories of individuals, or organizations, and are challenged as contrary to that government's obligations under an international regime to which it is a party. Here one response has been the development by intergovernmental regimes of administrative law standards and mechanisms to which national administrations must conform in order to assure their compliance and accountability with the international regime. In order to boost their legitimacy and effectiveness, a number of regulatory bodies not composed exclusively of states—hybrid public-private, and purely private bodies—have also begun to adopt administrative law decisionmaking and rulemaking procedures.[33]

Here the question might be considered of whether international obligations could exist for one central bank to extend a currency swap to another central bank.

Global administrative law offers helpful checklists for considering central bank currency swaps, including as to institutional design (which bodies and persons should decide on central bank currency

[31] Id., 329.
[32] Benedict Kingsbury, Nico Krisch and Richard B. Stewart, *The emergence of global administrative law,* 68 Law and Contemporary Problems 15 (2005).
[33] Id., 16-17.

swaps), normative bases (which countries should receive the benefit of central bank currency swaps), and doctrinal principles for assessing central bank actions. The doctrinal principles identified by Kingsbury et al. include:

1. Procedural participation and transparency
2. Reasoned decisions
3. Review
4. Substantive standards: proportionality, means-ends rationality, avoidance of unnecessarily restrictive means, legitimate expectations
5. Exceptions: Immunities
6. Exceptions: Special Regimes for Certain Issue Areas?

This list makes clear that global administrative law principles may be facially inapplicable to central bank currency swap agreements through items 5 and 6 above (immunities of central banks; special regimes for central banking). At the same time, in a context in which applicable law and legal standards will be a matter of negotiation, global administrative law is one source from which to seek arguments for legal standards that should apply.

Game theory. One theoretical approach taken when studying interactions between central banks is to disregard law in favour of applying game theory, considering reputation effects and punishment strategies. This is a widespread approach among economists. It can be found in the standard rationale for central bank independence, based on repeated interactions between policymaker and private agents allowing for substitution of reputational forces for formal rules.[34] Economists working on central banking have employed game theory principles to understand central bank behavior.[35] The Federal Reserve itself turned central banking into a computer game, 'Chair the Fed: A Monetary Policy Game', which is no longer available but which formed the basis for academic research on central bank behavior.[36]

One view of central bank currency swap agreements viewed through the theoretical framework of game theory would be that these agreements are not intended to be enforceable, but simply to

[34] Robert J. Barro and David B. Gordon, *Rules, Discretion, and Reputation in a Model of Monetary Policy,* 12 Journal of Monetary Economics 101 (1983). For a relatively recent discussion by a high-ranking official, see, e.g., 'Central bank independence revisited', keynote address by Yves Mersch, Member of the Executive Board of the ECB, at the Symposium on Building the Financial System of the 21st Century: An Agenda for Europe and the United States, Frankfurt am Main, 30 January 2017, available at https://www.ecb.europa.eu/press/key/date/2017/html/sp170330.en.html (last visited 27 September 2022): 'At a conceptual level, the benefits arising from central bank independence in terms of price stability have been strongly echoed in the literature on rules versus discretion.'

[35] See, e.g., Alex Cukierman, *Central Bank Strategy, Credibility, and Independence: Theory and Evidence* (MIT Press, 1992), reviewed by Charles A. E. Goodhart, *Game Theory for Central Bankers: A Report to the Governor of the Bank of England,* 32 Journal of Economic Literature 101 (1994).

[36] Evgeniya Duzhak, K. Jody Hoff & Jane S. Lopus, *Chair the Fed: Insights from game usage data,* 52 Journal of Economic Education 89 (2021).

memorialize the agreement of the parties. Perceived or actual deviation from agreed terms could form a basis for reputation effects and punishment strategies (such as declining to provide currency swap lines going forward).

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