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THE MISSING LINK: LEGAL AND REGULATORY CHALLENGES IN INTERLINKING FAST PAYMENT SYSTEMS

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ROSS P. BUCKLEY**

This Article presents the first comprehensive legal and policy framework underpinning the cross-border interlinking of Fast Payment Systems (FPSs). FPSs are innovative digital platforms that connect banks and non-bank payment service providers to exchange messages and settle transactions instantly. FPSs are designed primarily for low-value, retail transactions between end users. This distinguishes them from real-time gross settlement systems, which process high-value, wholesale payments between financial institutions. Although over 117 jurisdictions now operate FPSs, and technical pilots are rapidly expanding, the legal architecture required for secure and interoperable arrangements remains insufficiently developed. This Article identifies key legal risks, including settlement finality, liability allocation, and AML/CFT compliance, and offers concrete solutions, including a publicly accessible Single Rulebook, prefunded accounts or a central counterparty to mitigate

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settlement risk, and enforceable dispute resolution mechanisms. Drawing on international best practices, this Article argues that legal harmonization, transparency, and regional coordination are essential to achieving safe and efficient cross-border FPS interlinking. The technological and regulatory framework proposed here directly supports the G20's 2027 target of reducing average remittance costs below three percent and advancing global financial inclusion through faster, cheaper, and more accessible payment infrastructures.

Keywords: fast payment systems, cross-border payments, remittances, settlement risk, retail payments

Introduction

Fast payment systems[1] (FPSs) have become a cornerstone of modern domestic payment infrastructure, offering near-instantaneous fund transfers and expanding financial inclusion worldwide. FPSs are innovative digital platforms that link participating banks and non-bank payment service providers (PSPs) to exchange payment messages and settle transactions in real time. FPSs are designed primarily for low-value, retail transactions between end users. This distinguishes them from Real-Time Gross Settlement systems, which process high-value, wholesale payments between financial institutions. As of

1. Principles for Financial Market Infrastructures defines a *payment system* as a "set of instruments, procedures and rules for the transfer of funds between or among participants." Bank for Int'l Settlements, Comm. on Payments and Market Infrastructures, Principles for Financial Market Infrastructures 8 (Apr. 2012) [hereinafter P.F.M.I.].

June 2025, 117 countries have implemented a domestic FPS,[2] and nearly 15 of the systems surveyed by the BIS's Committee on Payments and Market Infrastructures in 2023 had at least one cross-border linkage, primarily within regional clusters like Asia-Pacific and Europe.[3]

Growing remittance volumes, which surpassed USD 800 billion globally in 2023 according to the World Bank,[4] have sharpened scrutiny of the inefficiencies in traditional cross-border payment channels.[5] These inefficiencies include high transaction costs, delays, and limited transparency. For example, sending a $200 remittance still costs an average of 6.18 percent globally, and up to 11.48 percent through traditional banks.[6]

Recognizing these systemic challenges, the G20 has endorsed a roadmap developed by the Financial Stability Board and the Committee on Payments and Market Infrastructures to make cross-border payments[7] faster, cheaper, more transparent,

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2. *See* Massimo Ferrari Minesso & Olga Triay Bagur, *Box 3: Geopolitics and Global Interlinking of Fast Payment Systems*, *in* EUR. CENT. BANK, THE INTERNATIONAL ROLE OF THE EURO 32 (June 2025), https://www.ecb.europa.eu/pub/pdf/ire/ecb.ire202506.en.pdf; Jon Frost et al., *Fast Payments: Design and Adoption*, B.I.S. Q. REV., Mar. 2024, at 31.

3. Tara Rice, CPMI's Key Areas of Strategic Focus and Our Contribution to Better Cross-Border Payments, Remarks at the 8th Annual European Payments Institutions Federation Conference (Nov. 15, 2023), BANK FOR INTERNATIONAL SETTLEMENTS, COMMITTEE ON PAYMENTS AND MARKET INFRASTRUCTURES, https://www.bis.org/cpmi/speeches/sp231115.htm; *see* RSRV. BANK OF AUSTL., INTERLINKING FAST PAYMENT SYSTEMS FOR CROSS-BORDER PAYMENTS (Apr. 2024), https://www.rba.gov.au/payments-and-infrastructure/pdf/report-interlinking-fast-payment-systems-for-cross-border-payments-april-2024.pdf [hereinafter INTERLINKING FAST PAYMENT SYSTEMS].

4. WORLD BANK GRP., *Remittance Prices Worldwide*, https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT (based on IMF Balance of Payments data); FED. RSRV., Global Remittances Cycle, https://www.federalreserve.gov/econres/notes/feds-notes/global-remittances-cycle-20250227.html (last visited Apr. 6, 2026).

5. *See* B.I.S. INNOVATION HUB, PROJECT RIALTO: IMPROVING INSTANT CROSS-BORDER PAYMENTS USING CENTRAL BANK MONEY SETTLEMENT (Feb. 2025), https://www.bis.org/publ/othp91.pdf.

6. *Id.*

7. A cross-border payment or settlement is generally understood as a payment or settlement involving parties or settlement activity across different jurisdictions. A cross-border payment may or may not involve currency conversion. COMMITTEE ON PAYMENT AND SETTLEMENT SYSTEMS, A GLOSSARY OF TERMS USED IN PAYMENTS AND SETTLEMENT SYSTEMS 17 (BANK FOR INT'L SETTLEMENTS, Mar. 2003), https://www.bis.org/cpmi/glossary_030301.pdf.

and more inclusive.[8] A key milestone of this initiative is to lower the global average cost of remittances to below three percent by 2027.[9] According to the World Bank's Remittance Prices Worldwide database, the global average cost of sending a remittance of $200 was about 6.49 percent in the first quarter of 2025.[10] Persistently high costs of remittances place a disproportionate burden on migrant workers and low-income households, underscoring why remittances are central not only to the G20's cross-border payments agenda but also to the United Nations Sustainable Development Goals, particularly Sustainable Development Goals 10 (reducing inequality)[11] and 16 (building inclusive institutions).[12]

While various novel financial technologies have been proposed to achieve remittance efficiency, including stablecoins,[13] wholesale central bank digital currencies,[14] and solutions like Wise,[15] each has limitations. Stablecoins face regulatory and monetary sovereignty concerns; fintechs[16] may lower costs but

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8. FIN. STABILITY BD., G20 ROADMAP FOR ENHANCING CROSS-BORDER PAYMENTS: CONSOLIDATED PROGRESS REPORT FOR 2024 (Oct. 21, 2024) [hereinafter CONSOLIDATED PROGRESS REPORT FOR 2024].

9. *Id.*

10. World Bank Grp., *supra* note 4. (last visited Apr. 6, 2026).

11. U.N. SUSTAINABLE DEV., *Goal 10: Reduce Inequality Within and Among Countries*, https://www.un.org/sustainabledevelopment/inequality/ (last visited Mar. 2, 2026).

12. U.N. SUSTAINABLE DEV., *Goal 16: Promote Just, Peaceful, and Inclusive Societies*, https://www.un.org/sustainabledevelopment/peace-justice/ (last visited Mar. 2, 2026).

13. *See, e.g.*, Ayanfe Fakunle, *Wholesale CBDCs and Stablecoins: A Dual Future for Digital Finance*, DISRUPTION BANKING (May 15, 2025), https://www.disruptionbanking.com/2025/05/15/wholesale-cbdcs-and-stablecoins-a-dual-future-for-digital-finance/.

14. *See, e.g.*, Raphael Auer et al., *CBDCs Beyond Borders: Results from a Survey of Central Banks*, B.I.S. PAPERS NO. 116 (June 11, 2021), https://www.bis.org/publ/bppdf/bispap116.htm.

15. Wise (formerly TransferWise) is a UK-based financial technology company that provides low-cost cross-border money transfer services using a peer-to-peer matching model to reduce foreign exchange and remittance fees. Wise Ltd., *About Wise*, https://wise.com/about (last visited Mar. 2, 2026) (UK-based fintech company providing low-cost international money transfer services).

16. Fintechs are companies that leverage financial technology to provide financial services such as payments, lending, investment, or banking through digital platforms and innovative business models. *See* Douglas W. Arner, Jànos Barberis & Ross P. Buckley, *The Evolution of Fintech: A New Post-Crisis Paradigm?*, 47 GEO. J. INT'L L. 1271 (2016).

often take days to complete transfers in less-developed corridors; and wholesale central bank digital currencies remain untested with unknown systemic risks.

By contrast, interlinking existing FPSs offers a practical and near-term path toward achieving the G20's cost and speed targets for cross-border transfers. Rather than building entirely new infrastructure, interlinking is a technology that leverages domestic systems already in place, improving liquidity management, compliance, and processing. In essence, interlinking FPSs reduces reliance on correspondent banking by allowing participating domestic real-time payment infrastructures to connect directly or through a shared technical interface, rather than routing payments through multiple intermediary banks holding nostro/vostro accounts. Thus, these arrangements deliver faster, cheaper, and more transparent remittances.

Projects such as PayNow–PromptPay (Singapore–Thailand), UPI–PayNow (India–Singapore), TARGET Instant Payment Settlement–RIX (Europe–Sweden), and Bank for International Settlements-led initiatives like Nexus and Rialto illustrate growing momentum for FPSs.[17] Over the next two years, 22 FPSs plan to establish their first or add additional cross-border links, though many remain in early planning.[18]

Despite this progress, a major gap persists: few reports address the legal and regulatory foundations required to operationalize these linkages safely. This uncertainty underscores the urgent need for a clear, consistent legal framework to ensure

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17. Projects such as PayNow–PromptPay (a cross-border linkage between Singapore's PayNow and Thailand's PromptPay instant payment systems, enabling near-real-time transfers using mobile identifiers), UPI–PayNow (a real-time cross-border payment link between India's Unified Payments Interface and Singapore's PayNow), TARGET Instant Payment Settlement (TIPS)–RIX (the integration of Sweden's RIX with the Eurosystem's TIPS platform to extend instant settlement across currencies), and BIS-led initiatives like Project Nexus and Project Rialto (multilateral efforts by the Bank for International Settlements Innovation Hub to interlink domestic instant payment systems and explore enhanced cross-border settlement mechanisms) illustrate emerging infrastructure aimed at faster, cheaper, and more transparent remittances. *See* Ass'n of Banks in Sing., *PayNow*, https://www.abs.org.sg/consumer-banking/pay-now (last visited Apr. 6, 2026).

18. Emilie Fitzgerald, Anamaria Illes & Thomas Lammer, Bank for Int'l Settlements, Comm. on Payments and Market Infrastructures, Steady as We Go: Results of the 2023 C.P.M.I. Cross-Border Payments Monitoring Survey (June 2024), https://www.bis.org/cpmi/publ/brief5.pdf [hereinafter Results of the 2023 C.P.M.I. Cross-Border Payments Monitoring Survey].

settlement finality, liability, Anti-Money Laundering and Countering the Financing of Terrorism (AML/CFT) compliance, and governance are addressed from the outset.[19]

This Article addresses that gap by providing original legal and policy recommendations for structuring FPS interlinking, including detailed guidance on a 'Single Rulebook' to ensure legal certainty, robust risk mitigation, and enforceability across jurisdictions. It also proposes using central counterparty clearing mechanisms to manage cross-border liquidity and credit exposures while reducing systemic risk.[20]

Importantly, interlinking FPSs is increasingly critical in the geopolitics of international finance, as they enable near-instant cross-border transactions while reducing reliance on dominant currencies and correspondent banking networks. By facilitating smoother settlement and enhancing financial resilience, interconnected systems can shift economic influence, promote regional financial integration, and provide states with strategic leverage in global payment infrastructures, making them a subtle but powerful tool in shaping economic power dynamics.

By focusing on legal architecture rather than technical design, this Article aims to support policymakers, central banks, and payment system operators in building an interoperable, secure, and transparent global network for real-time payments.

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19. Anti-Money Laundering and Countering the Financing of Terrorism ("AML/CFT") refers to the policies, procedures, and controls financial institutions implement to detect, prevent, and report money laundering, terrorist financing, and related financial crimes. Banks worldwide are generally required to comply with domestic AML/CFT laws and regulations, which are largely aligned with the international standards set by the Financial Action Task Force (FATF). *See* FINANCIAL ACTION TASK FORCE, INTERNATIONAL STANDARDS ON COMBATING MONEY LAUNDERING AND THE FINANCING OF TERRORISM & PROLIFERATION (2023), https://www.fatf-gafi.org/publications/fatfrecommendations/documents/fatf-recommendations.html.

20. "Systemic risk: the risk that the inability of one or more participants to perform as expected will cause other participants to be unable to meet their obligations when due. In such circumstances, a variety of spillover effects are possible, and an FPS's inability to complete inter-PSP settlement could have significant adverse effects on the markets it serves and the broader economy," BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, LINKING FAST PAYMENT SYSTEMS ACROSS BORDERS: GOVERNANCE AND OVERSIGHT 31 (Oct. 2024), https://www.bis.org/cpmi/publ/d223.pdf [hereinafter FINAL REPORT TO THE G20]; *see* Scott James & Lucia Quaglia, *Geoeconomics and Financial Statecraft in the European Union: The Case of Critical Market Infrastructures*, 28 J. INT'L ECON. L. 490, 496 (2025).

I.
Fast Payment Systems (FPSs)

In the rapidly evolving fintech landscape, FPSs have become a cornerstone of retail payment infrastructure, enabling seamless, near-instant transactions. Originally designed for domestic use to permit retail consumers to send low-value payments on a 24/7 basis, FPSs now play a central role in enhancing efficiency, accessibility, and financial inclusion, forming a key part of payment system reforms in many jurisdictions.[21]

A typical domestic payment works by transferring funds from a payer's bank account to a payee's bank account through the country's payment infrastructure. The payer initiates a payment via a bank, mobile app, or payment service, which sends the instruction to the domestic clearing system. The clearing system verifies the transaction, ensures sufficient funds, and forwards it to the payee's bank for settlement. Once settled, the payee's account is credited.

Older payment systems would typically take several hours or days for the transfer to be completed and settled. FPSs were created to process payment messages and credit the funds to the payee's account almost instantly, operating continuously—24 hours a day, 7 days a week, 365 days a year.[22] This distinguishes them from real-time gross settlement systems, which handle high-value wholesale payments without transaction limits, but typically within restricted operating hours.[23] FPSs often set transaction caps, such as the £1 million limit in the UK's Faster Payments Service, to manage risk,

21. Alberto Di Iorio et al., Bank for Int'l Settlements, Comm. on Payments and Market Infrastructures, Acta Non Verba: Interlinking Fast Payment Systems to Enhance Cross-Border Payments 3 (Feb. 2025), https://www.bis.org/C.P.M.I./publ/brief7.htm.

22. "An FPS is a retail payment system that allows for the transmission of the payment message and the final crediting of funds to the payee in real time or near real time. Final crediting in this context means that the payee has unconditional and irrevocable access to the funds, even if settlement among payment service providers (PSPs) is deferred. FPSs typically operate around the clock or very close to 24 hours a day, every day of the week throughout the year (24/7/365)," Final Report to the G20, *supra* note 20, at 3.

23. The Financial Stability Board defines wholesale payments as transactions between financial institutions, typically exceeding US$100,000. Interlinking Fast Payment Systems, *supra* note 3.

maintain stability, and efficiently process large volumes of low-value transactions.[24]

Operationally, FPSs are technology-enabled platforms that connect PSPs to one another, enabling them to exchange payment messages and settle transactions in real time. To operate continuously outside central bank hours, PSPs maintain pre-funded settlement accounts,[25] separate from reserve accounts used for monetary policy.[26] These accounts, held either at a central bank or within the FPS infrastructure, are replenished during central bank hours from reserve balances.[27]

Participation is generally limited to authorized financial institutions within a jurisdiction, subject to eligibility criteria and membership rules. Each FPS operates under a set of operating rules and procedures, typically contained in a rulebook, which functions as a contractual agreement between participants and the platform.[28] FPS platforms are typically overseen by a central bank or designated authority in a specific jurisdiction to ensure operational stability, regulatory compliance, and effective risk management.[29]

A. *The Settlement Process*

The defining feature of an FPS is that the payee gains near-instant access to funds once the payer initiates the transaction. At the customer level, the payee's account is credited

24. *Faster Payment System*, PAY.UK, https://www.wearepay.uk/what-we-do/payment-systems/faster-payment-system/ (last visited Oct. 10, 2025) [hereinafter *Fast Payment System*].

25. BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, INTERIM REPORT TO THE G20: LINKING FAST PAYMENT SYSTEMS ACROSS BORDERS: CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT (Oct. 2023), https://www.bis.org/cpmi/publ/d219.pdf.

26. A reserve account is a deposit account held by a commercial bank at the central bank, used to settle interbank obligations and manage liquidity. Transfers between reserve accounts are typically executed through the Real-Time Gross Settlement (R.T.G.S.) system during its operating hours, allowing immediate and final settlement of high-value payments between participating institutions.

27. *Fast Payment System*, *supra* note 24.

28. MONETARY AUTH. OF SING., BANK OF THAI. & BAKER MCKENZIE, PAYNOW-PROMPTPAY/PROMPTPAY-PAYNOW LINKAGE WHITE PAPER: A PLAYBOOK FOR ASEAN AND THE WORLD 17–24 (2022), https://abs.org.sg/docs/library/PayNow-PromptPay_Linkage_White_Paper.pdf?sfvrsn=9 [hereinafter A PLAYBOOK FOR ASEAN AND THE WORLD].

29. *Id.* at 15.

almost immediately after the payer's account is debited, so settlement occurs in real time.[30] For example, if Alice instructs her bank (the paying bank) to send $100 to Bob, Bob's account is credited and the funds become available almost immediately after Alice's bank processes the payment.

At the PSP level, however, interbank settlement between Bank A and Bank B may not occur instantly. The timing depends on the FPS operator's model. FPSs generally adopt either real-time settlement,[31] where PSP accounts are debited and credited in sync with the customer transaction, or deferred net settlement, where the payee has immediate access to funds, but interbank settlement occurs later in scheduled batches.[32] Both approaches ensure near-instant availability for the payee, even when PSP-to-PSP transfers are deferred.

1. *Real-Time Settlement*

In a real-time FPS, each transaction is settled individually as it is initiated. When the payer instructs a transfer, the payer's PSP's account, which is held at the central bank or within the FPS, is debited, and the payee's PSP's account is credited simultaneously, ensuring immediate interbank settlement.[33]

For example, if Alice (Bank A) sends $100 to Bob (Bank B), Bank A debits Alice's account and sends a payment message to the FPS. The FPS instantly debits Bank A's prefunded account by $100 and credits Bank B's prefunded account by the same amount. Bank B then immediately credits Bob's account, making the funds instantly available.

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30. A payer bank will always debit the payer's account after processing a payment instruction to ensure that there is no double-spending by the customer.

31. Real-time FPSs should not be confused with real-time gross settlement systems. Real-time gross settlement platforms handle large-value, wholesale payments between financial institutions, whereas FPS rails are designed for low-value, retail transfers between end users.

32. Morten Bech, Yuuki Shimizu & Paul Wong, *The Quest for Speed in Payments*, BIS Q. REV., Mar. 2017, at 62, https://www.bis.org/publ/qtrpdf/r_qt1703g.pdf.

33. Australia's New Payments Platform (N.P.P.) is an example of a real-time settlement system. Alexandra Rush & Riaan Louw, *The New Payments Platform and Fast Settlement Service*, RSRV. BANK OF AUSTL.: BULLETIN (Sept. 20, 2018), https://www.rba.gov.au/publications/bulletin/2018/sep/the-new-payments-platform-and-fast-settlement-service.html [hereinafter *The New Payments Platform and Fast Settlement Service*].

Because PSP-to-PSP settlement occurs in real time—often in under a minute[34]—there is no settlement or credit risk for the payee's bank. This prevents situations where an account is credited without receiving funds due to the payer bank's insolvency. While this model eliminates settlement risk by ensuring immediate finality, it demands high liquidity, as PSPs must maintain substantial prefunded balances—a costly requirement for smaller institutions.

2. *Deferred Net Settlement*

In a deferred net settlement system, transactions are accumulated over a defined period, and only the net amount[35] owed between PSPs is settled at scheduled intervals. The payee's PSP credits the customer's account immediately upon receiving the payment message, even though interbank settlement occurs later. At the close of each cycle, the FPS calculates each PSP's net obligations and transfers only the net difference from prefunded accounts.[36]

For example, Bank A sends $100 from Alice to Bob at Bank B, while later Bank B sends $50 from Craig to Dora at Bank A. At the end of the cycle, these obligations offset, leaving Bank A as the net debtor for $50. The FPS then debits $50 from Bank A's prefunded account and credits Bank B's, completing the settlement.

This approach optimizes liquidity and reduces the need for frequent large-value transfers but introduces potential settlement risk. If a net debtor PSP defaults, e.g., through insolvency, after the payee's PSP has credited its customer's account, the latter may be unable to recover those funds. In practice, this risk is minimized because PSPs are required by the rules of the FPS to maintain sufficient balances in prefunded accounts, ensuring coverage even if a debtor fails.

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34. Bech et al., *supra* note 32, at 59.

35. "Netting" is the process of offsetting multiple payment obligations between parties to determine a single net amount payable or receivable, thereby reducing the number and value of individual settlements required.

36. The U.K.'s Faster Payments Service is an example of a deferred net settlement system. Funds are credited to the payee's account in seconds, but interbank settlement occurs in netting cycles (typically three times daily) via accounts at the Bank of England. PAY.UK, FASTER PAYMENTS SERVICE PRINCIPLES: A GUIDE FOR PROSPECTIVE FPS PARTICIPANTS (Jan. 31, 2023), https://www.wearepay.uk/wp-content/uploads/2023/02/Pay.UK-Faster-Payments-Service-Principles.pdf.

By netting and offsetting transactions, deferred net settlement requires only a single net transfer between PSPs rather than settling every transaction individually. This greatly improves liquidity efficiency, as PSPs need to prefund only enough to cover expected net obligations. However, it also creates exposure: if a net debtor PSP fails to meet obligations at the cycle's close, net creditor PSPs may face losses after crediting customer accounts without receiving the corresponding funds.

B. *Settlement Finality*

In FPSs, *operational* finality, which occurs when the payee's account and their PSP's account are credited, does not necessarily confer *legal* or *settlement* finality. In certain jurisdictions, insolvency provisions such as the 'zero-hour rule' may permit completed transactions to be unwound. Settlement finality is the legal moment when a payment becomes irrevocable and binding, even if a PSP subsequently becomes insolvent.[37] Without such protection, transactions may be reversed, posing both settlement and systemic risk. To safeguard payment integrity, a Single Rulebook for FPSs should explicitly protect settlement finality and clearly define when it is achieved.

1. *The Zero-Hour Rule*

As discussed further below, many jurisdictions enacted legislation guaranteeing settlement finality to override the 'zero-hour rule,' an insolvency law allowing administrators to retroactively void transactions made from midnight (00:00) on the day insolvency is declared, regardless of when proceedings begin.[38]

To illustrate the potential adverse effects of the zero-hour rule, consider a scenario where Alice instructs Bank A at

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37. *See* BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, DISTRIBUTED LEDGER TECHNOLOGY IN PAYMENT, CLEARING AND SETTLEMENT, AN ANALYTICAL FRAMEWORK 16 (2017), https://www.bis.org/cpmi/publ/d157.pdf.

38. For example, Australia retains a zero-hour rule in the *Bankruptcy Act 1966* (Cth) s 57A (Austl.): "Where, after the commencement of this section, a person becomes a bankrupt by virtue of the presentation of a debtor's petition, the person shall, for the purposes of this Act, be deemed to become a bankrupt at the first instant of the day on which the petition is accepted by the Official Receiver." A similar rule exists in the Netherlands: *Faillissementswet* [Bankruptcy Act], Wet van 30 september 1893, art 23 (Neth.), http://www.dutchcivillaw.com/bankruptcyact.htm [https://www.viajuridica.nl/informatiesoorten/wet-en-regelgeving/faillissementswet].

2:00 P.M. to transfer $100 to Bob. Bank A debits Alice's account and credits Bank B's account via the FPS, prompting Bank B to credit Bob's account. If Bank A is declared insolvent at 3:00 P.M., the zero-hour rule could void all transactions since 12:00 A.M., leaving Bank B 'out of pocket' after crediting Bob and prompting it to recover funds from him. Similarly, if Bank B became insolvent at 4:00 P.M., its administrator could reverse Bob's credit, creating uncertainty over payment finality.

In a deferred net settlement-based FPS, similar risks arise at the close of the netting cycle. If Bank A became insolvent, before settlement, while owing Bank B, the administrator could block settlement, leaving Bank B exposed for funds already credited to Bob's account.

Thus, the zero-hour rule undermines certainty in jurisdictions where it applies, as insolvency law could override the Single Rulebook—even when the Single Rulebook defines settlement finality as the moment the payee's account is credited. Without specific settlement finality legislation, participants face credit and settlement risk, and legal uncertainty over when funds are truly irrevocable.

Such uncertainty undermines trust in FPSs, as recipients like Bob may face retroactive reversals after spending the funds, e.g., paying a supplier with the $100, disrupting subsequent transactions and eroding confidence in the banking system. This instability can drive users toward less efficient alternatives, such as cash. Settlement finality legislation removes this risk by ensuring that once finality is reached, payments cannot be unwound, thereby safeguarding confidence and the smooth functioning of payment systems.

2. *Settlement Finality Legislation*

To guarantee legal settlement finality, many jurisdictions have enacted legislation to ensure that once a transaction is deemed final under Financial Market Infrastructures' rules, which are the contractual rules (or user agreement) that bind members of the system,[39] it becomes legally

39. P.F.M.I., *supra* note 1, at 7 (defining a financial market infrastructure as a multilateral system among participating institutions, including the operator of the system, used for clearing, settling, or recording payments, securities, derivatives, or other financial transactions).

binding[40] and cannot be reversed, even if a participant becomes insolvent. Such legislation exempts (carves out) Financial Market Infrastructures from the zero-hour rule and other corporate insolvency provisions.

In the European Union, the Settlement Finality Directive[41] provides that "[t]ransfer orders and netting shall be legally enforceable, and, even in the event of insolvency proceedings against a participant, shall be binding on third parties, provided that transfer orders were *entered* into a system before the moment of opening of such insolvency proceedings . . . ." The Directive further provides that transfer orders may not be revoked from the moment defined by the rules of the relevant system, and that insolvency proceedings do not have retroactive effects on rights and obligations arising from participation in the system.[42]

In the United States, settlement finality is addressed through a combination of Uniform Commercial Code (U.C.C.)[43] Article 4A, payment system rules, and federal insolvency protections. Article 4A limits cancellation or amendment of a payment order after it has been accepted by a receiving bank. For Fedwire transfers, Regulation J governs funds transfers through the Fedwire Funds Service and provides that payment by a Federal Reserve Bank occurs when the payment order is credited to the receiving bank's account or sent to the receiving bank, whichever occurs first. Separately, FDICIA protects bilateral and clearing organization netting arrangements from disruption in insolvency, while the Bankruptcy Code safe harbors protect certain settlement payments and financial market transfers from

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40. EUR. PAYMENTS COUNCIL, SEPA INSTANT CREDIT TRANSFER SCHEME RULEBOOK 15 (2023), https://www.europeanpaymentscouncil.eu/sites/default/files/kb/file/2023-11/EPC004-16%202023%20SCT%20Instant%20Rulebook%20v1.2.pdf.

41. Directive 98/26/EC of the European Parliament and of the Council of 19 May 1998 on Settlement Finality in Payment and Securities Settlement Systems, arts. 3(1), 5 and 7, 1998 O.J. (L 166) 45 [hereinafter Directive 98/26/EC].

42. *Id.*.

43. The Uniform Commercial Code (UCC) is a set of model statutes designed to harmonize commercial law across the United States. It has been enacted into state law in all fifty states, the District of Columbia, and U.S. territories, although individual jurisdictions have occasionally adopted non-uniform amendments.

avoidance.[44] Together, these rules provide important protections for payment and settlement finality, although through a more fragmented framework than the EU model.

Similarly, in Australia, section 14 of the Payment Systems and Netting Act 1998[45] provides that "a payment or transfer *made* through an approved R.T.G.S. system or an approved netting arrangement is not to be voided, reversed, or repayable in the event of the external administration of a participant."[46]

Across these jurisdictions, the legal framework ensures that once a payment reaches finality as defined in legislation or system rulebooks, it is unconditional and irrevocable. This protects payees from the zero-hour rule and reinforces confidence in the payment system. Thus, when Bob receives $100 from Alice, he can use the funds immediately without fear of reversal, even if a PSP later fails.

3. *Defining Settlement Finality*

Legal certainty for FPS operators requires defining settlement finality in the Single Rulebook as the moment the payee's account is credited, not when a payment instruction is merely submitted. Legal finality should be tied to an objective event—the actual crediting of funds—rather than the payee's expectation of payment. This ensures that only fully executed transfers are protected from reversal in insolvency proceedings, whether inter-PSP settlement occurs in real time or on a deferred net settlement basis.

This approach balances speed with security, making FPSs a dependable mechanism for everyday payments. It aligns with the legal frameworks in the EU, U.S., and Australia, where finality occurs only when a payment order has been entered, accepted, and executed by the payee's PSP. In FPSs, this point is reached when the payee's bank credits the account, which is an

44. U.C.C. § 4A-211(c) (Am. L. Inst. & Unif. L. Comm'n 1989) (accepted payment orders); Regulation J, 12 C.F.R. §§ 210.25(a)–(b), 210.31(a) (2025) (Fedwire funds transfers); Federal Deposit Insurance Corporation Improvement Act of 1991, 12 U.S.C. §§ 4403–4405 (bilateral and clearing organization netting contracts); 11 U.S.C. § 546(e) (Bankruptcy Code settlement-payment safe harbor).

45. *Payment Systems and Netting Act 1998* (Cth) s 14 (Austl.).

46. *Id.* (emphasis added); in Australia, "The FSS enables final and irrevocable settlement of individual NPP transactions in real time . . . with a median settlement-processing time since launch of around 50 milliseconds," *The New Payments Platform and Fast Settlement Service*, *supra* note 33.

objective and verifiable point confirming the transfer has been completed by both the FPS system and the payee's PSP.

4. *Knowledge of Insolvency*

If a PSP becomes insolvent but fails to notify the FPS operator, a key question arises: are payments processed in the interim still final and enforceable? Under Article 3(1) of the EU Settlement Finality Directive, transfer orders entered into a designated system before insolvency are binding and irrevocable.[47] Even orders entered afterward remain enforceable if the system neither knew nor could reasonably have been expected to know of the insolvency.[48]

To ensure legal certainty, the Single Rulebook should require PSPs to notify the FPS operator immediately upon commencement of insolvency proceedings and should confirm that payments remain final until actual notification is received; constructive knowledge or suspicion should not suffice. This clear boundary protects system integrity and prevents retroactive clawbacks, which could otherwise undermine confidence in FPSs.[49]

C. *Erroneous Transfers*

An effective Single Rulebook must clearly define how to manage erroneous transfers, where a payer instructs their PSP to transfer funds to the wrong account. In existing systems like the EU's TARGET Instant Payment Settlement[50] and the UK's Faster Payments Service,[51] the recipient may retain the funds until notified of the error. The payer must contact their PSP, which coordinates with the payee's PSP to inform the recipient,

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47. Directive 98/26/EC, *supra* note 41, art. 3(1).

48. *Id.*

49. If the operator receives notice of insolvency but continues processing payments, liability should shift to the operator. The Single Rulebook should make the operator contractually responsible for guaranteeing finality post-notification and compensating affected parties for losses. This explicit allocation of risk maintains settlement finality as robust, transparent, and enforceable, even during insolvency events.

50. EUROPEAN CENTRAL BANK, *TARGET Instant Payment Settlement User Requirements* (June 21, 2017), https://www.ecb.europa.eu/paym/target/target-professional-use-documents-links/tips/shared/pdf/tips_crdm_uhb_v1.0.0.pdf.

51. *Fast Payment System, supra* note 24.

who is expected to return the funds since they have no legal claim to them.[52]

Given that settlement finality prevents automatic reversal, the payee's bank cannot unilaterally recover the funds without the recipient's consent. If the recipient refuses, the payer can pursue legal action, often based on unjust enrichment or restitution, though outcomes vary by jurisdiction.[53] However, if the funds are spent in good faith before notification, the payer may lack legal recourse. This is known as a "change of position" defense. A well-drafted Single Rulebook would need to address how the FPS handles fraudulent and unauthorized transfers.

D. *Unauthorized and Fraudulent Transfers*

Unauthorized transfers, such as those caused by account hacking without the payer's authorization, require explicit protections in a Single Rulebook. Where the payer bears no fault for the unauthorized transfer (e.g., a system vulnerability rather than negligence, such as weak password management), the FPS should provide for compensation. This approach is consistent with the EU's *Payment Services Directive 2*, which requires payment service providers to refund unauthorized transactions unless the payer has acted with gross negligence.[54] It also reflects common banking practices, in which institutions investigate disputed transactions and may reimburse customers who have been defrauded or affected by errors.

Reversing an unauthorized transfer to a fraudster's account generally requires court or regulatory authorization. However, the Single Rulebook should allow PSPs, with appropriate regulatory approval, to temporarily freeze the recipient's account during an investigation. This measure helps prevent further dissipation of funds and facilitates recovery efforts.

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52. Eur. Payments Council, SEPA Instant Credit Transfer Scheme Rulebook 38 (2024), https://www.europeanpaymentscouncil.eu/sites/default/files/kb/file/2024-11/EPC004-16%202025%20SCT%20Instant%20Rulebook%20v1.0.pdf (recall procedure); Moses v. Macferlan, 97 Eng. Rep. 676, 2 Burr. 1005 (K.B. 1760) (a foundational case in the law of restitution, establishing that money paid by mistake, for failed consideration, or obtained through undue oppression or unconscionable means may be recovered).

53. This approach is supported by Directive 98/26/EC, *supra* note 41, recital 13.

54. Directive 2015/2366 of the European Parliament and of the Council of 25 November 2015 on Payment Services in the Internal Market, arts. 69, 73, 2015 O.J. (L 337) 35.

E. *Enhancing Security*

To minimize erroneous transfers, the Single Rulebook should require preventive controls such as two-factor authentication and payee verification before funds are released. For example, the UK's *Confirmation of Payee* service flags name mismatches,[55] while the EU's TARGET Instant Payment Settlement requires verification,[56] obliging PSPs to confirm the payee's identity prior to execution. Real-time transaction alerts further help payers detect and report mistakes promptly.[57]

For unauthorized transfers, enhanced authentication measures, such as two-factor authentication and biometrics, strengthen protection against hacking. The Single Rulebook should mandate robust cybersecurity standards for PSPs and require them to compensate payers for losses resulting from system breaches where the payer is not negligent. These measures will foster a safer, more resilient payment ecosystem and reinforce public trust in FPSs.

II.
Interlinking FPS Arrangements

Interlinking arrangements are contractual, technical, and operational frameworks that connect payment systems across jurisdictions, enabling participating PSPs to exchange payments as if operating within the same system.[58] In FPSs, interlinking arrangements link domestic platforms to enable seamless, secure, and real-time cross-border transfers. Such arrangements enable PSPs to make cross-border payments without belonging to the foreign FPS, meaning a PSP in country A can send funds to a PSP in country B without opening accounts or obtaining membership abroad.[59] Connectivity is achieved through software that routes payment instructions and related

55. *Confirmation of Payee*, UK finance, https://www.ukfinance.org.uk/policy-and-guidance/guidance/confirmation-payee (last visited Aug. 3, 2026).

56. Parliament and Council Regulation 2024/886, art. 5c, 2024 O.J. (L 886).

57. For an example of real-time transaction alerts, see A Playbook for ASEAN and the World, *supra* note 28.

58. Final Report to the G20, *supra* note 20, at 3.

59. Bank for Int'l Settlements, Comm. on Payments and Market Infrastructures et al., Exploring Multilateral Platforms for Cross-Border Payments (2023), https://www.bis.org/C.P.M.I./publ/d213.pdf [hereinafter Exploring Multilateral Platforms].

data between systems, and reconciles differences in message formats in a cost-effective manner.[60]

Interoperability is enabled through standardized messaging protocols, such as ISO 20022[61] and application programming interfaces (APIs).[62] A cross-border payment typically involves two legs: first, debiting the payer's PSP in one jurisdiction, and second, crediting the payee's PSP in another, with a separate foreign exchange (FX) transaction if currency conversion is required.[63] These arrangements allow PSPs in different jurisdictions to exchange payment messages and settle transactions within seconds, so the payee in Country B is credited almost immediately after the payer in Country A initiates the transfer.

As with domestic FPSs, the defining feature of interlinking FPSs must be the near-instant crediting of the payee's account. While technical design, settlement models, and liquidity arrangements may differ under FPS rulebooks, the user experience must remain seamless, predictable, and fast. This standard is essential across all interlinked corridors, as it underpins confidence, drives adoption, and ensures competitiveness for interlinked FPSs with alternatives like stablecoins, which already enable near-instant cross-border transfers. Even where inter-PSP settlement follows a deferred net settlement model, the payee's account should still be credited irrevocably and without delay. Guaranteeing this outcome is critical to the long-term success and scalability of FPS interlinking.

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60. A PLAYBOOK FOR ASEAN AND THE WORLD, *supra* note 28, at 8.

61. ISO 20022 is a global standard for electronic data exchange between financial institutions, enabling richer payment data and greater interoperability. Already adopted by 73% of FPSs—mainly in Europe and Asia-Pacific—its use is projected to reach 80% within five years. While 69% of FPSs plan full migration for domestic payments, only 42% intend to do so for cross-border payments, with Europe expected to lead at 81% within five years. RESULTS OF THE 2023 C.P.M.I. CROSS-BORDER PAYMENTS MONITORING SURVEY, *supra* note 18; *see also* J. Benton Heath, *Constructing a Global Panopticon: Towards a Jurisprudence of Weaponized Interdependence*, 28 J. INT'L ECON. L. 505, 518 (2025).

62. APIs enhance cross-border FPSs by reducing manual intervention and enabling timely data exchange. Adoption is rising, with 93% of FPSs planning to use APIs within five years, particularly in the Middle East and Africa. Current uses include submitting or amending payment instructions and sharing transaction data or notifications. *See* RESULTS OF THE 2023 C.P.M.I. CROSS-BORDER PAYMENTS MONITORING SURVEY, *supra* note 18, at 13–14.

63. FINAL REPORT TO THE G20, *supra* note 20, at 3. Francisco J. Quintana, *Dollar Dominance, De-dollarization, and International Law*, 28 J. INT'L ECON. L. 359, 366 (2025).

A. *Traditional Correspondent Banking Arrangements*

Cross-border payments have traditionally operated through correspondent banking, where banks maintain bilateral agreements with one another and use intermediaries for payment services abroad.[64] Funds do not physically move across borders; instead, a sequence of accounting entries ultimately credits the payee's account (minus fees).[65] Given that banks rarely have direct relationships with all foreign counterparties, payments often pass through a chain of correspondent banks.[66] These relationships rely on *nostro* and *vostro* accounts: a *nostro* account (our money in your bank) is a bank's account at a foreign institution, while a *vostro* account (your money in our bank) is the reciprocal account held for the foreign bank.[67]

For example, if Alice in Hong Kong sends HK$100 to Bob in the UK, her bank (Bank A) may route the payment via a U.S. correspondent (Bank C) with accounts at both Bank A and Bob's bank (Bank B). Bank C debits Bank A's *nostro* account, credits Bank B's *vostro* account with the GBP equivalent, and instructs Bank B to credit Bob's account. Each intermediary adds costs, foreign exchange spreads, delays, and repeated AML/CFT and sanctions checks.

B. *Benefits of Interlinking FPSs*

FPS interlinking extends the speed, affordability, and convenience of domestic instant payments to cross-border transactions, directly addressing inefficiencies in the traditional correspondent banking model. The G20 and Committee on Payments and Market Infrastructures have prioritized it as a step in modernizing global payments, emphasizing its potential to deliver faster, cheaper, more transparent, and more inclusive cross-border services.[68] Given the widespread adoption of domestic FPSs, linking them is seen as a practical near- to

64. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3.

65. Douglas Arner et al., *Building Regional Payment Areas: The Single Rule Book Approach* (Bank for Int'l Settlements Working Paper, Paper No. 1016, 2022), https://www.bis.org/publ/work1016.pdf [hereinafter *The Single Rule Book Approach*].

66. FINAL REPORT TO THE G20, *supra* note 20.

67. *See* BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, A GLOSSARY OF TERMS USED IN PAYMENTS AND SETTLEMENT SYSTEMS (2008) (defining "nostro account" and "vostro account").

68. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3, at 6.

medium-term pathway toward safer and more efficient retail payments.[69]

In contrast, the current correspondent banking model often involves multiple intermediaries, driving up costs,[70] prolonging settlement—sometimes for days—and limiting access, especially for smaller banks and non-bank PSPs lacking established relationships.[71] Opaque fees and exchange rates, coupled with heavy AML/CFT compliance burdens, further constrain remittances, trade among small and medium-sized enterprises, and financial inclusion, particularly in emerging markets. Each additional intermediary increases costs, delays, and credit risk, compounding inefficiencies.

FPS interlinking shortens this chain by enabling PSPs in different jurisdictions to transact directly through connected infrastructures. This reduces reliance on multiple bilateral arrangements, narrows FX spreads, improves fee and status transparency, and enables settlement within seconds. By leveraging existing domestic infrastructures, banking networks, and Know-Your-Customer (KYC) frameworks,[72] interlinking expands access to reliable payment services, particularly in underserved markets, and advances financial inclusion.

Some correspondent banking remains necessary, particularly for currency conversion and cross-border liquidity management, but in a more streamlined form.[73] Interlinking frameworks can route payment instructions through institutions that already hold reserve or FPS accounts in multiple jurisdictions, reducing intermediaries while preserving access to foreign currencies and liquidity sources.

By easing infrastructural and regulatory bottlenecks, FPS interlinking is not merely a technical upgrade but a strategic reform that advances global policy objectives, facilitates trade,

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69. FINAL REPORT TO THE G20, *supra* note 20, at 2.

70. *The Single Rule Book Approach*, *supra* note 65, at 11 ("McKinsey (2016) reported that the average cost for a U.S. bank to execute a cross-border payment via the correspondent banking network is 10 times higher than the cost of an average domestic payment.").

71. "Dominant correspondent banks will inevitably exploit their market power through higher than competitive fees," Ulrich Bindseil & George Pantelopoulos, *Towards the Holy Grail of Cross-Border Payments* 17 (Eur. Cent. Bank Working Paper No. 2022/2693, 2022), http://dx.doi.org/10.2139/ssrn.4178863 [hereinafter *Towards the Holy Grail*].

72. *Id.* at 46–47.

73. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3, at 9.

supports economic growth, and expands access to the international financial system.

C. *Challenges of Interlinking FPSs*

Creating a global FPS interlinking arrangement involves complex legal, regulatory, governance, technical, and political challenges that must be addressed to build a secure, efficient, and widely adopted system. A primary obstacle is the significant differences between legal and regulatory frameworks across jurisdictions. Each country has its own rules on settlement finality, netting, consumer protection, AML/CFT compliance, and data privacy. These legal discrepancies complicate harmonization and, if unaddressed, expose participants to heightened legal and financial risks.[74]

Regulatory alignment, particularly around AML/CFT obligations, adds further complexity. Varying national standards make it difficult to design a uniform compliance framework, and achieving mutual recognition and streamlined cross-border processes requires substantial coordination. Implementation is further challenged by fragmented data protection regimes. Some jurisdictions, for instance, mandate data localization or limit cross-border sharing.[75] These restrictions directly hinder straight-through processing and shared screening utilities that could otherwise enhance compliance efficiency.[76]

Another critical challenge is governance. FPS linkages require clear oversight and dispute resolution mechanisms, yet the absence of globally accepted standards means countries

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74. *Id.* at 15.

75. Data localization requirements in several jurisdictions require certain financial or personal data to be stored domestically, which can complicate cross-border payment processing and interoperability. *See, e.g.*, FINANCIAL STABILITY BOARD, ENHANCING CROSS-BORDER PAYMENTS: STAGE 3 ROADMAP 3 (2020). E.g., The Reserve Bank of India requires payment-system providers to store "the entire data relating to payment systems operated by them" only in India, including full end-to-end transaction information. Reserve Bank of India, Storage of Payment System Data, RBI/2017-18/153 (Issued on Apr. 6, 2018), https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11244.

76. BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, LINKING FAST PAYMENT SYSTEMS ACROSS BORDERS: CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT 8 (Oct. 2023), https://www.bis.org/C.P.M.I./publ/d219.pdf [hereinafter CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT]; INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3.

must negotiate bespoke arrangements to address their commercial, legal, regulatory, and operational concerns.

Political hurdles also hinder multilateral schemes. Securing jurisdictional partners is difficult given conflicting compliance expectations, divergent cybersecurity standards, and differing cultural or risk-tolerance norms. Many countries note that regulatory and supervisory reforms, which are often slow and politically fraught, are a prerequisite for progress.[77]

Technical challenges also feature prominently. Although 70 percent of FPSs use ISO 20022, variations in interpretation and implementation require upgrades or full migrations before systems can participate in an interlinked arrangement.[78]

Finally, practical factors such as cost, public sector support, and business model feasibility remain barriers. According to the Committee on Payments and Market Infrastructures, some jurisdictions cite weak government backing, limited demand, and unclear commercial models as significant barriers to multilateral interlinking platforms.[79] Without sustained political will and long-term investment from both governments and industry, these projects risk stagnation.

In this context, global institutions such as the Bank for International Settlements, International Monetary Fund, World Bank, and Financial Stability Board could accelerate progress by collectively developing a unified Single Rulebook, offering technical assistance, and establishing minimum global standards for legal, regulatory, and operational interoperability. Their leadership is crucial to overcoming fragmentation and aligning the varied interests of participating jurisdictions. This Article provides legal and regulatory solutions and recommendations to overcome these challenges and establish a unified Single Rulebook.

III.
Types of Interlinking Arrangements

This Section provides an overview of the different types of interlinking arrangements. "There is no one-size-fits-all

77. *See* Exploring Multilateral Platforms, *supra* note 59.
78. Interlinking Fast Payment Systems, *supra* note 3, at 37; *see* Consolidated Progress Report for 2024, *supra* note 8.
79. *See* Exploring Multilateral Platforms, *supra* note 59, at 5–25.

approach for oversight of FPS interlinking arrangements,"[80] as each payment corridor presents distinct legal, technical, and institutional challenges. The structure must be tailored to the jurisdictions involved. FPS interlinking may take the form of bilateral links, each with its own rules, or a common multilateral framework.[81]

A fundamental prerequisite is that both countries have operational FPSs. This remains a major barrier in regions where FPS infrastructure is underdeveloped, including parts of Africa, the Americas (such as Canada),[82] and the South Pacific (including New Zealand).[83] Without domestic FPS capabilities, jurisdictions cannot participate in interlinking, underscoring the importance of broader global FPS adoption for real-time cross-border payments.

Depending on the design, an interlinking arrangement may require a dedicated entity to operate the technical infrastructure, such as a central "hub" or shared platform. It may also involve designated FX providers for currency conversion (where applicable) and settlement agents[84] to manage final settlement across systems.[85]

A. *The Four Models of Interlinking FPS*

Interlinking fast-payment systems can be organized along four models:[86]

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80. FINAL REPORT TO THE G20, *supra* note 20, at 1.

81. *See Towards the Holy Grail*, *supra* note 71, at 42–43.

82. Canada will implement a new FPS, the Real-Time Rail (RTR), with the technical build expected to be completed in Q3 2025. *The Real-Time Rail: Canada's Fastest Payment System*, PAYMENTS CANADA, https://www.payments.ca/systems-services/payment-systems/real-time-rail-payment-system (last visited Oct. 10, 2025).

83. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3, at 21. New Zealand is the "only country of the 38 in the OECD that has not implemented, or committed to implementing, a real-time payments network." Ruairi O'Shea, *New Zealand Left Behind by Rest of the World on Payment Technology*, CONSUMER NZ (Jan. 23, 2025), https://www.consumer.org.nz/articles/new-zealand-left-behind-by-rest-of-the-world-on-payment-technology.

84. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3, at 7, 27.

85. CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT, *supra* note 76, at 8.

86. For a comprehensive discussion on the full details and strengths of each model, see EXPLORING MULTILATERAL PLATFORMS, *supra* note 59; FINAL REPORT TO THE G20, *supra* note 20.

1. In the *single access point* model, participants in one domestic payment system access a foreign system through a single entity that directly participates in the foreign system.[87]
2. In the *bilateral link* model,[88] domestic participants can directly reach all participants in the foreign system via the link, not just through a single gateway.
3. In the *hub and spoke* model,[89] bilateral links between two or more payment systems (the spokes) are replaced by links to a common intermediary (the hub).
4. In the *common platform* model,[90] participants interact directly across borders on a single, integrated platform.[91]

Although similar in concept, the hub-and-spoke and common-platform models, referred here collectively as "multilateral platforms," differ in two key respects. First, in a hub-and-spoke model, domestic FPSs (the spokes) and connected PSPs follow the hub's rulebook for cross-border transactions but retain their own rulebooks for domestic payments. By contrast, a common platform applies one unified rulebook to all connected FPSs and PSPs for both domestic and cross-border transactions, eliminating separate domestic rulebooks.

87. An example of the single access point model is the Swiss euroSIC system, where cross-border euro payments from Swiss participants are routed through Swiss Euro Clearing Bank, which acts as a gateway participant in TARGET2. BANK FOR INT'L SETTLEMENTS, INTERLINKING PAYMENT SYSTEMS AND THE ROLE OF APPLICATION PROGRAMMING INTERFACES: A FRAMEWORK FOR CROSS-BORDER PAYMENTS 7 (2022).

88. For example, Directo a México (2005), connecting the U.S. FedACH and Mexico's real-time gross settlement system (SPEI); PayNow–PromptPay (Singapore–Thailand, 2021); PayNow–UPI (Singapore–India, 2023); and Hong Kong–PromptPay link (2023). CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT, *supra* note 76, at 25.

89. For example, the Regional Payment and Settlement System (REPSS) of the Common Market for Eastern and Southern Africa. *Id.*

90. For example, the SADC-R.T.G.S., hosted by the South African Reserve Bank on its SAMOS infrastructure. *Id.*

91. "While all four interlinking models can achieve similar results, the common platform is, in a strict sense, not a form of interlinking since PSPs participate in one and the same payment system." EXPLORING MULTILATERAL PLATFORMS, *supra* note 59, at 5–25.

Second, hubs are typically designed only for cross-border payments, while common platforms support both domestic and cross-border activity.[92] For the purposes of this Article, all multilateral platforms are assumed to operate under a unified rulebook for cross-border payments, and no further distinction is made between the two models.[93]

B. *Choice of Interlinking Arrangement*

Bilateral links remain the dominant FPS interlinking model, representing 54 percent of current arrangements.[94] However, they face scalability limits: each new connection requires separate technical integration, legal agreements, and operational processes, creating exponential complexity as networks grow.[95] As the European Central Bank observes, "a network of 20 countries would require 190 country-to-country links,"[96] highlighting the inefficiency of a purely bilateral approach. Reflecting this, the Committee on Payments and Market Infrastructures notes that "if an FPS plans to connect with more than one FPS over time, it may choose a hub-and-spoke model over a bilateral model."[97]

Many bilateral links appear to be transitional "quick wins," with at least half of FPSs using them planning to migrate to multilateral models.[98] While multilateral platforms represent just eight percent of current connections, their share is expected to rise to nine percent within two years and 28 percent within five. By allowing each FPS to connect once to a single platform rather than bilaterally to every other system, these models offer a more scalable and sustainable route to interoperability.

Although establishing a multilateral platform usually requires creating a new legal entity and a unified rulebook,[99] which potentially extends implementation timelines, it streamlines future onboarding, fosters harmonization, and improves

92. *Id.* at 8.
93. *Id.* at 6.
94. RESULTS OF THE 2023 C.P.M.I. CROSS-BORDER PAYMENTS MONITORING SURVEY, *supra* note 18.
95. INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3, at 35–36.
96. *Towards the Holy Grail*, *supra* note 71, at 43.
97. FINAL REPORT TO THE G20, *supra* note 20, at 15.
98. RESULTS OF THE 2023 C.P.M.I. CROSS-BORDER PAYMENTS MONITORING SURVEY, *supra* note 18.
99. EXPLORING MULTILATERAL PLATFORMS, *supra* note 59, at 9.

cross-border efficiency. The Bank for International Settlements' (BIS) Committee on Payments and Market Infrastructures' Nexus initiative illustrates this potential by combining a unified technical standard, consistent processing rules, and competitive FX conversion to reduce fragmentation and enable seamless integration across jurisdictions.[100]

For a global instant payment network governed by a Single Rulebook, the common platform model is arguably the most coherent architecture, because it supports uniform legal rules, direct cross-border participation, operational efficiency, and scalable global interoperability. Systems such as BIS's Project Nexus conceptually move in this direction by standardizing messaging, governance, and compliance frameworks across participating systems.

IV.
Governance and Oversight for FPS Interlinking

Governance and oversight are essential to ensuring the safety, efficiency, and trustworthiness of FPS interlinking arrangements. *Governance* refers to the rules, structures, and decision-making processes that define the roles and responsibilities of participants, operators, and owners of a payment system. In contrast, *oversight* is a central bank function that monitors and assesses payment arrangements to ensure they meet public policy objectives, especially safety, efficiency, and systemic resilience.[101]

Together, these frameworks allocate legal and operational risks, ensure compliance, and maintain stability across jurisdictions. Without strong governance and oversight, interlinking arrangements risk legal uncertainty, reputational damage, or even financial losses—outcomes that would undermine user confidence and international cooperation.

A. *Governance*

Multilateral models generally operate under their own governance framework for cross-border payments, codified in a uniform rulebook that defines the rights, obligations, and

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100. *Id.*
101. *See* A Glossary of Terms Used In Payments and Settlement Systems, *supra* note 7, at 37.

procedures of all participants. In the global, cross-border interlinking FPSs advocated for in this Article, this would be the Single Rulebook. In addition, the platform remains subject to the laws and regulations of its jurisdiction of incorporation,[102] including corporate law and any applicable central bank oversight, depending on whether it is privately or publicly operated.

Governance structures may include a board of directors, shareholder or member assemblies, and consultative committees to ensure strategic oversight, accountability, and stakeholder representation. These roles are usually outlined in founding documents such as articles of association or incorporation. The governance framework must strike a balance between institutional robustness, which ensures legitimacy, accountability, compliance, and operational flexibility that supports timely decisions and avoids unnecessary procedural complexity.

A Single Rulebook would establish a uniform governance framework for a global interlinked FPS by clearly defining the roles and responsibilities of system operators, participants, and oversight bodies. It would set consistent rules for onboarding, decision-making, risk management, compliance, and dispute resolution, ensuring that all participants operate under the same legal and operational standards, regardless of jurisdiction. By centralizing governance, the Rulebook would reduce operational and regulatory uncertainty, promote accountability, and enable coordinated supervision, while also providing clear procedures for handling errors, fraud, and other operational incidents, thereby enhancing trust and efficiency across the global network.

B. *Oversight*

Effective oversight of FPS interlinking requires strong cross-border cooperation among regulators, since disruptions can affect participants and central banks across jurisdictions. While each domestic FPS remains under its home central bank, the interlinking arrangement, particularly if constituted as a separate legal entity, may require formal designation as a payment system and oversight under the host jurisdiction's legal framework.[103]

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102. CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT, *supra* note 76, at 11.
103. *See* FINAL REPORT TO THE G20, *supra* note 20, at 34.

The Continuous Linked Settlement system provides a precedent, operating under a cooperative oversight by 18 central banks and Eurozone authorities.[104] As multilateral platforms expand in scale and systemic importance, similar cooperative frameworks will be essential. However, legal and institutional barriers, such as the absence of procedures to recognize or supervise foreign Financial Market Infrastructures, may complicate implementation.

Coordination among national overseers helps prevent legal conflicts, regulatory gaps, and fragmented supervision. As the G20 notes,[105] oversight of an interlinking arrangement may differ from oversight of its component FPSs, making structured cooperation vital to safeguard legal certainty, systemic integrity, and user confidence.[106]

The Single Rulebook would enhance oversight of a global interlinked FPS by providing a centralized framework for supervision and compliance. It would establish clear obligations for system operators and participants, standardize reporting and transparency requirements, and define protocols for monitoring operational, liquidity, and fraud risks across jurisdictions. By harmonizing rules and procedures, regulators and oversight bodies could coordinate more effectively, ensuring timely detection of systemic risks, consistent enforcement, and efficient resolution of disputes or errors. Overall, the Rulebook would strengthen accountability, reduce regulatory gaps, and improve the resilience and integrity of the global FPS.

C. *Ownership*

A well-designed FPS interlinking arrangement requires a transparent ownership structure. While central banks own, operate, or act as settlement agents for over 90 percent of real-time gross settlement systems, FPSs more often adopt mixed models: central banks typically serve as settlement agents, while private entities participate in ownership or operation in about half of cases.[107] Private ownership can operate effectively, as demonstrated by well-regulated Financial Market Infrastructures such

104. Exploring Multilateral Platforms, *supra* note 59, at 24.
105. Final Report to the G20, *supra* note 20, at 7.
106. Considerations for Governance and Oversight, *supra* note 76.
107. Results of the 2023 C.P.M.I. Cross-Border Payments Monitoring Survey, *supra* note 18.

as LCH (formerly London Clearing House), one of the world's largest central counterparty clearing mechanisms, provided that a strong regulatory and supervisory framework is in place.[108] However, whether ownership, operation, and governance are centralized in one entity or distributed across several, public sector ownership—or at minimum strong public oversight—is best positioned to safeguard financial stability and mitigate systemic risk for a well-designed FPS interlinking arrangement.[109]

For an ideal global interlinked FPS under a Single Rulebook, a hybrid ownership model with strong public-sector oversight would be most effective. In this structure, a central bank or public authority would retain ultimate oversight and act as the settlement agent, ensuring system-wide stability, while private entities could participate in the operation, technology provision, and day-to-day management of the platform. The Single Rulebook would codify the roles, responsibilities, and accountability mechanisms for both public and private participants, including clear standards for risk management, operational continuity, and regulatory reporting. By combining the efficiency and innovation of private-sector participation with the stability and authority of public oversight, this ownership model would promote resilient, secure, and interoperable cross-border payments, while enabling coordinated governance and enforcement of uniform rules across all jurisdictions.

D. *Location of Link Operator*

Choosing the home jurisdiction for an interlinking operator, particularly when structured as a separate legal entity, is a foundational legal and strategic decision. The jurisdiction of incorporation determines the applicable regulatory framework, including rules on consumer protection, AML/CFT compliance, data privacy, corporate governance, and oversight. It also determines the courts with jurisdiction, the recognition of settlement finality, and the enforceability of contracts, which are

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108. LCH, originally the London Clearing House, is a privately owned central counterparty clearinghouse and part of the London Stock Exchange Group. It clears a wide range of derivatives, fixed-income, and other financial transactions and has demonstrated resilience as a CCP, effectively mitigating counterparty and systemic risk through robust risk management, margining, and regulatory oversight. *See About LCH*, LSEG, https://www.lch.com/about-us.

109. FINAL REPORT TO THE G20, *supra* note 20, at 7.

all essential for legal certainty in cross-border payments. The reputation of the home jurisdiction influences the arrangement's ability to attract members, ensure legal compliance, and secure effective cross-border cooperation.

The home jurisdiction should therefore possess an independent judiciary, robust commercial and insolvency laws, political and economic stability, and a credible regulator with experience overseeing systemically important Financial Market Infrastructures. Jurisdictions such as Belgium, Switzerland, Singapore, Germany, and Japan offer many of these qualities, with mature legal systems, top-tier financial regulation, and central roles in global payment networks. Ideally, the jurisdiction should also issue a widely used currency and host international standard-setters or key institutions—such as the European Central Bank—to reinforce trust and legitimacy. Thus, the European Central Bank could be an ideal institution for hosting a global interconnected FPS.

V.
Contractual Arrangements and The Single Rulebook

Arner et al. have proposed a global 'Single Rule Book' to guide regional payment integration, similar to the UCC in the United States, setting minimum harmonized standards while allowing local adaptation.[110] As the authors explain, "such a Single Rule Book could be instrumental in enhancing safety, efficiency, and integrity in cross-border payments" by establishing a harmonized legal and operational baseline for regional and global interoperability.[111] This research supports that proposal by offering detailed legal risk management provisions for a Single Rulebook, addressing settlement finality, liability allocation, data protection, and dispute resolution.

The Single Rulebook should serve both as a contractual framework for interlinking arrangements and as a practical guide aligned with international standards. As law firm Baker McKenzie observes, past linkages have been hindered by "multiple parties with diverse interests and no international standards to use as a basis."[112] Incorporating global best practices, such as the Principles for Financial Market Infrastructures

110. *The Single Rule Book Approach*, *supra* note 65.
111. *Id.* at 4.
112. A Playbook for ASEAN and the World, *supra* note 28, at 27.

and Financial Action Task Force (FATF) Recommendations,[113] would reduce legal fragmentation, build trust, and minimize operational uncertainty. Over time, the emergence of widely accepted international standards would further streamline linkages, strengthening efficiency, interoperability, and confidence across jurisdictions.

In FPS interlinking, the Single Rulebook is the core legal and operational framework of a cross-border arrangement.[114] Legally, it acts as a binding multi-party contract[115] between the link operator and participating domestic FPSs, defining roles, responsibilities, and obligations, and establishing a uniform legal basis across jurisdictions.[116]

To ensure enforceability, its terms must be "clear, easily understandable for the relevant audience, and consistent with the laws and regulations of those jurisdictions in which it operates."[117] While the operator may also hold bilateral agreements with FX providers, settlement banks, or technical service suppliers, the Single Rulebook remains the master document governing the scheme. If an FPS or PSP breaches its provisions, the operator should have authority to suspend or terminate participation.

Crucially, the Single Rulebook must be contractually binding on every participant and enforceable across every jurisdiction represented.[118] Domestic FPSs may need to amend their own rulebooks or adopt supplementary provisions to align with

113. Incorporating global best practices, such as the CPMI-IOSCO Principles for Financial Market Infrastructures (PFMI) and Financial Action Task Force (FATF) recommendations, helps reduce legal fragmentation, build trust, and minimize operational uncertainty. The PFMI set standards for risk management, governance, and operational resilience of payment systems, clearinghouses, and central securities depositories, while FATF recommendations provide guidance on AML/CFT measures, customer due diligence, and reporting obligations. *See* P.F.M.I., *supra* note 1; INTERNATIONAL STANDARDS ON COMBATING MONEY LAUNDERING AND THE FINANCING OF TERRORISM & PROLIFERATION, *supra* note 19.

114. "Rulebooks for payment instruments are single sets of rules, practices, standards and implementation guidelines for the execution of such payments." BANK FOR INT'L SETTLEMENTS, SERVICE LEVEL AGREEMENTS FOR CROSS-BORDER PAYMENT ARRANGEMENTS: RECOMMENDATIONS AND KEY FEATURES 8 (2024) [hereinafter RECOMMENDATIONS AND KEY FEATURES].

115. A PLAYBOOK FOR ASEAN AND THE WORLD, *supra* note 28, at 17–24.

116. FINAL REPORT TO THE G20, *supra* note 20, at 8–9.

117. RECOMMENDATIONS AND KEY FEATURES, *supra* note 114, at 16.

118. Christian Chamorro-Courtland, *Counterparty Substitution in Central Counterparty (CCP) Systems*, 26 BANKING & FIN. L. REV. 517 (2010).

the interlinking arrangement. Where full alignment is impossible, such as with differing settlement finality models, technical and legal mechanisms can still ensure interoperability.[119]

The Single Rulebook functions as both a contract and a service-level agreement,[120] harmonizing[121] operations across diverse systems through common standards for messaging, settlement cycles, transaction limits, risk-sharing, AML/CFT compliance, data protection, and cyber resilience.[122] It must also provide enforcement tools—sanctions for non-compliance, dispute-resolution processes, and alignment with the Principles for Financial Market Infrastructures standards in jurisdictions where the arrangement is systemically important.[123]

Risk management is central to its design, with minimum standards for access, operational resilience, liquidity, and fraud prevention. Striking the right balance is critical: overly strict requirements may deter participation, while lax standards undermine trust. Flexible tools, such as corridor-specific limits or the option to decline connections with certain FPSs or PSPs, help manage legal and operational risk while enabling scalability, and thus should be included in the Single Rulebook.[124]

Furthermore, amendments to the Single Rulebook should follow a clearly defined procedure set out within the Single Rulebook itself. This process must specify who may propose changes (typically the link operator, participating FPSs, or a governance committee) and the thresholds for approval. Minor operational updates might be adopted by simple majority, while substantive amendments affecting settlement, risk management, or access criteria should require a qualified or supermajority vote of the members of the interlinking arrangement to ensure broad consensus.

A. *Resolving Conflicts*

A domestic FPS may join only if its rulebook is consistent with, and does not conflict with, the Single Rulebook. The accession contract should state that the Single Rulebook takes

119. Interlinking Fast Payment Systems, *supra* note 3.
120. *Id.*
121. *Id.*
122. Considerations for Governance and Oversight, *supra* note 76, at 8–9.
123. Recommendations and Key Features, *supra* note 114, at 12–13.
124. Interlinking Fast Payment Systems, *supra* note 3, at 29.

precedence in any conflict with the FPS's rulebook, at least for cross-border transactions, as a binding condition of participation. Alignment must be maintained on an ongoing basis, with non-compliance subject to remedies such as fines, suspension, or expulsion.

Beyond rulebook alignment, a domestic FPS's laws must meet the minimum standards set by the Single Rulebook, such as settlement finality legislation and compliance with Principles for Financial Market Infrastructures and FATF principles. If a jurisdiction's laws later fall out of alignment (e.g., repealing settlement finality protections), the link operator should apply a graduated response by issuing a notice or "greylist" warning to the relevant FPS or regulatory authority in the affected jurisdiction, allowing a defined period for corrective action, and, if unresolved, suspending or terminating membership in the interlinking arrangement.

B. *Dispute Resolution*

Dispute resolution is essential in interlinking arrangements, where participants operate under different legal systems, languages, and regulations. The Single Rulebook should set clear procedures for handling erroneous transfers, fraud, failed settlements, misallocation of funds, security breaches, or liability disputes arising from cyberattacks or sanctions.

A multi-tiered approach is recommended. First, parties attempt direct resolution, supported by a secure case-management platform. Retail customers contact their PSP, which liaises with the foreign PSP or escalates through its domestic FPS, which then engages the corresponding FPS and PSP abroad. While FPS routing provides oversight, direct PSP-to-PSP communication may expedite resolution for large, regulated entities.

If informal resolution fails, disputes should proceed to arbitration, preferably initiated by the domestic FPS (unless PSPs are directly bound by the Single Rulebook). The Single Rulebook should designate a neutral forum, such as London, Singapore, or Geneva, offering procedural neutrality, confidentiality, and enforceability. Arbitration would apply only to FPSs and PSPs, not end-users.

To preserve system integrity in cases of default (e.g., PSP insolvency), loss-allocation mechanisms should backstop the process. Options include a default fund, collateral requirements, or, in advanced models, a central counterparty clearing mechanism to absorb losses and ensure settlement continuity. While disputes and defaults cannot be eliminated entirely, such safeguards contain losses, prevent contagion, and maintain trust, thereby enhancing the arrangement's resilience and scalability.

VI.
Risks in Interlinking Arrangements

Cross-border FPS interlinking faces greater complexity than domestic systems due to fragmented legal, regulatory, and technological regimes, which heighten legal risk, AML/CFT inconsistencies, and uncertainty over settlement finality. Robust scheme rules and processing standards that enforce minimum risk requirements across jurisdictions can mitigate these challenges, ensuring integrity, interoperability, and the scalability of cross-border payments.[125]

A. *Legal Risk*

Legal risk arises when the operation or enforcement of an interlinking arrangement is threatened by the unexpected application—or misapplication—of laws and regulations, or when legal outcomes are uncertain. In cross-border contexts, this risk is amplified by multiple legal systems with differing statutory protections, regulatory frameworks, and interpretations of key concepts.

For example, a payment deemed final in one jurisdiction may not be recognized in another, undermining settlement finality.[126] Similar inconsistencies can occur in netting enforceability, insolvency treatment, access criteria, and data protection, jeopardizing both transaction certainty and the enforceability of obligations, particularly if domestic laws change after a system has joined.[127]

To mitigate these risks, the Single Rulebook should contain clear, consistent, and enforceable provisions across all jurisdictions, explicitly addressing divergences in settlement finality, data sharing, and AML/CFT obligations, and

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125. *Id.*
126. Exploring Multilateral Platforms, *supra* note 59, at 9.
127. Final Report to the G20, *supra* note 20, at 10.

prescribing remedial measures.[128] Jurisdictions with conflicting laws may need to amend legislation or adopt enabling provisions before joining, which could be a potential barrier to creating a single global FPS interlinking arrangement in the near-term. Continuous legal due diligence and engagement with domestic authorities are critical to detect and address changes affecting enforceability. Mutual recognition of the interlinking arrangement as a systemically important Financial Market Infrastructure can further enhance legal certainty.

Contractual safeguards, such as choice-of-law clauses, arbitration agreements, and flow-down obligations in domestic rulebooks, can also reduce ambiguity. While contracts alone cannot eliminate all conflicts, an internationally coordinated legal framework greatly strengthens the credibility, resilience, and enforceability of interlinking arrangements.

B. *Operational Risk*

Operational risk is the potential for disruption or loss from failures in systems, processes, personnel, or external events such as cyberattacks or natural disasters. In FPS interlinking, this risk is amplified by the complexity of coordinating real-time payments across multiple jurisdictions. Failures in the interlinking operator or any connected FPS, whether from outages, software bugs, human error, or cyber incidents, can delay or block cross-border transactions, creating ripple effects across the network. Since FPSs operate 24 hours a day, 7 days a week, 365 days a year, even brief disruptions can quickly erode public confidence.[129]

The cross-border nature of these arrangements increases the "attack surface" for operational failures, requiring a robust, multi-layered resilience framework. This should include strong cybersecurity measures, system redundancies, distributed data centers, and real-time data replication, with operators meeting the Committee on Payments and Market Infrastructures–International Organization of Securities Commissions' two-hour recovery-time objective for critical infrastructures.[130]

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128. EXPLORING MULTILATERAL PLATFORMS, *supra* note 59.
129. FINAL REPORT TO THE G20, *supra* note 20, at 11.
130. P.F.M.I., *supra* note 1, at 94.

FPSs should also maintain hot-standby connections to correspondent banking channels to reroute traffic during outages. The Single Rulebook should mandate coordinated incident response plans, clear communication protocols, and regular live-fire failover drills to ensure PSPs and merchants can switch rails smoothly. While correspondent banking may be slower or costlier, they remain essential for preserving service continuity and sustaining trust in the system.

C. *Fraud Risk*

Fraud risk is heightened in FPS interlinking due to real-time settlement, cross-border complexity, and the difficulty of freezing funds once moved abroad. Common threats include phishing, account takeover, identity theft, and social engineering. The speed of transfers enables fraudsters to withdraw or reroute funds across jurisdictions before detection.[131] Legal fragmentation compounds the challenge, with inconsistent account-freezing powers and varying application of the *bona fide purchaser for value without notice* rule,[132] which, like settlement finality, gives recipients confidence that legitimate payments cannot be unwound.

The Single Rulebook should explicitly enshrine the bona fide purchaser principle, protecting recipients who receive funds in good faith, while also ensuring fairness to defrauded payers through a capped reimbursement or insurance scheme. Such a scheme could take the form of a pooled fund contributed to by participating PSPs, a commercial insurance policy covering fraud losses, or a hybrid arrangement combining both approaches. The fund would cover verified fraud losses up to a defined limit, providing predictable compensation to victims without undermining settlement finality or creating moral hazard.

131. FINAL REPORT TO THE G20, *supra* note 20, at 12.

132. The bona fide purchaser for value without notice rule is a principle in property and commercial law which provides that a recipient who takes property or funds for value, in good faith, and without notice of any competing claim or defect in title, obtains full ownership rights and is generally protected from subsequent claims to recover the property. In payment systems, this rule underpins confidence that a legitimate recipient cannot have funds unwound even if the sender later alleges an error or fraud, subject to statutory or contractual exceptions such as settlement finality laws. *Bona fide purchaser,* CORNELL L. SCH. LEGAL INFO. INST., https://www.law.cornell.edu/wex/bona_fide_purchaser (last visited Apr. 5, 2026).

Fraud mitigation should adopt a layered defense model, combining multiple complementary safeguards: robust customer and system authentication, real-time transaction monitoring, shared blacklists of known fraudsters, automated alerts for suspicious activity, and protocols to temporarily freeze accounts during investigations. This multi-tiered approach should be reinforced through coordinated engagement with law enforcement and international agencies such as Interpol, ensuring that technical, operational, and legal measures work together to prevent, detect, and respond to fraud effectively across jurisdictions.

Where fraudulent funds remain in an account, the Single Rulebook should set a standard recovery process: first, a victim complains to their PSP, followed by investigation, notification to the receiving FPS or PSP, and a court or regulatory order in the receiving jurisdiction to freeze the account. Once frozen, the funds may be placed in escrow or returned to the victim, subject to the relevant legal framework. Since interlinking operators typically lack standing to obtain such orders directly, formal cooperation protocols between FPS operators and domestic regulators are essential. Clearly defined procedures, timelines, and role allocations within the Single Rulebook will enhance enforceability, accelerate recovery, and maintain public trust in the arrangement.[133]

D. *Financial Risks*

For lawyers and regulators drafting a Single Rulebook, the priority should be managing four interconnected financial risks: credit, liquidity, settlement, and systemic risk. Credit risk arises when a participant cannot meet obligations, e.g., if a PSP in one jurisdiction becomes insolvent before paying a debt owed to a PSP in another. Liquidity risk occurs when a participant is solvent but unable to fund payments on time, such as during a sudden foreign currency shortage in a thin weekend corridor, delaying transfers. Settlement risk emerges when one leg of a cross-currency payment settles but the matching leg fails, leaving the transaction incomplete. Systemic risk is the most severe, occurring when the failure of a major PSP cascades

133. RESULTS OF THE 2023 C.P.M.I. CROSS-BORDER PAYMENTS MONITORING SURVEY, *supra* note 18.

across multiple PSPs and FPSs, potentially freezing retail and wholesale payments across jurisdictions.

One way to mitigate these risks in an interlinking arrangement is to update all relevant accounts in real-time, crediting the payee's account only after the payer's account and PSP's account are debited and the payee's PSP's account is credited. This sequencing ensures funds are irrevocably transferred through every layer before final credit, reducing financial risks and enhancing certainty.

Implementing this approach across borders is challenging for FPSs that rely on deferred settlement, where transactions clear in scheduled batches rather than continuously.[134] Enabling real-time sequencing in such systems could require fundamental architectural changes, often costly and politically unpalatable. Since the goal of interlinking is to leverage, not replace, existing FPS infrastructure, more practical alternatives include prefunding, collateralization, or loss-sharing arrangements.

A robust interlinking framework would combine three safeguards, which should be enshrined in the Single Rulebook. First, PSPs should maintain prefunded balances in central-bank money, either with the FPS or in central bank reserve accounts, to eliminate exposure to PSP insolvency. Second, there must be a well-regulated mutual default fund or central counterparty clearing mechanism that can absorb losses exceeding an insolvent PSP's prefunding. Third, settlement finality legislation must ensure transfers become irrevocable once the payee's account is credited. In addition to prefunding, participants could pledge collateral, such as high-quality liquid assets or cash, to secure obligations that exceed prefunded amounts. This ensures that potential shortfalls caused by a participant's insolvency can be covered without disrupting settlement, providing an additional layer of protection alongside prefunded balances and mutual loss-sharing arrangements.

Together, prefunding, a loss-sharing backstop, and strong legal finality protections substantially reduce credit, liquidity, and settlement risks while preventing a single failure from escalating into systemic disruption.[135] This integrated approach

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134. FINAL REPORT TO THE G20, *supra* note 20, at 9.

135. "[T]he credit risk borne by the payee's PSP can be managed, for example, through limits (to the aggregate net positions of PSPs), frequent settlement cycles, loss-sharing agreements, collateralization and/or prefunding arrangements." *Id.* at 11.

strengthens resilience and stability while building the trust necessary for long-term success.

E. *FX Settlement Risk*

Cross-currency FPS interlinking requires an FX transaction whenever the payer and payee use different currencies. This involves exchanging one currency for another at an agreed rate.[136] A market maker, which is often a bank with accounts at both central banks, pays out the sold currency from one account and receives the bought currency into another.[137] These are processed as separate domestic transfers, recorded as an outgoing payment and incoming receipt.[138]

This process exposes the PSP or market maker to FX settlement risk, commonly known as Herstatt risk,[139] if one leg settles while the other fails. A payment-versus-payment (PvP) mechanism removes this risk by ensuring both legs settle simultaneously.[140] Where PvP is unavailable, time-zone differences or operational delays can create a settlement gap, leaving the delivering party exposed.

The most famous example occurred on June 26, 1974, with the collapse of Bankhaus Herstatt.[141] The German bank received Deutsche Mark payments from counterparties in Frankfurt during the European trading day, but before it could transfer the corresponding U.S. dollars in New York, it was declared insolvent and shut down at 3:30 PM German time.[142] Since the

136. "[C]ross-currency payments require an FX conversion at some point. In the correspondent banking model, this conversion is done by one or more correspondent banks along the payments chain. Often it is done by either the first (i.e., the payer's) bank or the last (i.e., the payee's) bank in the chain." Bech et al., *supra* note 32, at 59.

137. Ulrich Bindseil & George Pantelopoulos, *Towards the Holy Grail of Cross-Border Payments: The Interlinking Solution* (SUERF POL'Y BRIEF NO. 451, Oct. 27, 2022), https://www.suerf.org/publications/suerf-policy-notes-and-briefs/towards-the-holy-grail-of-cross-border-payments-the-interlinking-solution/.

138. *Towards the Holy Grail*, *supra* note 71, at 45–46.

139. FOREIGN EXCHANGE COMMITTEE, FOREIGN EXCHANGE TRANSACTIONS: EXECUTION TO SETTLEMENT RECOMMENDATIONS FOR NON-DEALER PARTICIPANTS 13 (2016).

140. Marc Glowka & Thomas Nilsson, *FX Settlement Risk: An Unsettled Issue*, BIS Q. REV., Dec. 2022, at 75, 76.

141. BANK FOR INT'L SETTLEMENTS, SETTLEMENT RISK IN FOREIGN EXCHANGE TRANSACTIONS 6 (Mar. 1996).

142. *Id.*

U.S. payment system had not yet opened, the dollar leg never settled, and counterparties suffered major losses.[143] The root cause was non-synchronous settlement across time zones, which is a vulnerability that persists where PvP is absent.[144]

In such events, counterparties become unsecured creditors of the insolvent bank, often recovering only a fraction of their claims after lengthy proceedings. This underscores the need for PvP or comparable safeguards in FPS interlinking to prevent settlement gaps from becoming principal losses.

1. *Payment-versus-Payment (PvP)*

The PvP mechanism was developed to prevent scenarios like the Herstatt crisis by ensuring both currency legs of an FX transaction settle simultaneously. Under PvP, the final transfer of one currency occurs only if the final transfer of the other currency happens at the same time.

Launched in 2002 by major central banks and FX market participants, the Continuous Linked Settlement (C.L.S.) system implements PvP for wholesale FX transactions across 18 major currencies.[145] C.L.S. connects directly to participating currencies' real-time gross settlement systems and holds central bank accounts for settlement, acting as an escrow-like intermediary.[146] In a typical C.L.S. transaction, e.g., a euro–USD trade between a German and a U.S. bank, each bank funds C.L.S. by transferring the sold currency to C.L.S.'s account at its central bank. C.L.S. releases each currency to the counterparty only once both legs are fully funded, eliminating settlement risk. If one party fails to fund, C.L.S. returns the other's funds, leaving only replacement cost risk[147] from re-entering the market at a different rate.

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143. *Id.*

144. *Id.*

145. *Continuous Linked Settlement*, DEUTSCHE BUNDESBANK, https://www.bundesbank.de/en/tasks/payment-systems/oversight/continuous-linked-settlement-626502 (last visited Apr. 5, 2026).

146. "Technically, PvP settlement can be achieved in different ways. It can be done through a direct link between two payment systems or through a common agent in the middle." Morten Bech, Umar Faruqui & Takeshi Shirakami, *Payments Without Borders*, BIS Q. REV., Mar. 2020, at 53, 62.

147. Replacement cost risk in the context of FX transactions refers to the potential financial loss a party faces when a counterparty fails to fulfill its obligations, forcing the affected party to enter a new transaction at potentially less favorable market rates.

C.L.S. operates under a contractual framework in which participants settle with C.L.S. rather than with each other. While highly effective in mitigating settlement risk, C.L.S. is not a 24/7 system; its operations are limited to overlapping real-time gross settlement hours, which can delay settlement. Moreover, C.L.S. is designed for wholesale FX, not retail or instant cross-border payments. Broader PvP adoption remains constrained by the operational, technical, and legal complexities of linking multiple currencies and jurisdictions. Although PvP and C.L.S. have significantly reduced risks like those of 1974, limitations such as restricted operating hours and residual replacement cost risk mean that settlement risk is mitigated, but not eliminated.

2. *Managing FX Settlement Risk*

FPS interlinking falls into three categories: single-currency, multi-currency, and cross-currency links, each with different implications for FX and settlement risk. In single-currency systems (e.g., euroSIC, SADC),[148] transactions settle in one designated currency, with FX handled bilaterally outside the link. Multi-currency systems (e.g., EU's TARGET Instant Payment Settlement)[149] process several currencies in parallel but require PSPs to manage conversions independently, meaning no cross-currency settlement or embedded FX risk. By contrast, cross-currency links (e.g., Directo a México, GCC's AFAQ)[150] embed FX conversion within the system, crediting payees in a different currency and thereby introducing settlement risk that operators must mitigate, ideally through PvP.

While PSPs manage FX risks externally in the first two models, unmanaged conversion risk in cross-currency arrangements can propagate across borders. While 75 percent of FPSs currently operate in a single currency, 43 percent of multi-currency systems plan to enable cross-currency settlement within five years, indicating a clear trend toward more integrated FX functionality across interlinked systems.[151]

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148. Bank for Int'l Settlements, Interlinking Payment Systems and the Role of Application Programming Interfaces: A Framework for Cross-Border Payments 11 (2022), https://www.bis.org/cpmi/publ/d205.pdf.

149. *Id.* at 10.

150. *Id.* at 11.

151. Results of the 2023 C.P.M.I. Cross-Border Payments Monitoring Survey, *supra* note 18.

FX settlement risk in such arrangements can be mitigated by combining prefunded central bank accounts, multilateral netting, and robust legal settlement finality. Each PSP should maintain prefunded balances, either at its domestic central bank or within the FPS, in every currency in which it provides FX conversion. These balances must be sufficient to cover obligations during real-time gross settlement closures, such as weekends or public holidays, when incoming cross-border transactions can accumulate.

At defined intervals, the FPS operator nets each PSP's outgoing and incoming flows, reducing liquidity needs.[152] For example, if Bank A owes Bank B $100 and Bank B owes Bank A $50, only $50 is transferred when the real-time gross settlement system reopens. If a PSP's net debit position exceeds its prefunded balance, the operator can automatically suspend further payouts until the account is replenished, ensuring no PSP can send more than it has funded.[153] This process can be automated via APIs and smart contract-based rules.[154]

Legal protection is essential. The Single Rulebook and domestic legislation should grant participating PSPs 'super-priority' creditor status in insolvency. For instance, Article 3 of the EU Settlement Finality Directive ensures that "netting shall be legally enforceable and, even in the event of insolvency proceedings against a participant, shall be binding on third parties."[155] This prevents insolvency administrators from unwinding settlement or netting arrangements if a PSP in the FPS interlinking framework fails.

Super-priority ranking ensures that net creditor PSPs are repaid first from an insolvent PSP's prefunded account, ahead of all other claims, and without waiting for lengthy insolvency proceedings. Funds in these accounts must be ring-fenced so they cannot be clawed back by insolvency administrators. Netting and set-off rights should also be explicitly enforceable, allowing a net debtor PSP to pay only the net amount owed rather than the gross value of unsettled transactions.

This structure mirrors the protections of C.L.S. bank's PvP model but extends them to cover both real-time and deferred

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152. A PLAYBOOK FOR ASEAN AND THE WORLD, *supra* note 28, at 17–24.
153. *Id.*
154. *Towards the Holy Grail*, *supra* note 71, at 45–46.
155. Directive 98/26/EC, *supra* note 41.

net settlement FPSs, enabling them to operate on a near-24/7 basis. Crucially, settlement finality must be recognized across all participating jurisdictions so that once a payment is executed, it is irrevocable, even if a PSP fails moments later. Without such statutory protection, cross-border payment flows remain legally vulnerable, undermining system integrity.

Dynamic liquidity safeguards, such as net debit caps and top-up triggers,[156] further strengthen resilience. When a real-time gross settlement is closed, and additional funding is needed, PSPs can pledge collateral to their central bank or draw on emergency liquidity lines. Adjustments to reserve requirements and standby funding mechanisms may also be necessary to support continuous operation. Together, these measures, including prefunding, netting, settlement finality, super-priority status, and liquidity support, create a 'synthetic PvP' framework for interlinked FPSs. By mitigating settlement risk and ensuring enforceable outcomes, this framework advances the G20 objective of faster, safer, and more transparent cross-border payments, even in environments without real-time PvP.

F. *Settlement Finality Risk*

From a legal standpoint, the key questions are when funds are available to the end user and when cross-border settlement achieves finality between intermediaries.[157] The Committee on Payments and Market Infrastructures–International Organization of Securities Commissions' Principles for Financial Market Infrastructures apply to systemically important payment systems, with Principle 8 requiring rules to define settlement

156. Dynamic liquidity safeguards, such as net debit caps and top-up triggers, are critical tools for maintaining resilience in fast payment systems. Net debit caps limit the maximum net debit position a participant can hold at any time, preventing any one participant from sending more payments than its available funds allow and thereby containing the risk of cascading liquidity shortfalls. Top-up triggers automatically prompt participants to add liquidity when balances fall below predefined thresholds, either through central-bank reserves or pre-arranged collateral, ensuring the system can continue processing payments without interruption. Together, these mechanisms both contain risk and sustain operational continuity, helping to prevent gridlock, maintain real-time settlement, and strengthen the overall stability of interlinked or high-volume payment infrastructures.

157. RECOMMENDATIONS AND KEY FEATURES, *supra* note 114, at 22.

finality as the moment a transfer becomes irrevocable and unconditional.[158]

For FPS interlinking arrangements, the Single Rulebook should state unequivocally that finality occurs once the payee's account is credited.[159] From that moment, the credit is irrevocable and cannot be unwound, *even if* the payer's PSP has not yet settled with the payee's PSP or later becomes insolvent.

If the payer's PSP fails before interbank settlement is completed, the payee's PSP should be reimbursed from the payer's prefunded central-bank account held by the link operator (whether in the payer's or the payee's jurisdiction). This arrangement gives the payee's PSP a super-priority claim over the insolvent PSP's other unsecured creditors. Similarly, if the payee's PSP enters resolution later that day, its insolvency administrator must not claw back the incoming credit under any zero-hour doctrine. By defining legal finality as the moment the payee's account is credited, the Single Rulebook insulates that entry from reversal once it appears on the payee's ledger.

The Single Rulebook should also require that the link operator connect FPSs only in jurisdictions with enforceable settlement finality legislation—or, where absent, on the basis of a legal opinion confirming that settlement finality is recognized for FPSs. It should further clarify that an intervening insolvency—whether of the payer's PSP, the payee's PSP, or either PSP's correspondent—must not affect the validity of the credit to the payee's account or the payee's PSP's account.

To reinforce compliance, additional incentives, such as fines or expulsion from the interlinking arrangement, should be available in the Single Rulebook to ensure that all participating jurisdictions adhere to this legal standard.

158. The P.F.M.I. defines Financial Market Infrastructures as "multilateral [system] among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions." P.F.M.I., *supra* note 1, at 7. Given that FPSs are designed to facilitate the clearing and settlement of retail payments, they clearly fall within this definition.

159. RECOMMENDATIONS AND KEY FEATURES, *supra* note 114, at 15, 22.

G. *A Central Counterparty Clearing Mechanism for Interlinking Arrangements*

A novel approach would be to establish a global or regional central counterparty (CCP) clearing system as the operator of an interlinked FPS. A central counterparty clearing mechanism would manage counterparty and settlement risk by novating all payment obligations, acting as buyer to every seller and seller to every buyer.[160] Thus, when PSP A initiates a payment to PSP B, and the operator accepts it, the obligation is extinguished and replaced with two contracts: PSP A owes the central counterparty clearing mechanism, and the central counterparty clearing mechanism owes PSP B. This ensures PSP B is paid even if PSP A defaults.

We suggest that payouts should come from prefunded resources, including each PSP's cash collateral at central banks in participating jurisdictions and a rigorously stress-tested default fund. Domestic settlement finality laws should give such claims super-priority, ensuring enforceability in insolvency.

Comparable frameworks already exist in financial markets: CCPs are subject to robust regulation under regimes like European Market Infrastructure Regulation[161] and *Dodd-Frank*,[162] and no major central counterparty clearing mechanism has defaulted since 1974. The value of cross-border transfers that a central counterparty clearing mechanism for FPSs would process is relatively small compared with derivatives markets. For example, global remittances[163] total roughly USD 2.5 billion per day, whereas the over-the-counter foreign exchange market trades approximately USD 7.5 trillion daily.[164]

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160. Chamorro-Courtland, *supra* note 118, at 520.

161. Commission Regulation 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC Derivatives, Central Counterparties and Trade Repositories, arts. 14–35, 2012 O.J. (L 201) 1.

162. Dodd-Frank Wall Street Reform and Consumer Protection Act, Pub. L. No. 111-203, 124 Stat. 1376 (2010); *see also* 7 U.S.C. §§ 7a-1, 7a-2 (2018) (implementing CCP registration and clearing requirements under Title VII).

163. Dilip Ratha, Sonia Plaza & Eung Ju Kim, *In 2024, Remittance Flows to Low- and Middle-Income Countries Are Expected to Reach $685 Billion, Larger than FDI and ODA Combined*, WORLD BANK BLOGS (Dec. 18, 2024), https://blogs.worldbank.org/en/peoplemove/in-2024–remittance-flows-to-low–and-middle-income-countries-ar.

164. BANK FOR INT'L SETTLEMENTS, MONETARY AND ECON. DEP'T, OTC FOREIGN EXCHANGE TURNOVER IN APRIL 2022 (Oct. 27, 2022), https://www.bis.org/statistics/rpfx22_fx.pdf.

A CCP could further enhance dispute resolution for erroneous but authorized payments. Instead of forcing senders into costly foreign litigation, unresolved claims could be routed through the central counterparty clearing mechanism, which, using its standing in multiple jurisdictions or pre-agreed arbitration, would wield far more leverage than individual claimants.

The model, however, carries costs. A cross-border CCP would require a common charter, governance, and supervisory college.[165] PSPs would need to post margin and contribute to a mutualized default fund, tying up capital. A CCP also creates concentration risk: its failure would halt settlement system-wide. Because the CCP would function as a central interconnection point linking multiple domestic FPSs and jurisdictions, disruption at this single node could propagate rapidly across borders, interrupting payment flows globally and potentially transmitting liquidity and operational shocks throughout the financial system.

Moreover, novation alone does not ensure PvP, as time-zone mismatches may cause the central counterparty clearing mechanism to release one leg of a transaction before receiving the counter-leg. Prefunded collateral mitigates but does not eliminate this risk, making synchronized settlement essential. If the central counterparty clearing mechanism also acts as an FX settlement agent, it must hold central bank accounts and maintain liquidity in all relevant currencies, which is a costly and operationally demanding task.

On balance, a central counterparty clearing mechanism could consolidate prefunding, collateral management, and statutory protections into a single clearing utility, significantly reducing credit and settlement risk. Its design could allow real-time and deferred-net FPSs to interoperate securely across time zones and cut-off times. With payments settled in central bank money and finality legally incontestable, recipients could use funds immediately, confident they cannot be clawed back. The trade-off is whether these benefits justify the costs of building

165. A supervisory college is a cooperative oversight arrangement composed of regulators from multiple jurisdictions responsible for supervising a cross-border financial institution or financial market infrastructure. The college facilitates information sharing, coordinated supervision, and joint risk assessment among national authorities to ensure consistent oversight of entities operating across borders. *See, e.g.*, P.F.M.I., *supra* note 1, (encouraging cooperative oversight arrangements for systemically important financial market infrastructures).

a new global central counterparty clearing mechanism infrastructure.

H. *Default Fund*

Where a fully-fledged central counterparty clearing mechanism is politically or financially untenable, an intermediate alternative is a mutual default fund. Each participating PSP would contribute a small, prefunded amount (perhaps as part of a membership fee) that would be scaled to its payment volumes into a ring-fenced pool, functioning like insurance. If an insolvency court freezes PSP A's prefunded balance before it can be released to PSP B, the mutual default fund immediately compensates PSP B and pursues recovery from the insolvent estate later. This model spreads loss contractually across the network without creating a new systemically important entity, keeps setup costs low, and reassures users that legitimate payments will be honored even when a counterparty fails.

I. *Systemic Risk*

Systemic risk in an FPS interlinking arrangement is smaller in scale, but not in consequence, when compared with wholesale real-time gross settlement systems or derivatives markets. For example, the UK Faster Payments Service handled 5.09 billion retail transfers worth £4.2 trillion in 2024, roughly £11 billion daily across 46 direct participants, with a single-payment cap of £1 million.[166] By contrast, the UK's high-value Clearing House Automated Payment System real-time gross settlement settled £542 billion in a single day alone in January 2022,[167] while the global "over-the-counter" (OTC) FX market turns over about USD 7.5 trillion daily.[168]

Other retail instant-payment rails show similar patterns. The U.S. Real-Time Payments network processed 343 million transfers worth USD 246 billion in 2024,[169] while Europe's TARGET

166. *Fast Payment System*, *supra* note 24.
167. BANK OF ENGLAND, REAL-TIME GROSS SETTLEMENT (R.T.G.S.) SYSTEM AND CHAPS ANNUAL REPORT 2021/22 (Sept. 6, 2022), https://www.bankofengland.co.uk/report/2022/rtgs-and-chaps-annual-report-2021-22.
168. OTC FOREIGN EXCHANGE TURNOVER IN APRIL 2022, *supra* note 164, at 4.
169. *Skyrocketing RTP® Network Growth Sets Stage for 2025*, THE CLEARING HOUSE (Jan. 8, 2025), https://www.theclearinghouse.org/payment-systems/Articles/2025/01/RTP_2024_Year_Records_01-08-2025.

Instant Payment Settlement settled 269.8 million payments in 2023 at an average of €641 each, roughly €170 billion in total.[170] Individually, these flows are modest next to wholesale payment systems. But when dozens of domestic FPSs are interconnected, an outage at the interlinking operator, or exhaustion of its default resources, could freeze retail payments across multiple countries and spread to the wider financial system.

Individually, most FPSs would not qualify as systemically important. Yet interlinking them could create systemically significant infrastructure, amplifying risk if a major participant's failure drains liquidity across the network. Such arrangements should therefore align with the Principles for Financial Market Infrastructures to bolster resilience and harmonize oversight, even absent formal systemic designation.[171]

J. *AML/CFT Risk*

All payment systems face risks of illicit finance, including money laundering, terrorist financing, and sanctions evasion. These AML/CFT risks are heightened in FPS interlinking due to greater jurisdictional diversity, differing data-sharing rules, and real-time execution. In such environments, reliably identifying both the originator and beneficiary becomes harder, particularly when participants follow divergent messaging standards or when inconsistent legal regimes block information exchange.[172]

Sanctions screening must occur for every transfer, even when the customer has passed standard KYC checks, because onboarding verification does not eliminate the risk that funds may be transferred to a sanctioned person or entity. In the United States, this obligation arises under sanctions administered by the Office of Foreign Assets Control, while in the EU sanctions regulations prohibit making funds or economic resources available to designated persons. At the international level, the FATF requires jurisdictions to implement targeted financial sanctions regimes, ensuring that financial institutions can identify and freeze assets linked to designated persons.

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170. EUR. CENT. BANK, TARGET ANNUAL REPORT: 2023, at 20–21 (June 2024), https://www.ecb.europa.eu/pub/pdf/targetar/ecb.targetar2023.en.pdf.
171. CONSIDERATIONS FOR GOVERNANCE AND OVERSIGHT, *supra* note 76, at 18.
172. EXPLORING MULTILATERAL PLATFORMS, *supra* note 59, at 11–13.

Sanctions lists (e.g., Office of Foreign Assets Control, United Nations, EU) are frequently updated; a customer cleared at onboarding may later appear on a list.[173] Regulators and PSPs must therefore screen all transfers in real-time, regardless of prior risk assessments. Thus, this requirement can delay cross-border transactions.

1. *Streamlining Compliance*

Given the speed of FPSs, AML/CFT compliance must be straight-through processable. This requires automating checks and sharing results across PSPs to minimize redundancy. In theory, if the payer PSP performs sanctions and AML screening at initiation and the payee PSP trusts the quality of that check, perhaps because both use the same compliance software or screening engines, a second check may be unnecessary.

To facilitate this, the Single Rulebook should establish common compliance standards for participating PSPs, including harmonized sanctions-screening protocols, minimum data requirements, and certification of approved screening engines. It could also provide for secure transmission of compliance flags or screening confirmations within the payment message itself, allowing the payee PSP to rely on the originating institution's verified checks where agreed standards are met. By promoting standardized compliance procedures, shared data formats, and mutual recognition of screening results, the Single Rulebook would reduce duplication, lower compliance costs, and enable real-time processing while maintaining robust AML/CFT safeguards.

A uniform compliance model, where results are shared between PSPs across borders, would significantly reduce friction and duplication.[174] PSPs could secure customer consent during onboarding to allow cross-jurisdictional information sharing strictly for AML/CFT compliance.

Project Nexus and the Bank for International Settlements Innovation Hub have explored embedding screening APIs directly into the interlinking hub to harmonize screening across jurisdictions and reduce duplicate checks.[175] However,

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173. A PLAYBOOK FOR ASEAN AND THE WORLD, *supra* note 28.

174. *Towards the Holy Grail*, *supra* note 71, at 42–43.

175. EXPLORING MULTILATERAL PLATFORMS, *supra* note 59, at 5–25; INTERLINKING FAST PAYMENT SYSTEMS, *supra* note 3.

implementing shared compliance infrastructure raises several legal and operational challenges. Harmonized data protection laws are essential because PSPs would need to transmit sensitive customer and transaction data across borders; without consistent privacy standards, data transfers could violate local regulations and expose participants to penalties. Clear liability rules are also critical: if a PSP fails to identify a sanctioned party or red-flagged transaction, the question arises whether the originating institution, the hub operator, or the receiving PSP bears responsibility. Ambiguity in liability could discourage participation or lead to costly litigation. Therefore, the Single Rulebook would need to specify standards for data handling, liability allocation, and risk-sharing among participants, ensuring that while compliance checks are streamlined and automated, the obligations and accountability of each PSP and the interlinking hub are clearly defined. This would provide legal certainty, protect against misuse of personal data, and maintain trust in the global interlinked FPS infrastructure.

2. *International Oversight*

International coordination is essential. All FPSs seeking to join the interlink should comply with the FATF Recommendations, with jurisdictions on the FATF greylist or blacklist[176] barred or automatically suspended to mitigate financial crime risk. This creates strong incentives for jurisdictions to adopt and enforce robust AML/CFT controls, reinforced by FATF's periodic evaluations of participating FPSs.

Under FATF Recommendation 40, jurisdictions undergo mutual evaluations roughly every 10 years, assessing the effectiveness of their AML/CFT frameworks, including laws, regulations, supervisory practices, and enforcement actions. These evaluations examine how well authorities implement customer due diligence, transaction monitoring, sanctions screening, and reporting of suspicious activity, as well as the quality of

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176. The FATF maintains two lists of jurisdictions based on their anti-money laundering and counter-terrorism financing (AML/CFT) compliance. The "blacklist" identifies high-risk jurisdictions with significant strategic deficiencies that pose a threat to the international financial system, while the "greylist" identifies jurisdictions under increased monitoring that have committed to address deficiencies but have not yet fully implemented FATF standards. Countries on the greylist are subject to enhanced scrutiny by financial institutions and regulators.

inter-agency coordination and oversight of cross-border payment systems. Countries found deficient in implementing FATF standards may be publicly identified on the greylist or blacklist, triggering enhanced scrutiny by global financial institutions. The resulting reputational and operational consequences create powerful incentives for jurisdictions to ensure that domestic FPSs comply with AML/CFT obligations and that cross-border interlinking arrangements are built on robust, enforceable safeguards.

The link operator must play an active oversight role by hosting a shared compliance scheme, monitoring anomalies across the transaction chain, and enforcing uniform technical standards for sanctions screening, KYC data, and error handling.[177] The Single Rulebook should formalize these responsibilities and grant the operator clear enforcement powers, including suspension or disconnection of non-compliant PSPs or FPSs. Automatic suspension should also apply if a jurisdiction is placed on the FATF greylist or blacklist or if a PSP fails to meet minimum compliance thresholds.

To integrate law enforcement coordination into a Single Rulebook for a global interlinked FPS, the framework should explicitly recognize and facilitate real-time communication and coordination between participating PSPs, national authorities, and international agencies such as Interpol. The Rulebook could require that flagged or suspicious transactions trigger automated alerts, which are securely transmitted to relevant Financial Intelligence Units and, where appropriate, to Interpol's secure systems. It should also establish protocols for the rapid freezing or recall of illicit funds, clarify the responsibilities of payer and payee PSPs in providing transaction data, and define timelines for regulatory or law enforcement intervention. By embedding these procedures into the governance of the interlinked FPS, the Single Rulebook would ensure that cross-border payments are not only efficient but also resilient to financial crime, enabling timely investigative action without undermining settlement finality or operational continuity.

177. EXPLORING MULTILATERAL PLATFORMS, *supra* note 59, at 5–25. Panicos Demetriades & Radosveta Vassileva, *Money Laundering and Central Bank Governance in the European Union*, 23 J. INT'L ECON. L. 509, 512 (2020) ("central banks usually have an important role in the fight against money laundering").

The Single Rulebook could establish a clear international oversight framework for the global interlinked FPS by defining the roles and responsibilities of participating jurisdictions, central banks, and supervisory authorities. It would require the creation of a multilateral supervisory college composed of regulators from all jurisdictions linked through the system, enabling coordinated supervision, risk assessment, and information sharing. The Rulebook could mandate standardized reporting requirements, regular audits, and stress testing to ensure consistent operational and financial resilience across borders. It would also set out escalation procedures for addressing non-compliance or systemic risks in any member jurisdiction, including temporary suspension of participation or corrective action plans. By codifying these arrangements, the Single Rulebook would provide legal certainty, harmonized oversight, and accountability, ensuring that cross-border interlinking operates safely while preserving financial stability and trust among all participants.

3. *Example of Good Practice: Singapore–Thailand PayNow–PromptPay*

The Singapore–Thailand PayNow–PromptPay linkage offers a practical case study in coordinated compliance. Both countries adopted real-time screening engines and imposed transaction caps (SGD 1,000 or THB 25,000) to mitigate the risk of funds being paid out before screening was completed.[178] Suspicious transfers were rejected before inclusion in the daily settlement file, preventing illicit funds from entering the financial system.[179]

While both countries adhered to FATF standards, they applied compliance differently: Singapore conducted AML/CFT screening at the transfer phase—just before funds are debited—whereas Thailand screened earlier, during the lookup phase, when the payer searched for the payee's name in the online banking interface. The linkage succeeded because both sides agreed on a minimum dataset, harmonized workflows, and a shared understanding of when and how screening would occur.

178. A Playbook for ASEAN and the World, *supra* note 28, at 7.
179. *Id.* at 17–24.

4. *AML/CFT Design Considerations for Interlinking Arrangements*

A Single Rulebook for a global interlinked FPS should go beyond general principles and mandate specific AML/CFT policies and operational structures to ensure harmonized compliance across jurisdictions. It could require participating PSPs to implement automated sanctions and AML screening at transaction initiation, specifying minimum standards for data fields, screening engines, and list refresh frequency. To reduce duplication and support straight-through processing, the Rulebook could mandate the use of shared compliance infrastructure, such as secure interlinking hubs or APIs, allowing payee PSPs to rely on verified checks performed by the originating institution under agreed standards. Customer due diligence requirements should be standardized, covering identity verification, beneficial ownership, and periodic risk assessments, aligned with FATF Recommendations.

The Rulebook could also prescribe clear escalation and reporting procedures, including the immediate notification of suspicious transactions, freezing protocols, and coordinated engagement with Financial Intelligence Units and international law enforcement, such as Interpol. In addition, it could require governance measures such as internal compliance oversight, regular independent audits, and reporting to a multilateral supervisory college. Liability and remediation structures could be mandated, including capped reimbursement schemes, insurance mechanisms, or mutualized default funds to protect victims of fraud and reduce operational risk. By combining prescriptive operational requirements with coordinated oversight and clear accountability, the Single Rulebook would ensure that cross-border FPS transactions are processed efficiently, securely, and in full compliance with international AML/CFT standards.

Beyond real-time screening and international coordination, future interlinking arrangements may adopt tiered, risk-based models. For example, transactions exceeding USD 10,000 might be routed into a delayed processing queue for additional scrutiny, with exceptions for pre-screened corporate clients with strong compliance records. Countries could also agree on minimum transaction limits or let users set personal caps, particularly for high-risk corridors prone to fraud, money laundering, or terrorist financing.

Regulatory alignment and technological innovation can reduce AML/CFT risk without undermining the speed of fast payments. The Bank for International Settlements' Project Mandala, for instance, explores automating the policy compliance layer, including sanctions, AML/CFT, and capital control, before a cross-border payment is initiated.[180] As regulators and link operators expand supervisory scope, these embedded safeguards can help ensure that FPS interlinking remains both efficient and secure.

Furthermore, liability for AML/CFT failures must be clearly defined in the Single Rulebook. Typically, each PSP remains responsible for its jurisdiction's compliance obligations, including screening and monitoring. However, if illicit transactions are processed due to negligence, such as a failure to screen a sanctioned party or complete due diligence, the negligent payer PSP, rather than the payee PSP, may be held liable by its regulator or other participants. The Single Rulebook should therefore specify provisions for dispute resolution, remediation, and cost allocation in such cases.

K. *Data Protection and Privacy Risks*

Protecting consumer data is essential in any FPS interlinking arrangement. Given the sensitivity of financial and personal data exchanged across jurisdictions, participants must adopt robust legal, contractual, and technical safeguards to comply with local data protection laws and international best practices.

At a higher level, inconsistent data privacy laws across jurisdictions remain a challenge for FPS interlinking. Some countries require in-country processing and storing (data localization), which can hinder features like pre-validation or confirmation-of-payee which might otherwise be helpful for FPS interlinking. The use of proxy identifiers, such as phone numbers or emails, also raises concerns, as these are often considered personally identifiable information (PII).

The Singapore–Thailand PayNow–PromptPay linkage illustrates good practice. Its Multi-Party Agreement permits banks to collect and process customer data solely to enable transfers.[181] This contractual restriction aligns with national privacy laws

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180. Interlinking Fast Payment Systems, *supra* note 3.
181. A Playbook for ASEAN and the World, *supra* note 28, at 16.

in both jurisdictions and requires banks to update their terms and conditions, privacy notices, and customer agreements to comply with the Multi-Party Agreement.[182] Customers are then given the choice to accept the updated terms, reinforcing transparency and consent as core principles.

To prevent misuse of personal data, such as name farming during proxy lookups, the Multi-Party Agreement implemented technical solutions. For example, when a sender in Singapore performs a proxy lookup using a recipient's mobile number, only a masked version of the recipient's name appears (e.g., 'TH**** LE*'), preserving anonymity while still confirming the correct payee.[183] Both countries also enabled opt-out functionality: Thai users could receive PromptPay transfers while opting out of cross-border ones, with similar enhancements underway in Singapore.[184] Additional controls include rate limits on proxy queries to prevent abuse.

Harmonizing national data privacy standards through frameworks like the Global Cross-Border Privacy Rules Forum[185] can ease compliance burdens and enable secure cross-border data-sharing.[186] Ultimately, the interlinking arrangement's Single Rulebook should clearly define privacy obligations, designate responsible parties, and mandate protections such as masking, opt-outs, and rate-limiting to strengthen user trust and legal certainty.

VII.
Selected Projects

Project Nexus is a flagship initiative led by the Bank for International Settlements' Innovation Hub with the central

182. *Id.* at 17–24.
183. *Id.* at 29.
184. *Id.* at 39.
185. The Global Cross-Border Privacy Rules (CBPR) Forum is an international initiative that establishes a voluntary framework for cross-border data transfers and privacy protection. Participating jurisdictions implement the CBPR system to certify companies that meet agreed-upon privacy standards, ensuring personal data is handled consistently across borders. The Forum provides guidance, oversight, and monitoring to promote trust in cross-border data flows while harmonizing privacy protections across multiple regulatory regimes. *About CBPRs*, Cross Border Privacy Rules System, https://cbprs.org/about-cbprs/ (last visited Aug. 3, 2026).
186. Interlinking Fast Payment Systems, *supra* note 3; *Global CBPR Forum: Building Digital Trust Through Partnerships*, Global CBPR Forum (2024), https://www.globalcbpr.org/.

banks of Singapore, Malaysia, Indonesia, the Philippines, and Thailand.[187] Project Nexus aims to interlink FPSs via a common API-based architecture and a centralized governance model.[188] Instead of deep harmonization, it relies on a 'service level description' for each country, codifying local rules and formats (e.g., alias usage, timeouts, dispute periods). Project Nexus is designed to enable cross-border payments from sender to recipient within 60 seconds in most cases, including through arrangements that support currency conversion via FX Providers.[189]

Another ambitious initiative is the TARGET Instant Payment Settlement system in Europe. The EU's TARGET Instant Payment Settlement enables instant settlement in central bank money across the euro area and is evolving into a multicurrency platform.[190] Sweden's RIX-INST is already integrated, allowing real-time cross-currency payments between the euro and Swedish krona.[191] The EU's TARGET Instant Payment Settlement also supports multiple Automated Clearing Houses and enables PSPs to shift liquidity across systems on a 24/7 basis, including weekends.[192] Denmark's kroner is next in line for integration, using cross-currency technical accounts held by central banks to facilitate settlement.[193]

Project Rialto, launched in 2024 by the Bank for International Settlements Innovation Hub, goes further by addressing FX and settlement frictions in retail cross-border payments. It's

187. *Project Nexus: Enabling Instant Cross-Border Payments*, B.I.S. (Aug. 27, 2025), https://www.bis.org/about/bisih/topics/fmis/nexus.htm.

188. *Id.*

189. *Project Nexus*, *supra* note 187, at 10.

190. Ulrich Bindseil, *TARGET Services: The backbone of European Financial Markets*, EUR. CENT. BANK (July 14, 2025), https://www.ecb.europa.eu/press/blog/date/2025/html/ecb.blog20250714~9676bef78b.en.html.

191. *Sweden Joins ECB's Instant Payments Settlement Platform*, EUR. CENT. BANK (Apr 3, 2020), https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200403_1~302d8928e3.en.html.

192. BANK FOR INT'L SETTLEMENTS, COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, INTERLINKING PAYMENT SYSTEMS AND THE ROLE OF APPLICATION PROGRAMMING INTERFACES: A FRAMEWORK FOR CROSS-BORDER PAYMENTS (July 2022), https://www.bis.org/cpmi/publ/d205.pdf; *Call for Expression of Interest in Supporting the Implementation of the TIPS Cross-Currency Service*, EUR. CENT. BANK (Jan. 17, 2025), https://www.ecb.europa.eu/press/intro/news/html/ecb.mipnews250117_1.en.html.

193. COMM. ON PAYMENTS AND MARKET INFRASTRUCTURES, *supra* note 192; *Call for Expression of Interest in Supporting the Implementation of the T.I.P.S. Cross-Currency Service*, *supra* note 192.

proof of concept leverages an automated wholesale FX conversion layer in central bank money, eliminating commercial bank risk from transactions. Participants include the Bank of France, Bank of Italy, MAS, and Bank Negara Malaysia.[194] Rialto could significantly reduce remittance costs.[195]

The Amplus concept, proposed by the Deutsche Bundesbank, targets remittance corridors specifically. It envisions central banks participating directly in a global multi-currency system, with domestic PSPs accessing it indirectly. The model integrates a KYC identifier and addressability framework to streamline compliance and expand access, especially for underbanked populations.

Together, these initiatives show the diversity of interlinking models,[196] allowing jurisdictions to adopt frameworks suited to their technical, legal, and policy contexts. At the same time, they provide valuable lessons that can inform the development of a Single Rulebook or the design of a new multilateral platform to interconnect existing FPSs.

While Project Rialto and Project Amplus showcase technical innovation in linking FPS and addressing FX and settlement frictions, they remain technical pilots rather than comprehensive legal frameworks. They do not establish binding liability rules, governance structures, or cross-border supervisory arrangements, leaving uncertainties around AML/CFT compliance, sanctions screening, settlement finality, and dispute resolution. Rialto's automated FX layer reduces commercial bank risk but does not clarify responsibility for participant failures or system disruptions, while Amplus lacks codified standards for compliance, data protection, or legal accountability. The key lesson is that technical interoperability alone is insufficient: a Single Rulebook must complement these projects with enforceable rules and harmonized standards to ensure legal certainty, operational resilience, and trust in a global interlinked FPS network.

Conclusion and Recommendations

This Article has presented the first comprehensive legal and policy framework for the safe and effective interlinking of FPSs

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194. Bank for Int'l Settlements Innovation Hub, Project Rialto-Technical Report: Improving Instant Cross-Border Payments Using Central Bank Money Settlement (Dec. 2025).
195. *Id.* at 31.
196. Consolidated Progress Report for 2024, *supra* note 8.

across borders. While recent initiatives have focused largely on technical pilots, this paper highlights the equally essential legal foundations needed to build trust, minimize risk, and achieve the G20's 2027 target of reducing remittance costs below three percent through cross-border FPS interlinking.

A central recommendation is the establishment of a consistent, enforceable framework across jurisdictions, supported by a Single Rulebook that defines settlement finality, liability, AML/CFT compliance, and dispute resolution. Settlement finality should occur when the payee's account is credited, ensuring legal certainty and protection against reversal. Risk management mechanisms, such as prefunded accounts, default funds, or central counterparty clearing mechanism models, must be paired with robust governance, enforceable sanctions, and clear legal opinions confirming enforceability. FATF-designated high-risk jurisdictions should be excluded until deficiencies are resolved.

Unlike wholesale central bank digital currencies or stablecoins, FPS interlinking leverages existing infrastructure, offering a faster and more practical path to cheaper, quicker, and more inclusive cross-border payments. Success will require international cooperation, led by central banks and supported by global institutions such as the Bank for International Settlements, Committee on Payments and Market Infrastructures, Financial Stability Board, International Monetary Fund, and World Bank. These bodies should define common standards, provide technical assistance, and ensure policy alignment, drawing lessons from Continuous Linked Settlement systems, SWIFT, and G20-led post-2008 OTC clearing reforms.

Regional hubs are likely to emerge first, serving as testbeds for harmonization before scaling to a global network. Political coordination remains the greatest challenge: aligning domestic laws on settlement finality, netting, data protection, and AML/CFT will be essential to avoid fragmentation.

Ultimately, the interlinking of FPSs is an international economic and public-policy imperative. Like central clearing for OTC derivatives, it will demand legal certainty, enforceable rulebooks, and sustained international cooperation. The reward is faster, safer, and more accessible cross-border payments for billions of people worldwide. These recommendations highlight how a Single Rulebook can provide a unified legal and governance framework, codifying obligations, liability, and supervisory arrangements to make cross-border fast payment systems both safe and efficient.

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THE ENFORCEABILITY OF CROSS-BORDER DERIVATIVES: OF *LEX MERCATORIA*, COURTS, AND DIALOGUE

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Cross-border Over-the-Counter (OTC) derivatives underpin global financial markets' stability. They are governed by the International Swaps and Derivatives Association Master Agreement (ISDA MA), an example of successful lex mercatoria. However, a string of lawsuits spanning the last decade and a half has cast doubt over the enforceability of cross-border derivatives. This Article delves into these disputes, finding three main causes. First, the ISDA MA primarily relies for its enforcement on the laws, and courts, of England and New York. This creates a vulnerability when other jurisdictions, and their laws, not chosen in the contract, come nonetheless into play, as mandatory laws, public policy, or sources of non-contractual liability. Second, English and Continental European courts disagree on how to approach cases where (i) a bank's client alleges that the bank failed to properly disclose a transaction's risks, or to give proper advice, resulting in liability, or contract invalidity, while (ii) the bank alleges that the contract includes representations that negate the existence of disclosure or advisory duties. Moreover, courts historically focused more on affirming their own (partial) jurisdiction over the contract claim (English courts) or the advisory/disclosure duties' claim (Continental European courts), instead of finding common ground. Third, numerous cross-border disputes have focused on the alternative issue of whether the banks' clients had "capacity" to celebrate "speculative" transactions. However, determining whether a transaction is speculative is an uncertain, often futile exercise, while "capacity" is a concept that makes

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compromise impossible. The outcome, negative for all parties, and risky for derivatives markets, nonetheless provides an opportunity for reflection. The Article outlines possible solutions to the impasse, emphasizing the importance of deeper inter-court dialogue, to pursue a more plural lex mercatoria for derivatives.

Introduction

Cross-border derivatives litigation has been prominent in the past fifteen years. Norwegian and Italian municipalities, German and Portuguese public corporations, and Dutch housing associations, to name a few, have all sought to annul the derivatives contracts they once entered into. In response, English courts have asserted their jurisdiction, and the application of English law; they have acknowledged foreign laws on capacity, but they have sought to protect the validity of the contract, or to mitigate the effects of voidness. This failed to ease the tension. Norwegian local corporations refused to pay the moneys owed; a Dutch housing association sued other banks, while being on the brink of collapse; and Italian municipalities engaged in unilateral action, contumacious behavior, and parallel proceedings. The picture is not pretty.

Look past each individual dispute, and there are common elements that explain the tensions. This Article presents the anatomy of those tensions, and courts' failure to resolve them. First, this Article describes how the governing contractual framework, the International Swaps and Derivatives Association (ISDA) Master Agreement (MA), an example of successful *lex mercatoria,*[1] is designed to be self-contained, and protected from external threats to its validity, by relying primarily on the jurisdiction of English and New York courts, and on English and New York law for its enforcement; yet, conversely, it is not good at facilitating dialogue between those laws, and courts,

1. This Article accepts the conception of *lex mercatoria* as an emerging set of legal norms, procedures, and institutions outside the state and its institutions as a basis. *See infra* Section I.A. However, instead of a "pure" version of this conception, where there is no state interference, the Article wishes to emphasize the opposite idea. Even the ISDA MA, a phenomenally successful privately originated set of rules, relies on courts, and national laws, for its enforcement, and raises issues of legitimacy, which, if not properly addressed, can ultimately undermine its effectiveness.

and other laws and courts, when such validity may legitimately be challenged.

This would not be a problem if there were essential agreement between English/New York courts and other courts. Unfortunately, at least courts in numerous Continental European countries consider that financial intermediaries, including banks, are subject to duties to adequately disclose the risk of a transaction, or give advice;[2] in contrast, courts in England see derivatives as a commercial contract, banks as normal commercial counterparties, and rely on contract representations that negate disclosure, advisory, or fiduciary duties. Even in the best-case scenario, this disagreement is tense and complex. The next two sections describe how the scenario has been far from the best.

Next, Section II discusses how litigating parties have pled their cases by appealing to courts' experience in each jurisdiction with banks framing the problem as one of contract representations before English courts, and clients as one of disclosure and advisory duties before courts in Continental Europe (with Italy offering the greatest number of cases). While this approach was strategically sensible for the parties, it meant that courts were presented with a half-truth at best, and, by accepting the parties' characterization, courts avoided the

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2. The terms "disclosure duties," "advisory duties," etc. used here encompass the doctrinal developments in jurisdictions such as Germany, Italy, France, Spain or the Netherlands, which emphasize financial intermediaries' duty to properly disclose the risks of a financial transaction, and, in case there is a relationship of financial advice, ensure that the product is suitable for the client's needs. Regulatory provisions, such as Articles 24 and 25 of Directive 2014/65/EU on Markets in Financial Instruments (MiFID) contemplate those duties. However, the scope of such duties goes beyond financial regulation, and shapes private law obligations, resulting in contract voidness, in the most serious cases, or giving remedies such as termination and/or damages. Some courts, e.g., in Germany, have developed such duties independently from regulation, while others have used regulatory provisions to shape pre-existing duties. These duties can apply with varying intensity to retail and other clients but are not automatically excluded if a client is non-retail. For a comparative analysis, see MARCO LAMANDINI & DAVID RAMOS MUÑOZ, FINANCE, LAW AND THE COURTS: FINANCIAL DISPUTES AND ADJUDICATION 310–319 (2023); DANNY BUSCH & CEES VAN DAM, A BANK'S DUTY OF CARE (2019); David Ramos Muñoz, *The Validity of Derivatives Contracts. Legal Doctrine as a Vehicle of Dialogues on 'Speculation'*, 26 EUR. BUS. ORG. L. REV. 141 (2025). I posit that these duties and doctrines are the form in which courts in Continental Europe have managed to transform fruitless criticism of "speculation" into a fruitful discussion about how risks should be properly managed.

real cross-border issue: the interplay between English contract representations and Continental European mandatory advisory duties. As such, the matters were settled by default, without discussing the full scope of the issue.

Section III considers how in the same vein, bank clients choose to plead before English courts that they lack capacity to subscribe speculative transactions. Again, this is strategically rational because arguments of "capacity" and "speculation" resonate with English precedent and make English courts potentially more inclined to acknowledge the role of clients' local personal laws. However, framing the conflict in terms of "capacity" and "speculation" is deeply problematic. Capacity is a rigid, uncompromising term: an entity has it, or not. "Speculation" is vague, and sometimes impossible to establish. Combined, they substantiate allegations that invariably make the client appear opportunistic and disingenuous, and force the court into an all-or-nothing position with the potential for contract voidness. English courts predictably sought to limit findings of voidness, or mitigate its consequences, but this, also predictably, has only deepened the schism.

Each actor has behaved as expected to avoid or mitigate a risk. However, the compounded effect has been miscommunication, misunderstanding, and mistrust. The conflict may blow over—or blow up, with a real risk that financial disputes may result in inconsistent judgments or migrate away from courts. This would be sad and unnecessary if dialogue is given a chance. Inter-court dialogue is a well-known idea, which encompasses both "formal" dialogue where national courts in one jurisdiction ask courts with a different jurisdiction to clarify a specific issue, and "informal" dialogue, where courts acknowledge other courts' views as a persuasive, if not authoritative source.[3] Section IV provides an onward perspective with potential avenues to move forward, and expresses a preference for a more dialogical, but still court-based system of dispute resolution and governance.

3. Marco Lamandini, David Ramos Muñoz & Violeta Ruiz Almendral, *The EMU and Its Multi-Level Constitutional Structure: The Need for More Imaginative 'Dialogue' Among and Across EU and National Institutions*, 47 LEGAL ISSUES ECON. INTEGRATION 311 (2020).

I.
DESIGN: THE SELF-CONTAINED FRAMEWORK OF THE ISDA AND THE CHALLENGES FOR CROSS-BORDER DIALOGUE

Cross-border derivatives disputes have typically involved contract documentation subject to the ISDA MA, which is seen as an example of *lex mercatoria*. Thus, it is useful to analyze: (A) how *lex mercatoria* protects its legitimacy and integrity; (B) how the ISDA MA's structural features promote legal certainty while limiting legal pluralism; (C) how core ISDA provisions on interpretation and validity interact with diverse legal traditions; and (D) the broader societal questions embedded in derivatives disputes that courts are often called upon to resolve.

A. *Lex Mercatoria and Transnational Law: Legitimacy and Integrity*

The *lex mercatoria* can find as many definitions as there are scholars. This Article accepts as a basis the conception of *lex mercatoria* as an emerging set of legal norms, procedures, and institutions outside the state and its institutions,[4] although under a broad view, which encompasses rules that may originate outside states and their institutions, but still rely on state institutions, like courts, for their application and enforcement.

It is difficult to adopt a conception of *lex mercatoria* without acknowledging the academic debates on its true nature, and role. Some scholars view it as a complement to national legal systems,[5] others see it as an autonomous system,[6] and still others focus on the conditions under which it could emerge as such an autonomous system.[7] Most views agree that, empirically speaking, a body of transnational commercial law exists. However, this body is not autonomous from the state; rather, it coexists

4. Ralf Michaels, *The True Lex Mercatoria: Law Beyond the State*, 14 IND. J. GLOBAL LEGAL STUD. 447, 448 (2007).

5. Michael Mustill, *The New Lex Mercatoria: The First Twenty-five Years*, 4 ARB. INT'L 86, 88 (1988).

6. KLAUS PETER BERGER, THE CREEPING CODIFICATION OF THE LEX MERCATORIA 61 (2010).

7. Gralf-Peter Calliess, *Reflexive Transnational Law: The Privatisation of Civil Law and the Civilisation of Private Law*, 23 ZEITSCHRIFT FÜR RECHTSSOZIOLOGIE 185 (2002); Gunther Teubner, "Global Bukowina: Legal Pluralism in the World Society" in GLOBAL LAW WITHOUT A STATE 3–28 (Gunther Teubner ed., 1997); Peer Zumbansen, *Piercing the Legal Veil: Commercial Arbitration and Transnational Law*, 8 EUR. L.J. 400, 418 (2002).

with and relies upon state structures, including legislatures and courts.[8]

Indeed, a search for a pure *lex mercatoria*, completely autonomous from the state, misses the bigger picture, where private transactions and disputes are regulated by a diverse ensemble of rules and procedures, which present varying degrees of state involvement in their production and application. These comprise, at the state-based end of the spectrum, treaties like the UN Convention on Contracts for the International Sale of Goods (CISG), which was produced by the United Nations Commission on International Trade Law (UNCITRAL), and relies on states' ratification to take effect,[9] or other UNCITRAL texts, such as the Model Law on International Commercial Arbitration. At the private end of the spectrum there are standard contract terms generated by trade organizations, such as the Baltic and International Maritime Council (BIMCO) rules governing maritime carriage[10] or the Uniform Customs and Practice for Documentary Credits (UCP).[11] Codified soft law norms, like the International Institute for the Unification of Private Law (UNIDROIT) Principles of International Commercial Contracts,[12] would be in between, as they rely on incorporation by private parties into their contracts, but also on arbitrators' and courts' recourse to them as a persuasive source of legal principles.[13]

The commonality across these transnational sets of rules is that they apply without fully or partly going through a formal legislative process, and thus a central concern is ensuring their

8. *See* Joanne P. Braithwaite, *Standard Form Contracts as Transnational Law: Evidence from the Derivatives Markets*, 75 Mod. L. Rev. 779 (2012) [hereinafter "*Standard Form Contracts*"]; *see also* Michaels, *supra* note 4; Royston Goode, *Usage and its Reception in Transnational Commercial Law*, 46 Int'l & Compar. L.Q. 1, 24–26, 34 (1997). *See generally* Joanne P. Braithwaite, The Financial Courts: Adjudicating Disputes in Derivatives Markets (2020).

9. United Nations Convention on Contracts for the International Sale of Goods, 1980.

10. BIMCO, *Contracts and Clauses*, https://www.bimco.org/contracts-and-clauses (last visited March 10, 2026).

11. ICC, Uniform Customs and Practice for Documentary Credits (UCP) 600 (2007).

12. UNIDROIT Principles of International Commercial Contracts (2016).

13. For databases on the influence of these instruments, see United Nations Comm'n on Int'l Trade L , Case Law on UNCITRAL Texts (CLOUT), UNCITRAL, https://uncitral.un.org/en/case_law (last visited June 29, 2025) [hereinafter "UNCITRAL"]; UNILEX, International Case Law & Bibliography on the UNIDROIT Principles and CISG, UNILEX.info, https://unilex.info/ (last visited March 10, 2026) [hereinafter, "UNILEX"].

legitimacy.[14] This is granted in the case of treaties and Model Laws, where there are legislative procedures to ratify or adopt, even if they do not produce the norm from scratch. Even so, state-based international bodies, like UNCITRAL or UNIDROIT try to bolster their "input" legitimacy by ensuring a plurality of views in the working groups that formulate the rules.[15] Other bodies try to involve "stakeholders."[16] Privately originated, contract-based rules, closer to the idea of *lex mercatoria,* often spread because a well-organized group, typically of specialized service-providers, requires their acceptance by users as a precondition for contracting.[17] However, these organizations also try to ensure some "participation" of different groups and interests in the committees that draft and update the rules.[18]

Perhaps the most important source of legitimacy is their application of international commercial rules, including *lex mercatoria,* by a plurality of courts, which strengthens the widespread acceptance. Many transnational law texts foster this "output" legitimacy by relying on a decentralized system of application and enforcement by courts, e.g., the success of the CISG or the UNIDROIT principles is due, in large part, to their application by thousands of court decisions in many jurisdictions, on top of their application by arbitral tribunals. Privately

14. Ralf Michaels & Nils Jansen, *Private Law Beyond the State? Europeanization, Globalization, Privatization*, 54 AM. J. COMPAR. L. 843, 879–80 (2006).

15. The 70 Member States of UNCITRAL represent African, Asian, Eastern European, Latin American and Caribbean, Western European and other States. *See* United Nations Comm'n on Int'l Trade L., *Origin, Mandate and Composition of UNCITRAL*, UNITED NATIONS, https://uncitral.un.org/en/about/faq/mandate_composition/history (last visited March 10, 2026). There is participation by delegates from countries with different socio-economic background and legal traditions. UNIDROIT's 63 members include less African countries (4), and more from Asia, South and North America and Europe. *See* Int'l Inst. for the Unification of Priv. L., *Membership*, UNIDROIT, https://www.unidroit.org/about-unidroit/members-states-2/ (last visited June 29, 2025). Working Groups are formed based on expertise, but observers from organizations representing different legal traditions also participate.

16. Caroline Bradley, *Private International Law-Making for the Financial Markets*, 29 FORDHAM INT'L L.J. 127, 133 (2006). The Basel Committee on Banking Supervision (BCBS) is responsible for the development of common standards of prudential regulation, or the Organization for Economic Cooperation and Development (OECD) customarily gather the views of stakeholders from industry and civil society.

17. *E.g.*, BIMCO or UCPs.

18. Andreas Maurer, *The Concept of Participation in the Making of Transnational Law: Legitimization and Normativity in the Transnational Sphere, in* REGULATORY HYBRIDIZATION IN THE TRANSNATIONAL SPHERE 203 (Paulius Jurčys, Poul F. Kjaer & Ren Yatsunami eds., Brill 2013).

produced contract texts, like the UCP, have also given rise to hundreds of decisions.

Application by a plurality of courts bolsters output legitimacy but presents a risk for the uniform application, and integrity of the instrument. If different courts and bodies interpret and apply the same terms and provisions differently, this compromises the aim to harmonize and enhance legal certainty. Legal concepts or rules that are uniform in theory, but diverging in practice may increase unpredictability, and undermine the effectiveness of the text. There is no silver bullet to prevent this from happening. Many law texts such as those by UNCITRAL and UNIDROIT include a "uniformity clause," with a mandate to interpret the text in a uniform manner in light of its international character. An example is CISG Article 7:

> *(1) In the interpretation of this Convention, regard is to be had to its international character and to the need to promote uniformity in its application and the observance of good faith in international trade.*
>
> *(2) Questions concerning matters governed by this Convention which are not expressly settled in it are to be settled in conformity with the general principles on which it is based or, in the absence of such principles, in conformity with the law applicable by virtue of the rules of private international law.*[19]

This mandate is accompanied by official and unofficial efforts to assist courts and arbitral tribunals applying and interpreting uniform texts, by compiling past court rulings and arbitral awards,[20] which offers a persuasive body of precedent, by systematically studying them (e.g., through digests),[21] which helps spot common trends and better interpretations, and by trying to offer authoritative opinions to foster converging interpretations.[22] Studies suggest that progress, though uneven, is undeniable.[23]

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19. Although the CISG is part of the state-based end of the spectrum of transnational law, the UNIDROIT Principles of International Commercial Contracts (2016), which are soft law, and rely on parties and arbitrators for their application, include an analogous clause in their Article 1.6.

20. UNCITRAL, *supra* note 13; UNILEX, *supra* note 13.

21. UNCITRAL, *supra* note 13; UNILEX, *supra* note 13.

22. *E.g.*, CISG Advisory Council, CISG Advisory Council Advisory Opinions, CISG https://www.cisgac.com/ (last visited March 10, 2026).

23. For a thorough account, which extols the examples of good practice, but does not spare the reader the instances of bizarre, ethnocentric applications of the CISG, see ANSELMO MARTÍNEZ CAÑELLAS, LA INTERPRETACIÓN Y

Contract-based commercial law is, typically, subject to fewer initiatives to foster convergence, but some norm-producing bodies monitor how courts apply their instruments, especially when this happens across numerous jurisdictions.[24] Some experiences are encouraging. Consider documentary credits under UCPs, wherein civil law courts struggle to characterize a documentary credit within their legal concepts, and yet the rules work well in civil law countries.[25] In those countries courts adjust legal principles like good faith or fraud to preserve the UCPs' effectiveness.[26] Common law courts apply the "fraud" exception narrowly, but with varying approaches.[27] Thus, a plurality of legal frames presents a manageable source of legal risk, and a system of decentralized application by courts from different jurisdictions, representing a diversity of legal systems, can still result in an instrument that is uniformly applied in practice.

B. *The ISDA Framework as Lex Mercatoria: Mitigating Legal Risk at the Expense of Plurality*

The ISDA framework's widespread acceptance, and its contribution to legal certainty in the global derivatives market,[28] make it a successful, if unique, example of *lex mercatoria*.[29]

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la integración de la Convención de Viena sobre la compraventa internacional de mercaderías, de 11 de abril de 1980 (Comares 2004).

24. *E.g.*, ICC Comm. on Banking Tech. and Prac., *Position Papers No. 1, 2, 3, 4 on UCP 500* (Sept. 1, 1994).

25. Malgorzata Karolina Chmielewska, *Documentary Letter of Credit: A Pivotal Case for the Inefficiency of the Law of Contract*, 35 Revue Générale de Droit 487, 530 (2005). In Spain, a Supreme Court decision suggested that the UCPs could be a sort of "usage," but they are more commonly applied as standard terms, which complete the contract. J.T.S., Judgment of Oct. 27, 1984 (R.J., No. 1984/5076) (Spain).

26. Gralf-Peter Calliess & Insa Stephanie Jarass, *Private Uniform Law and Global Legal Pluralism, in* The Oxford Handbook of Legal Pluralism 746 (Paul Schiff Berman ed., Oxford University Press 2020); Sang Man Kim, *The Fraud Exception in a Documentary Credit (or Letter of Credit) under Korean Law*, 136 Banking L.J. 587 (2019).

27. Gao Xiang & Ross P. Buckley, *A Comparative Analysis of the Standard of Fraud Required Under the Fraud Rule in Letter of Credit Law*, 13 Duke J. Compar. & Int'l L. 293 (2003).

28. Gabriel V. Rauterberg & Andrew Verstein, *Assessing Transnational Private Regulation of the OTC Derivatives Market: ISDA, the BBA, and the Future of Financial Reform*, 9 Va. J. Int'l L. 54 (2013); Maciej Konrad Borowicz, *Private Power and International Law: The International Swaps and Derivatives Association*, 8 Eur. J. Legal Stud. 46 (2015).

29. *Standard Form Contracts*, *supra* note 8.

The ISDA framework relies on parties' incorporation by reference,[30] and thus on decentralized party autonomy, but its text is updated following a centralized process by a non-state actor in the ISDA. Its application relies on (i) national decision making by specialized bodies;[31] (ii) national courts applying national law;[32] and (iii) national courts or international arbitrators for the application of the uniform contract framework.[33] Thus, the fact that the key ISDA provisions are primarily interpreted and applied by courts belies simplified conceptions of *lex mercatoria* as mostly merchant-based and court-shy.[34] In reality, courts are essential actors in the process.

In terms of legitimacy and plurality, the ISDA has over one thousand members globally, including representatives from both sell-side and buy-side.[35] It has commissioned legal opinions in over eighty jurisdictions about the enforceability of close-out netting,[36] and actively engages with legislators[37] and courts,[38] to ensure the enforceability of such netting provisions.

However, some point to the ISDA's rulemaking as influenced by the producer side, specifically large dealer banks.[39]

30. John Biggins, *'Targeted Touchdown' and 'Partial Liftoff': Post-Crisis Dispute Resolution in the OTC Derivatives Markets and the Challenge for ISDA*, 13 GER. L.J. 1323 (2012).

31. *E.g.*, Determinations Committees (DCs) for "Events of Default." *See* John Biggins & Colin Scott, *Licensing the Gatekeeper? Public Pathways, Social Significance and the ISDA Credit Derivatives Determinations Committees*, 6 TRANSNAT'L LEGAL THEORY 370 (2015).

32. *E.g.*, collateral enforcement, or close-out netting. *See* Biggins, *supra* note 30.

33. This includes cases where the issue is the enforceability of the derivative transactions, or the ISDA MA, such as those examined in the present Article, as well as cases where the issue is the interpretation of specific ISDA MA provisions, e.g., on the calculation of moneys owed post-default in Lomas v. JFB Firth Rixson Inc., [2012] EWCA (Civ) 419.

34. *Standard Form Contracts*, *supra* note 8.

35. *About ISDA*, https://www.isda.org/about-isda/ (last visited June 29, 2025).

36. *Id.*

37. *Status of Netting Legislation*, ISDA: SAFE, EFFICIENT MKT., https://www.isda.org/2020/07/03/status-of-netting-legislation/ (last visited June 29, 2025).

38. For example, through amicus briefs. Amicus Briefs, ISDA: SAFE, EFFICIENT MKT., https://www.isda.org/category/legal/amicus-briefs/ (last visited June 29, 2025).

39. ISDA's original name was the International Swap Dealers' Association, and changed to its current name in 1993, to signal its greater openness, although dealers remain the only ones with full voting privileges. *See* Anna Gelpern, *Boilerplate against Bailouts: A Regulatory Ride Fallacy* in HIDDEN FALLACIES IN CORPORATE LAW AND FINANCIAL REGULATION: REFRAMING THE

Such "tilt" towards the producer side is present in other contract-based examples of *lex mercatoria*.[40] Other scholars also point out that the ISDA contract provisions are more inspired by the common law tradition,[41] and thus, the limited onboarding of other legal traditions, such as civil law, makes the rules not too pluralistic.

This strategy of centralization helps to protect the integrity of the instrument: if the meaning of its clauses is shaped by a relatively close-knit group of lawyers from the same legal tradition, coherent interpretation and application is strengthened.

This centralization strategy further extends to the application of the ISDA framework. The ISDA Master Schedule shows a preference for English or New York law,[42] and courts.[43] Although

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MAINSTREAM NARRATIVES 253–89 (Alexandra Andhov, Claire A. Hill & Saule T. Omarova eds., Bloomsbury Publishing 2025). There has traditionally been a narrower group of large banks that are particularly active in the derivatives market, including JP Morgan, Goldman Sachs, Bank of America Merrill Lynch, Morgan Stanley, Barclays, Deutsche Bank, BNP Paribas, Société Générale, Credit Suisse, or Nomura. *See* DAVID MENGLE, CONCENTRATION OF OTC DERIVATIVES AMONG MAJOR DEALERS 2–4 (2010), https://www.isda.org/a/8PDDE/concentrationrn-4-10.pdf. Scholars agree that the producer side and especially large dealers hold much influence in the process of generating ISDA's new rules. John Biggins & Colin Scott, *Public-Private Relations in a Transnational Private Regulatory Regime: ISDA, the State and OTC Derivatives Market Reform*, 13 EUR. BUS. ORG. L. REV. 317, 324 (2012); Anna Gelpern & Mitu Gulati, *CDS Zombies*, 13 EUR. BUS. ORG. L. REV. 347, 350 (2012).

40. *E.g.*, BIMCO's bill of lading, or UCPs (noting that these are contract-based rules). *See supra* Section I.A. For a general description of the balance of private interests in transnational private regulation, see Daniel Mügge, *Private-Public Puzzles: Inter-firm Competition and Transnational Private Regulation*, 11 NEW POL. ECON. 177, 180–181 (2006); Fabrizio Cafaggi, *New Foundations of Transnational Private Regulation*, 38 J. L. & SOC'Y 20 (2011).

41. Biggins & Scott, *supra* note 39, at 325.

42. Clause 13 of the ISDA MA 2002 refers to the law indicated in the Master Schedule, and the Master Schedule, Part 4, letter (h) refers to either English law or the law of the State of New York not including their conflict-of-laws. The choice of law extends to non-contractual obligations such as concurrent duties of care or tortious acts leading to the formation of the contract. ISDA Choice of Court and Governing Law Guide, Annex D (2018). This is permitted by, for example, Article 14(1) of the Rome II Regulation, and by New York state and federal courts.

43. The ISDA model clause includes a default choice for English courts, if English law applies, or New York courts and the U.S. District Court (Borough of Manhattan, New York City) if New York law applies. *See* ISDA Master Agreement, cl. 13 (2002). English courts or New York courts are chosen as the non-exclusive jurisdiction, or as the exclusive jurisdiction, if only exclusive jurisdiction clauses are admissible. ISDA Choice of Court and Governing Law Guide, 1.12 and Annexes A–B (2018). Regarding exclusive choice of

the parties could hypothetically change this preference, default rules are sticky.[44] The ISDA elaborated an amendment document to migrate to French or Irish law and courts after Brexit,[45] as well as a series of model arbitration clauses.[46] However, any choice beyond these limited exceptions is difficult to implement in practice; if a party tried to draft the clause differently, this would be seen by the party relying on the uniform template (typically, the bank) as a source of risk, and thus strongly resisted. This framework reflects a perception that English and New York courts are a source of certainty, while other jurisdictions are a source of legal risk.[47]

This is not a unique option. BIMCO, for example, includes a Model Dispute Resolution clause that favors English law, albeit with a lean towards arbitration,[48] as do standard commodities contracts by the Grain and Feed Trade Association (GAFTA) for both arbitration and matters falling outside arbitral proceedings.[49]

Sacrificing plurality in favor of predictability is a feature of so-called "commercial boilerplate," of which the ISDA documentation is the quintessential example.[50] If certain terms

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court agreements, Article 1 (1) of the Hague Convention on Choice of Court Agreements states that: "This Convention shall apply in international cases to exclusive choice of court agreements concluded in civil or commercial matters." Article 3 of the Convention defines exclusive choice of court agreements.

44. *See* Cass R. Sunstein, *Deciding by Default*, 162 U. PA. L. REV. 1, 5 (2013); Julian Nyarko, *Stickiness and Incomplete Contracts*, 88 U. CHI. L. REV. 1 (2021); Stephen Choi, Mitu Gulati & Robert Scott, *The Black Hole Problem in Commercial Boilerplate*, 67 DUKE L.J. 1 (2017).

45. This model document included a new attachment providing for the amendment of the governing law clause, to subject the agreement to Irish or French law, and a jurisdiction clause, giving the parties the option to subject themselves to the exclusive, or non-exclusive, jurisdiction of Irish courts, or the Commercial Court of Paris and the Paris Court of Appeal. ISDA Amendment of the ISDA 2002 Master Agreement, attachs. 1 & 2 (2020).

46. ISDA Arbitration Guide (2018).

47. Biggins & Scott, *supra* note 39, at 326.

48. *See* BIMCO, Dispute Resolution Clause (2017), https://www.bimco.org/contractual-affairs/bimco-clauses/earlier-clauses-list/dispute_resolution_clause_2017/ (last visited June 29, 2025).

49. Stephen J. Choi & Mitu Gulati, *Contract as Statute*, 104 MICH. L. REV. 1139 (2006). For the point that boilerplate clauses can create discontinuities between the parties' intent and the legal term, see Gregory Klass, *Boilerplate and Intent*, 82 L. & CONTEMP. PROBLEMS 105, 106 (2019).

50. Klass, *supra* note 49; MITU GULATI & ROBERT E. SCOTT, THE THREE AND A HALF MINUTE TRANSACTION: BOILERPLATE AND THE LIMITS OF CONTRACT DESIGN (The University of Chicago Press 2012).

apply on a market-wide basis, any interpretation will have market-wide implications, hence the greater need for certainty.[51] Such enhanced need for certainty is, in this case, also linked to national policy goals like financial stability.[52]

Thus, some authors posit that when boilerplate clauses apply, rather than ascertaining the parties' intent in individual cases, courts should interpret "contract as statute" and prioritize consistent interpretation across cases while deferring to the original intent of the drafters and the opinion of standard-setting bodies.[53] Without going that far, the ISDA drafters chose New York and English courts because they thought that those courts would differ little in their interpretation of the ISDA terms,[54] and some courts acknowledge the system-wide implications as further supporting enhanced certainty.[55]

The question remains as to whether sacrificing plurality in favor of stability is equally justified when the issue concerns not the contract's interpretation, but its validity and enforceability.

C. *From Interpretation to Validity Protections: The ISDA's Agreement and Representations and Warranties*

The ISDA model follows the common law tradition when protecting the integrity of the instrument not only from spurious interpretations, but also from threats to its validity through the use of representations and warranties.

The ISDA MA's core representations clauses provide that each party has the requisite "Status," meaning that it validly exists and is duly organized under applicable law.[56] Each party further represents that it has the necessary "Powers" to enter into and

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51. LAMANDINI & RAMOS MUÑOZ, *supra* note 2, at 233.

52. *Id.*

53. Choi & Gulati, *Contract as Statute*, *supra* note 49, at 1139; Maciej Konrad Borowicz, *Contracts as Regulation: The ISDA Master Agreement*, 16 CAP. MKTS. L.J. 72 (2021).

54. Jeffrey Golden, *Interpreting ISDA Terms: When Market Practice is Relevant, as of When Is It Relevant?* 9 CAP. MKTS. L.J. 299, 304–05 (2014) ("At the time that the ISDA Master was first published, the drafters felt that there was likely to be little variation in the way that an English or a New York court would construe the terms of the agreement.").

55. LAMANDINI & RAMOS MUÑOZ, *supra* note 2, at 328–336. *See also* Lomas v. JFB Firth Rixson Inc., [2012] EWCA (Civ) 419, ¶¶ 42–44 (2012); *In re* Lehman Bros. Holdings Inc., No. 08–13555 SCC, 2015 WL 7194609, at *1 (Bankr. S.D.N.Y. Sept. 16, 2015).

56. ISDA Master Agreement, cl. 3 (2002).

execute the agreement; that its execution and performance will involve "No Violation or Conflict" with any applicable law, constitutional documents, or contractual restrictions; that all required "Consents" have been obtained; and that all conditions necessary for its "Obligations" to be legally binding are met.[57] The MA also contains an "Entire Agreement" clause and resolves questions of interpretation through the self-referenced interpretation of the Single Agreement, formed by the ISDA MA, its Master Schedule (with preference over the MA) and the transaction Confirmations (with preference over the Master Schedule).[58] The ISDA Master Schedule's "Additional Representations" provide that (i) each party enters every future transaction under its own independent decision, not relying on the other party's advice or recommendation; (ii) each party understands and accepts the transaction's terms, conditions and risks; and (iii) no party is acting as a fiduciary for or adviser to another party.[59]

Such clauses, typical of common law countries, are well-known in international commercial contracts. However, their meaning and weight vary depending on the jurisdiction. Common law courts tend to consider "entire agreement" clauses conclusive,[60] or at least attach significant weight to them,[61] and reinforce them with the parol evidence rule excluding extrinsic evidence. Transnational law texts such as CISG or UNIDROIT Principles differ from this approach. First, they admit negotiations, practices, or subsequent conduct as valid elements to interpret both the contract and the parties' intent,[62] which is an implied rejection of the parol evidence rule.[63] Then, the CISG and UNIDROIT Principles admit entire agreement or merger

57. *Id.* cl. 3(a)(i)–(v).

58. *Id.* cl. 9 (Miscellaneous) (a) (entire agreement), cl. 1 (Interpretation).

59. Schedule to the 2002 ISDA Master Agreement, pt. 4 (Miscellaneous) Additional Representation, [(i)] Relationship between the Parties (1)–(3) (2002). The Master Schedule can be incorporated into the agreement.

60. David McLauchlan, *The Entire Agreement Clause: Conclusive or a Question of Weight?*, 128 L.Q. Rev. 521 (2012); Benvenuti Oil Co. v. Foss Consultants, Inc., 781 A.2d 435 (Conn. App. Ct. 2001).

61. Bonfire, LLC v. Zacharia, 251 F. Supp. 3d 47 (D.D.C. 2017).

62. CISG, *supra* note 9, art. 8(3); UNIDROIT Principles, *supra* note 12, arts. 1.2, 4.3.

63. As courts in common law jurisdictions have acknowledged. *See* MCC-Marble Ceramic Ctr., Inc. v. Ceramica Nuova D'Agostino, S.P.A., 144 F.3d 1384 (11th Cir. 1998); Mitchell Aircraft Spares, Inc. v. Eur. Aircraft Service AB, 23 F. Supp. 2d 915, 919–21 (N.D. Ill. 1998).

clauses, but do not view them as conclusive.[64] Article 2.1.17 of the UNIDROIT Principles (*Merger clauses*) states that:

> A contract in writing which contains a clause indicating that the writing completely embodies the terms on which the parties have agreed *cannot be contradicted or supplemented by evidence of prior statements or agreements.* However, *such statements or agreements may be used to interpret the writing.*[65]

Thus, while merger clauses are admissible, courts may still use extrinsic evidence to ascertain whether the merger clause expresses the parties' actual intent.[66] The Principles of European Contract Law distinguish between individually negotiated merger clauses, which exclude prior statements, and boilerplate ones, which only establish a rebuttable presumption.[67]

Representations and warranties (R&Ws) for their part have a distinct legal meaning in common law.[68] Conversely, civil law countries and uniform law lack a distinct legal framework for R&Ws. Courts and scholars can classify them as part of the provisions of contract remedies for breach of contract obligations,[69]

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64. CISG-AC Opinion No. 3, *Parol Evidence Rule, Plain Meaning Rule, Contractual Merger Clause and the CISG* (Rapporteur: Richard Hyland) (2004); UNIDROIT Principles, *supra* note 12, art. 2.1.17.

65. UNIDROIT Principles, *supra* note 12, art. 2.1.17 (emphasis added); *see also* CISG-AC, CISG-AC Opinion No. 3, *Parol Evidence Rule, Plain Meaning Rule, Contractual Merger Clause and the CISG* (Rapporteur: Richard Hyland) (2004).

66. TeeVee Toons, Inc. v. Gerhard Schubert GmbH, No. 00 Civ. 5189(RCC), 2006 WL 2463537, at *8 (S.D.N.Y. Aug. 23, 2006) (applying the CISG to refuse summary judgment as there was a genuine issue of fact regarding whether the parties shared the intent to be bound by merger clause).

67. OLE LANDO & HUGH BEALE, PRINCIPLES OF EUROPEAN CONTRACT LAW, art. 2:105 (Kluwer Law International 2000) [hereinafter PECL].

68. "A representation is a statement of fact made by the representor to the representee on which the representee is intended and entitled to rely as a positive assertion that the fact is true. In order to determine whether any representation was made by a statement . . . ." Cassa di Risparmio Della Repubblica di San Marino Spa v. Barclays Bank Ltd [2011] EWHC (Comm) 484 [215] (Eng.). Which, if false, can give rise to a claim for misrepresentation, while a warranty is a promise or a contractual undertaking. *See, e.g.*, Credit Suisse International v. Stichting Vestia Groep, [2014] EWHC 3103 [296]–[300] (Eng.). This normally gives rise to a damages claim and potentially a right of termination.

69. In France, *see* Cour de cassation [Cass.] [supreme court for judicial matters] com., Jan. 25, 2017, No. 15-17137, 15-18246 (Fr.) (dismissing a damages claim for breach of warranty, though the facts suggest that it was an indemnity).

non-conformity,[70] or other obligations or ancillary commitments depending on the clause's function in the circumstances.[71]

Here, the ISDA MA's reliance on the common law tradition, coupled with its strategy of centralization, at the expense of plurality, becomes controversial. Derivatives' enforceability is subject to doctrinal developments that are the result of a delicate evolution process that differs between jurisdictions.

D. *Derivatives, Speculation, and Law: Societal Dialogue and Courts' Maieutic Role*

The ISDA's centralized approach, while a sensible way to promote certainty in a global market, downplays derivatives' rich, diverse, and eventful relationship with law and society. Derivatives have been on the radar since the 2008 financial crisis due to the aggregate effects of OTC derivatives as a source of systemic risk. Global standards enhanced (i) transparency, via trade repositories or platform trading, (ii) risk mitigation, via central clearing, and (iii) higher capital requirements for non-centrally cleared derivatives.[72]

Derivatives have a troubled history with law and society beyond systemic risk, though. Embracing derivatives has required overcoming prejudices over speculation.[73] Courts have played an instrumental, maieutic role, using legal concepts and

70. *See, e.g.*, Djakhongir Saidov, *Article 35 of the CISG: Reflecting on the Present and Thinking about the Future*, 58 VILL. L. REV. 529, 530–33 (2013); Villy De Luca, *The Conformity of the Goods to the Contract in International Sales*, 27 PACE INT'L L. REV. 163, 176 (2015).

71. In Italy, see Cass. Civ. [Court of Cassation], 25 July 2014, n. 16963 (It.) (treating R&Ws as ancillary commitments to ensure the correspondence between price and business value); Cass. Civ. [Court of Cassation], 13 August 2020, n. 17011 (It.) (classifying them as 'guarantee' clauses). In Spain, see T.S., Dec. 21, 2009 (JUR No. 24346) (Spain) (considering the possible contribution by R&Ws to the concrete *causa* of the contract, giving rise to termination for its breach).

72. Central clearing is the process through which the derivatives contract initially concluded is novated, and a central counterparty (CCP) interposes itself between the two original parties, acting, respectively, as "buyer" to one, and "seller" to the other, replacing bilateral exposures with a safer centralized system. These elements were agreed upon at the G-20 summit in Pittsburgh in September 2009. Through the Financial Stability Board (FSB) initiative, in April 2010, a working group was formed to make recommendations on the implementation of the G-20 objectives. *See, e.g.*, FINANCIAL STABILITY BOARD, IMPLEMENTING OTC DERIVATIVES MARKET REFORMS (Oct. 25, 2010), https://www.fsb.org/uploads/r_101025.pdf.

73. David Ramos Muñoz, *supra* note 2.

doctrines to shape societal dialogue and balancing derivatives enforcement with acknowledging societal concerns. Choosing the right legal doctrine has been trial-and-error, with setbacks and variations across jurisdictions.[74] English courts' experience with the *ultra vires* doctrine and the concept of "capacity" has largely been destabilizing, leading them to adopt an approach that prioritizes certainty and limits challenges based on capacity.[75] By contrast, courts in parts of Continental Europe have developed a different synthesis. Rather than framing disputes in terms of impressible speculation, they tend to focus on the level of risk embedded in the transaction, the banks' role as a gatekeeper, and the scope of its corresponding disclosure and advisory duties.[76]

1. *The Ultra Vires Doctrine, Its Risks, and the Futility of Discussing Speculative Transactions: The English Experience*

Ultra vires is a term often used in practice to describe situations where an act goes beyond the legal capacity of an entity, or beyond the legal authority of its agents.[77] Limiting an entity's capacity or authority can be done in its articles of association through an "objects" clause that defines the scope of its activities in order to guard against agency conflicts.[78] An objects clause can help ensure that the entity's resources are dedicated to the purposes for which the entity was created, protecting shareholders and creditors from the dissipation of assets into unrelated ventures.[79] In practice, however, the doctrine often prevented companies from undertaking useful activities and was unscrupulously used to invalidate otherwise legally binding

74. *Id.*
75. *See infra* Section I.D.1.
76. *See infra* Section I.D.2.
77. Stephen J. Leacock, *The Rise and Fall of the Ultra Vires Doctrine in United States, United Kingdom, and Commonwealth Caribbean Corporate Common Law: A Triumph of Experience Over Logic*, 5 DEPAUL BUS. & COM. L.J. 72–73 (2006). Another situation would be that of a company acting in a way prohibited by statute. *See* Harry Rajak, *Judicial Control: Corporations and the Decline of Ultra Vires*, 26 CAMBRIAN L. REV. 9 (1995).
78. Leacock, *supra* note 77, at 70.
79. Ashbury Railway Carriage & Iron Co. Ltd. v. Riche (1875) LR 7 HL 653 (Eng.).

contracts.[80] Thus, the *ultra vires* doctrine has a residual role under modern corporate laws.[81]

The doctrine, however, survives for other entities. For non-profits, objects clauses can ensure that an association truly remains a non-profit, and that profit-making activities are secondary or auxiliary.[82] For public authorities, *ultra vires* doctrines ensure that the exercise of governmental powers stems from the laws conferring those powers, and there is no abuse or deviation of power.[83]

However, there are powerful objections to using *ultra vires* to nullify contracts with third parties: guarding against an agent's abuse of power does not generally justify penalizing a third party, nor does it justify subjecting it to unbearable uncertainty or opportunistic claims of invalidity.[84] Financial contracts entered into by a nonprofit or public authority as an investment, financing, or hedging are typically ancillary to the entity's main mandate. If such secondary or ancillary acts are valid *to the extent that* they are conducive to the entity's mandate, the third party may not know enough to ascertain *ex ante* whether the contract is valid.

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80. Leacock, *supra* note 77, at 78.

81. Directive 2017/1132 of the European Parliament and of the Council of 14 June 2017 relating to certain aspects of company law, art. 9(1), ¶ 1 [hereinafter EU Company Law Directive]. Member States may consider a contract non-binding if it falls outside the corporate "objects," and this was known to the third party concluding the contract. *Id.* ¶ 2. The Directive balances German doctrines about the scope of the power of representation of company organs, and French theories of *spécialité statutaire* and *ultra vires* theories. MADS ANDENAS & FRANK WOOLRIDGE, EUROPEAN COMPARATIVE COMPANY LAW, 42–43 (Cambridge University Press, 2009).

82. RAS INSTITUTE, COMPARATIVE LEGAL ANALYSIS OF ASSOCIATIONS LAWS AND REGIMES IN THE EU: FINAL REPORT 28–30 (Sept. 2022), https://op.europa.eu/en/publication-detail/-/publication/21adb612-42cb-11ed-92ed-01aa75ed71a1.

83. This idea is found in most jurisdictions that uphold the rule of law. In the United States, federal courts have long asserted equitable power to enjoin executive officers from acting *ultra vires*. *See* Nat'l Ass'n of Postal Supervisors v. U.S. Postal Serv., 26 F.4th 960, 970 (D.C. Cir. 2022). In Europe's local governments, the EC Charter of Local Self-Government states in its art. 4 (1) that: "[t]he basic powers and responsibilities of local authorities shall be prescribed by the constitution or by statute. However, this provision shall not prevent the attribution to local authorities of powers and responsibilities for specific purposes in accordance with the law." (ETS No. 122), https://www.coe.int/en/web/conventions/full-list?module=treaty-detail&treatynum=122.

84. Leacock, *supra* note 77, at 78.

Furthermore, in some laws, whether a contract is incidental or conducive to an entity's object depends on whether the contract is a hedge or mere speculation.[85] Cases regarding capacity and authority form part of a broader, ongoing discourse or dialogue which tries to accommodate speculation's useful role while acknowledging its risks.[86] Legislators and judges historically struggled to balance these views and used different doctrines to shape societal dialogue.[87]

Attempts to use legal doctrines to shape societal dialogues over speculation, however, have had their fair share of failures and dead ends. Generally, a doctrine that requires courts to analyze whether an individual transaction is speculative tends to yield outcomes too rigid and unpredictable to be useful and should be abandoned.[88] Speculation and hedging are not opposites, but parts of a continuum, and often can only be assessed in the aggregate.[89] Thus, a bank acting as a third party may be unaware of how a single transaction is speculation or hedging for its client.

Even among bad doctrines that aim to distinguish speculative from legitimate transactions, *ultra vires* occupies a singularly problematic position.[90] The concept of capacity is binary: an entity either can enter into a transaction, or

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85. *See also* Omotola Ariyo, *The 'Hedging or Speculation' Question in Determining the Capacity of Public Bodies to Trade Derivative Transactions*, 20 CAP. MKTS. L.J. 1 (2025).

86. *See* DAVID RAMOS MUÑOZ, *supra* note 2 (providing a historical account of the traditional objections against speculation as a form of gambling in the United States and in Europe, and how these objections have been gradually overcome. Economic analysis (e.g., Frank Knight's *Risk, Uncertainty and Profit*) showed that speculators, by specializing in certain one-way bets, can provide a counterpart to parties trying to hedge, and also, by aggregating multiple claims, can transform "uncertainty" into "risk," which can be studied probabilistically. Court cases showed that many, if not most conventional executory contracts (where performance lies in the future) can involve some form of speculation or "bet").

87. *Id.* (showing how speculation, although tolerated, is not fully accepted, and courts and legislatures recurrently bring back anti-speculation arguments. Courts have the challenge of sidestepping those arguments in favor of a more constructive debate (e.g., on whether a transaction was "risky," and its elements were properly disclosed to a client)).

88. *Id.*; *see also* Jo Braithwaite, *Thirty Years' Law: Local Authorities, National Courts and the Global Derivatives Markets*, 71 CURRENT LEGAL PROBS. 369 (2018).

89. Isabel Vansteenkiste, *What is Driving Oil Futures Prices? Fundamentals versus Speculation,* 20 (ECB WP Series No. 1371) (2011) (available at https://www.ecb.europa.eu/pub/pdf/scpwps/ecbwp1371.pdf).

90. LAMANDINI & RAMOS MUÑOZ, *supra* note 2, at 542–45.

it cannot.[91] That determination is independent of the parties' conduct. As a result, a reckless client could always invoke lack of capacity to escape a transaction characterized as speculative. Thus, a client making this allegation will tend to look opportunistic and disingenuous. The concept of authority is slightly more flexible, particularly where it protects good-faith parties by enforcing transactions that would otherwise be *ultra vires*. Yet it is similarly problematic: it resolves internal agency conflict by shifting the risk outward, placing the burden of those conflicts on third parties.

The problem may be made worse if a public entity is subject to fiscal policy constraints, which ban transactions that endanger public services[92] or fund non-capital expenditures.[93] This raises a further question: are such constraints "internal" governance rules, inapplicable to third parties, or do they have "external" effect, rendering non-compliant transactions *ultra vires* and unenforceable against third parties?

This uncertainty can be substantial. To address it, courts in some jurisdictions have attempted to draw clearer lines. For example, German courts have clarified that the autonomy of local self-government limits the ability of national or regional authorities to curtail municipalities' capacity to contract. As a result, fiscal constraints are generally treated as internal limitations rather than restrictions on third parties, and *ultra vires* does not raise major issues in Germany.[94]

As a contrary example, the United Kingdom gained first-hand experience of how bad *ultra vires* can be. During the 1980s, fiscal constraints led local authorities to use innovative financing, including derivatives as a funding mechanism.[95] Local authorities became active players in the swaps market,

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91. *Id.* at 540–45.

92. *See, e.g.,* Council of Europe, *Local Government in Critical Times: Policies for Crisis, Recovery and a Sustainable Future* (Kenneth Davey ed., 2011) (available at https://rm.coe.int/16807472af).

93. Heather McVey, *Council of Europe, Coping with the Debt Burden: Local Authorities in Financial Difficulty* ¶ 64 (Report CG35(2018)21 final of Nov. 8, 2018) (available at https://rm.coe.int/coping-with-the-debt-burden-local-authorities-in-financial-difficulty/16808d3dc6).

94. Bundesgerichtshof [BGH] [Federal Court of Justice], Judgment of Apr. 28, 2015, XI ZR 378/13 (Ger.).

95. Martin Loughlin, *Innovative Financing in Local Government: The Limits of Legal Instrumentalism - Part I*, 4 PUB. L. 372 (1990); Martin Loughlin, *Innovative Financing in Local Government: The Limits of Legal Instrumentalism - Part II*, 5 PUB. L. 568 (1991).

and many filed lawsuits, claiming their swaps were invalid. One of them, Hammersmith & Fulham LBC, was chosen as the test case because it had subscribed every conceivable form of swap.[96]

The result was *Hazell v. Hammersmith & Fulham LBC,* where the House of Lords held the swaps to be void for lack of capacity (i.e., *ultra vires*) under Section 111 and Schedule 13 of the Local Government Act 1972.[97] Importantly, the House of Lords found the swaps fell outside the council's incidental powers because they involved *speculation* and were outside the council's borrowing function.[98]

Hazell was strongly criticized, but from a bad decision came mixed outcomes.[99] The case exposed governance flaws in municipalities.[100] The British government was urged to intervene by enacting retroactive legislation but refused to do so, instead letting the courts deal with the problem.[101] Commercial courts coordinated to deal with the ensuing wave of litigation, selecting both "pilot" and "second tier" cases.[102] This helped develop the law of restitution,[103] and to clarify that derivatives were not gaming contracts (and thus not legally suspect).[104] The Legal Risk Committee pondered, and ultimately discarded,

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96. The council had entered into 592 swap transactions and 297 of these were still outstanding, with a notional principal of £6052 million. Compared to this, its actual borrowing was £390 million, its estimated expenditure, £85.7 million, and its budget £44.6 million. *See* DUNCAN CAMPBELL-SMITH, FOLLOW THE MONEY (Allen & Lane, 2008).

97. Hazell v. Hammersmith & Fulham LBC [1992] 2 A.C. 1 (Eng.).

98. *Id.* ("a local authority is not a trading or currency or commercial operator with no limit on the method or extent of its borrowing or with powers to speculate").

99. Ewan McKendrick, *Local Authorities and Swaps: Undermining the Market?,* in MAKING COMMERCIAL LAW: ESSAYS IN HONOUR OF ROY GOODE 201, 215–16 (Royston Miles Goode & Ross Cranston eds., Clarendon Press 1997).

100. The swaps in *Hammersmith & Fulham* were subscribed by local officers without the scrutiny of their elected superiors. *See* DUNCAN CAMPBELL-SMITH, *supra* note 96, ch. 6.

101. McKendrick, *supra* note 99, at 202.

102. *Id.* at 221.

103. *See, e.g.,* Westdeutsche Landesbank Girozentrale v. Islington LBC [1996] A.C. 669 (HL) (Eng.); Kleinwort Benson v. South Tyneside Metro. Borough Council [1994] 4 All E.R. 972 (Eng.); Kleinwort Benson v. Birmingham City Council [1996] 4 All E.R. 733 (Eng.); Morgan Grenfell & Co. Ltd. v. Welwyn Hatfield DC [1995] 1 All E.R. 1 (Eng.); Kleinwort Benson Ltd. v. Lincoln City Council [1999] 2 A.C. 349 (Eng.).

104. Morgan Grenfell & Co. Ltd. v. Welwyn Hatfield DC [1995] 1 All E.R. 1 (Eng.).

changes to the *ultra vires* doctrine.[105] A 2011 reform expanded city councils' powers.[106] Thanks to courts' unquestioned legitimacy, the law-making partnership between courts, legislators, and administrative authorities managed, through constructive engagement, to mitigate the worst consequences, and draw some useful lessons about how to balance predictability for financial markets with the need for accountability, and the respective roles of courts and legislature in that process.

2. *From Fruitless Speculation to Useful Risk Management and Advice: Banks' Gatekeeping Role in Continental Europe and the Contrast with English Courts*

Hazell and its aftermath exemplify the perils of capacity, and the advantages of the interaction between courts, legislatures and civil society. Courts in other jurisdictions went in a different direction. Instead of discussing whether a transaction is speculative or within the bounds of *ultra vires*, they focused on the transaction's risk, whether the risk was properly disclosed, and, if not, whether this could give rise to voidness, rescission, avoidance, or damages.[107]

In the European Union, the Markets in Financial Instruments Directive (MiFID) tries to capture these pre-existing concerns about the relationship between financial intermediaries marketing financial services and their clients, and requires investment firms to disclose the transaction's main elements: the relative risks, whether the client understands the transaction (appropriateness), and whether the firm provides financial advice suitable for the client.[108] MiFID's aim goes beyond pure financial regulation.[109] Although Member States can determine

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105. McKendrick, *supra* note 99, at 202.

106. Localism Act 2011, c. 20, § 1 (Eng.).

107. *See* LAMANDINI & RAMOS MUÑOZ, *supra* note 2; *see, e.g.*, *Bundesgerichtshof* [BGH] [Federal Court of Justice] Judgment of Mar. 22, 2011, XI ZR 33/10 (Ger.); S.T.S., Jan. 20, 2014 (No. 840/2013) (Spain); Cass., sez. un., *25 giugno 2008*, n. 17340, Foro it. 2009, II (It.); Cass. civ., 19 December 2007, no. 26724, 26725, Foro it. 2008, I, 748 (It.).

108. Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, arts. 24–25, 27, 2014 O.J. (L 173) 349 [hereinafter MiFID II].

109. *Id.* art. 69 ("Member States shall ensure that mechanisms are in place to ensure that *compensation may be paid* or *other remedial action be taken* in accordance with national law *for any financial loss or damage* suffered *as a result of an*

the private law consequences for breach of MiFID rules subject to the principles of equivalence and effectiveness,[110] it is often assumed that there must be *some* consequences.[111]

In fact, concerns about financial intermediaries' gatekeeping role go far beyond MiFID and resonate deeply with civil law courts, which see the enforcement of these duties as their own responsibility and not just that of financial supervisors.[112] Some courts use regulatory provisions to inform the application of private law doctrines, such as mistake, precontractual or contractual liability, or principles like good faith.[113] Others have independently developed doctrines and principles in ways that make them equally demanding on banks, if not more.[114]

Being principles-based solutions, these doctrines can account for factors like the transaction's complexity, the client's sophistication, or the firm's reasonable behavior. All of these can shape the outcome in a flexible way.[115] "Basis clauses," representing that the client understood and chose freely, are less

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infringement of this Directive or of Regulation (EU) No 600/2014") (emphasis added).

110. CJEU, Judgment of May 30, 2013, Case C-604/11, *Genil*, ECLI:EU:C:2013:344, ¶ 57 (2013) ("it is for the internal legal order of each Member State to determine the contractual consequences of non-compliance with those obligations, subject to observance of the principles of equivalence and effectiveness"); *see also* Danny Busch, *The Private Law Effect of MiFID II: The Genil case and Beyond*, 4 EUR. REV. CONT. L. 70 (2017). The principle of equivalence ensures that procedural rules for enforcing provisions of EU Law are no less favorable than domestic actions, while the principle of effectiveness ensures that the exercise of rights protected by EU Law is not rendered impossible or excessively difficult.

111. Busch, *supra* note 110, at 70. The result cannot be that the civil action is rendered impossible or excessively difficult.

112. *See* BUSCH & VAN DAM, *supra* note 2.

113. Italy and Spain are prominent examples. *See, e.g.*, S.T.S., Jan. 20, 2014 (No. 840/2013) (Spain); S.T.S., Oct. 15, 2015 (R.J., No. 2015/5030) (Spain); Cass. Civ., 25 giugno 2008, n. 17340 (It.); Cass. civ., 19 dicembre 2007, n. 26724, 26725 (It.); *see also* Federico Della Negra, *The Private Enforcement of the MiFID Conduct of Business Rules: An Overview of the Italian and Spanish Experiences*, 10 EUR. REV. CONT. L. 571 (2014).

114. Germany follows this approach. *See, e.g.*, Bundesgerichtshof [BGH] [Federal Court of Justice] Mar. 22, 2011, Entscheidungen des Bundesgerichtshofes in Zivilsachen [BGHZ] 189, 13, XI ZR 33/10 (Ger.); Bundesgerichtshof [BGH] [Federal Court of Justice] Sept. 27, 2011, Entscheidungen des Bundesgerichtshofes in Zivilsachen [BGHZ] 191, 119, XI ZR 182/10 (Ger.); Bundesgerichtshof [BGH] [Federal Court of Justice] June 3, 2014, Neue Juristische Wochenschrift [NJW] 2947 (2014) XI ZR 147/12 (Ger.); all discussed in BUSCH & VAN DAM, *supra* note 2.

115. LAMANDINI & RAMOS MUÑOZ, *supra* note 2.

tested, but courts tend to be more circumspect if the situation represented by a boilerplate clause does not match reality.[116] This is similar to the way civil law courts act when assessing whether the parties actually treated the entire agreement as precluding extrinsic evidence.[117]

Most important, this approach helps focus the debate on relevant factors (risk and transparency), instead of elusive arguments about "speculation." It also offers a practical solution to both the asymmetry of information between banks and clients, *and* the agency conflicts of some (public, social or private) entities discussed in the previous section in a more fair and balanced way than under the *ultra vires* doctrine. Once it properly discloses the risk elements, a financial entity need not be acquainted with the entity's objects or internal governance.

The only objection to the approach in civil law countries is that it relies on a case-by-case analysis of the adequacy of disclosures, which can lead to less predictable outcomes. Instead of focusing on the text of the contract, courts may examine the surrounding circumstances and the quality of the information given to the counterpart. By contrast, a more formal approach would focus strictly on the contract's wording. Such strict focus is the approach of English courts, which prioritize certainty, and treat banks and financial intermediaries like any other commercial counterparty. In claims of misrepresentation, implied representations, or advice, English courts adhere strictly to the letter of the contract and extensively rely on broad disclaimers in the documents.[118] They use contractual estoppel to prevent customers from relying on extrinsic facts to the written contract terms,[119] and to enforce representations or warranties that exclude advice or disclosure obligations.[120] These "basis

116. For a comparison between the Scottish decision of Grant Estates Ltd v. Royal Bank of Scotland, Court of Session 21 August 2012 [2012] CSOH 133, and Dutch or German law, *see* Danny Busch, *Agency and Principal Dealing under the Market in Financial Instruments Directive*, in AGENCY LAW IN COMMERCIAL PRACTICE 168–69 (Danny Busch, Laura McGregor & Peter Watts eds., Oxford Univ. Press 2015).

117. *Supra* Section I.C.

118. Raiffeisen Zentralbank Osterreich AG v. The Royal Bank of Scotland Plc [2010] EWHC (Comm) 1392 [80]-[87] (Eng.); IFE Fund SA v. Goldman Sachs International [2006] EWHC (Comm) 2887 (Eng.).

119. Peekay Intermark Ltd v. Australia and New Zealand Banking Group Ltd [2006] EWCA (Civ) 386 [56]-[58] (Eng.).

120. Springwell Navigation Corp v. JP Morgan Chase Bank [2010] EWCA (Civ) 1221 [170] (Eng.).

clauses" preclude customers from relying on the actual events, are strictly enforced, and not subjected to a test of unfairness, in contrast to exclusionary clauses.[121]

Further, English courts tend to find that there were no implied disclosure or advisory duties.[122] Regulatory Conduct-of-Business (COB) duties have been construed narrowly, as applicable to consumers only,[123] and the presence of COB duties was found to not give rise to a co-extensive duty of care in common law.[124] According to English courts, banks are not legally obliged, as part of their private law duties, to disclose to clients internal mark-to-market (MTM) valuations of the products, break cost scenarios, or contingent liability calculations,[125] all of which are important elements in transactional risk assessment.

Such certainty in law, however, can lead to results that are seen as unfair by bank clients and the public. In fact, from 2012 onwards, the regulator, the Financial Services Authority (FSA), began an inquiry, after identifying problems in the marketing of Interest Rate Hedging Products (IRHP) to Small and Medium Enterprises (SMEs).[126] Its successor, the Financial Conduct Authority (FCA), made a large-scale intervention to reach transactional solutions (so-called "redress") that left their customers in a similar position as if the contracts had never been signed.[127]

Despite its intervention the FCA was criticized for being slow to react, and for agreeing with the banks to exclude from

121. Crestsign Ltd v. NatWest Plc & RBS Plc [2014] EWHC (Ch) 3043 [111–114] (Eng.).

122. Property Alliance Group Limited v. Royal Bank of Scotland Plc [2018] EWCA (Civ) 355 [78], [127]–[132] (Eng.).

123. Titan Steel Wheels v. RBS [2010] EWHC (Comm) 211 [44]–[76] (Eng.); Bailey et al. v. Barclays Bank Plc [2014] EWHC (QB) 2882 [37]–[51] (Eng.).

124. Green and Rowley v. Royal Bank of Scotland plc [2012] EWHC (QB) 361 [114]–[117] (Eng.); Green and Rowley v. Royal Bank of Scotland plc [2013] EWCA (Civ) 1197 [30] (Eng.).

125. Green and Rowley v. Royal Bank of Scotland plc [2012] EWHC (QB) 361 [88]-[107] (Eng.); Crestsign Ltd v. NatWest Plc & RBS Plc [2014] EWHC (Ch) 3043 [117]-[122] (Eng.).

126. *See* Financial Conduct Authority, *Interest-Rate Hedging Products (IRHP)*, www.fca.org.uk/consumers/interest-rate-hedging-products [https://perma.cc/D8GZ-VK37] (last visited June 29, 2025).

127. *Id.*; LAMANDINI & RAMOS MUÑOZ, *supra* note 2.

the scheme what it classified as "Sophisticated Customers"[128] which still left out of the scheme many business clients that did not see themselves as "sophisticated," prompting the FCA Board to commission an independent review,[129] resulting in a detailed report with recommendations.[130] The FCA accepted many of those recommendations,[131] but refused to seek further redress for sophisticated customers.[132] This prompted the All Party Parliamentary Group (APPG) on Fair Business Banking to seek judicial review of that decision,[133] and the High Court confirmed the FCA's exercise of discretion.[134] In all fairness, the FCA was the only institution able and willing to intervene in a situation where courts granted no redress to customers, sophisticated or not.[135] In fact, it was a challenge for the FCA to seek redress over swap contracts that would, in all likelihood, have been strictly enforced by the courts.[136] Thus, while crystal clear for English courts, the strict enforceability of swap contracts was controversial enough for English society to prompt the FCA to act, and an independent inquiry was organized due to the perception that even that was not enough.

In sum, courts in England and Continental Europe differ both on their approach to banks' disclosure and advisory duties

128. Sophisticated Customers include firms meeting at least two out of three requirements: a turnover of more than £6.5 million; a balance sheet total of more than £3.26 million; or more than 50 employees. John Swift QC, *Lessons Learned Review commissioned by the non-executive directors of the Financial Conduct Authority (FCA) into the supervisory intervention on Interest Rate Hedging Products (IRHPs)*, FCA (7 February 2022) [hereinafter, "Swift Review"] at 116–18, 200, 288–89.

129. *Id.* at 24.

130. *Id.* at 21–38.

131. Financial Conduct Authority, *Independent Review of Interest-Rate Hedging Products*, www.fca.org.uk/transparency/independent-review-interest-rate-hedging-products#section-fca-response [perma.cc/3ZFQ-D3VF] (last visited June 29, 2025).

132. Financial Conduct Authority, *Report of the Independent Review into the FSA and FCA's supervisory intervention on Interest Rate Hedging Products (IRHP): The FCA response* ¶¶ 3.21–3.28, 4.3 (December 2021).

133. All-Party Parliamentary Group on Fair Business Banking v. The Financial Conduct Authority [2025] EWHC (Admin) 525 [1]-[4].

134. *Id.* at [168].

135. Swift Review, *supra* note 128, at 74–80.

136. *Id.* at 175–76 (describing how the High Court handed down the abovecited *Green and Rowley* ruling while the FSA was trying to seek solutions for clients, and the FSA sought to present it as "decided on its facts," while RBS and other banks considered it as a "landmark legal judgment" which supported their approach).

as well as on the interplay between such duties and contract representations that negate them. In cross-border transactions, the ISDA expresses a preference for English and New York law, as well as contract representations negating advisory or fiduciary duties. The question remains whether courts manage to have a constructive exchange over this issue.

II.
Avoidance: How English Courts and Continental Courts Never Talked About Their Differences

Diverging approaches to banks' advisory and disclosure duties in the presence of representations and warranties that negate such duties would require courts' diplomacy and ingenuity in even a best-case scenario. Unfortunately, the reality has been far from best. Banks strategically sued their clients in England and presented the dispute as a pure contract matter, familiar to English courts. English courts, among others, in a series of decisions over jurisdiction and applicable law, proceeded to: (A) dodge the real substantive conflict, (B) settle that conflict by default, (C) retrench into their own doctrinal position, and (D) protect that position. The substantive disagreement was never squarely discussed.

A. *Dodging Conflict, Shunning Dialogue: The Equivocation Cases*

The failure of English courts and the courts in Continental Europe to understand each other began with a line of "equivocation" cases, wherein both the parties and the courts made what, at best, was a partial description of the conflict. More importantly, they failed to state the problem in full: a situation where the riskiness of a transaction, together with an allegedly flawed disclosure of, and advice over, such risk, could affect both the validity of the contract, and the validity of the decision of a corporate or public entity to sign the contract. The *BVG* cases, and the *Pisa* saga form this first block of "equivocation" cases.

BVG, a German corporation responsible for Berlin's public transportation, engaged in a swap known as an "Independent Collateral Enhancement Transaction" ("ICE Transaction") with

JP Morgan Chase.[137] JP Morgan sued in England, and BVG not only opposed the claim in England, but brought parallel proceedings before the Berlin Regional Court. BVG claimed that JP Morgan offered incorrect advice and misrepresented the risks, and also that BVG Management Board and Supervisory Board had acted *ultra vires*.[138] The Berlin court made a preliminary reference to the Court of Justice of the European Union (CJEU).[139] The preliminary reference procedure is the main form of structured dialogue between the Court of Justice and domestic courts, where the latter can ask the former to answer questions of European Union (EU) Law.[140]

Regarding the parties' argument, JP Morgan relied on the contract's clause choosing English courts.[141] BVG, on the other hand, relied on Article 22(2) of the Brussels I Regulation, which granted exclusive jurisdiction to the courts of the corporate seat for proceedings that "have as their object" the validity of companies, or decisions of their company boards. But was this a contract dispute or a corporate dispute?

In *BVG v. JP Morgan (BVG I)*, the English Court of Appeal upheld the jurisdiction of English courts. It held that the proceedings did not "have as their object" the validity of companies or the decisions of their bodies, as per Article 22(2) Brussels I, because the *ultra vires* issue was important, and might even be decisive, but the proceedings were not "principally concerned" with this issue, but rather with the enforceability of the swap contract, against which other objections, including wrong advice and misrepresentation, had been raised.[142] The court

137. Berliner Verkehrsbetriebe (BVG) Anstalt Des Offentlichen Rechts v. JP Morgan Chase Bank N.A. [2010] EWCA (Civ) 390 [4].

138. *Id.* at [4], [98]; Case C-144/10, Berliner Verkehrsbetriebe (BVG) v. JP Morgan, ECLI:EU:C:2011:300, ¶¶ 16–17, 19 (May 12, 2011).

139. Case C-144/10, Berliner Verkehrsbetriebe (BVG) v. JP Morgan, ECLI:EU:C:2011:300, ¶ 21 (May 12, 2011).

140. Article 267 of the Treaty on the Functioning of the European Union (TFEU) regulates this procedure. Consolidated Version of the Treaty on the Functioning of the European Union art. 267, Oct. 26, 2012, 2012 O.J. (C 326) 47.

141. Choice-of-court clauses were protected by article 23 of the Brussels I Regulation. Case C-144/10, Berliner Verkehrsbetriebe (BVG) v. JP Morgan, ECLI:EU:C:2011:300, ¶ 16 (May 12, 2011).

142. Berliner Verkehrsbetriebe (BVG) Anstalt Des Offentlichen Rechts v. JP Morgan Chase Bank N.A. [2010] EWCA (Civ) 390, [25], [99]-[106] (upholding the view of the lower court).

relied primarily on English precedents.[143] Further, the court refused to make a preliminary reference to the CJEU, holding that it was bound by those precedents.[144]

The CJEU decided the Berlin court's preliminary reference in *BVG II*,[145] with a conclusion similar to the English court's, holding that Article 22(2) did not apply to "proceedings in which a company pleads that a contract cannot be relied upon against it because a decision of its organs which led to the conclusion of the contract is supposedly invalid on account of infringement of its statutes."[146] The court held that, for disputes principally related to a *company's* validity, courts of a company's seat are better placed, but they are not when the dispute is principally related to a *contract's* "validity, interpretation, and enforceability" as in the case at issue.[147]

The two decisions in the parallel proceedings were measured and respectful yet planted the seed of future discord. BVG did not succeed in characterizing the dispute as a problem of acts concluded *ultra vires* because it had made other invalidity claims for wrongful advice and misrepresentation; future litigants would successfully make the *ultra vires* claim by omitting the wrongful advice and misrepresentation claims, which might have been a more useful basis for dialogue.[148] The CJEU declined to answer the question whether the validity of public bodies' decisions was a civil or commercial matter under Brussels I despite it being a critical issue in subsequent cases. The English court was wrong to refuse dialogue with the CJEU: if the legal issues in the German and English proceedings were different, as the Court of Appeal held,[149] it should have made a

143. The court cited the Judgment of the Court of Justice, Case C-372/07, Hassett v. South Eastern Health Board, ECLI:EU:C:2008:534, ¶¶ 20–21, 23–26 (Oct. 2, 2008) (also citing the Jenard Report on the Brussels Convention); and Case C-4/03, Gesellschaft für Antriebstechnik mbH & Co KG (GAT) v. Lamellen und Kupplungsbau Beteiligungs KG, ECLI:EU:C:2006:457, (July 13, 2006), but not on the decisive interpretative issues. Berliner Verkehrsbetriebe (BVG) Anstalt Des Offentlichen Rechts v. JP Morgan Chase Bank N.A. [2010] EWCA (Civ) 390, [34]-[106].

144. *Berliner*, EWCA (Civ) 390 at [114] (referring to Grupo Torras SA v. Sheikh Fahad Mohammed Al-Sabah, [1995] 1 Lloyd's Rep 374).

145. Judgment of the Court of Justice, Case C-144/10, Berliner Verkehrsbetriebe (BVG) v. JP Morgan, ECLI:EU:C:2011:300, (May 12, 2011).

146. *Id.* ¶ 49.

147. *Id.* ¶¶ 37–38.

148. *Infra* Section IV.

149. Berliner Verkehrsbetriebe (BVG) Anstalt Des Offentlichen Rechts v. JP Morgan Chase Bank N.A. (Rev 2) [2010] EWCA (Civ) 390, [111].

preliminary reference to the Court of Justice. If they were the same, it should have stayed the proceedings. The U.K. Supreme Court on appeal made its own preliminary reference,[150] but after the CJEU forwarded a copy of *BVG II*, it withdrew the reference.[151] This is not the best display of judicial dialogue.

Next came the *Pisa* saga, with two decisions in England and two in Italy. The basic question was whether the dispute was about the validity of the swap contract, or about the validity of the decision of the client (a local entity) and its governing bodies to sign the contract. The Italian province of Pisa alleged that its swap's initial undisclosed negative value made the transaction speculative, contrary to the economic convenience principle (a principle under Italian fiscal and budgetary law), and thus null and void,[152] which could be treated as a matter of capacity or a matter of contract validity. Sadly, *Pisa* also acted unilaterally, using its self-redress powers (*autotutela*) under Italian administrative law to revoke the contract.[153] The banks challenged the decision before Italian administrative courts and sued Pisa before English courts, leading to *Pisa I* and *III* (England), and *Pisa II*, *IV* and *V* (Italy).[154]

In *Pisa I*,[155] the High Court relied on *BVG I* to dismiss Pisa's jurisdictional objection under Article 22 of the Brussels I Regulation, because the case was not "principally concerned" with the validity of Pisa's organs' acts, since it *also* involved arguments of misrepresentation or mis-selling.[156] In the parallel proceedings in Italy, the Council of State held in a preliminary

150. Case C-54/11: Reference for a preliminary ruling from Supreme Court of the United Kingdom made on 7 February 2011 - JPMorgan Chase Bank N.A., Frankfurt Branch, J.P. Morgan Securities Limited v. Berliner Verkehrsbetriebe (BVG) Anstalt des öffentlichen Rechts, 2011 O.J. (C 120) 7.

151. Case C-54/11, Order of the President of the Court on 5 July 2011 (reference for a preliminary ruling from the Supreme Court of the United Kingdom, JPMorgan Chase Bank N.A., J.P. Morgan Securities Limited v. Berliner Verkehrsbetriebe (BVG), Anstalt des öffentlichen Rechts 2011 O.J. (C 311) 49 (removing the case from the register).

152. Pisa alleged that the imbalance between the swap's cap and floor generated an implied cost, divorcing it from its purported hedging purpose. The economic convenience principle, in Ministerial Decree 389/2003, and Ministerial Circular of 27 May 2004, required transactions to produce savings, not increase risks. *Infra* Section IV.C.

153. Depfa Bank plc & Dexia Crediop S.p.A. v. Provincia di Pisa [2010] EWHC (Comm) 1148 [35] (Eng.) [hereinafter *Pisa I*].

154. *Id.*

155. *Id.*

156. *Id.* at [61]–[64].

jurisdictional decision, *Pisa II*, that Italian authorities were competent to annul the contracts through *autotutela*, and Italian courts competent to review these acts and the contract's validity.[157] The English High Court declared its exclusive competence over the case in *Pisa III*.[158] Finally, the Italian Council of State, in its subsequent decision on the merits in *Pisa IV*, held that the derivatives contract was valid: the alleged "implied cost" was not a cost, but the negative market valuation of a hypothetical contract and did not breach the economic convenience principle.[159] Disclosure and advisory duties were inapplicable because the contract was signed following an unofficial tender procedure, and MiFID was not yet in force.[160] In *Pisa V* the Italian Supreme Court dismissed Pisa's appeal.[161]

The *Pisa* saga was another missed opportunity for dialogue. Pisa (the local entity) was not straightforward in its position, arguing before English courts that its plea was only one of lack of capacity, while it was pleading misrepresentation and breach of advisory duties before Italian courts. Both English and Italian courts seemed more focused on affirming their jurisdiction than on settling the substantive dispute, about the enforceability of a private contract in the face of alleged misrepresentation and mis-selling, and a breach of local administrative laws.

Furthermore, neither court made a preliminary reference to the CJEU, a decision as disappointing as it was careless. The parallel proceedings in Italy and England created the risk of conflicting judgments. A central point for the underlying conflict was whether the Brussels I Regulation applied to the dispute, which involved both a private contract, and the decisions of a public body, and how Brussels I would allocate jurisdiction between English and Italian courts. This point was

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157. Cons. Stato [Council of State], Sez. V, 7 September 2011, n. 5032 (It.) [hereinafter *Pisa II*]. Previously, the Regional Administrative Court of Tuscany had found that Pisa could not unilaterally annul contracts under the jurisdiction of English courts. Tribunale Amministrativo Regionale [Regional Administrative Court] Toscana, 27 January 2011, n. 6579 (It.).

158. Depfa Bank Plc v. Provincia di Pisa [2012] EWHC (Comm) 687 [19] (Eng.) [hereinafter *Pisa III*].

159. Cons. Stato [Council of State], Sez. V, 27 November 2012, n. 5962 (It.) (hereinafter Pisa IV).

160. *Id.*

161. Cass. Civ., Sez. Un. [Court of Cassation], 16 January 2014, n. 773 (It.) (hereinafter *Pisa V*). Pisa had alleged the Council of State's lack of jurisdiction but had directed its appeal against the second (substantive) decision, not the first (jurisdictional) decision.

not settled. In fact, it was a central question not answered by the CJEU in the *BVG II* case discussed above. The CJEU was the *only* court that could settle this issue of EU Law authoritatively, and the preliminary reference is *the* procedure specifically conceived for settling these issues. Furthermore, for the English High Court, not referring the matter to the CJEU was not an oversight, but a conscious choice. In *Pisa III* the *banks*, who clearly wanted to have the case decided by English courts, nonetheless argued that the High Court should make a preliminary reference to the CJEU, even when this risked taking the case away from England, while Pisa, which preferred to have the case decided by Italian courts, argued that the English Court should decide alone, without referring the matter to the CJEU. The banks had the more convincing position: if a matter of EU Law was critical for the dispute, the ordinary course was to refer the issue to the CJEU, unless the English court could decide the issue "with complete confidence,"[162] and the English court could not have "complete confidence" because there was a conflicting decision by the Italian Council of State (in *Pisa II*).[163] The English High Court dismissed this argument, holding that the matter was "civil or commercial," and thus it could adjudicate with "complete confidence."[164] Further, it held that only the Italian courts should refer the matter to the CJEU.[165] As much as one can admire the court's confidence, the outcome, in terms of legal certainty, was far from admirable.

B. *Settling by Default: The "No Show Up" Cases*

If parties and courts in the first group of cases failed to define the problem in full, in the second group of cases, defendants simply failed to show up, and English courts thus unsatisfactorily settled by default the critical issue of how disclosure and advisory duties interact with contract representations.

The outcomes before English courts were not always negative for bank clients. In *UBS v. Calabria*, a case decided on

162. *Pisa III*, *supra* note 158, at [20].
163. *Pisa III*, *supra* note 158, at [21]–[22].
164. *Id.*
165. *Id.* at [28]–[31]. The court also held that the case would involve "no inquiry in this case into the internal decision making procedures of the Defendant," *see Pisa I*, *supra* note 153, at [65], a statement that seemed premature then, and unfortunate now. *See infra* Section III.C.

the same date as *Pisa III*,[166] the High Court stayed the English proceedings in favor of earlier litigation in Italy.[167] Calabria, an Italian region, sued UBS for breach of an "Advisory Contract" governed by Italian law between Calabria and UBS *Ltd* in Italy. Separately, Calabria had entered into swap agreements with UBS *AG* governed by English law and subject to English jurisdiction. When proceedings were brought in England, the High Court granted the stay, holding that the English case with UBS Ltd had the same cause of action (Article 27 of the Brussels I Regulations), and the case with UBS AG was a related action.

UBS v. Calabria does not belong in the following group of cases, but it helps to explain them. This rare jurisdictional victory for a client (Calabria) taught banks an important lesson: it was important to take the initiative, and to shape the narrative. If they sued first, asking English courts for a declaratory judgment protecting the enforceability of derivatives contracts and finding advisory duties inapplicable, they could pre-empt lawsuits before other courts and protect themselves.

In the following group of cases, banks showed that they had learned their lesson well. However, the main reason banks succeeded, and the defining feature of these cases was the failure of the bank clients to appear before English courts, hence the "no show up" moniker. The unsatisfactory result was that the main underlying issues were settled by default.

In *Verona*,[168] the local authority of Verona failed to attend the English trial and the English High Court granted *all* the declarations of swaps' enforceability sought by the bank. Critically, the High Court held that the defendant was *contractually estopped* from denying the representations made in the ISDA MA.[169] Thus, the court settled the central issue of the breach of precontractual advisory duties versus contract representations without any discussion.

Then, the *Piemonte* case showed features of both the *Pisa* saga,[170] and the *Verona* case just discussed. In *Piemonte*, the Piedmont region hired several banks (including Merrill Lynch, Intesa Sanpaolo, and Dexia) to arrange a bond issuance and

166. *See supra* Section II.A.
167. UBS Ltd. v. Regione Calabria [2012] EWHC (Comm) 699 [4] (Eng.).
168. Merrill Lynch v. Commune di Verona [2012] EWHC (Comm) 1407 [2], [32]–[34] (Eng.).
169. *Id.* at [29].
170. *Supra* Section II.A.

signed a hedging interest rate swap (IRS) that lost the client's money.[171] The banks sued in England, seeking declarations that the derivatives contracts were valid and enforceable. Piedmont used its self-redress powers (*autotutela*) under Italian law to revoke the swaps, a decision that was challenged before Italian administrative courts, which ultimately held that English courts had jurisdiction.[172] Piedmont managed to reach a settlement with Merrill Lynch and Intesa in England,[173] but not with Dexia, and it failed to appear in the proceedings brought by Dexia. By default,[174] the High Court granted all declarations sought by the banks.[175]

The Court of Appeal affirmed,[176] understandably displeased at Piedmont's behavior.[177] Unfortunately, instead of simply stating that reopening the issues would result in unjustified delay, the court went on to say that Piedmont's arguments would have failed even at their best since the breach of Italian fiscal and budgetary rules did not result in a lack of capacity under Italian law.[178] As such, the transaction could not be considered contrary to English public policy and thus could not be illegal.[179] Further, the court held that the arguments on lack of authority, fiduciary duties, secret profits, mis-selling, and unsuitability were precluded by contractual estoppel, due to the presence of contract representations.[180] This statement, unnecessary to settle the case at hand, nonetheless shaped the official position of English courts. In subsequent cases, English

171. The more complete narrative of the facts can be found in the decision by the Court of Appeal in *Piemonte v. Dexia* [2014] EWCA (Civ) 1298 (Eng.). It is largely taken from there.

172. Tribunale Amministrativo Regionale [Regional Administrative Court] Toscana, 21 December 2012, n. 1390 (It.), holding that the contracts' validity should be decided by the (English) civil judge. The Italian Council of State rejected Piemonte's appeal in Italy in Cons. Stato [Council of State], Sez. V, 5 May 2014, n. 13 (It.).

173. Piedmont agreed on a declaration that the swaps were valid, binding/effective and enforceable. *See* Piemonte v. Dexia [2014] EWCA (Civ) 1298 [49]–[53] (Eng.).

174. Piemonte v. Dexia [2013] EWHC (Comm) 1994 [66]–[67] (Eng.), Piemonte v. Dexia [2014] EWCA (Civ) 1298 [126]–[127] (Eng.).

175. Piemonte v. Dexia [2013] EWHC (Comm) 1994 [66]–[67] (Eng.).

176. Piemonte v. Dexia [2014] EWCA (Civ) 1298 [126]–[127] (Eng.).

177. *Id.* at [44]–[45].

178. *Id.* at [84]–[98].

179. *Id.* at [100].

180. *Id.* at [102], [109], [116], [120], [122] (relying on Springwell Navigation Corp. v. JP Morgan Chase Bank [2010] EWCA (Civ) 482).

courts would repeat the estoppel argument without ever reconsidering it.

Taken together, *Calabria, Verona* and *Piemonte* effectively smothered any chance of discussing the interplay between advisory and disclosure duties, on one hand, and contract representations, on the other hand. Arguably the central controversy of these cases, the application of this interplay was settled by default, without meaningful debate or dialogue. Ironically, in *Piemonte*, the High Court discussed in detail the municipality's capacity and authority to conclude the contracts, but since these were issues of Italian law, the English court's view would be subsequently disavowed by the Italian Supreme Court.[181] Conversely, the High Court's passing remark on contract representations that estopped clients from relying on advisory or disclosure duties would define English courts' position, as discussed below.

C. *Compartmentalizing and Retrenching: The "Advisory Contracts" Cases*

In a third group of cases, courts would "retrench" by defining the conflict as separate components. This is the group of the "advisory duties" cases, because in all of them the claims by the banks against their clients under derivatives contracts, subject to the ISDA MA, coexisted with claims by the clients against their banks, based on advisory duties, arising both from Italian securities laws, and from "advisory contracts" subscribed between the banks and their clients, where the derivatives contracts were inserted as a form of hedging. In spite of these two angles, English courts, and the courts in the clients' country (Italy), framed the conflict as *either* a matter of contract representations (in England) *or* as a matter of advisory and disclosure duties (in Italy), not both. This allowed courts in each country to affirm their jurisdiction over one part of the dispute (contractual in England, non-contractual in Italy) while making it impossible to analyze the whole conflict or seek common ground.

Despite Italian courts affirming English courts' jurisdiction over derivatives *contracts* and the ISDA MA,[182] the Italian

181. *See infra* Section IV.C.
182. *E.g.*, in *Pisa IV; see supra* Section II.A.

Supreme Court in three key cases affirmed the jurisdiction of Italian courts over non-contractual claims for breach of disclosure and advisory duties based on Italian securities laws under the place-of-harm forum in Article 5(3) of the Brussels I Regulation.[183] In each *Milan v. Deutsche Bank,*[184] *Venice v. Merrill Lynch*[185] and *Lazio v. Dexia,*[186] the Italian Supreme Court held that Italian courts were competent for the non-contractual claims, and for the secondary claims based on a breach of duties under an advisory contract concluded between the banks and each local authority, because, according to the court, even these were autonomous claims, arising under a separate, broader contract, and thus did not fall under the exclusive jurisdiction clause in the ISDA MA.[187]

English courts' response came through the cases of *Dexia v. Brescia,*[188] *Deutsche Bank v. Commune di Savona* (*Savona*),[189] and *BNP Paribas v. Trattamento Rifiuti Metropolitani* (*TRM*).[190] In all three cases, there were derivatives contracts subject to the ISDA MA and English law and courts, *but* in each case the derivatives agreements were inserted within a broader relationship, where the banks were supposedly acting as advisers of their clients, under a contract of mandate/agency subject to Italian law and courts. English courts, however, would construe the derivatives relationship as autonomous and independent, and affirm the jurisdiction of English courts.

In *Brescia*, the Italian province of Brescia sued in Italy for breach of the advisory (mandate) contract.[191] Dexia, the bank, sued in England, seeking declarations that the swaps were valid

183. The Supreme Court was consistent with its previous case law. *See* Cass. Civ., Sez. Un. [Court of Cassation], 19 December 2007, n. 26724 & n. 26725 (It.); Cass. Civ., Sez. Un. [Court of Cassation], 8 April 2011, n. 8034 (It.).

184. Cass. Civ., Sez. Un. [Court of Cassation], 27 February 2012, n. 2926 (It.).

185. Cass. Civ., Sez. Un. [Court of Cassation], 18 September 2014, n. 19675 (It.).

186. Cass. Civ., Sez. Un. [Court of Cassation], 19 January 2017, n. 1311 (It.).

187. *Id.* (holding that the ISDA Exclusive jurisdiction clause should be interpreted restrictively).

188. Dexia Crediop SPA v. Provincia di Brescia [2016] EWHC (Comm) 3261 [24]–[27] (Eng.).

189. Deutsche Bank v. Commune di Savona [2018] EWCA (Civ) 1740 [2] (Eng.).

190. BNP Paribas v. Trattamento Rifiuti Metropolitani [2019] EWCA (Civ) 768 [1]–[2] (Eng.).

191. Dexia Crediop SPA v. Provincia di Brescia [2016] EWHC (Comm) 3261. For the full description of facts, see *id.* at 13–29.

and enforceable, that their execution and performance were in conformity with provisions on Brescia's capacity and powers as well as Italian fiscal and budgetary law, and with financial intermediaries' duties ("conformity" declarations). Without much explanation, Brescia accepted that the validity declarations fell within the scope of the ISDA Master Agreement, and thus English courts were competent, but it contended that the "conformity" declarations fell outside, as they concerned breaches of the mandate contract and Italian law.[192]

The High Court held itself competent because the conformity declarations largely matched the representations made in the ISDA MA.[193] Ultimately, however, this meant accepting the bank's framing of the dispute as a controversy about contract representations and warranties, instead of Brescia's framing as a controversy about flawed disclosures and advice *leading* to an unsuitable contract contrary to mandatory public policy. The High Court reasoned that upholding Brescia's view would mean "a degree of fragmentation that the parties could not have intended,"[194] and that despite the overlap between issues,[195] a conflict could be avoided by granting the declarations "without making any findings about Italian law . . . on the basis of a contractual estoppel."[196] The court did not see that the real fragmentation was deciding on contract representations *separately* from advisory duties because this provided partial, compartmentalized, and irreconcilable views of the conflict. In making this decision the High Court relied on *Piemonte.*[197] However, *Piemonte,* as seen in the previous section, was a case settled by default, because the bank client (Piedmont) failed to appear in the proceedings brought by the bank.[198] By using *Piemonte* as an authority, the court in *Brescia* was signaling its unwillingness to open a discussion or seek a synthesis between English and Italian positions.

In *Savona,* the Italian municipality of Savona sued in Italy for breach of a convention (a contract) to provide advisory services, subject to Italian law, and under the jurisdiction of Italian

192. *Id.* at 75.
193. *Id.* at 106–07.
194. *Id.* at 108.
195. *Id.* at 110–11.
196. *Id.* at 112.
197. *Id.*
198. Piemonte v. Dexia [2014] EWCA (Civ) 1298, [Section 11.B] (Eng.).

courts.[199] In parallel, Deutsche Bank sued in England seeking declaratory relief based on the ISDA MA, subject to English law, and the jurisdiction of English courts.[200] The High Court held that some of the declarations sought by the bank regarding the absence of investment advice, fiduciary duties, and speculation fell outside of its jurisdiction.[201] After a detailed analysis of the jurisdiction clause in the convention, the High Court held that although the bank's claim relied solely on the ISDA MA clauses, this did not automatically make English courts competent: the analysis of the clause, which carefully considered expert opinion over Italian law, and Waksman, J. concluded that the underlying issue was whether the declarations made and the advice given were correct, and these were matters to be decided by Italian courts.[202]

However, the *Savona* court's deferential, even curious, view towards foreign law principles of contract interpretation and advisory duties meant that English courts would not decide on matters of relevance for the ISDA MA. Thus, subsequent cases would disavow this view.

In *Trattamento Rifiuti Metropolitani (TRM)* (a corporation involved in the treatment of waste, and its conversion into energy, for the province of Turin, Italy) *v. BNP* (a bank), the High Court took the opposite view. The contract structure followed the same structure as *Savona*. First, there was a broader relationship based on a financing agreement governed by Italian law. That framework agreement contemplated (i) a loan, (ii) advisory obligations owed by the bank, and (iii) a proposed hedging strategy. Second, the parties provided standard derivatives documentation in the form of an ISDA Master and a Swap Confirmation, both governed by English law and courts. The High Court held that the declarations about the ISDA MA's validity and enforceability sought by BNP fell within the ISDA's exclusive jurisdiction clause.[203] The High Court further emphasized the importance of a uniform interpretation of the

199. Deutsche Bank v. Comune di Savona [2017] EWHC (Comm) 1013 [2], [44]–[47] (Eng.).
200. *Id.* at [2].
201. *Id.* at [10], [105].
202. *Id.* at [84].
203. BNP Paribas v. Trattamento Rifiuti Metropolitani [2018] EWHC (Comm) 1670 [23]–[35] (Eng.). Admittedly, TRM did not help its case by arguing that the only dispute was over the Finance Agreement and that "there was no dispute" about the ISDA's declarations of validity and enforceability.

ISDA MA,[204] siding with *Brescia* and against *Savona*. The *TRM* court dismissed the expert testimony regarding the scope of the finance agreement's jurisdiction clause,[205] and dismissed a clause in the finance agreement that stated this agreement *prevailed* over the ISDA MA, holding that, since there was no conflict between the two agreements, the prevalence clause was not engaged.[206]

Then, it was the turn of the Court of Appeal, which overturned *Savona* first, and later confirmed *TRM*. First, in setting aside the lower court's ruling in *Savona*, the Court of Appeal succinctly dismissed the expert evidence on the application of Italian legal principles of contract interpretation to the jurisdiction clause.[207] In the court's view, the parties had subscribed a "generic" relationship set out in the Convention, and a "specific" relationship set out in the ISDA MA, and the jurisdiction clause in the latter emphasized that it was a separate self-contained contract.[208]

The Court of Appeal then confirmed the High Court's view in *TRM,* discussing in detail the jurisdiction clauses in light of Article 25 of the Brussels I Regulation, concluding that the parties had two "particular legal relationship[s]."[209] Accepting TRM's view would either subsume the ISDA-based claims into the finance agreement claims, not treating them separately, or require the court to make an impossible distinction between derivatives that implemented the hedging strategy in the finance agreement and those that did not.[210]

These considerations were reasonable. Other aspects of the decision were less so. The Court of Appeal based its decision solely on English precedents;[211] it did not make a preliminary

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However, we surmise that the conclusion would have been the same in any event.

204. *Id.* at [43]–[45].

205. *Id.* at [47]–[51].

206. *Id.* at [40].

207. Deutsche Bank v. Comune di Savona [2018] EWCA (Civ) 1740 [15]–[16], [21]–[24] (Eng.).

208. *Id.* at [21]–[22].

209. BNP Paribas v. Trattamento Rifiuti Metropolitani [2019] EWCA (Civ) 768 [79], [82] (Eng.).

210. *Id.* at [90]–[92].

211. The court cited case C-214/89, Powell Duffryn PLC v. Wolfgang Petereit, 1992 E.C.R. I-1745, but only as part of a verbatim quote of the English case Deutsche Bank AG London Branch v. Petromena ASA [2015] EWCA (Civ) 226. The *Powell Duffryn* case concerned a jurisdiction clause in a company's

reference to the CJEU, despite the issue being a novel one. Furthermore, when construing the two agreements (the ISDA MA and the financing agreement), the Court of Appeal held that the ISDA's entire agreement clause and the separate jurisdiction clauses indicated that (i) the swaps were self-contained contracts (echoing *Savona*),[212] (ii) the jurisdiction clauses did not materially overlap,[213] and (iii) the conflicts clause, stating that the finance agreement prevailed in case of conflict, was not engaged because there was no conflict.[214] This downplayed the fact that the parties had settled on a framework via the finance agreement, which expressly contemplated a hedging strategy under the ISDA MA. It also downplayed the agreed upon ISDA MA Master Schedule, which stated that the parties' rights under the Master Agreement:

> [A]re subject to the terms and conditions of the [FA] and the [ICA]; (ii) that BNPP is the 'Banca Hedging' (ie. the bank that will provide the 'Contratti di Hedging' pursuant to the 'Strategia di Hedging' as these terms are defined in paragraph 1 (Interpretazione) and annex 17.19 (Strategia di Hedging) of the [FA] and (iii) no derivative transactions shall be entered into hereunder other than those foreseen in annex 17.19 (Strategia di Hedging) of the [FA] . . . In the case of conflict between the provisions of this Agreement and the [FA] and the [ICA], the provisions of the [FA] and the [ICA] as appropriate shall prevail.[215]

While the entire agreement and jurisdiction clauses are part of the ISDA MA's standard language, the ISDA schedule's function is to complement boilerplate clauses with more specific choices.[216] The choice in this case was to link the two contracts by placing the ISDA MA within the broader framework of the finance agreement. Thus, the Court of Appeal's insistence of the separateness of the contracts and the self-contained nature of the derivative looks more like a policy choice to preserve

bylaws, i.e., unrelated issue. Even in *Petromena* the issue was whether a tort-based claim of non-liability for breach of advisory duties fell within the exclusive jurisdiction clause in favor of Norwegian courts in a financing contract (holding that there were not two interrelated contracts, as in this case).

212. *TRM* [2019] EWCA (Civ) 768 [83].
213. *Id.* at [82].
214. *Id.* at [86]–[87].
215. *Id.* at [20].
216. Gelpern & Gulati, *supra* note 39, at 357.

the integrity and self-contained nature of the ISDA MA, and English courts' jurisdiction than an attempt to ascertain the parties' intent. By compartmentalizing the derivatives' dispute, *Savona* and *TRM* also prevented any attempt at a synthesis between contract representations and advisory duties.

D. *Fortifying (or Burning Bridges): The Foreign Mandatory Laws Cases*

The remaining group of foreign mandatory laws cases represents a final step in the process of affirmation by English courts of their jurisdiction and laws. After English courts had defined the archetypal derivatives case as being solely about contract representations, and Continental European (typically Italian) courts had defined the same dispute as one about disclosure and advisory duties, English courts took the final step of ruling out any role for foreign laws, even of mandatory provisions.

The relevant provision was Article 3(3) of the Rome Regulation I,[217] which states that:

> Where *all other elements relevant to the situation at the time of the choice* are located in a country other than the country whose law has been chosen, the choice of the parties shall not prejudice the application of provisions of *the law of that other country which cannot be derogated from by agreement.*[218]

The key issue was defining: (i) "all other elements," (ii) "relevant," and (iii) "the situation." From an initial position of relative openness to the role of foreign mandatory laws, English courts evolved towards a more closed, and protective approach, until they eventually ruled out any role for foreign mandatory laws in the presence of an ISDA MA.[219]

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217. The predecessor of Article 3 (3) of the Rome I Regulation was Article 3(3) of the Rome Convention 1980. This was replaced by the Rome I Regulation. However, the Rome I Regulation did not intend to introduce substantial differences, or change the meaning of the provision, as expressly acknowledged in Recital (15) of the Rome I Regulation.

218. Regulation (EC) No. 593/2008 of the European Parliament and of the Council of 17 June 2008 on the Law Applicable to Contractual Obligations (Rome I), art. 3(3), 2008 O.J. (L 177) 6 (emphasis added). Although the wording is different, Recital (15) of the Rome I Regulation suggests that there has been no intent to change the basic regime.

219. One can note the parallel between the group of "advisory" cases of *Brescia, Savona* and *TRM* (*supra* Section II.C) and the "foreign mandatory laws" cases in this ection. In both groups one of the High Court decisions

Step one was *Dexia v. Comune di Prato,* a case where the bank and client were domiciled in Italy, and the swaps in question were also entered into and performed in Italy.[220] The bank argued that there were two other key elements that would take it outside of the Italian courts: (1) the ISDA MA drafted by international working groups for international derivative transactions; and (2) a back-to-back hedging swap entered into for each swap by the bank with another bank in the international market under the same standard documentation.[221] The High Court dismissed the bank's arguments in finding a breach of Italian securities law, holding that an international agreement was not an "element of the situation" connected with a different country and that the back-to-back transaction was relevant to the bank but not the client.[222] However, this deferential position towards foreign mandatory laws would soon be reversed.

Step two was *Santander Totta,*[223] where the clients were Portuguese public sector transport corporations which argued that, despite the choice of English law, "Portugal was where both parties were incorporated, where the parties communicated with each other, where the swaps were entered into, and where the obligations under the swaps had to be performed."[224] However, the High Court held that Article 3(3) of the Rome Regulation had to be interpreted *restrictively* in commercial transactions: the parties had chosen the applicable law, which created a rebuttable presumption that this should be the law applicable.[225] The connecting factors should be appraised not in relation to the *contract*, but to the present "*situation.*"[226] The High Court excluded the application of Article 3(3), finding that not all the elements of the situation were connected with Portugal, considering elements like (i) the right to assign to a foreign bank, (ii) the use of standard international documentation, (iii) the

(*Savona* in the advisory cases, *Prato* in the "mandatory laws" cases) showed an open mind towards the application of foreign laws, or the competence of foreign courts, only to be contradicted by another High Court decision (*TRM* in the "advisory" cases, *Santander* in the "mandatory laws" cases), and be disavowed by the Court of Appeal.

220. Dexia Crediop S.P.A. v. Comune di Prato [2015] EWHC (Comm) 1746 [209] (Eng.).

221. *Id.* at [210].

222. *Id.* at [211], [218]–[252].

223. Banco Santander Totta v. Companhia de Carris de Ferro de Lisboa [2016] EWHC (Comm) 465 (Eng.).

224. *Id.* at [388], [408].

225. *Id.* at [394].

226. *Id.* at [395]–[400].

necessity of a relationship with a bank outside Portugal, or (iv) the fact that Santander (the bank) had hedged its exposure to the transaction with a back-to-back swap with another bank outside Portugal, as something typical of the international nature of the swaps market, finding that a different conclusion would undermine legal certainty.[227]

Despite its finding that only English law applied, and its restrictive approach towards foreign mandatory laws, the High Court in *Santander* tried to create dialogue on foreign law, which is unusual. The court held that the contract would have also been valid under a hypothetical application of the Portuguese law that prohibited games of chance (which was not applicable to derivatives),[228] and under a hypothetical application of the Portuguese change of circumstances doctrine (which would not render the swaps invalid).[229] Unfortunately, unlike "advisory" cases, like *Brescia, Savona,* or *TRM*,[230] the non-bank counterparties had not alleged a breach of advisory or disclosure duties.

Step three involved the Court of Appeal's review of both *Prato* and *Santander.* The court confirmed *Santander*'s approach towards foreign mandatory laws, maintaining that Article 3(3) of the Rome Regulation should be interpreted restrictively.[231] Then, the court relied on *Santander* to set aside *Prato*, holding that the mere fact that the parties used an ISDA MA in English and that there were back-to-back hedging contracts sufficed to exclude Article 3(3) of the Rome Convention.[232]

The last step, *Dexia v. Provincia di Pesaro e Urbino*, eliminated any role for local mandatory laws.[233] In this case, most of the relevant elements were connected to Italy.[234] Although the bank could not prove that it had hedged its exposure in the international market, a relevant element to establish that not all elements of the situation were linked to the same country, the English court considered the mere choice of ISDA

227. *Id.* at [411].
228. *Id.* at [413]–[453].
229. *Id.* at [465], [439]–[442], [503]–[523].
230. *Supra* Section II.C.
231. Dexia Crediop SpA v. Provincia di Pesaro e Urbino [2022] EWHC (Comm) 2410 (Eng.).
232. Dexia Crediop SpA v. Comune di Prato [2017] EWCA (Civ) 428 (Eng.).
233. Dexia Crediop SpA v. Provincia di Pesaro e Urbino [2022] EWHC 2410 (Comm) (Eng.).
234. *Id.* at [79].

documentation enough to create an "international situation" ruling out Article 3(3).[235]

The foreign mandatory laws cases excluded any chance for synthesis between the approach based on contract representations under the ISDA MA, enforced under English contract law, and the approach based on advisory and disclosure duties under other jurisdictions. No court found it appropriate to make a preliminary reference to the CJEU to interpret the Rome Regulation despite it being a novel issue. Thus, a controversial interpretation of Article 3(3) of the Rome Regulations became the official position of English courts before Brexit without a single authoritative decision by the CJEU.

III.
Wrong Framing: The Futility of Capacity and Speculation

Courts in England and Continental European countries disagree about the interaction of disclosure and advisory duties with any contract representations that negate them. The previous Section illuminates how these courts failed to establish constructive dialogue on this difference and seek synthesis. This Section analyzes how English courts, prompted by litigants, have channeled the dialogue on the role of foreign laws through the *ultra vires* doctrine due to allegations by non-bank counterparties that they lacked capacity to conclude speculative contracts.

This is a terrible framing. It is one thing for a bank client to say, "when signing I was not fully aware of the risk involved," and quite another to say, "I signed this willingly, but, as it now turns out, I lacked the capacity to do so." The *ultra vires* doctrine is rigid, unpredictable, and unfair to third parties. The party who alleges that it acted *ultra vires* looks invariably opportunistic. English courts know this well thanks to *Hazell* and its progeny.[236] And yet, like a bad zombie movie, decades after *Hazell*, capacity came back to haunt cross-border derivatives, with predictably disappointing results. The cases where courts and arbitral tribunals grappled with the questions of capacity and speculation fall into three groups: (A) Diplomacy, wherein English courts purportedly deferred to foreign laws on capacity, while mitigating

235. *Id.* at [75]–[78].
236. *Supra* Section I.D.1.

their effects in practice; (B) Dismissal, wherein English courts excluded *ultra vires* applicability to government-owned commercial corporations; and (C) Stalemate, wherein the local courts' push to expand *ultra vires* was met with pushback from English courts.

A. *Diplomacy: Norwegian Municipalities and Dutch Social Housing Associations*

The first group includes two key cases concerning a Norwegian local authority and a Dutch Social Housing Association. They have in common the attempt of English courts to, on the one hand, defer to foreign laws regulating the capacity of bank clients to conclude derivatives transactions, and, on the other hand, limit the effects of the resulting voidness over such derivatives. English courts' diplomacy was only outdone by their legal gymnastics in trying to protect derivatives contracts.

Haugesund Kommune v. Depfa ACS Bank is the first case in the international capacity and *ultra vires* saga.[237] At least one justice was aware of the parallel with *Hazell,*[238] remarking that "*history repeats itself, at least with variations.*"[239] He may have also been aware of Marx's quip that, when history repeats itself, the first time is as tragedy; the second as farce,[240] but failed to see the irony.

The swap contracts were entered into by Norwegian local authorities (Kommunes) with an Irish bank that was a subsidiary of a German parent and governed by English law. However, the Kommunes were legally classified as corporations, meaning their capacity was subject to Norwegian law.

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237. *Haugesund* was decided only one month after *BVG I*, the first "equivocation" case (*supra* Section II.A), although neither the High Court nor the Court of Appeal in *Haugesund* seems to have been aware of the *BVG* dispute, and its similarities, or at least they make no mention of it. As fate would have it, *BVG*'s equivocation would be the first step in the (failed) process to find a synthesis between advisory duties and contract representations, while *Haugesund* would be the first step in the process where *ultra vires* doctrines would successfully assert themselves as the conceptual basis of dialogue on the role of foreign laws, if success is a term that one can associate with this process.

238. *Supra* Section I.D.1.

239. Haugesund Kommune v. Depfa ACS Bank [2010] EWCA (Civ) 579 [1] (Eng.).

240. KARL MARX, THE EIGHTEENTH BRUMAIRE OF LOUIS BONAPARTE 5 (Saul K. Padover trans., Marx/Engels Internet Archive 1995) (1852), https://www.marxists.org/archive/marx/works/download/pdf/18th-Brumaire.pdf [https://perma.cc/4794-XNYQ].

At first instance, the High Court held that the contracts were invalid because the Kommunes lacked capacity.[241] On appeal, the bank argued that the High Court improperly conflated corporate capacity, substantive power to enter into this particular type of contract, and unlawfulness.[242]

The Court of Appeal held that the concept of capacity had to be given a "broad, internationalist interpretation" such that matters that could fall within the scope of "substantive power" to enter into an agreement were treated as matters of capacity.[243] When assessing Haugesund's constitution, the court followed a similarly flexible approach and considered not only the constitutional documents, as it would do under English law, but also statutes like the Norwegian Municipalities Act.[244] The court concluded that, under Section 50 of that Act, local corporations lacked capacity to conclude loan contracts. Broadly interpreted, this included the swaps, which were declared void.[245]

However, once the court accepted that the contract was void under Norwegian law, the remedy had to be governed by English law.[246] On this point, the court found that the bank had a claim for the return of sums advanced under the now-void contract plus interest, and any restitution-related exceptions were inapplicable. Thus, the Norwegian local authorities' victory on the issue of voidness was of little consequence in financial terms; it was in essence a "pyrrhic victory," as put by the High Court judge.[247]

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241. Haugesund Kommune v. Depfa ACS Bank [2009] EWHC (Comm) 2227 [123] (Eng.).
242. Haugesund Kommune v. Depfa ACS Bank [2010] EWCA (Civ) 579, [30] (Eng.).
243. The court was aware of the difference between the Anglo-American tradition that "capacity" is conceived with a purpose in mind, and the more continental approach, where the legal entity's "power of law" is deemed to be universal, and constraints do not result from a doctrine of *ultra vires*, but from the exercise of powers. *See* Haugesund Kommune v. Depfa ACS Bank [2010] EWCA (Civ) 579 (Eng.).
244. *Id.* at [48]–[49].
245. *Id.* at [49] (where it declared the swaps to be "loans," confirming the findings of first instance in Haugesund Kommune v. Depfa ACS Bank, [2009] EWHC (Comm) 2227 at [12]–[15] (Eng.)). The concept should be given a broad meaning in light of Section 50's goal to ensure the municipalities' economic control. *See id.* at [55]–[60] (for the declaration of voidness).
246. *Id.* (citing Westdeutsche Landesbank Girozentrale v. Islington London BC [1996] A.C. 669 (Eng.)).
247. Haugesund Kommune v. Depfa ACS Bank [2009] EWHC (Comm) 2227, [182] (Eng.) (Tomlinson, J.).

The case, however, involved many issues beyond capacity. For one, it was part of the Terra Securities affair, a national scandal where Terra Securities, an investment firm, convinced Norwegian municipalities to raise money, thus circumventing restrictions on indebtedness, and invest in complex products that performed disastrously.[248] The "zero coupon" swaps were the form of circumventing those restrictions, as they were similar to loans,[249] but the municipalities could pretend they were not. The bank (Depfa) was complicit in this strategy. It admitted that it was trying to "lend money" to the municipalities,[250] while still maintaining that the swaps were not "loans" under Section 50, primarily based on a questionable law firm opinion.[251]

None of this affected the outcome. English courts found that Section 50 gave no reason of public policy to limit the restitution to the sums invested in the risky investments,[252] that the banks had behaved in good faith, and that the municipalities had assumed the duty to pay the money back, regardless of how the investments turned out.[253] The problem was not the finding itself, but the absence of any consideration as to whether something more might have been expected from the bank.

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248. *Id.* at [6]. The "Terra Securities scandal" has its own Wikipedia page. *Terra Securities Scandal*, WIKIPEDIA, https://en.wikipedia.org/wiki/Terra_Securities_scandal [https://perma.cc/W6EE-YNQU] (last visited April 6, 2026). It got ample press coverage, comedic quips, and two documentaries.

249. The rate payable by the banks was zero; the bank made initial payments, which were subsequently repaid in quarterly payments, with a final "bullet" payment (similar to a loan with a large final payment). Haugesund Kommune v. Depfa ACS Bank [2009] EWHC (Comm) 2227, [34], [77] (Eng.).

250. *Id.* at [151] (citing the statement by the bank's head of legal).

251. *Id.* at [12], [14], [50], [78]–[96]. The legal basis was a Ministry of Local Government letter (the "Vik Letter") which referred to a different transaction, where the future payment obligations were tied to the revenue from energy license fees, thus lowering the potential impact on public services. In any event, the Ministry expressed concern about the treatment of similar transactions as loans in the future, and its views were challenged by opposition politicians. In contrast, in this case the repayment obligation was independent from the performance of the (risky) investments for which the money would be used.

252. Haugesund Kommune v. Depfa ACS Bank [2010] EWCA (Civ) 579, [101]–[102] (Eng.) (Aikens, L.J.)

253. Haugesund Kommune v. Depfa ACS Bank [2009] EWHC (Comm) 2227, [141], [148], [163], [169] (Eng.) (finding that the municipalities assumed the risk). The courts also examined the "change of position" exception to restitution, finding that it did not apply in a case like this, where the municipalities understood that the money had to be restituted. *See* Haugesund Kommune v. Depfa ACS Bank [2009] EWHC (Comm) 2227, [162]–[169] (Eng.); [2010] EWCA (Civ) 579, [109]–[126], [141], [148] (Eng.).

In the end, the bank could not get its money. The Norwegian Kommunes refused to pay back the sums, arguing that the English ruling was not binding on them as a matter of Norwegian public policy, and Depfa sued the law firm that had issued the opinion (Wikford Rein) unsuccessfully.[254] Thus, the English courts' elaborate, diplomatic, and at times acrobatic balancing of deference towards foreign law and public policy with strict contract enforcement not only failed to address the relevant underlying issues, but also produced an unenforceable decision that was useful to no one.

The matter of capacity to enter into swap agreements arose again in *Credit Suisse International v. Stichting Vestia Groep*.[255] The defendant was a Dutch social housing association (SHA), a type of foundation subject to the Dutch Civil Code that plays a critical role in Dutch social housing for owning a large percentage of the residential rental market. Given their importance, SHAs are subject to considerable constraints: their financial regulations allow them to enter into derivatives contracts to manage borrowing costs, but not for speculation.

The High Court concluded that Vestia's primary objective of operating in the field of social housing did not include the capacity to conclude derivative contracts.[256] Acts falling outside of their objective had to be analyzed under the doctrine of secondary acts, which allows such acts only if they served the interest of the corporate entity and not an unrelated third party.[257] Whether the transactions served the entity's interest was to be judged objectively, without regard to their purpose, and in light of the act's substance.[258] Since the SHA was a nonprofit entity operating in a highly regulated field,[259] the court concluded that some transactions, the so-called *ultra vires* transactions, were void.[260]

254. Haugesund Kommune v. Depfa ACS Bank [2011] EWCA (Civ) 33 (Eng.) settled the complaint against the law firm. *See id.* at [24], [31], [42], [89]–[90] for the subsequent facts on the municipalities' refusal to pay back the moneys, and [73]–[94], for the arguments on the law firm's (lack of) liability.

255. Credit Suisse Int'l v. Stichting Vestia Groep [2014] EWHC (Comm) 3103 (Eng.).

256. *Id.* at [39] (Article 3 of the articles of association) and [188]–[190].

257. *Id.* at [76], [196].

258. *Id.* at [196]–[203], [206].

259. *Id.* at [208]–[209].

260. *Id.* at [228]–[253].

The court's analysis was complicated. On the one hand, the court found that the distinction between transactions that genuinely constituted hedges as opposed to speculation was "false" or "elusive," and only distracted from the key issue: whether the transactions were within Vestia's objects.[261] On the other hand, the court's assessment of whether the transaction was within Vestia's objects was based on whether the act served Vestia's interest, which depended on whether the transactions had an objectively identifiable "hedging effect,"[262] thus implicitly relying upon the hedging-speculation distinction. The court also held that such a hedging strategy had to be assessed in the aggregate or on a portfolio basis,[263] although the House of Lords in *Hazell* had rejected this same approach.[264, 265]

And yet, despite declaring the swaps void, the High Court managed to exclude the disruptive effects of voidness. Once it found Vestia lacked capacity to enter into the derivative agreements, the court held that Vestia had *also* concluded (i) an ISDA MA that represented that Vestia had the power and capacity to enter into a swap transaction, and (ii) a Schedule to the Master Agreement entitled "Additional Representations." This Master Schedule stated that:

> [Vestia] hereby represents and warrants to [Credit Suisse] (which representations will be deemed to be repeated by [Vestia] on each date on which a Transactions [sic] is entered into that:
>
> (i) [Vestia's] entry into and performance of its obligations under this Agreement and each Transaction hereunder is and will be in compliance with its articles of association (statuten), its financial rules (financieel statuut) and any other laws or regulations applicable to [Vestia] from time to time . . .

261. *Id.* at [214].
262. *Id.* at [235]–[244].
263. *Id.* at [222].
264. *Supra* Section I.D.1; *infra* Section III.C (discussing judgments post-*Cattolica* (e.g., *Venice*)).
265. *Hazell* concerned English local authorities, and *Vestia* concerned Dutch Social Housing Associations. However, the court in *Vestia* did not explain why this should result in a different assessment of the hedging effects.

> (ii) [Vestia] is entering into each Transaction purely for the purpose of hedging its exposures and not for the purpose of speculation.[266]

The court held that the power and capacity representations were "statements of fact" that were true at the date of signing but not binding for future transactions.[267] In contrast, the Master Schedule's Additional Representations were found to be warranties that invoked contractual estoppel for future transactions.[268] The consequence of this was that although Vestia had acted beyond its capacity, Credit Suisse could enforce the MA *as if* the derivatives contracts were valid, and Vestia could not object.[269]

This was a creative strategy, and the court's aim was to strengthen the contract. The court's construction of a warranty of future capacity, under contractual estoppel, was based on cases where courts had *assumed* the client's warranty that it would seek independent advice in the future or rely on its own judgment,[270] which is different from a client saying that it will have capacity to contract in the future. In fact, in *Westdeutsche Landesbank Girozentrale* the court had held that if a contract was entered into beyond an entity's capacity and is *ultra vires,* a clause in that contract warranting that the entity has capacity is also *ultra vires*,[271] such that an entity cannot expand its capacity by contract or estoppel.[272]

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266. Credit Suisse Int'l v. Stichting Vestia Groep [2014] EWHC 3103 (Comm), [291] (Eng.); *see also supra* Section I.A-I.C, for a discussion of the role of representations and warranties in the ISDA MA.

267. Credit Suisse Int'l v. Stichting Vestia Groep [2014] EWHC (Comm) 3103, [295]–[296] (Eng.).

268. *Id.* at [300], [307], [309], [315].

269. *Id.* at [301]–[321]. Alternatively, Vestia would be subject to liability for breach of warranty, on similar grounds. *Id.* at [322].

270. Credit Suisse International v. Stichting Vestia Groep [2014] EWHC (Comm) 3103, [308] (Eng.), with reference to Titan Steel Wheels v. RBS [2010] EWHC 211 (Comm) (Steel, J.) (Eng.) or Bank Leumi (UK) Plc v. Wachner [2011] EWHC 656 (Comm) (Flaux, J.) (Eng.).

271. Westdeutsche Landesbank Girozentrale v. Islington LBC [1994] 4 All E.R. 890, 905b (Eng.).

272. *Id.*; *see also* Hazell v. Hammersmith and Fulham LBC [1992] 2 A.C. 1, 36F/G (Eng.). The court considered in *Vestia* this precedent inapplicable by treating the ISDA MA as separate from the derivatives contract, thus concluding that an entity cannot expand its capacity through a clause in the same (void) contract, but that it can do it (or achieve an equivalent effect) through a clause in a separate contract.

As in *Haugesund,* the situation went deeper than the capacity issue. Vestia's case was a national scandal.[273] Its cash manager, Mr. Marcel de Vries, caused a sensation for his blatantly speculative strategies, enabled by Vestia's weak governance, which placed Vestia on the brink of collapse.[274] Banks were involved in the scheme; some received kickbacks for the transactions contracted, and split the money with Mr. De Vries, a conduct that resulted in criminal sentences,[275] and lawsuits against the banks that ended in settlements.[276]

Credit Suisse itself was not suspected of wrongdoing, and the transactions were concluded before the scandal erupted in January of 2012. However, Credit Suisse's liaison with Vestia supported Mr. De Vries' strategy despite being aware of its problems, and the concerns about Mr. De Vries,[277] and the bank subjected the derivatives to limited scrutiny, and made no attempt to flag potential risks to Vestia's governing bodies.[278] None of these issues were convincingly addressed in the case, arguably because doctrines of capacity and concepts like speculation do not provide a basis for it. Although a bank cannot be responsible for an entity's governance failures, it is at least worth discussing whether it may be asked to properly disclose the risks.

B. *Dismissal of Capacity: Public Sector Corporations Cases*

The next group comprises the "public sector corporations" cases, where arbitral tribunals struggled with classifying

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273. Apart from the press coverage, the books on the affair include JAN SMIT, HET DERIVATENDRAMA [The Derivatives Drama] (2014); HANS VERBRAEKEN, DE VRIJE VAL VAN VESTIA [The Free Fall of Vestia] (2014).

274. Credit Suisse Int'l v. Stichting Vestia Groep [2014] EWHC (Comm) 3103, [49]–[53], [62], [91] (Eng.).

275. *See* Bart Brugman, *Main Suspects in Vestia Derivatives Case Jailed for Fraud and Bribery*, DUTCH NEWS (July 24, 2018), https://www.dutchnews.nl/2018/07/main-suspects-in-vestia-derivatives-case-jailed-for-fraud-and-bribery/.

276. *See, e.g.,* Olaf Storbeck, *Deutsche pays €175m to settle Dutch bribery lawsuit*, FIN. TIMES (July 19, 2019), https://www.ft.com/content/a8da07a0-a4b8-11e9-a282-2df48f366f7d. There were also settlements with ABN Amro, BNP Paribas, Citibank, Société Générale, Nomura, or Barclays.

277. Mr. Sebastian Dupont, the bank's liason with Vestia, enabled Mr. De Vries' actions. *See* Credit Suisse Int'l v. Stichting Vestia Groep [2014] EWHC (Comm) 3103, [66], [84], [88], [91], [95], [116], [117], (Eng.).

278. Credit Suisse approved the transactions as "non-standard transactions," with "potential Reputational Risk issues and/or particular market or franchise risk" and was supposed to check whether the transactions involved an unacceptable degree of risk for the client. *Id.* at [99], [102]. In such a scenario, it would have been sensible to raise the issue with Vestia's CEO, or governing bodies.

individual transactions as speculation or hedging, while English courts opted for excluding the *ultra vires* doctrine for this type of entity.

A line of cases involving Ceylon Petroleum Corporation (CPC) illustrates the challenges of these entities. CPC was a public corporation created by statute for supplying petroleum products to Ceylon, later Sri Lanka. CPC entered into a derivative arrangement with Citibank, Standard Chartered, and Deutsche Bank, and later refused to pay on the grounds that it lacked capacity to conclude speculative transactions. Three cases were brought, with three different outcomes.

The first, *Citibank v. CPC*, was a commercial arbitration dispute.[279] Both parties *agreed* in the dispute that CPC's capacity extended *only* to hedging transactions, not to speculation on the price of oil, and that the hedging/speculation distinction should be based on objective elements over the parties' subjective intent.[280] The arbitral tribunal found for CPC, attaching much weight to the hedging/speculation distinction.[281]

The second, *Deutsche Bank v. Sri Lanka*, was an investment arbitration dispute under the International Centre for the Settlement of Investment Disputes (ICSID) where the bank sued the Sri Lankan government, not a specific, government-owned entity, and the tribunal's analysis of the validity of the derivative transaction was a step in determining whether an "investment" existed for purposes of the arbitral tribunal's jurisdiction.[282] The tribunal concluded that the derivative was not speculation and thus valid. Relying on the parties' *shared* understanding of speculation and applying an objective assessment, the tribunal examined market expectations at the time the transaction was entered into. It found that prices were expected to remain high and the derivative was designed to mitigate the associated risk, and this sufficed to characterize the transaction as a hedge.[283]

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279. Citibank N.A. v. Ceylon Petroleum Corp., LCIA Arb. No. 81215, First Partial Award (July 31, 2011). The text of the arbitral award was not made public, but the outcome was described in the parallel dispute of Standard Chartered v. CPC [2012] EWCA (Civ) 1049 (Eng.).

280. Standard Chartered v. CPC [2012] EWCA (Civ) 1049 [10] (Eng.).

281. *Id.* The parties had agreed that the distinction between hedging and speculation was key to determine the capacity of the entity.

282. Deutsche Bank AG v. Sri Lanka, ICSID Case No. ARB/09/02 (Oct. 31, 2012). The transaction was referred to as a "zero cost collar," "seagull" or "swap."

283. *Id.* ¶ 336.

The tribunal rejected Sri Lanka's expert's argument that risk reduction had to be meaningful or effective to characterize the instrument as a hedge.[284] It noted that no such requirement existed in the relevant accounting standards,[285] and reasoned that the difference between hedging and speculation should not be based on a subjective or shifting evaluation of how successful the risk reduction ultimately proved to be.[286]

Some authors see *Deutsche Bank v. Sri Lanka* as a success in distinguishing between hedging and speculation.[287] A closer look, however, shows its weaknesses. The tribunal's arguments to dismiss the idea that a hedge must be effective to justify the hedge accounting treatment were wrong.[288] However, had the tribunal accepted the idea, it would have been in a similarly weak position. The problem is not whether the "effectiveness" of a hedge is a sound concept under accounting rules (it is) but whether using accounting concepts to decide whether an act is *ultra vires* is sound (it is not).[289] This brings the problem back to the same point: classifying a derivative as *either* a hedge, *or* a speculative transaction, except in clear cases, involves some degree of arbitrariness.

Thus, it is not surprising that in the third case, *Standard Chartered v. CPC,*[290] English courts chose a different approach. The High Court ruled that distinguishing between hedging and speculation was difficult,[291] that CPC had the burden of

284. *Id.* ¶ 333.

285. *Id.* This was International Accounting Standard (IAS) 39.

286. *Id.* ¶ 334.

287. Ariyo, *supra* note 85.

288. The tribunal said that it could find no reference in the relevant accounting standards to the idea of "effectiveness" to treat a transaction as a hedge. This is surprising and factually incorrect since IAS 39 contained about 60 references to it. *See, e.g.*, IAS 39 ¶¶ 9, 76, 81, 84, 88(b), 88(d), AG105-AG113A. The standard that replaced IAS 39, i.e., International Financial Reporting Standard (IFRS) 9, also contains many references to this idea. *See* IFRS 9 ¶¶ 6.4.1(b)(c)(iii), 6.5.5. The tribunal also said that the idea of a hedge "effectiveness" was "subjective," when it is not considered subjective at all in the accounting standards.

289. "Hedge accounting" allows companies to treat the underlying exposure (e.g., bonds or other financial instruments) *and* the hedge (e.g., a derivative) as a single position, instead of recognizing them separately, as would be the general rule. Thus, this is authorized only when the derivative "effectively hedges" the exposure, because then, and only then, showing the joint position is more transparent than showing them separately. This is far from the concerns that justify the limitations arising from *ultra vires* doctrines.

290. Standard Chartered v. CPC [2011] EWHC (Comm) 1785; [2012] EWCA (Civ) 1049; [2012] WLR(D) 232 (Eng.).

291. Standard Chartered v. CPC [2011] EWHC (Comm) 1785, [344] (Eng.).

proving that the contracts were speculative, and that CPC had not discharged such burden.[292] The Court of Appeal went further, holding that the question of hedging versus speculation was a false question that should not determine the issue of capacity.[293] Instead, for the Court of Appeal, CPC was a *commercial* company, which, in itself, distinguished the case from those involving local authorities.[294] As a commercial company, its founding act should be interpreted as authorizing CPC to "enter into any transaction that could fairly be said to be incidental or conducive to its statutory objects."[295]

Santander Totta v. Companhia de Carris de Ferro de Lisboa[296] completed this saga and gave doctrinal shape to the approach in *Standard Chartered*. The debtor companies were public-sector Portuguese transport companies which ran the metro, bus, and tram services in the cities of Lisbon and Porto, which argued that the swaps were speculative, and that their capacity extended only to swaps that operated as hedges.[297]

The High Court rejected the hedging versus speculative distinction as a valid basis, due in large part to "the difficulty of drawing distinctions between the various activities of speculation, hedging, financial management and similar in the absence of an applicable definition."[298] Determining whether the companies had capacity required examining whether the swaps were necessary or convenient for their purpose of seeking profit, not the speculative or hedging nature of swaps.[299]

292. *Id.* at [369].

293. "In our judgment, the question of hedging or speculation is, at any rate, in the context of an issue of capacity, a false question." Standard Chartered v. CPC [2012] EWCA (Civ) 1049, [22] (Eng.).

294. The Court of Appeal found that the courts' restrictive approach in *Hazell, see supra* Section I.D.1, was justified because the bank clients were local authorities, with capacity restricted by the Local Government Act 1972. Standard Chartered v. CPC [2012] EWCA (Civ) 1049, [28] (Eng.).

295. Standard Chartered v. CPC [2012] EWCA (Civ) 1049, [31] (Eng.).

296. Banco Santander Totta v. Companhia de Carris de Ferro de Lisboa [2016] EWHC (Comm) 465 (Eng.).

297. *Id.* at [6] ("What makes the swaps unusual was the incorporation of a 'memory' feature. Speaking generally, once the reference interest rates (EURIBOR and sometimes LIBOR) moved outside upper or lower 'barriers,' the fixed rate payable by the Transport Companies had a 'spread' added to it. The spread was cumulative at each payment date and was subject to leverage (in all but one swap), hence the swaps being described as 'snowball' swaps").

298. *Id.* at [229].

299. *Id.* at [265], [270], [274] (considering the parties' arguments); [294], [310]–[314] (analysis); [324]–[328] (conclusion).

This functional, profit-making test was a different doctrinal approach from *Haugesund* and *Vestia*.[300] The courts in *Santander* rightly held that making the validity of the swaps depend on whether they helped the company in "contributing to the economic and financial balance of the public sector as a whole and in achieving adequate levels of satisfaction in meeting the community's needs" was unworkable,[301] and making it depend on whether the swaps were "convenient" to the entities' power to borrow in aid of their aim to run a public transportation system,[302] was too uncertain.[303] The High Court case was confirmed on appeal.[304]

C. *Stalemate: Italian Local Authorities*

The third group of capacity cases involved Italian local authorities. To provide background on the disputes, Article 119(6) of the Italian Constitution restricts local authorities' indebtedness "only for the purpose of financing investment expenditures." The Italian Finance Law—and subsequent decrees and circulars, including Article 62 of Decree Law No. 112 of 2008—initially permitted certain interest rate swaps (IRS), if they provided a financial advantage to the local authority.[305] However, even these transactions were later prohibited.[306] Article 62 was challenged before the Constitutional Court of Italy, which upheld the provision as constitutional. The court reasoned that derivatives may serve either a hedging or a speculative function and can generate significant debt exposures. Under Article 119(6) of the Italian Constitution, public entities must maintain debt equilibrium, and it is the legislature who must define what qualifies as

300. *Supra* Section III.A.

301. Banco Santander Totta v. Companhia de Carris de Ferro de Lisboa [2016] EWHC (Comm) 465, [312] (Eng.).

302. *Id.* at [334].

303. *Id.* at [312]–[314]. Furthermore, the companies were not able to furnish a clear test for when a company could be considered a "public company" since this depended on the degree of state ownership, which would introduce further uncertainty.

304. Santander Totta v. Companhia de Carris de Ferro de Lisboa [2016] EWCA (Civ) 1267 (Eng.).

305. *See* Art. 41, Fin. Law, n. 448, 28 December 2001 (It.); Art. 3.2, Decreto Ministeriale [Ministerial Decree], n. 389, 1 December 2003 (It.); Art. 62, Decreto Legislativo [Legislative Decree], n. 112, 25 June 2008 (It.).

306. Para. 572, Stability Law, n. 147, 27 December 2013 (It.), amending Art. 62, Decreto Legislativo [Legislative Decree], n. 112, 25 June 2008 (It.).

"indebtedness" and "investment," including by excluding certain derivatives contracts and prohibiting transactions that are deemed "objectively dangerous."[307] However, the practical implications of this ruling for Italian municipalities remained unclear.

In *Dexia v. Comune di Prato,* the High Court held that the relevant constitutional provision was framed in vague terms and that its concept of "indebtedness" did not extend to derivatives.[308] As a result, it did not limit the municipalities' legal capacity to enter into the swap. The court further held that the statutory requirement of financial advantage had to be evaluated in light of the transaction as a whole.[309]

Then, in 2020, the Italian Supreme Court decided *BNL v. Cattolica* (*Cattolica*), laying down several important principles.[310] The court held that swaps (and derivatives more generally) are presumed valid because they were not "futile bets," but "rational bets."[311] This presumption depends on the parties' agreement and understanding of the mark-to-market value and relevant probabilistic scenarios.[312] Under local administration law, Italian local authorities may validly enter into swap contracts for hedging purposes, but not speculative ones.[313] Even where a swap is framed as a hedge, the absence of agreement on mark-to-market and probabilistic scenarios renders the contract void for indeterminacy of its object.[314] In addition, swaps with debt-like features like upfront payments were only valid if approved by the municipal council.[315]

The *Cattolica* decision raised the stakes even more by stating unequivocally that certain transactions were invalid. The response by English courts did not take long. The first English case post-*Cattolica* was *Deutsche Bank v. Busto Arsizio.*[316]

307. Corte Cost. [Constitutional Court], 10 February 2010, n. 52 (It.).
308. Dexia Crediop S.p.A. v. Comune di Prato [2015] EWHC (Comm) 1746 (Eng.).
309. The High Court ultimately found the swap invalid because Dexia had breached several mandatory provisions of Italian law, particularly on disclosure and advice. The Court of Appeal upheld the High Court arguments on capacity, overturning it on the issue of mandatory law. *See* Dexia Crediop S.p.A. v. Comune di Prato [2017] EWCA (Civ) 428 (Eng.); *see also supra* Section II.D.
310. Cass. Civ., Sez. Un. [Court of Cassation], 12 May 2020, n. 8770 (It.).
311. *Id.* ¶ 6.2.
312. *Id.*
313. *Id.* ¶¶ 8.1, 9.8.
314. *Id.* ¶ 9.1.
315. *Id.* ¶¶ 10.2–10.5.
316. Deutsche Bank AG London v. Commune di Busto Arsizio [2021] EWHC (Comm) 2706 (Eng.).

Busto Arsizio, an Italian local authority, claimed that, under *Cattolica,* it lacked the capacity to enter into a swap subscribed with Deutsche Bank, and, alternatively, that in the absence of sufficient information regarding mark-to-market value and the relevant probabilistic scenarios, the contract would be rendered void. The English Court dismissed this argument. First, it found that before *Cattolica*, the Italian Constitution did not impose any limits on the capacity of Italian local authorities to enter into speculative derivative contracts. Article 119(6) of the Italian Constitution did not limit capacity,[317] and swaps fell outside the concept of indebtedness.[318] Second, the court found that the *Cattolica* ruling focused on the invalidity claim based on the lack of a determinable object for the contract, not on the local authority's lack of capacity.[319] Third, although the *Cattolica* ruling established that local authorities could only enter into derivatives for *hedging* and not for speculative purposes,[320] the High Court found that Busto Arsizio had not clearly asserted that the swap was speculative,[321] and concluded, on the evidence, that the swaps were hedging instruments.[322]

The plot thickened even more with *Intesa v. Comune di Venezia* (*Venezia*).[323] The origin of the transaction was the restructuring of a bond offering (the Rialto bond) where Venice had entered into an IRS with Bear Stearns to hedge its interest rate exposure.[324] The banks entered into a mandate (agency) contract to restructure the bond and extend its maturity, and, since the IRS was no longer aligned with the bond, Venice entered into the contested derivative transactions to replace the IRS.[325]

317. *Id.* at [173]–[195].
318. *Id.* at [196]–[203].
319. *Id.* at [211]–[251] (referring to Section 9 of the *Cattolica* decision).
320. *Id.* at [280]. The court accepted the criticism of the *Cattolica* ruling's equivocation and consistency with the Constitutional Court ruling 52/2010, and its statement that the Supreme Court was not "creating" new law but merely stating the law as it was. Yet, these were arguments for Italian courts. *Id.* at [256], [278]–[279].
321. *Id.* at [281]–[302].
322. *Id.* at [302]–[306].
323. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 (Eng.); [2023] EWCA (Civ) 1482 (Eng.).
324. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 [22]–[30] (Eng.).
325. *Id.* at [37]–[42] (bond restructuring); [43]–[57] (replacing the derivative); [58]–[66] (detailing the transactions).

The High Court,[326] and the Court of Appeal that overturned it,[327] chose different ways to mitigate the effects of the *Cattolica* judgment.

The High Court first tried a diplomatic approach, similar to *Haugesund* or *Vestia*,[328] acknowledging that Italian law rendered the contract void, while simultaneously excluding the effects of such voidness. The court accepted that the *Cattolica* judgment by the Italian Supreme Court meant that under Italian law, local authorities lacked the capacity to enter into speculative derivative transactions,[329] and it was not the job of the High Court to second-guess that interpretation.[330] Then, instead of formulating a definitive test for what makes a transaction speculative, the court focused on the specific features of the transaction,[331] finding that the structure of the new derivative entailed an element of speculation with interest rate movements.[332] The court also found that the derivatives qualified as indebtedness under the *Cattolica* standard and therefore breached Article 119(6) of the Italian Constitution.[333] Simultaneously, the court found that, although the contract was void, the bank did not have to restitute the sums paid, using a novel interpretation of

326. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 (Eng.).

327. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2023] EWCA (Civ) 1482 (Eng.).

328. *Supra* Section III.A.

329. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 [196] (Eng.).

330. *Id.* at [194]–[195], [200]. In particular, the Court of Cassation drew from the principle of "financial equilibrium constraint," as expressed in a previous ruling by the Constitutional Court, n. 52/2010, that local authorities could not conclude speculative derivatives.

331. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 [202]–[223] (Eng.). The High Court cited the U.S. case of *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964), where Justice Potter Stewart said that he would not attempt to define "obscenity," but that "I know it when I see it."

332. *Id.* at [226]–[232]. Instead of paying the winding-up cost of the Bear Stearns swap, the winding-up costs were incorporated into the structure of the new swap, which meant that Venice was assuming the risk of paying a great deal more, and was subject to terms that were no longer based on the terms of the Rialto Bond, and were disconnected from the prevailing forward rate curve, all suggestive of speculation.

333. *Id.* at [233]–[254], [260], [267]–[269].

restitutionary defenses,[334] which sought to temper the consequences of the *Cattolica* judgment.[335]

However, the Court of Appeal was not convinced, and the decision was overturned.[336] First, the Court of Appeal held that the fact that the derivatives transactions acted as a replacement for the Bear Stearns IRS, which was a hedge, meant that they could not be speculative. The large, negative mark-to-market value was the result of the cumulative effect of low interest rates in the previous years, which was dragged into the new transaction.[337] Second, the Court of Appeal challenged the Italian precedents used by the High Court to make its finding of speculation, which were mostly from lower courts, and some English precedents.[338] The High Court should instead have been based on Supreme Court decision number 19013 of 2017,[339] which relied on a Determination by the Italian securities regulator (CONSOB).[340] That determination provided a structured test for identifying a hedging transaction: (i) the transaction is explicitly carried out to reduce risks associated with the underlying financial instrument; (ii) there is a high degree of correlation between the characteristics of the underlying debt and those of the derivative.[341] Applied properly, the Court of Appeal concluded, this test would have been satisfied, and the transaction should therefore have been characterized as non-speculative.[342]

334. *Id.* at [393]–[425]. One should note that in *Haugesund Kommune v. Depfa ACS Bank* [2010] EWCA (Civ) 579 [123] (Eng.), where restitution favored the bank, the court applied a restrictive approach to restitutionary defenses.

335. Banca Intesa Sanpaolo SPA v. Comune di Venezia [2022] EWHC (Comm) 2586 [425] (Eng.).

336. Banca Intesa Sanpaolo and Dexia v. Commune di Venezia [2023] EWCA (Civ) 1482 (Eng.).

337. *Id.* at [156]–[158], [161]–[163].

338. *Id.* at [164]–[167].

339. Cass. Civ., Sez. Un. [Court of Cassation], 31 July 2017, n. 19013 (It.).

340. Commissione Nazionale per le Società e la Borsa (CONSOB), *Comunicazione n. DI/99013791: Strumenti finanziari derivati: criteri di qualificazione e applicazione di norme regolamentari* (Feb. 26, 1999), https://www.consob.it/documents/1912911/1926871/99013791.pdf/b3a6f8ea-040e-d81f-66b6-8c5def90b6ab (last visited March 9, 2026). This CONSOB determination was an answer to a question by a corporation.

341. *Id.*

342. Banca Intesa Sanpaolo and Dexia v. Commune di Venezia [2023] EWCA (Civ) 1482 [159], [168] (Eng.).

The Court of Appeal's focus on context was sensible: the contested derivative was skewed and risky, but it novated an IRS that was originally intended for hedging and should not transform into speculation when it is novated. However, its choice of precedents was also selective. The English Court of Appeal in *Venice* relied on the Italian Supreme Court's decision number 19013 of 2017. This decision analyzed the existence of hedging versus speculation. However, it did not do so in order to determine whether an entity had capacity to conclude the contract, or whether the contract had a determinable "object," the topics analyzed in *Venice* or in *Cattolica,* but in order to determine whether the bank had breached its duties to disclose the transaction risks, and give advice.

Venice is an apt corollary of the trend described here. The key difference between English courts and courts in Italy and other countries in Continental Europe is in the role of banks' duties to disclose risks, and/or offer advice. Courts in England enforce contract representations that negate those duties. Courts in Continental European countries tend to enforce those duties. In multiple iterations, courts on both sides have failed to find common ground. Parties gradually shifted towards presenting the issue not as one of risk disclosure and advice, but as one of capacity to conclude speculative transactions, until the Italian Supreme Court listened in its *Cattolica* judgment. English courts' reaction was to protect the contract, and the banks, against this development. What did they use? The more robust definitions for a "hedging" transaction drawn from a case about risk disclosures and advisory duties. No court gave dialogue a chance.

IV.
ONWARD: WHAT *LEX MERCATORIA* FOR DERIVATIVES?

This Section sets out the principal conclusions. Years of litigation have weakened the enforceability of cross-border derivatives, rather than strengthening it. Part of it is due to some initial shortcomings, such as relying, for derivatives enforcement, on a dispute resolution system centered in the law and jurisdiction of the United Kingdom and United States. Part is due to the inability of English courts, and courts in Continental Europe, to openly discuss, let alone find common ground, on how to approach a conflict where the bank's client alleges that it was sold a product with inadequate advice or risk disclosure, while the bank relies on contract representations that preclude such allegations. Part is due to bank clients' decision to plead that they lacked the capacity to conclude speculative transactions, and English courts' decision to *prima facie* accept such arguments. The result has been frustration and stalemate. This Section analyzes the possible ways forward, which consist of (i) preserving the current system in full, i.e., ignoring the conflict (A); (ii) moving towards hybrid arrangements that incorporate more explicit regulatory involvement (B); or (iii) seeking to recalibrate the current private system through greater decentralization and enhanced dialogue among courts (C).

A. *Status Quo: Private and Centralized Lex Mercatoria*

Despite the strains caused by derivatives litigation, the current system has clear strengths: the ISDA MA is a well-tested and technically precise framework, and courts in England and New York are experienced, sophisticated, and predictable. Thus, one option is to simply wait until the conflict fades out in the distance (procrastination). A return to normalcy in interest rates will reduce the incentives of non-bank counterparties to litigate, and courts in other jurisdictions may learn to normalize derivatives contracts and accept the centrality of English and New York courts. Relying on parties' negotiation would be equivalent to this. Post-conflict negotiation has always been available; presumably, the parties litigated only when both thought that doing so could yield a better outcome. Pre-conflict negotiation looks unrealistic: default preferences are sticky, and any individual counterparty would face an uphill battle in attempting to introduce an untested option. Some non-bank counterparties managed to insert the derivatives into a broader advisory relationship, only to realize that English courts interpret the derivatives contracts and the ISDA MA in a self-referenced, self-contained way.[343]

Thus, if the choice is to double down on the current system of private and centralized *lex mercatoria*, a natural evolution would be to go one step further in the privatization of *lex mercatoria* and encourage the use of *arbitration*. Arbitration is a natural companion of *lex mercatoria*.[344] Centralized models that favor one

343. *See supra* Section II.C (discussing cases of Brescia, Savona, and TRM).
344. BERGER, *supra* note 6, 109–110.

specific law (English law) to settle disputes over standard terms, such as BIMCO, for maritime carriage, or GAFTA, for commodities trade increasingly rely on arbitration.[345] Arbitration's importance is rising in financial disputes,[346] and it is already enabled by the ISDA's arbitration framework.[347] Arbitral awards benefit from the widely accepted New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. This includes, for example, the enforcement of English courts' decisions in European countries post-Brexit that fall outside the Brussels Regulations and the Lugano Convention,[348] and are covered by the Hague Convention of 2019.[349] Arbitrators seem as likely as English judges to focus on the letter of the contract and to leave matters of disclosure or advice out.

However, as the *Ceylon Petroleum* saga illustrated,[350] arbitrators are unlikely to sidestep matters like capacity and speculation. Furthermore, the *Ceylon* saga is not a paragon of predictable, cohesive solutions, given it consisted of three decisions (two of which were arbitral awards), with three different doctrinal outcomes. Arbitration's private nature, though positive for parties wary of public exposure, would prevent a more coherent body of case law from developing and anchor *ultra vires* challenges more firmly into the private law of derivatives.

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345. *Supra* Section I.B.

346. LAMANDINI & RAMOS MUÑOZ, *supra* note 2, at 460. The American Arbitration Association (AAA) has a specific section for financial disputes (https://www.adr.org/industries/commercial-industries/financial-services/) and it is a growing area (https://feature.adr.org/2025-aaa-infographics). Self-regulatory organizations, such as the Financial Industry Regulatory Authority (FINRA) also provide alternative dispute resolution mechanisms (https://www.finra.org/arbitration-mediation/dispute-resolution-statistics/2025).

347. *Supra* Section I.B.

348. The European Commission objected to the United Kingdom rejoining it. Communication from the Commission to the European Parliament and the Council: Assessment on the application of the United Kingdom of Great Britain and Northern Ireland to accede to the 2007 Lugano Convention, at 4, COM (2021) 222 final (May 4, 2021), available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52021DC0222.

349. Convention on the Recognition and Enforcement of Foreign Judgments in Civil or Commercial Matters, July 2, 2019, 3827 U.N.T.S. 1. The EU's accession was on 29 August 2022, and the Convention entered into force on 1 September 2023. The United Kingdom ratified the Convention on 27 June 2024, and it will enter into force there on 1 July 2025. *See* HCCH, Status Table, available at https://www.hcch.net/en/instruments/conventions/status-table/?cid=137 (last visited June 29, 2025).

350. *Supra* Section III.B.

This connects to a broader structural concern. Preserving the *status quo* is defensible only if disputes over the validity of derivatives are viewed as either opportunistic—raised by non-bank counterparties seeking to escape unfavorable bargains—or exceptional deviations from an otherwise correct model in which strict enforcement and a self-contained construction of the ISDA framework is plainly right, and any deviation from it is plainly wrong. However, the cases analyzed here suggest a more complicated picture. Different jurisdictions are not merely misapplying a shared framework; they diverge in how to conceptualize transactional risk, what conduct they legally expect from banks, and how they assess financial transactions that may undermine public services or social goals. Glossing over these differences may preserve short-term stability, but likely only at the expense of bigger issues in the long run. A particularly salient case, or a string of cases, involving risky products actively promoted by banks and leading to the failure of a prominent public or civil society institution could trigger a legitimacy crisis for the system as a whole. Thus, it is worth considering how to keep the strengths of the current system, while addressing the vulnerabilities these disputes have exposed.

B. *Regulation and Regulators (Hybrid Lex Mercatoria)*

If one accepts that some issues that have emerged in cross-border derivatives litigation reflect genuine concerns and disagreements over matters of policy not fully addressed by the ISDA framework, one option would be to evolve towards a hybrid system with greater involvement from administrative authorities.

Stronger regulation became standard practice for the derivative market after the 2008 financial crisis exposed the link between those elements and financial stability.[351] The relationship between banks and their clients, including in the sale of complex financial products, is also a matter of regulatory concern for both consumer and retail clients.[352] Supervisory authorities have developed alternative dispute resolution systems to deal with the large volumes of cases, as exhibited by the Italian "twin" systems sponsored by Bank of Italy and

351. Ramos Muñoz, *supra* note 2, at 539.
352. *Supra* Section I.D.2.

CONSOB.[353] In the United Kingdom, where courts tend to strictly rely on the letter of the contract, regulatory authorities like the FCA intervened to address the perceived protection gap in Interest Rate Hedging Products marketed by banks to retail clients and managed to foster transactional solutions between parties without charging banks with any breach of standards.[354]

Authorities have not yet developed similar schemes for cross-border cases but could do so if they wished. Securities regulators could, for example, sign memoranda of understanding with each other to reach common positions on the riskier elements in certain transactions, what behavior is expected from banks, and what steps are recommended to enter into transactions. They could also liaise with public auditors or authorities enforcing fiscal or budgetary rules to flag particularly risky transactions. Banks could implement the newly promulgated guidelines into their internal risk processes to minimize interference with the ISDA framework.

This, however, would be tantamount to an admission of defeat for courts, as they were unable to reconcile public concerns about risk, disclosure, or *ultra vires* with private *lex mercatoria* for cross-border derivatives. Despite their unquestionable advantages, administrative authorities do not bolster the legitimacy of the system like courts can.[355] Italian alternative dispute resolution bodies, and the arbitrators that sit in them, deferentially follow case law, and the FCA's IRHP review, despite efficiently bringing redress to thousands of clients, was subject to a subsequent inquiry and an independent report, to address criticism.[356]

353. *Supra* Section I.D.2.

354. *Supra* Section I.D.2; Ramos Muñoz, *supra* note 2, at 556.

355. Ramos Muñoz, *supra* note 2, at 560, offering different examples where dispute resolution schemes sponsored by financial supervisors operate as complements, not substitutes of courts, to handle a large volume of disputes, while courts are still needed to settle relevant points of doctrine and principle.

356. *Id.* at 558–60. In the case of Italy, it refers to the Annual Reports of the two main Alternative Dispute Resolution (ADR) mechanisms in Italy, the *Arbitro Bancario Finanziario* (ABF), sponsored by the Bank of Italy, the bank supervisor, and the *Arbitro per le Controversie Finanziarie* (ACF) sponsored by the CONSOB, the securities supervisor. The Annual Reports typically refer to the more relevant doctrinal developments in the courts, which the arbitrators follow closely, to ensure alignment. In the case of the United Kingdom,

C. *Conversation (Plural Lex Mercatoria)*

Courts have not fully allayed the tensions underlying cross-border derivatives disputes, but they have undeniable, if unsung, advantages over administrative authorities. Thus, one plausible avenue is to make derivatives' *lex mercatoria* more *plural* through better *conversation,* or dialogue, between courts.

Inter-court dialogue is a well-known idea, encompassing both "formal" dialogue where national courts in one jurisdiction ask courts in a different jurisdiction to clarify a specific issue, and "informal" dialogue, where courts acknowledge other courts' views as a persuasive, if not authoritative source.[357]

This dialogue is often associated with higher courts on matters like fundamental rights and principles.[358] However, informal inter-court dialogue also underpins the success of some transnational commercial law texts. The CISG's principle of "uniform interpretation" (Article 7) has enabled courts to consider foreign courts' opinions.[359] Some court decisions have become truly international precedents on matters like extrinsic evidence (parol evidence rule),[360] damages,[361] or exemption ("*force majeure*").[362] In the CISG's arguably most famous case (*New Zealand Mussels*), the German Supreme Court set the

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it describes the IRHP intervention, its subsequent scrutiny, and the parallel developments in the English courts. *See supra* Section I.D.2.

357. Lamandini, Ramos Muñoz & Ruiz Almendral, *supra* note 3; Anne-Marie Slaughter, *A Typology of Transjudicial Communication*, 29 U. RICH. L. REV. 99, 100, 102, 104, 106 (1994) (offering multiple examples of 'horizontal' communication, in the absence of any Treaty or formal framework, in contrast with 'vertical' communication between national and supranational courts). Within Slaughter's typology, within horizontal cases I would still differentiate between cases where there is a "formal" request, as in cross-border recognition and enforcement, and cases where there is, simply, a cross-citation.

358. JUDICIAL DIALOGUE 55 (Martin Belov ed., 2019); Anthony Arnull, *Judicial Dialogue in the European Union*, in 109 PHILOSOPHICAL FOUNDATIONS OF EUROPEAN UNION LAW 117–19 (Julie Dickson & Pavlos Eleftheriadis eds., 2012).

359. United Nations Convention on Contracts for the International Sale of Goods, Apr. 11, 1980, 1489 U.N.T.S. 3, art. 7; Anselmo Martínez Cañellas, *Interpretación de la Convención de Viena sobre Compraventa Internacional de mercaderías*, 102 CEF Legal 13, 17 n. 11, 41 n. 173 (2010).

360. MCC-Marble Ceramic Ctr., Inc. v. Ceramica Nuova D'Agostino S.P.A., 144 F.3d 1384 (11th Cir. 1998).

361. Delchi Carrier S.p.A. v. Rotorex Corp., 71 F.3d 1024, 1026 (2d Cir. 1995) (supporting the claim although its reasoning on the susceptibility to interpret the CISG in line with the UCC is mistaken).

362. Bundesgerichtshof [BGH] [Federal Court of Justice] Jan. 9, 2002, Neue Juristische Wochenschrift [NJW] 1651 (2002) (Ger.).

standard for determining when a foreign country's mandatory health and safety regulations could amount to a lack of conformity under the Convention's uniform rules.[363] The court had to balance the relevance of domestic rules (typically in the buyer's country) with the behavior to be expected from the seller. Thus, a product in breach of such standards would be non-conforming only if the seller ought to have known the existence of such standards.[364] Thus, there are clear similarities with the problems analyzed here: banks actively engaging with their clients in a jurisdiction, used to the process of selecting a suitable product, and with knowledge of that jurisdiction's expectations on the disclosure of risks or advisory duties may not easily claim that such duties are irrelevant.

Admittedly, selling mussels is not the same as selling derivatives. However, the ISDA's centralized model of *lex mercatoria* is comparable only to those of BIMCO, for maritime carriage, or GAFTA, for commodities trade,[365] which have their own differences. Furthermore, there are other examples where courts' acknowledgment of each other's opinions can foster convergence, even in matters that impinge on public policy. This is the case of the UNCITRAL Model Law on Cross-Border Insolvency (MLCBI).[366] In the MLCBI context, courts sometimes have very different approaches to key legal concepts, such as the "center of main interest" (COMI) in Europe and in the United States.[367] However, that has not prevented courts in the United States or the United Kingdom from referring to, and analyzing, the decisions of the CJEU as persuasive, where possible, to emphasize the commonalities, rather than the differences.[368]

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363. Bundesgerichtshof [BGH] [Federal Court of Justice] Mar. 8, 1995, 129 Entscheidungen des Bundesgerichtshofes in Zivilsachen [BGHZ] 75 (1995) (Ger.).

364. *Id.*

365. *Supra* Section I.A.

366. *See* U.N. COMM'N ON INT'L TRADE L., DIGEST OF CASE LAW ON THE UNCITRAL MODEL LAW ON CROSS-BORDER INSOLVENCY 20 (Vienna, 2021) (Commentary on Article 6, public policy exception).

367. Courts in the EU, which interpret the concept of COMI under the European Insolvency Regulation 2015/848 (EIR) (recast) differ from U.S. courts interpreting the concept under U.S. Bankruptcy Code Chapter 15, based on the UNCITRAL MLCBI, e.g., on the strength of the presumption that the COMI is the registered office (stronger in the EU, weaker in the US).

368. U.S. cases, such as In re SPhinX, Ltd., 351 B.R. 103 (Bankr. S.D.N.Y. 2006), aff'd, 371 B.R. 10 (S.D.N.Y. 2007), CLOUT 768 have cited European cases, such as Case C-341/04, Eurofood IFSC Ltd., 2006 E.C.R. I-3813 (Grand

Thus, differences aside, there are lessons to be learned. Some English courts showed interest in foreign laws, such as in *Haugesund, Santander* (first instance), or *Venice* (first instance). The competent courts under the contract could find a way to develop their doctrines to acknowledge that cross-border cases may not be equivalent to domestic cases, that the parties' expectations may differ, and that foreign doctrines on disclosure and advice, which are a matter of principle in some jurisdictions, can have a role in shaping those expectations. Courts in other jurisdictions, typically deciding non-contractual claims, could look more deeply into the due diligence expected from supposedly sophisticated non-bank counterparties, and reach sterner verdicts when such parties acted opportunistically or carelessly. This would help align the findings in contractual and non-contractual cases, and to reach more calibrated decisions, like shifting the focus towards damages and away from voidness as a remedy. A positive side effect of focusing on disclosure and advice over risk would be to gradually eradicate capacity and speculation as the basis for cross-border dialogue, as they are uncompromising, rigid, and ultimately futile.

As the central organization in derivatives' *lex mercatoria* and governance, the ISDA would be a key actor in this process. The ISDA can foster uniform interpretations, and help tackle key legal issues by making existing case law available, like UNCITRAL does through the CLOUT system.[369] It can aid courts to pursue interpretations that acknowledge important matters of principle without endangering the stability of global markets, and use its wide stakeholder base to balance the demands for certainty of some members (like banks) with the advantages that a more plural *lex mercatoria* has for the legitimacy of the system, and, ultimately, the stability of global derivatives markets.

Formal inter-court dialogue is more difficult, but some examples could provide inspiration. Court-to-court cooperation is an established feature of insolvency law, including memoranda of

Chamber May 2, 2006) as a persuasive basis. The English Court of Appeal in re Stanford International Bank Ltd. [2010] EWCA (Civ) 137 (Eng.), analyzed the concepts of COMI under the EIR and the MLCBI, concluding that it was correct to use the Eurofood approach to interpret the English concept of COMI under its Cross-Border Insolvency Regulations SI 2006/1030, which gave force to the UNCITRAL MLCBI (in a non-EU case).

369. *Supra* note 13.

understanding or protocols.[370] At a regional level, inter-court dialogue is formally established in the European Union through the preliminary reference procedure to the CJEU.[371] Contract (and non-contractual) disputes may not need such a level of formality or institutionalization. The increasing presence of specialist courts for international commercial disputes creates an opportunity to experiment with more structured forms of judicial dialogue. In cases involving parallel or interconnected jurisdictional "legs," courts could formally request clarification from one another on specific issues of local law, rather than resolving those questions unilaterally. Such mechanisms would allow courts to address conflicts more cooperatively and with greater sensitivity to the legal frameworks involved in each forum.

It is easy to dismiss such views as unrealistic. This would look at the problem backwards. The cases discussed above demonstrate that risk and inconsistencies already exist: counterparties sometimes refuse payment on public policy grounds, and courts can reach opposing verdicts in both contractual and non-contractual proceedings. Those cases also suggest that the enforceability of derivatives contracts and of the ISDA MA cannot be secured through a purely self-referential interpretation of the agreement itself. Broader questions of public law, regulatory policy, and judicial authority are inevitable. The resulting tension may be addressed through some form of synthesis, such as structured inter-court dialogue, or some form of informal dialogue, where courts in one jurisdiction not only apply the laws of another jurisdiction when they have to, but also acknowledge the interests protected by a different legislation, and accept that they may call for a different approach in cross-border cases from the one that would be given to domestic cases. Alternatively, the center of gravity may shift away from courts altogether—towards arbitration or even regulatory authorities. The latter trajectory appears increasingly plausible. It would be a sad outcome. Courts are perfectly capable of using imaginative strategies to enhance dialogue, acknowledge the diversity of views, and try to find a synthesis. With that, courts should

370. *See, e.g.*, Int'l Insolvency Inst., *III: Insolvency Protocols*, https://www.iii-global.org/initiatives/iii-insolvency-protocols/ (last visited June 29, 2025).

371. Consolidated Version of the Treaty on the Functioning of the European Union art. 267, Oct. 26, 2012, 2012 O.J. (C 326) 47.

and will keep their role as the leading forum for cross-border derivatives disputes.

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THE FUNCTION AND FORM OF BOILERPLATE IN MUTUAL FUND DISCLOSURES

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The mutual fund market—where and how most Americans save for retirement—is governed largely by a disclosure regime administered by the Securities and Exchange Commission (SEC). These disclosures are often dismissed as rote boilerplate, assumed to convey little meaningful information. This Article challenges that view. We argue that mutual fund disclosures, considered in the aggregate, encode valuable information about fund strategy, innovation, and portfolio change. Funds invest substantial resources in drafting disclosure language, and the SEC actively enforces compliance—facts that underscore the informational and legal significance of linguistic choices.

We develop a game-theoretic model of disclosure strategy that explains why funds rely on standardized language to communicate shared legal meanings while selectively deviating from boilerplate to signal strategic change.

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We then test the model's predictions using original quantitative analyses of mutual fund disclosures from 2011 to 2022. The evidence reveals both the informational function and form of boilerplate. Funds use boilerplate strategically, particularly in describing investment strategies; disclosure language varies systematically by fund type and exhibits strong clustering within fund families—what we call "house" language. Most importantly, departures from boilerplate language predict economically and statistically significant changes in portfolio composition. Far from being empty gestures at compliance, boilerplate language serves as a low-cost signaling mechanism at the intersection of market behavior and regulatory oversight.

Introduction

Mutual fund disclosures read, unsurprisingly, like the legal documents they are—full of terms of art, legalese, and stock language.[1] They contain information such as past performance, fees, and discussions of the funds' investment strategies and the attendant risks.[2] Readers may be quick to dismiss the disclosures as "boilerplate"—a four-letter word in the law.[3] Calling language boilerplate belittles the drafter's skill and trivializes its informative value.[4] Yet boilerplate plays an undeniable role across practice areas, from complaint templates to standard contract terms and form documents—even before AI-assisted

1. Disclosures, like contracts, can overload investors with information, be excessively long, include obsolete terms, and accumulate legalese, known as "legal encrustation." For a discussion of the dark side of boilerplate, see Stephen Choi et al., *Who Calls the Shots? How Mutual Funds Vote on Director Elections*, 3 Harv. Bus. L. Rev. 35, 40–41 (2013).

2. Wulf A. Kaal & Bentley J. Anderson, *Unconstrained Mutual Funds and Retail Investor Protection*, 36 Rev. Banking & Fin. L. 817, 830–33 (2017) [hereinafter *Unconstrained*]. Mutual funds are subject to additional SEC filing requirements, as well as annual and semiannual financial statements. These regulations are beyond the scope of this Article. *See, e.g.*, Letter from Barry D. Miller, Associate Director of Office of Legal and Disclosure, SEC (July 30, 2010) [hereinafter ICI Letter] (detailing disclosure obligations beyond the prospectus); Enhanced Reporting of Proxy Votes by Registered Management Investment Companies: Reporting of Executive Compensation Votes by Institutional Investment Managers, 17 C.F.R. pt. 200, Release Nos. 33-11131 (Nov. 2022).

3. *Cf.* Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting*, 83 Va. L. Rev. 713, 719–720 (1997) (describing learning benefits and network benefits of boilerplate); Douglas G. Baird, *The Boilerplate Puzzle*, 104 Mich. L. Rev. 933, 949–50 (2006) (discussing the boilerplate in commercial transactions); Gregory Klass, *Boilerplate and Party Intent*, 82 Law & Contemp. Probs. 106 (2019) (describing problems of discerning party intent with boilerplate).

4. For example, the SEC warns operating companies (firms) to "avoid 'boilerplate' risk factors. We believe a discussion of risk in purely generic terms does not tell investors how the risk may affect their investment . . . ." SEC Plain English Disclosures 17 C.F.R. pts. 228, 229, 230, 239 and 274 [Release Nos. 33-7497; 34-39593; IC-23011]. *See, e.g.*, Reid Kress Weisbord & David Horton, *Boilerplate and Default Rules in Wills Law: An Empirical Analysis*, 103 Iowa L. Rev. 663 (2018) (describing boilerplate in wills); Lauren Henry Scholz, *Fiduciary Boilerplate: Locating Fiduciary Relationships in Information Age Consumer Transactions*, 46 J. Corp. L. 143 (2020) (describing consumer boilerplate); Orly Lobel, *Boilerplate Collusion: Clause Aggregation, Antitrust Law & Contract Governance*, 106 Minn. L. Rev. 877 (2021) (describing the role of boilerplate in antitrust).

drafting.[5] No one reinvents the wheel with pay-by-the-hour legal services.

Mutual fund disclosures require a special kind of drafting to satisfy the Securities and Exchange Commission's (SEC) regulatory requirements[6] and meet investors' (and their intermediaries')[7] information needs.[8] Funds must draft compliant disclosures that tell the markets what they do and then follow the rules of their own game. As we show in a regulatory enforcement game, boilerplate can be an attractive drafting strategy for funds, regulators, and investors.[9]

We also empirically examine the role that boilerplate plays in mutual fund disclosures. To do so, we use an original dataset of all mutual fund summary prospectuses filed between 2011

5. *See, e.g.*, James M. Lacko & Janis K. Pappalardo, *The Failure and Promise of Mandated Consumer Mortgage Disclosures: Evidence from Qualitative Interviews and a Controlled Experiment with Mortgage Borrowers*, 100 AM. ECON. REV. 516 (2010); Janis K. Pappalardo, *Product Literacy and the Economics of Consumer Protection Policy*, 46 J. CONSUMER AFF. 319 (2012).

6. The Securities and Exchange Commission (SEC) requires information to register and monitor funds through both initial and annual disclosures. 15 U.S.C.A. § 77g (2022). The SEC uses the information to let in new funds, with initial registration, and monitor funds thereafter with annual disclosures. Form N–1A, Registration Statement of Open-End Management Investment Companies, 17 C.F.R. § 239.15A (2021), https://www.sec.gov/files/formn-1a.pdf [hereinafter SEC FORM N-1A]. A mutual fund's prospectus is perhaps the most significant source of information about funds. Every fund must file this document with the SEC to initially register and then annually renew the fund.

7. Intermediaries include broker/dealers and employer-plan sponsors who provide the investment portals through which most individuals invest. *See* Susan Navarro Smelcer, Anne Tucker & Yusen Xia, *Aggregated Risks: Mutual Fund Disclosures & Market Risk*, 49 J. OF CORP. L. 49, 63–64 (2023) [hereinafter *Aggregated Risks*] (discussing plan sponsors); VANGUARD, BEST PRACTICES FOR PLAN FIDUCIARIES 22 (2022) (discussing plan fiduciaries).

8. Margaret Giles, *What to Invest in During High Inflation*, MORNINGSTAR (Jan. 12, 2023), https://www.morningstar.com/markets/what-invest-during-high-inflation (discussing Morningstar investment analysis). *See, e.g.*, Anne M. Tucker, Yusen Xia, *Promise & Peril of Plain English: Mutual Fund Disclosure Readability*, 13 HARV. BUS. L. REV. 59, 71–75 (2023) [hereinafter *Promise & Peril of Plain English*] (discussing ordinary investors' information needs). "Average" investors' relative disinterest in the nitty-gritty of mutual fund disclosures suggests the importance of other audiences for the information. Beyond the SEC, sophisticated intermediaries access, absorb, and act upon disclosed information on the investors' behalf. The benefits of more "investor friendly" disclosures seem to accrue substantially to the regulators and intermediaries, but benefits only indirectly trickle down to individual investors.

9. *See, e.g.*, Jeremy McClane, *Boilerplate and the Impact of Disclosure in Securities Dealmaking*, 72 VAND. L. REV. 191, 233 (2019) (describing incentives to recycle previously approved SEC language).

and 2022 to observe how much boilerplate exists. We define boilerplate as repeated and recycled language across filings and measure it using two similarity measurements that account for word importance (cosine TF/IDF) and word order (cosine 5-gram shingles).[10] We find a lot of boilerplate—on average, around 80% of disclosure language is recycled year-to-year in the narrative sections, such as a fund's Investment Strategy and Principal Risk sections. Consistent with our regulatory model, drafting mutual fund disclosures resembles other areas of the law: to draft tomorrow's disclosure, funds look to the last one filed.

Our findings are expected, consistent with our research experience reading thousands of these documents, and intuited by anyone who has ever attempted to draft or read even a summary prospectus. The puzzle is that the SEC rules expressly prohibit boilerplate in disclosures—or at least too much boilerplate.[11] Of course, not all disclosure language is repetitive.[12] It would be a poor regulatory tool if it were. Funds toe an invisible line, changing some disclosure language year to year but not most.[13]

A central tension emerges between disclosure language stability—boilerplate—on one hand, and change, on the other. Scholars have observed and partially resolved this tension in other legal drafting tasks. Lawyers drafting contracts, for example, may choose boilerplate provisions to reduce drafting costs,[14] facilitate shared meaning with the other party,[15] and increase

10. *See infra* Section II.

11. 17 C.F.R. § 230.421 (2025) (requiring prospectuses to be written in clear, plain English and discouraging vague boilerplate disclosure).

12. *See infra* Section III.

13. It would be odd—and perhaps even alarming—if a fund's description of its principal strategies and resulting risks radically changed from year to year in an investment meant to last a lifetime. Some boilerplate is therefore expected, if not welcomed. As we note in our findings in Section III, principal risk statements change more significantly than investment strategy sections.

14. For example, boilerplate avoids drafting costs by not "reinventing the wheel," and risk-averse lawyers are comforted by language that is road-tested and trusted by the SEC and investors. *See generally*, Jessica Jeffers & Anne Tucker, *Shadow Contracts*, 1 U. CHICAGO BUS. L. REV. 269, 282 (2022) (discussing the role of transactional costs in drafting new language).

15. In contracts and other disclosure regimes, the predominance of boilerplate language promotes stability, facilitates shared meaning—especially with complex topics—and signals expectations. David Horton & Reid Kress Weisbord, *Boilerplate No Contest Clauses*, 82 LAW & CONTEMP. PROBS. 69, 72–73 (2019).

interpretability by future judges.[16] Lawyers change contract language to tailor the contract to a given deal and avoid too much boilerplate, which can lead to impenetrable, illogical, and inefficient drafting.[17] But drafters and readers alike use boilerplate as a roadmap to construct, read, and understand contracts. There is no working model, however, for mandatory mutual fund disclosures. Our work fills this gap by offering both a theoretical model and novel empirical evidence of how boilerplate works in disclosures.

To begin, we review the regulatory requirements that govern mutual fund disclosure, such as updating disclosure language in response to external events or when investment strategies drift.[18] We then offer a game-theoretic account of disclosure drafting and the incentives of funds, the SEC, and investors.[19] The game highlights the uncertainty that funds, regulators, and investors face. How much information is the right amount? Boilerplate can be a useful drafting strategy for the three players because repeated language reinforces *shared meaning* over time, avoids costly mistakes with terms of art, and reduces transaction drafting costs. Identifying strategic reasons for stability also highlights the inverse: change.

We identify four hypotheses of disclosure drafting that we take to the data: (1) boilerplate advances shared meaning over time, (2) boilerplate reduces transaction costs, but (3) boilerplate gives way to new language when conditions on the ground change, such as new strategies or (4) when the fund changes its portfolio holdings.

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16. Repeated exposure to contractual boilerplate increases consistency and reliability in judicial interpretation. Henry E. Smith, *Modularity in Contracts: Boilerplate and Information Flow*, 104 MICH. L. REV. 1175, 1188 (2006) (acknowledging that boilerplate facilitates judicial interpretation); Jeremy McClane, *Boilerplate Semantics: Judging Natural Language in Standard Deal Contracts*, 2020 WIS. L. REV. 595, 624–25 (2020) [hereinafter *Boilerplate Semantics*] (acknowledging the role of courts in interpreting boilerplate); John Coyle & W. Mark C. Weidemaier, *Interpreting Contracts Without Context*, 67 AM. U. L. REV. 1673 (2018).

17. Disclosures, like contracts, can overload investors with information, be excessively long, include obsolete terms, and accumulate legalese, known as "legal encrustation." For a discussion of the dark side of boilerplate, see Choi et al., *supra* note 1, at 40–41. *See also* 2011 SEC staff comments to the ARROW INVESTMENTS TRUST 3 (on file with author).

18. Susan Navarro Smelcer, Anne Tucker & Yusen Xia, *Regulating Dynamic Risk in Changing Market Conditions*, 13 WM. & MARY BUS. L. REV. 775, 788–89 (2022).

19. *See infra* Section I.

Our findings support the shared meaning hypothesis. Different types of funds—as indicated by asset class—use boilerplate in unique ways. For example, fixed-income (FI) funds employ a different level of boilerplate, on average, as compared to every other type of fund.[20] We also find that disclosures by funds in the same asset class—that is, funds with similar investment strategies—are more likely to share language than disclosures from different asset classes. This is true of both the investment strategy and risk sections.

Next, evidence of boilerplate's ability to reduce transaction costs can be found in funds' observable use of "house language." Funds within the same family share more language compared to similarly situated funds in other complexes.

We also observe when disclosure language changes. Funds with innovative or evolving strategies, such as environmental, social, and governance (ESG) funds, are more likely to revise their investment strategies annually compared to funds with more established strategies.

Importantly, major changes in disclosure language signal more than mere wordsmithing. We find that major changes to disclosure language signal statistically significant changes in the mix of a fund's portfolio. That is, lower levels of repeated language are correlated with meaningful and statistically significant changes in assets (equity securities, debt securities, cash, and other holdings).

This Article proceeds as follows: Section I describes the regulatory architecture of mutual fund disclosures, introduces a game-theoretic model, and identifies four resulting hypotheses. Section II describes our data and methodology. Section III outlines our main boilerplate findings. Section IV concludes with three use cases for boilerplate disclosure language focusing on regulators, funds, investors, and their intermediaries.

I.
Fund Disclosures & Boilerplate

This Part briefly introduces the regulations governing mutual fund disclosures before introducing a regulatory enforcement game to understand drafting incentives. It concludes

20. Fixed-income funds, which invest in debt and the bond markets, are broadly considered more stable as a form of guaranteed or principal-protecting assets, compared to stocks like domestic equity funds.

with our hypotheses that boilerplate is a drafting strategy that promotes shared meaning and reduces transaction costs. But boilerplate gives way to updated language when investment strategies evolve.

A. *Disclosure Rules*

Mutual funds must file a registration statement (SEC Form N-1A) to form a new open-ended fund whenever the fund materially changes and at least annually thereafter.[21] Funds must also make material updates when investment strategies change and drift,[22] and funds update the prospectus to keep it "accurate in all material respects."[23]

The SEC uses disclosed information (and more) to ensure fund compliance, monitor market risks, prevent fraud, and promote investor confidence.[24] The last goal—investor confidence—and its companion, investor *protection*,[25] have traditionally given the SEC political authority to regulate markets and mandate information from issuers.[26] Admittedly, few individual investors read detailed fund disclosures, but investment

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21. SEC Form N-1A, *supra* note 6; John McGuire, *Registering Investment Companies under Form N-1A*, Mutual Funds Today: Current Issues and Developments, CW009 ALI-CLE (2014); *Unconstrained*, *supra* note 2, at 830 (*citing to* 15 U.S.C. §§ 80a-1(b)(1)–(3), (5), (7); § 80a-8(b)(1)(E)).

22. Changes to "investment objective and policies" that change a fund's focus "require a post-effective amendment filed under Rule 485(a), rather than a Rule 497 prospectus." Investment Company Act Release No. 19,382 (Apr. 6, 1993).

23. Michael Glazer, *Prospectus Disclosure and Delivery Requirements*, Ch.4, Mutual Funds & Exchange Traded Funds, 4–32 (2015).

24. *See, e.g.*, Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 Ala. L. Rev. 473, 479 (2007) (describing the SEC regulatory regime as one primarily built around disclosure).

25. SEC Form N-1A, *supra* note 6, at General Instructions C.1.(b) (naming ordinary investors as an audience). The SEC is concerned with ordinary investors in regulating firms, as well as funds. *See e.g.*, Usha Rodrigues, *Dictation & Delegation*, 92 Ind. L.J. 435, 495-497 (describing the SEC's rulemaking under Title III of the JOBS Act and the focus on protecting ordinary investors).

26. *Promise & Peril of Plain English*, *supra* note 8, at 63. The SEC's political authority to regulate markets is based upon the hypothetical individual investor who reads disclosures. *Id.* at 62–63. But, within a well-regulated market, information *to investors* has diminishing returns beyond a fund's crucial attributes. This is especially true where intermediaries and regulators are on the scene. Crucial information such as security type, general strategy, risk profile, fees, and performance track record (if any) is detailed in the summary prospectus. Perhaps this explains why so few individual investors read disclosures. SEC Form N-1A, *supra* note 6.

intermediaries consume, interpret, and act on disclosed information on the investors' behalf.[27]

The SEC requires three types of disclosures from funds.[28] First, the SEC mandates certain check-the-box disclosures of hard facts like fee tables and the inclusion of mandatory language.[29] These disclosures provide information about voting records, taxes, portfolio holdings, fees, and past performance.[30] Second, the SEC imposes principles-based requirements to list and describe the "principal" investment strategies and risks.[31] Third, the SEC requires additional open-ended disclosures like updating for material strategy changes or shifts in external market conditions.[32]

SEC regulations also dictate the language and style of the disclosure. Funds must produce clear and comprehensive communications[33] written in plain English,[34] and subject to other guidelines around formatting, ordering, and writing.[35]

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27. McClane, *supra* note 9, at 219–20 (expressing skepticism that individual investors read disclosures and discussing how disclosed information reaches investors, through analytics and other intermediaries). Investment intermediaries and professionals include broker-dealers, plan administrators, and industry analysts like those at Morningstar. *Aggregated Risks*, *supra* note 7, at 63–64.

28. Smelcer, Tucker & Xia, *supra* note 18, at 787; *Aggregated Risks*, *supra* note 7, at 61–62.

29. Smelcer, Tucker & Xia, *supra* note 18, at 787–88.

30. *Unconstrained*, *supra* note 2, at 830–32. Mutual funds are subject to additional SEC filing requirements, as well as annual and semiannual financial statements. These regulations are beyond the scope of this Article.

See also ICI Letter, *supra* note 2; SEC Enhanced Reporting of Proxy Votes by Registered Management Investment Companies: Reporting of Executive Compensation Votes by Institutional Investment Managers, 17 C.F.R. pt. 200, 232, 240, 249, 270 and 274 (2024).

31. Smelcer, Tucker & Xia, *supra* note 18, at 789.

32. *Id.* at 789–90. Our study focuses primarily on the narrative discussions and requirements to update disclosures, as opposed to check-the-box disclosures. The prospectus is a comprehensive, annual, widely available document. Parts are automatically provided to investors. For a discussion of the prospectus, see *id.*, at 790–91; s*ee also Unconstrained*, *supra* note 2, at 832; ICI Letter, *supra* note 2.

33. SEC Form N-1A, *supra* note 4, at General Instructions C.1.(b) (naming ordinary investors as an audience). The SEC is concerned with ordinary investors in regulating firms, as well as funds.

34. SEC Plain English Disclosures, 17 C.F.R. pts. 228, 229, 230, 239 and 274 (1998); *see also Promise & Peril of Plain English*, *supra* note 8, at 70–71.

35. *See, e.g.*, Form and Content of Prospectuses, 17 C.F.R. § 230.421(d)(2)(i)–(vi) (2023) (outlining style guides); *see also* SEC. & EXCH COMM'N, Enhanced Disclosure and New Prospectus Delivery Option for Registered Open-End Management Investment Companies (2009), https://

The SEC justifies its style and content rules in service of better investor comprehension.[36]

Similarly, the SEC cautions funds to avoid "[v]ague boilerplate explanations that are readily subject to differing interpretations."[37] SEC examiners also flag mutual fund filings for the improper use of generic language,[38] laundry lists,[39] or confusing language.[40] SEC enforcement actions attempt to police the overuse of boilerplate.[41] Regulators have issued

www.sec.gov/rules/final/2009/33-8998-secg.htm [https://perma.cc/JM2R-R8CG] (describing summary prospectus expectations).

36. *See* Section I.B.

37. SEC Plain English Disclosures, *supra* note 34. The SEC similarly warns operating companies to "avoid 'boilerplate' risk factors. We believe a discussion of risk in purely generic terms does not tell investors how the risk may affect their investment . . . ." *Id.*

38. A 2013 staff comment to the GuideStone Funds filing noted the Staff's concern with registrants providing derivatives disclosure that was either too brief or generic. The Staff stated its view that appropriate derivatives disclosure will be "tailored specifically to how a fund expects to be managed and should address those strategies that the fund expects to be the most important means of achieving its objectives and that it anticipates will have a significant effect on its performance." The disclosure "should describe the purpose that the derivatives are intended to serve in the portfolio . . . and the extent to which derivatives are expected to be used." Funds should avoid enumerating a generic "laundry list" of derivatives. (on file with authors)

39. BrandywineGLOBAL - Global Total Return ETF.pdf (on file with authors)—"The disclosure in the Principal investment strategies" section includes a laundry list of fixed income securities and debt instruments in which the Fund may invest.

40. Under the heading, Principal Investment Strategies, the disclosure states, "The Longview Extended Commodity Index is a composite index of commodity sector returns. This statement may be confusing to some shareholders. How can an index be comprised of sector returns? It may be helpful to provide the components of the index." 2011 SEC staff comments to the ARROW INVESTMENTS TRUST.pdf, p.3 (on file with author).

As in contracts, the overuse of boilerplate erodes consumer comprehension, leading to legal encrustation where the "intelligibility of language deteriorates significantly as legal jargon is added to standard formulations . . . ." Stephen J. Choi, Mitu Gulatti & Robert E. Scott, *The Black Hole Problem in Commercial Boilerplate*, 67 DUKE L.J. 1, 5 (2017).

41. The SEC has tried several times to limit boilerplate recitations in securities disclosures, and in December 2015, Congress took aim at boilerplate by mandating that the SEC revise its disclosure regulations to eliminate such language as much as possible. Fixing America's Surface Transportation Act of 2015 (FAST Act), Pub. L. No. 114-94, § 72002, 129 Stat. 1312, 1784–85 (2015) ("[T]he Securities and Exchange Commission shall take all such actions to revise regulation S-K . . . to eliminate provisions of regulation S-K, required for all issuers, that are duplicative, overlapping, outdated, or unnecessary . . . ."); *see also* Business and Financial Disclosure Required by Regulation S-K, 81 Fed. Reg. 23,915, 23,917 (Apr. 22, 2016) ("We are specifically seeking comment

orders asking some funds to revise "nearly identical language" across disclosures that made it difficult to "distinguish between the investments . . . ."[42]

Some of the SEC prohibitions are followed,[43] like when SEC Examiners reject filings that copy and paste the same language across different funds with different strategies because the boilerplate is noncompliant.[44] But, as we show in Section III, the SEC tolerates extensive boilerplate.

SEC regulations introduce several tensions: language stability and change; compliance and non-compliance; and information for regulators and investors. Resolving these tensions is not obvious from the face of the regulations alone. We turn to a theoretical account to fill in the missing incentives and motivations.

B. *Disclosure in a Regulatory Oversight Game*

We can characterize funds' competing incentives as a game of regulatory oversight. Both the SEC and investors require different levels of disclosed information from the fund. The fund must choose how much and which type of information to disclose.[45] The cost of doing so grows necessarily with the

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on . . . whether, and if so how, we could revise our requirements to . . . promote efficiency, competition, and capital formation . . . .").

42. SEC Comment Letter, American Funds Retirement Income Portfolio Series, File Nos.: 333-203797; 811-23053 (May 29, 2015) (2015 WL 14055764). If risk statements are found to be "identical," the SEC rejects the filing and demands "fund-specific risk disclosure to permit investors to understand how the risks differ among the Funds." SEC Comment Letter, Unified Series Trust, File Nos. 811-21237; 333-100654 (Nov. 21, 2002) (on file with authors).

43. *See e.g.*, *Promise & Peril of Plain English*, *supra* note 8, at 78 (describing results that funds follow some SEC guidelines, but not all).

44. "The Principal Investment Strategies section for CLS Global Diversified Equity Fund, CLS Growth and Income Fund, and CLS Global Growth Fund each contain three substantially identical paragraphs that seek to describe the Fund's risk level relative to a blended benchmark, the advisor's strategy to control risk, and the advisor's active management strategy." Letter from Thompson Hine LLP to Keith Gregory File Nos. 333-20635 and 811-08037, (Oct. 31, 2014) (2014 WL 13088193).

45. *See, e.g.*, Geoffrey A. Manne, *The Hydraulic Theory of Disclosure Regulation and Other Costs of Disclosure*, 58 ALA. L. REV. 473, 479 (2007) (SEC regulation depends upon disclosure). A mutual fund's prospectus is perhaps the most significant source of information about funds. Every fund must file this document with the SEC to initially register and then annually renew the fund. Form N–1A, Registration Statement of Open-End Management Investment Companies, 17 C.F.R. § 239.15A (2021).

amount and variety of information disclosed. After receiving the fund's disclosure, both the SEC and investors must decide whether the fund has met their requirements and whether to "punish" the fund.[46]

Imagine that the fund can choose any level of disclosure d with cost c_d.[47] The cost of writing a disclosure is such that, as the level of disclosure increases, so too does the cost.[48] The SEC requires disclosures that reveal some level of information α about the fund's compliance. This preference α encompasses the minimum information required both to inform investors of the relevant risk and allow the SEC to monitor the markets pursuant to its mandate in the 1933, 1934, and 1940 Acts.[49]

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46. The SEC acts as a third-party arbitrator sitting between the fund and investors, much like a judge in interpreting a contract. *See generally* Russell B. Stevenson, *The SEC and the New Disclosure*, 62 CORN. L. REV. 50 (1976) (describing the SEC's enforcement of disclosure regulations). The SEC reviews, accepts (or rejects), and enforces initial and updated disclosures.

> The Disclosure Review and Accounting Office (DRAO) is primarily responsible for the analysis and review of filings for mutual funds, ETFs, closed-end funds, variable insurance products, unit investment trusts, and similar investment companies under the Federal securities laws. These responsibilities include the review of initial registration statements, post-effective amendments thereto, proxy statements, and financial statements as required by the Sarbanes-Oxley Act of 2002.

Division of Investment Management: Division of Disclosure Review and Accounting Office, SEC, (Apr. 6. 2023), https://www.sec.gov/division-investment-management-about-disclosure-review-and-accounting-office.

47. Funds exercise discretion in writing disclosures, especially in complying with principles-based and open-ended SEC regulations. *See, e.g.,* Tamar Frankel, *The Failure of Investor Protection by Disclosure*, 81 U. CIN. L. REV. 421, 426 (2012). Disclosure drafters face uncertainty about how to comply or what counts when regulations task the disclosing party with interpreting the rules. McClane, *supra* note 9, at 217–218.

48. *See generally* Jessica Jeffers & Anne Tucker, *Shadow Contracts*, 1 U. CHICAGO BUS. L. REV. 269, 276 (2022) (discussing the role of transactional costs in drafting new language); *see also* McClane, *supra* note 9, at 233 (describing temptations for companies and counsel to use market-tested and SEC approved language).

49. Congress granted the Securities and Exchange Commission authority over securities market regulation and disclosure through the Securities Act of 1933, 15 U.S.C. §§ 77a–77aa; the Securities Exchange Act of 1934, 15 U.S.C. §§ 78a–78qq; and the Investment Company Act of 1940, 15 U.S.C. §§ 80a-1–80a-64. "Disclosure has become the main regulatory mechanism for the securities markets. Disclosure offers two main benefits. First, it enables investors to make their decisions on whether and how to trade in securities (third-party promises). Second, disclosure can deter issuers and brokers from misleading investors." Frankel, *supra* note 47, at 426.

Investors, however, require additional information beyond the SEC's minimum requirement α to make informed investment choices.[50] Let us call this higher level of disclosure β, such that $\beta > \alpha$.

After observing the fund's disclosure d, the SEC and investors must decide how to respond. The SEC suffers a cost r if it receives a disclosure that fails to meet its minimum information requirements to regulate and monitor markets. The SEC can avoid r by initiating an enforcement proceeding. But enforcement is costly to both the fund and the SEC, and both parties accrue cost e when an enforcement proceeding is initiated.[51]

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50. Scholars have documented retail investors' reliance on past performance and Morningstar Ratings to make investment decisions. *See, e.g.*, Itzhak Ben-David et al., *What Do Mutual Fund Investors Really Care About?*, 35 REV. FIN. STUD. 1723 (2022) (finding evidence that investors chase returns and look to rating agencies); Richard B. Evans & Yang Sun, *Models or Stars: The Role of Asset Pricing Models and Heuristics in Investor Risk Adjustment*, 34 REV. FIN. STUD. 67 (2021) (using changes in Morningstar rating systems to create a natural experiment to observe the positive relationship between investor fund flows and Morningstar ratings); *see also*, Sankar Srinivasan, BEGINNERS GUIDE TO MUTUAL FUNDS (2023); Diane K. Schooley et al., *Generation X: Understanding Their Risk Tolerance and Investment Behavior*, 16 J. FIN. PLANNING 58 (Sept. 2003); *How to Determine Your Risk. Tolerance Level*, CHARLES SCHWAB (Mar. 13, 2026) [hereinafter *Charles Schwab Risk*], https://www.schwab.com/learn/story/how-to-determine-your-risk-tolerance-level.

51. *See* Enforcement Data, on file with author (describing the observations of a manual review of over 100 SEC comments on mutual fund registration statements, which revealed enforcement patterns around boilerplate, vague language, duplicative language, laundry lists, and generic statements). Disclosure defects can be costly—we found enforcement cases ranging from \$10–40M. *See* Press Release, SEC, *SEC Charges Investment Adviser and Distributor in Connection with Improper Fees for Mutual Fund Investors* (Sept. 21, 2015), https://www.sec.gov/newsroom/press-releases/2015-198 (announcing a \$40 million settlement with First Eagle Investment Management and FEF Distributors for failing to disclose conflicts related to securities lending activities); Press Release, SEC, *SEC Charges Invesco* Advisers for Making Misleading Statements About Supposed Investment Considerations (Nov. 8, 2024), https://www.sec.gov/newsroom/press-releases/2024-179 (announcing a \$17.5 million settlement with Invesco Advisers, Inc. for making misleading statements about the percentage of company-wide assets under management that integrated environmental, social, and governance (ESG) factors in investment decisions); Press Release, SEC, *SEC Charges BlackRock Advisors for Failing to Disclose Conflict of Interest* (Apr. 20, 2015), https://www.sec.gov/newsroom/press-releases/2015-71 (announcing a \$12 million settlement with BlackRock Advisors, LLC for failing to disclose a conflict involving a former employee).

When the fund loses an enforcement action, it accrues an additional cost c_e to remediate its defective disclosure.[52]

Investors have a different choice to make. Investors, like the SEC, can seek to impose legal liability for a failure to provide sufficient information.[53] But the most important punitive tool available to investors is the ability to exit, which the fund experiences as negative fund flow.[54] Assume that investors suffer some cost i when either (1) the fund has not provided sufficient information, but investors do not exit; or (2) the fund has provided sufficient information,[55] and the investors choose to exit anyway. When the fund's investors choose to exit, the fund experiences a loss of fees f.[56]

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52. Breaching these obligations or having materially incomplete disclosures can result in enforcement actions or private legal actions. *See, e.g.*, In re Marion Merrell Dow, Inc., Sec. Litig., No. 92-0609-CV-W-6, 1993 U.S. Dist. LEXIS 14197, at *28–30 (W.D. Mo. Oct. 4, 1993) (finding that a drug company's prospectus included warnings that were too generic and failed to specify the magnitude of risk).

53. *Aggregated Risks, supra* note 7, at 113. Breaching these obligations or having materially incomplete disclosures can result in enforcement actions or private legal action. *In re* Marion Merrell Dow, Inc.*, supra* note 52, at *28–30 (criticizing a disclosure as too generic).

Funds also face the threat of investor actions. Fund disclosures establish a quasi-contractual relationship with investors. Securities Act of 1933, 15 U.S.C. § 77k. Misrepresentations and omissions in registration statements filed for a registered public offering are actionable under Section 11. *See, e.g.*, Omnicare, Inc. v. Laborers Dist. Council Constr. Indus. Pension Fund, 135 S. Ct. 1318, 1323 (2015) (alleging that registration statement contained an untrue statement of material fact or omitted a material fact under section 11).

Section 12(a) addresses misrepresentations in a prospectus or oral communication with investors. 15 U.S.C. § 77l.

Investors can sue if a fund deviates from its stated strategies, fails to disclose primary risks, or omits crucial information about fees, rights, and relationships with other financial intermediaries. *See, e.g.*, *In re* Countrywide Fin. Corp. Sec. Litig., 588 F. Supp. 2d 1132, 1162 (C.D. Cal. 2008) (referencing 15 U.S.C. § 77k(e) for damages under Section 11 liability); *see also In re* MetLife Demutualization Litig., 624 F. Supp. 2d 232, 271 (E.D.N.Y. 2009) (referencing 15 U.S.C. § 77*l*(a)(2) for section 12 damages).

54. *See, e.g.*, Anne M. Tucker, *Locked In: The Competitive Disadvantage of Citizen Shareholders*, 25 YALE L.J. FORUM 163, 172 (2015) (describing investor exit costs and constraints).

55. Investors have insufficient information when $d < \beta$, and sufficient information when $\beta \leq$ d.

56. Keith C. Brown et al., *Of Tournaments and Temptations: An Analysis of Managerial Incentives in the Mutual Fund Industry*, 51 J. FIN. 85, 88 (1996) (describing the relationship between the number of fund investors and mutual fund managers compensation); *see also* Eric D. Roiter, *Disentangling Mutual Fund Governance from Corporate Governance*, 6 HARV. BUS. L. REV. 1

But investors are not the only actors watching these disclosures. Other funds are also monitoring their competitors' disclosures. Disclosures revealing more specific information about the funds' strategy allow others to more easily copy those strategies, all else being equal.[57]

This revelation can be costly.[58] These "copycats" may entice investors away from the fund, resulting in a negative fund flow. We conceptualize the cost of copycatting as γf—some proportion (γ) of the total fees earned by the fund (γ).[59] We also assume that γ increases with disclosure quality d, such that more fulsome disclosures result in higher levels of copycatting and negative fund flow. Functionally, this means that funds will always experience some negative fund flow, *even when investors are satisfied with the fund's disclosure.*

This configuration of incentives forces funds to balance the cost of writing a fulsome disclosure with the possibility of enforcement by the SEC, exit by investors, and the possibility of copycatting.[60] The fund will choose to write a disclosure d^+ that

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(2016) (explaining the relationship between negative fund flows and loss of advisor fees).

57. Disclosure risks revealing private, proprietary information such as research and skill, that once disclosed, can be copied. This phenomenon has been documented in the hedge fund industry. *See* Zhewei Shi, *The Impact of Portfolio Disclosure on Hedge Fund Performance*, 126 J. FIN. ECON. 36, 36–53 (2017) (showing that hedge fund performance declines and returns correlated with peers' increases after the initiation of 13F filings, suggesting disclosure erodes proprietary advantages); Vikas Agarwal et al., *Uncovering Hedge Fund Skill from the Portfolio Holdings They Hide*, 68 J. FIN. 739, 739–83 (2013) (finding that hedge funds' confidential holdings outperform their disclosed ones). The literature has been extended to mutual fund portfolios. *See* Thomas C. Hagenberg, *Transaction-Level Transparency and Portfolio Mimicking*, 79 J. ACCT. & ECON. 101713 (2025) (finding that enhanced transparency facilitates portfolio mimicking, especially among smaller insurers copying more sophisticated peers); Russ Wermers et al., *Predicting Stock Performance with Mutual Fund Portfolio Disclosure*, Univ. of MD., Smith Sch. of Bus. (2008) (demonstrating that disclosed mutual fund holdings contain predictive information).

58. Zhaoyang Chen et al., *Testing the Effect of Portfolio Holdings Disclosure in an Environment Absent of Mandatory Disclosure*, 57 ACCTS. & FIN. 701, 701–23 (2017) (showing that more frequent disclosure reduces alpha due to front-running and copycat behavior); Vikas Agarwal et al., *Mandatory Portfolio Disclosure, Stock Liquidity, and Mutual Fund Performance*, 70 J. FIN. 2733, 2733–76 (2015) (finding that more frequent disclosure reduces performance by revealing proprietary strategies and weakening incentives for information gathering).

59. By definition, $\gamma \in [0,1]$.

60. Funds balance SEC mandates to make complete disclosures (or risk liability) with practical market concerns, hoping not to scare away potential investors. *Aggregated Risks*, *supra* note 7, at 61.

satisfies both the SEC and investors when enforcement costs and the potential for negative fund flows are sufficiently large as compared to the cost of writing the disclosures.[61]

When the possibility of losing fees is relatively low (or the fees themselves are relatively low) as compared with the cost of writing d^+, the fund will write a less informative disclosure.[62] The fund will choose between writing a compliant disclosure d''[63] with cost c_d'', and a noncompliant disclosure d' with cost c_d'.

The SEC will choose to enforce when the fund's disclosure is noncompliant (d') and will not enforce otherwise. Knowing this, the fund will comply with the SEC's regulations when the cost of doing so is less than the cost of a successful enforcement action.[64] When this condition does not hold, however, the fund will choose to submit a non-compliant disclosure.[65]

To this point, we have assumed a game characterized by complete information where the SEC can perfectly interpret the signal sent by the fund through its disclosure level d, and where funds perfectly understand the SEC's minimum compliance requirements (α). But this is likely not the case. The SEC's preference for compliant disclosures (α) in real life is achieved, in part, by requiring that funds disclose information through principles-based and open-ended discussions.[66] Funds must exercise judgment and discretion over what information is, in fact, required by the SEC and investors when drafting

61. In other words, the fund will produce $\alpha < \beta \leq d^+$ with cost c_d^+. From a technical perspective, this is satisfied when the difference between writing a disclosure that satisfies only the SEC (d'' with cost c_d'') and writing a disclosure that satisfies both investors and the SEC (d^+ with cost c_d^+) is sufficiently small, such that $f(1-\gamma^+) > c_d^+ - c_d''$ and $c_d^+ - c_d' < r + e + f(1-\gamma^+)$.

62. We can express this condition formally as $f(1-\gamma^+) \leq c_d^+ - c_d''$.

63. A compliant disclosure is expressed as $\alpha \leq d'' < \beta$.

64. Formally, this can be expressed as $e + r > c_d^+ - c_d'$.

65. The full proof for this unique, pure-strategy equilibrium is included in Appendix B.

66. For a discussion of principles-based and open-ended disclosures, which require narrative responses, compared to check-the-box responses, such as stating a tax rate, *see Changing Market Conditions*, *supra* note 18, at 785–932. Narrative discussions force issuers to share in the regulatory burden of disclosure by interpreting what information is required, and complying with evolving standards as opposed to clear, disclosure requirements that require the regulator to define the disclosure universe ex-ante and bear the sole burden of determining what information is relevant.

the "principal" strategy and risk discussions.[67] In addition, the fund's disclosure d may include concepts or strategies that are unfamiliar to the SEC or investors and, as a result, risk misinterpretation.[68]

1. *Boilerplate Promotes Shared Meaning*

Boilerplate can serve a particularly useful function given the costs and uncertainties of drafting compliant disclosures, as demonstrated in the model. First, boilerplate can lower the costs of writing disclosures because repeated language can transmit *shared meaning*. Legally significant language repeated in disclosures over time can reliably express complex legal and financial concepts to SEC examiners and investors.[69]

SEC examiners, like judges, benefit from repeated exposure to similar language and disclosure structures when evaluating whether disclosures are compliant.[70] The SEC examiner builds knowledge and experience with the meaning and effects of repeated language. Once the SEC accepts a formulation of *derivative investments* or *emerging market risks*, that language, when it reappears in whole or part, is easier for the examiner to comprehend and approve.

Not all fund investment strategies are equal. Some are more complex than others, and if so, the task of writing compliant disclosures is most costly and ripe for boilerplate. A parallel can be drawn between complex contracts—known for inviting more boilerplate—and complex investment strategies like

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67. *Id.* (discussing different SEC disclosure requirements).

68. SEC review suggests a stamp of approval. Stephen J. Choi et al., *supra* note 40, at 4–5 (2017). Recycling approved language presents a cheap way to effectively communicate strategies and mitigate regulatory and litigation risks. Introducing new language or novel concepts likely incurs additional costs. *Id.*

69. McClane, *supra* note 9, at 275 (discussing boilerplate and investor comprehension).

70. Repeated exposure to contractual boilerplate increases consistency and reliability in judicial interpretation. "[J]udges can more easily afford to be legal generalists . . . when a great deal of contractual language they have to deal with is modular boilerplate." Smith, *supra* note 16, at 1188. *Cf. Boilerplate Semantics*, *supra* note 16, at 624–25 (cautioning that when courts see meaning where individuals see none, the language is susceptible to many legitimate readings and boilerplate can erode consent and let differences in intent/meaning persist through bad, boilerplate drafting).

derivatives and hedging.[71] Consider Guggenheim Multi-hedge Strategies Fund, which repeated derivative strategy language verbatim in the 2021 and 2024 summary prospectuses.[72] The principal investment strategy discussion was, in total, over 1,100 words describing sophisticated strategies like *merger arbitrage, global macro investments,* and *long/short equity positions.*[73] Contrast Guggenheim's investment strategy discussion with the short and pithy under-100-word descriptions of the S&P index funds (described below).[74] We posit that recycling boilerplate descriptions of complex strategies efficiently communicates hard-to-distill financial concepts into concrete language or at least formulations familiar to investors and the SEC. Standardized descriptions of investment strategies can also help obscure proprietary information, reducing the risk of copycat behavior by competitors.

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71. For a discussion of complex investment strategies like derivatives, see Kelly S. Kibbie, *Dancing with the Derivatives Devil: Mutual Funds' Dangerous Liaison with Complex Investment Contracts and the Forgotten Lessons of 1940*, 9 HASTINGS BUS. L.J. 195, 200 (2013).

72. Both prospectuses include the following language:

> Investments in derivative instruments, such as futures, options, and forward contracts and swap agreements, have the economic effect of creating financial leverage in the Fund's portfolio because such investments may give rise to losses that exceed the amount the Fund has invested in those instruments. Financial leverage will magnify, sometimes significantly, the Fund's exposure to any increase or decrease in prices associated with a particular reference asset resulting in increased volatility in the value of the Fund's portfolio. The value of the Fund's portfolio is likely to experience greater volatility over short-term periods. While such financial leverage has the potential to produce greater gains, it also may result in greater losses, which in some cases may cause the Fund to liquidate other portfolio investments at a loss to comply with limits on leverage and asset segregation requirements imposed by the Investment Company Act of 1940 (the "1940 Act") or to meet redemption requests. The Fund's use of credit risks. The Fund may use leverage to the extent permitted by applicable law by entering into borrowing transactions (principally lines of credit) for investment purposes.

Guggenheim Funds Summary Prospectus, April 30, 2021, available at https://www.sec.gov/Archives/edgar/data/899148/000119312521144436/d156314d497k.htm [hereinafter Guggenheim Prospectus dated April 30, 2021]; Guggenheim Funds Summary Prospectus, May 1, 2024 [hereinafter Guggenheim Prospectus dated May 1, 2024].

73. Guggenheim Prospectus dated April 30, 2021, *supra* note 72; Guggenheim Prospectus dated May 1, 2024, *supra* note 72.

74. *See infra* notes 78–79 and accompanying text.

Some disclosure continuity from year to year, especially related to strategy,[75] is a byproduct of the SEC's regulatory design.[76] Funds operate based on stated principal investment strategies that remain mostly stable over time.[77] If Fund A is an S&P 500 index fund, its investment strategy description likely identifies the index and describes related risks from tracking errors and stock market volatility in similar (or possibly even identical) ways over time.[78] Vanguard's S&P 500 Index fund, for example, uses the same principal investment strategy statement from 2021 through 2024.[79] This repeated *boilerplate* language is a feature, not a bug. If the strategy is stable and consistent, there is neither a regulatory nor a fund incentive to change the language.

Later, when disclosures are out in the world, familiar language helps intermediaries and investors confidently comprehend and navigate the investment landscape.[80] If an investor wants an index fund versus a growth fund or an emerging

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75. SEC Form N-1A, *supra* note 6 at Item 4: Principal Strategy.

76. *See* discussion *infra* Section III (finding significant year-to-year language stability in filings). The SEC disclosure rules do not anticipate entirely new disclosures every year for the same fund, nor should there be substantive differences between similarly situated funds.

77. SEC Form N-1A, *supra* note 6 at Item 4(a): Principal Investment Strategies of the Fund; *see also infra* Part III.A.1 Table 4 (establishing that funds recycle 85% or more of language between years).

78. For example, Vanguard's S&P 500 index fund states:

> The Fund employs an indexing investment approach designed to track the performance of the S&P 500 Index (the Index), a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The Fund attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the Index, holding each stock in approximately the same proportion as its weighting in the Index.

Vanguard, Vanguard 500 Index Fund Summary Prospectus (2024).

79. The 2021 principal investment strategy language states:

> The Fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. The Fund attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the Index, holding each stock in approximately the same proportion as its weighting in the Index.

Vanguard, Vanguard 500 Index Fund Summary Prospectus (2021), https://www.sec.gov/Archives/edgar/data/36405/000168386321002805/f8919d1.htm.

80. McClane, *supra* note 9, at 275 (discussing boilerplate and investor comprehension).

market fund, it is easier to shop when investments are described in familiar terms.[81]

Consider similar alternative S&P 500 funds offered by other complexes. These funds share investment strategies, and those similarities are evident in the language. S&P 500 funds' common language includes describing their "normal" investment practice of investing "80% of assets in the index"[82] or "all or substantially all assets,"[83] seeking to "replicate the performance of the index" subject to weighting,[84] and describing the index as comprised of "common stocks publicly traded in the United States."[85]

Funds also invest in the same external markets alongside other funds, which means that risks affecting one fund likely affect others.[86] For example, S&P 500 funds disclose stock market risks,[87] risks associated with replicating an index,[88] and risks of investing in large capitalization companies.[89] To this

81. Contracts scholars recognize that boilerplate facilitates shared meaning among parties to a deal. This is especially important as deals become more complex. Smith, *supra* note 16, at 1176; *see, e.g.*, Erik F. Gerding, *Contract as Pattern Language*, 88 WASH. L. REV. 1323, 1326 (2013) (describing complex transactions as being drafted by piecing together language from smaller standardized transactions).

82. FIDELITY, FIDELITY S&P 500 INDEX FUND APRIL 29, 2025, Summary Prospectus (2025), https://fundresearch.fidelity.com/mutual-funds/summary/315911750 [hereinafter Fidelity S&P 500]; CHARLES SCHWAB, SUMMARY PROSPECTUS, FEBRUARY 26, 2026, SCHWAB S&P 500 INDEX FUND [hereinafter Schwab S&P 500], https://connect.rightprospectus.com/Schwab/TVT/808509855/SP?site=FundDocs.

83. VANGUARD, VANGUARD S&P 500 INDEX FUND, SUMMARY PROSPECTUS, APRIL 29, 2025 (2025), AVAILABLE AT https://www.vanguard.com/pub/Pdf/p040.pdf [hereinafter Vanguard S&P 2025 Index].

84. Schwab S&P 500, *supra* note 82, at 1; Vanguard S&P 2025 Index, *supra* note 83, at 2.

85. Vanguard S&P 2025 Index, *supra* note 83, at 1; Fidelity S&P 500, *supra* note 80, at 3.

86. *Aggregated Risks*, *supra* note 7, at 64–66.

87. Vanguard S&P 2025 Index, *supra* note 83, at 8 (highlighting the chance that stock prices overall will decline. Stock markets tend to move in cycles, with periods of rising prices and periods of falling prices. The Fund's target index tracks a subset of the U.S. stock market, which could cause the Fund to perform differently from the overall stock market. In addition, the Fund's target index may, at times, become focused in stocks of a particular market sector, which would subject the Fund to proportionately higher exposure to the risks of that sector); *see also* Schwab S&P 500, *supra* note 82, at 2.

88. Vanguard S&P 2025 Index, *supra* note 83, at 3.

89. "Investment style risk, which is the chance that returns from large-capitalization stocks will trail returns from the overall stock market. Large-cap stocks tend to go through cycles of doing better—or worse—than other

end, prior empirical studies have found that unrelated funds, across a range of investment strategies, used similar language and structures to describe external market risks like spiking inflation.[90]

These shared meanings can evolve into terms of art that provide flexibility.[91] Contract drafters, for example, intentionally introduce ambiguity and flexibility into contract language to provide breathing room for future performance in the face of unknowns.[92] Provisions regarding reasonable conduct, professional standards, timely delivery, or ordinary course of business are recycled boilerplate terms that deliberately incorporate flexibility.[93] Ex-post flexibility through recycled boilerplate benefits parties who prefer to delay defining fixed standards and judges who must interpret contracts in the context of messy, real-world facts.

Funds' legal teams are similarly constrained in their knowledge about the future state of the world in which the fund will operate. Funds face uncertainty about the information

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segments of the stock market or the stock market in general. These periods have, in the past, lasted for as long as several years." Vanguard S&P 2025 Index, *supra* note 83, at 3.

90. *Aggregated Risks*, *supra* note 7, at 55; *id.* at 83 (quoting Am. Beacon Fund, Prospectus Materials (Form N-1A) 5 (Feb. 28, 2022)).

91. Parties drafting a contract have incomplete information about future states of the world (prices, markets, scarcity, and performance) and mitigate some of that uncertainty with incomplete contract terms and flexible language. *See, e.g.*, Albert Choi & George Triantis, *Strategic Vagueness in Contract Design: The Case of Corporate Acquisitions*, 119 YALE L.J. 848, 881–96 (2010) (describing efficiencies from contractual vagueness and incompleteness); Albert Choi & George Triantis, *Completing Contracts in the Shadow of Costly Verification*, 37 J. LEGAL STUD. 503, 517–20 (2008) (analyzing contractual litigation costs as a factor in drafting).

92. *See, e.g.*, *Boilerplate Semantics*, *supra* note 16, at 625 (linking some boilerplate writing to "the need to draft relatively broadly favors the use of opaque constructions, in which different imagined states of the world can be accommodated").

93. These phrases are legally acceptable and enforceable despite their vagueness and indefiniteness. *See, e.g.*, Robert E. Scott & George Triantis, *Anticipating Litigation in Contract Design*, 115 YALE L.J. 814, 844 (discussing implied contractual standards. Such language will not destroy the contract's enforceability, invite egregious litigation, or scare parties off by an unfinished deal); Kroboth v. Brent, 625 N.Y.S.2d 748, 749 (3d Dep't 1995) (describing the enforceability of best efforts); *see also* Coady Corp. v. Toyota Motor Distribs., 361 F.3d 50, 59 (1st Cir. 2004) (describing reasonableness); Nat'l Data Payment Sys., Inc. v. Meridian Bank, 212 F.3d 849, 854 (3d Cir. 2000) (describing diligence); T.S.I. Holdings, Inc. v. Jenkins, 924 P.2d 1239, 1250 (Kan. 1996) (describing reasonable diligence).

required by the SEC and investors. Disclosure drafters, like transactional attorneys, mitigate uncertainty (to some degree) with flexible strategy[94] and risk language.[95] Funds need flexibility to respond to new risks and invest in evolving markets, while avoiding the risk of sharing too much and inadvertently revealing proprietary information. But investors need to know enough about the fund to invest, and the SEC needs to know enough to effectively monitor it.[96] When drafters find the goldilocks of disclosure language that is SEC compliant and satisfies investors, without sharing too much, funds have incentives to continue its use.[97]

This result can be readily observed. Prior empirical studies have found that unrelated funds dramatically increased climate-change-related disclosures in 2020.[98] Many opted for a generic formulation like the following:

> The value of the Fund's investments may go up or down due to general market conditions that are not specifically related to the particular issuer, such as real or perceived adverse economic conditions, changes in the general outlook for revenues or corporate earnings, changes in interest or currency rates, regional or global instability, *natural or environmental disasters* . . . .[99]

In fact, among the funds that discussed the climate change-related risks in 2020, nearly 30% used a similar

94. The uncertainty may arise in how an asset manager will allocate the portfolio, which itself turns on unknown market conditions and opportunities. For a discussion on uncertainty and risks in mutual funds, see *Aggregated Risks*, *supra* note 7, at 66–70.

95. "Uncertainty may arise from unknown risks, like a pandemic or inflationary spikes. The nature of uncertainty implies that funds may not fully understand what risks are possible. That is, funds cannot fully account for all tail events. . . . Especially severe public health events, such as the dramatic onset of COVID-19, constitute uncertainties for which funds could not adequately assess or disclose risk prior to its onset." *Id.* at 69.

96. For a discussion of disclosures, aided by boilerplate, providing information to regulators, investors and the market writ large, see McClane, *supra* note 9, at 216–17.

97. *Changing Market Conditions*, *supra* note 18, at 849.

98. *Aggregated Risks*, *supra* note 7, at 91 (noting that climate change disclosures increased over time, and dramatically in 2020).

99. *Id.* at 95 (quoting AIM Sector Funds (Invesco Sector Funds), Prospectus Materials (Form N-1A) 2 (Aug. 26, 2021)) (emphasis added).

approach.[100] One fund's artful, flexible articulation of a risk that is acceptable to the SEC will be quickly followed in spirit, if not the letter, by other funds.[101]

2. *Boilerplate Reduces Transaction Costs*

Beyond increasing understanding, boilerplate can also reduce transaction costs by lessening the burden of writing disclosures year after year.[102] Previously accepted language—either its own or its competitor's—reduces a fund's uncertainty about complaint disclosures (α) and acts as a safe harbor.[103] Recycling SEC-approved language presents a cheap way to effectively communicate strategies and mitigate regulatory and investor risks.

Boilerplate can reduce the overall cost of disclosure (c_d) while increasing the amount of information transmitted. This means that funds are more likely to produce disclosures that satisfy both the SEC and investors. As in other areas of the law, why reinvent the wheel? Reusing language—at least to a certain point—allows funds to write higher quality disclosures at a lower cost.

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100. Unrealized risks receive more generic treatment. In the face of materialized risks that have come to fruition, funds opt for focused and specific statements, like in 2022, when 65% of funds made COVID-specific or focused risk disclosures in the waning global pandemic. *Id.* at 87.

An example of a focused climate change disclosure is:

> Certain issuers, industries, and regions may be adversely affected by the impacts of climate change, including on the demand for and the development of goods and services and related production costs, and the impacts of legislation, regulation and international accords related to climate change, as well as any indirect consequences of regulation or business trends driven by climate change.

Id. at 90.

101. *See, e.g.*, *id.* at 64–66 (discussing how funds learn from other funds, primarily through disclosures).

102. Disclosure drafters may be uncertain how to comply or what counts when regulations task the disclosing party with interpreting the rules. McClane, *supra* note 9, at 217–218; Last year's language and competitors' existing filings create a compliance benchmark: such language has been approved (if tacitly) by the SEC. Recycling previously accepted language and using familiar phrasing or boilerplate aids in compliance. *Id.* at 196 (discussing boilerplate in terms of compliance and "because there are only so many ways to say certain things").

103. Stephen Choi et al., *Who Calls the Shots? How Mutual Funds Vote on Director Elections*, 3 HARV. BUS. L. REV. 35, 43–46 (2013) (describing the review process by examiners and the uncertainty generated by such reviews).

As in contracts, recycling language with shared meaning reduces drafting costs.[104] While disclosures are not negotiated between the fund and an investor,[105] funds write disclosures through layers of internal review from asset management, compliance, legal, and outside counsel.[106] Transaction costs to change a fund's disclosure, particularly the strategy section, involve legal time (in-house) and costs (outside counsel).[107] Independent directors for funds ultimately approve disclosure filings and add yet another layer of review and cost.[108] Substantive changes to disclosures are summarized and reviewed by board members, and sometimes their counsel.[109] Recycling familiar language likely greases the wheels of this multi-tiered internal review process.

Boilerplate also serves a fund's internal operational efficiency. Internal fund actors, charged with implementing the disclosed information, may also prefer repeated, boilerplate language. Consider, for example, the job of a fund complex's compliance officer (like a Vanguard compliance officer). Unchanged disclosures leave working compliance systems

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104. Contractual boilerplate serves practical purposes, such as reducing transaction costs by avoiding the need to reinvent the wheel. For a discussion of boilerplate and transaction costs see Kahan & Klausner, *supra* note 3, at 718. *See also* Choi et al., *supra* note 103, at 4–5.

105. Contractual boilerplate commonly occurs in arms-length negotiations between sophisticated parties, often negotiated by individuals on behalf of a larger organization. Horton & Weisbord, *supra* note 15, at 72–73.

106.

> The overly complex and often difficult to interpret rules, releases, and guidance often require the assistance of outside counsel. Even as a rule or interpretation evolves or is revised it is still often necessary to go back to outside counsel to ensure that such changes have not created conflicts or unintended consequences for the Firm. The Firm has had to obtain the services of a third-party vendor in order to fulfill its AML responsibilities. The Firm has also had to devote considerable time, money, and human resources to working with its partn company's AMI, unit and audit/compliance groups to educate them in the differences between bank and broker-dealer responsibilities under the various rules and regulations.

The Cost of Compliance: 2013 KPMG/AIMA/MFA Global Hedge Fund Survey, KPMG INT'L (2013) [hereinafter Cost of Compliance], https://assets.kpmg.com/content/dam/kpmg/pdf/2013/10/the-cost-of-compliance-v2.pdf.

107. *Id.*

108. Michael Glazer, *Prospectus Disclosure and Delivery Requirements*, MUTUAL FUNDS & EXCHANGE TRADED FUNDS, 4-28 (2015).

109. Timothy D. Lytton & Anne M. Tucker, *The Hidden Work of Disclosures*, 104 Oregon L. Rev. (forthcoming 2026), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6667859.

intact without incurring the costs of updating them.[110] Further, using the same disclosure language across similar funds in Vanguard increases the officer's confidence that the compliance test in place, matches the disclosure language that the right test is in place.[111]

House language for similar strategies and risk would likewise lighten the loads of marketing teams, outside counsel, and independent directors reviewing disclosures.[112] Portability of language from one fund to another is a feature of disclosure boilerplate, analogous in function to contractual boilerplate.[113]

3. *Boilerplate Has Lower Utility When a Fund's Strategy Changes*

The regulatory game specified above suggests incentives for language stability, given both the SEC's uncertainty about interpreting disclosures (d) and the fund's uncertainty about minimum compliance requirements (α). In the game above, boilerplate is preferable to funds, the SEC, and investors when investment strategies remain the same year-to-year, when describing common risks or strategies, and when markets are stable.[114]

But when conditions on the ground change, boilerplate is no longer a smart strategy. Using boilerplate may reduce drafting costs, but repeated language may fail to adequately convey the fund's current investment strategies and risks, exposing the fund to potential SEC enforcement and investor exit.[115]

When boilerplate language no longer reflects the funds' current strategy and risks, funds have an incentive to draft new language. In other words, funds incur the full cost of drafting the disclosure—a cost that was previously reduced by using boilerplate language. Prior empirical work has demonstrated, for example, that funds respond to changing market conditions

110. *Cost of Compliance*, *supra* note 106, at 25.

111. For a discussion on operational economies of scale and interdependence in fund operations within the same fund complex or family, see John Morley, *The Separation of Funds and Managers: A Theory of Investment Fund Structure and Regulation*, 123 YALE L. J. 1228, 1259 (2014).

112. Glazer, *supra* note 108, at 4-28.

113. Boilerplate also includes copied and pasted language from one agreement to another, especially in standardized form contracts used in business-to-business transactions. Horton & Weisbord, *supra* note 15, at 72–73.

114. *See supra* notes 42-45, and accompanying text.

115. In the model, we expressed this as $\alpha < \beta \leq d^+$ with cost c_d^+.

(e.g., COVID-19 and inflation spikes) with new and updated disclosure language.[116]

C. *Boilerplate Hypotheses*

We empirically test four hypotheses to evaluate our theoretical and practical understanding of boilerplate and language change. If boilerplate plays a meaningful role in creating flexibility and promoting a shared meaning, similarly situated funds should exhibit more similar language, all else being equal. In particular, funds with similar investment styles should be more alike in their use of boilerplate than those with dissimilar investment styles. For example, boilerplate used by Index (I) funds should differ from boilerplate used by Domestic Equity (DE) funds, DE funds should differ from Foreign Equity (FE) funds, and so on.

(1) *Shared Meaning Hypothesis*: Funds with similar investment styles will exhibit more similar language than disclosures by funds with dissimilar investment styles.

But boilerplate also has value in reducing operational and transaction costs. Reusing language makes the act of complying with disclosure regulations less costly. As a result, we expect that funds in the same fund family (that is, funds managed by the same investment company) would resemble each other more than funds outside of their fund family, all else being equal. For example, we expect two DE funds in the Vanguard complex to share more language compared to other DE funds in other complexes, like Fidelity and BlackRock.

(2) *Transaction Cost Hypothesis:* Funds within the same fund family should share more language than funds outside of their family.

When investment strategies change, however, so too should funds' use of boilerplate. Boilerplate can predictably provide

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116. *Aggregated Risks*, *supra* note 7, at 77 (describing dynamic inflation disclosures) and 85 (describing dynamic COVID-19 disclosures). In additional unpublished research, the authors tracked how funds incorporated new investment strategies and risk statements related to artificial intelligence, finding increases in strategy disclosures (up to 72 unique statements in 2023) and risk disclosures (up to 36 unique risk statements). Notes on file with authors.

operational flexibility only when the underlying investment practices themselves are stable. When practices evolve, disclosure language must balance accuracy and flexibility, but boilerplate may not effectively accomplish this.

We argue that disclosure language changes are most likely when (1) funds are executing an emerging or evolving strategy (such as a strategy emphasizing innovation-related or ESG assets), and (2) when a fund changes the mix of assets in its investment portfolio. Each of these events mutes the beneficial aspects of boilerplate language.

(3) Emerging/Evolving Strategy Hypothesis: Strategy disclosures for funds pursuing emerging or evolving investment strategies will contain less boilerplate than fund disclosures with more traditional investment strategies.

(4) Portfolio Change Hypothesis: Strategy disclosures made following portfolio changes—that is, changes in the mix of equity securities, debt securities, and cash—will exhibit less boilerplate than funds with a stable distribution of portfolio assets.

Section II describes our data and details our methodology. Using these data, we examine each of these hypotheses in Section III. Section IV discusses three use cases for our methodology, focusing on the SEC, internal fund audiences, and investors and their intermediaries.

II.
Data & Methodology

In this Section, we turn to the empirical examination of boilerplate and change in mutual fund disclosures. We conceptualize boilerplate as repetitive language in disclosures that carries over from year to year.[117] We then propose two different

117. Repetitive language suggests text that can function across changing economic conditions and investment strategies—operating, much like contractual boilerplate, as a template that retains meaning through repeated use. Measuring boilerplate using year-to-year text similarity measures is particularly appropriate here, since general language is stable enough to track over time. Scholars working with cross-sectional data, where individual units appear only once, similarly rely on text similarity measures such as cosine similarity. *See, e.g.*, McClane, supra note 9, at 220–28.

methods of measuring similarity across disclosures using a dataset of mutual fund disclosure summary prospectuses to assess our hypotheses. We find, as a baseline matter (and unsurprisingly), that mutual fund disclosures exhibit a high degree of boilerplate.[118] We use empirical confirmation of this aspect of disclosures as a jumping-off point for evaluating our hypotheses in Part III.

A. *Mutual Fund Disclosure Data 2011-2022*

We use the SEC's Mutual Fund Prospectus Risk/Return Summary Data Sets to access the Investment Strategy and Principal Risks of all registered, open-end investment companies between 2011 and 2022.[119] We begin with a dataset of 203,540 disclosures spread over our 12-year period of interest. Our unit of observation is the fund-year, as identified by a filing's accession number.[120]

These 203,540 disclosures include two types of duplicates. First, the data contains submissions for multiple series of the same fund. We consider these to be duplicates because different series of the same fund will have identical investment strategies and risks; only fees differ.[121] As a result, the prospectuses of different series of the same fund will be identical. Retaining filings for each series would not only create meaningless duplication

118. Our results are complementary to earlier empirical findings of "considerable boilerplate" in registration statements (on average 47%). McClane, *supra* note 9, at 229.

119. We access SEC Summary Prospectus Data sets (2010-2024) available at SEC, *Mutual Fund Prospectus Risk/Return Summary Data Sets*, https://www.sec.gov/dera/data/mutual-fund-prospectus-risk-return-summary-data-sets (last visited July 31, 2026); *see also* SEC, *Mutual Fund Prospectus Risk/Return Summary Data Sets*, https://www.sec.gov/dera/data/rr1.pdf (last visited July 31, 2026). The data set includes fund filings using SEC form 497, which contains the definitive materials filed under paragraph (a), (b), (c), (d), (e) or (f) of Securities Act Rule 497 (prospectus) and 485BPOS, which is the Post-effective amendment filed pursuant to Securities Act Rule 485(b). *Id.* at 2. Amendments filed under 485(b) are effective immediately and contain non-material changes. Amendments filed under 485(a), in contrast, are material amendment and require additional SEC review. Glazer, *supra* note 108, at 4-30-4-32.

120. The accession number comprises the Central Index Key (CIK) uniquely identifying the entity submitting the filing, the year filed, and "the sequential count of filings submitted from that CIK." SEC, *Accessing EDGAR Data*, https://www.sec.gov/os/accessing-edgar-data (last visited July 6, 2023).

121. SEC, *Introduction to Investing: Mutual Fund Classes*, https://www.investor.gov/introduction-investing/investing-basics/glossary/mutual-fund-classes (last visited July 6, 2023).

but would also bias our results toward larger funds. Second, funds may update their prospectuses throughout the year. The SEC requires a fund to update its prospectus in the event of a material change in its investment strategy or principal risks.[122]

Removing these duplicates reduces the total number of observations to 144,619. We then further remove duplicates of filings with identical accession numbers.[123] This results in 31,870 observations.

Finally, we remove funds that file a prospectus in only one year. We need more than one year of data to make year-to-year comparisons.[124] This leaves 23,828 disclosures of funds' principal investment strategies and risks filed between 2011 and 2022. We document our data loss in Table 1.

TABLE 1: DATA LOSS RESULTING FROM CLEANING STEPS

Data Processing Step	*Number of Observations*
Initial number of observations	203,540
Removing multiple series of the same fund and keeping only the most recent filing	144,619
Removing duplicate accession numbers	31,870
Removing series with only one year of data	23,828

122. Securities Act of 1933, 15 U.S.C. § 10(a)(3); 17 C.F.R. § 230.496; *see also Importance of Delivering Timely and Material Information to Investment Company Investors*, SEC: DIV. OF INVESTMENT MGMT. (Apr. 14, 2020), https://www.sec.gov/investment/delivering-timely-material-information (explaining that updating prospectuses with material information "is particularly relevant for investment companies that continuously offer their shares, such as open-ended funds").

123. The count drops precipitously because risk and strategy contents are included in several formal filings—shareholder reports, full prospectus, and summary prospectus. Dropping duplicates across the field keep us from double counting the same language which would skew the similarly scores towards even more boilerplate.

124. Measuring boilerplate in this way excludes funds short-lived funds filing disclosures only in a single year. We have no empirical or theoretical reason to believe that such funds would use boilerplate in a systematically different way than other types of funds. To the extent that such short-lived funds have distinct investment strategies, these funds might use "standard" or "general" language differently than funds designed to exist over multiple years. Such funds, however, lie outside our empirical definition of boilerplate.

B. *Using Text Similarity Measures to Observe Boilerplate*

To study boilerplate in mutual fund disclosures, we construct series-year dyads to calculate year-over-year similarity between sequentially filed disclosures.[125] For example, we pair the most recent and complete disclosures of BNY Mellon Large Cap Securities Fund from 2011 and 2012, 2012 and 2013, 2013 and 2014, and so on.

We calculate pairwise similarity as the cosine similarity based on (1) paired term frequency-inverse document frequency (TF-IDF) matrices; and (2) 5-gram shingles.[126]

Cosine similarity methods can be used to determine the similarity of two different vectors or sets.[127] It measures distance as the cosine angle between the two vectors and is calculated as the dot product of the vectors divided by the magnitude:

$$\cos(\theta) = \frac{\mathbf{A} \cdot \mathbf{B}}{\|\mathbf{A}\|\|\mathbf{B}\|} = \frac{\sum_{i=1}^{n} A_i B_i}{\sqrt{\sum_{i=1}^{n} A_i^2}\sqrt{\sum_{i=1}^{n} B_i^2}}$$

This method requires that a vector of tokens be converted to numerical data. As a result, cosine similarity provides a good solution for comparing both the term frequency and the TF-IDF vectors of two texts. Term frequency denotes the number of

125. *GSU Mutual Fund Research*, GEORGIA STATE UNIVERSITY, *https://sites.google.com/view/gsu-mutual-fund-research* (authors' research website hosting replication code and research protocols).

126. Our findings are robust to different measurements of this concept. As a sensitivity check, we also conduct our analysis using Jaccard similarity and two different token lengths: unigram (bag-of-words) and 5-gram shingles. Jaccard similarity can be used with a bag-of-words approach using either unigrams (which does not preserve context and word order) or with any size of n-gram shingle (which does preserve context and word order). This is especially useful for discrete, qualitative data. But Jaccard similarity is ill-suited for comparing quantitative data with continuous measurements. Unlike cosine similarity, Jaccard similarity takes a set-based approach, calculated as the intersection between two texts, A and B, divided by the union of the texts. In other words, Jaccard similarity is the proportion of tokens two texts have in common. As a result, Jaccard similarity is less flexible than cosine similarity measures. Results using the Jaccard measures reflected the patterns and relationships in the cosine scores. For simplicity, we report only the cosine scores. For replication code, including the Jaccard scores, see *id.*

127. We apply these methods to text, but they can be used to measure commonalities between any two collections of objects, numbers, or words.

times a unique token appears in the text. TF-IDF, however, weights term frequency by the number of documents in which the term appears, providing a measure of term frequency in the context of the corpus as a whole. We calculate TF-IDF as

$$n_{t|d} * \log\left(\frac{n_d}{n_{t|d}}\right)$$

where $n_{t|d}$ is the number of tokens t in a particular disclosure, d, n_d is the number of disclosures in the corpus, and $n_{d|t}$ is the number of disclosures d containing the token t.

As a robustness check, we conduct our analysis using two different constructions of disclosure tokens. TF-IDF utilizes a bag-of-words approach using unigrams. Word order is not preserved, and similarity is calculated according to weighted term frequency. A term's weight is determined by how frequently it occurs in a document as compared to all other documents.

Our other method preserves context lost by the bag-of-words approach by employing 5-gram shingles.[128] We first split each disclosure into sentences. Then, for each sentence, we capture each sequence of five words using a sliding window. For example, a fund may disclose the following: "The value of your investment may fluctuate significantly." This sentence would produce the following 5-gram shingles: "the-value-of-your-investment," "value-of-your-investment-may," "of-your-investment-may-fluctuate," and "your-investment-may-fluctuate-significantly." This approach allows us to account not only for changed tokens but also for changed *meanings*.

A summary and comparison of these methods is provided in *Table 2*.

128. We split each string into sequences of five consecutive words (so-called "5-gram shingles"), shifting the window by 1 word each time. In a last step, we compute the similarity score as the cosine similarity between the two sets of shingles for each pair of contracts. Because the shingling preserves the order in which words appear, this process is designed to capture textual similarity as a form of copying and pasting. *See, e.g.*, Adam Badawi et al., *The Value of M&A Drafting*, DUKE L.SCH. PUB. L. & LEGAL THEORY SER. NO. 2023-14, at 14 (Jan. 25, 2023).

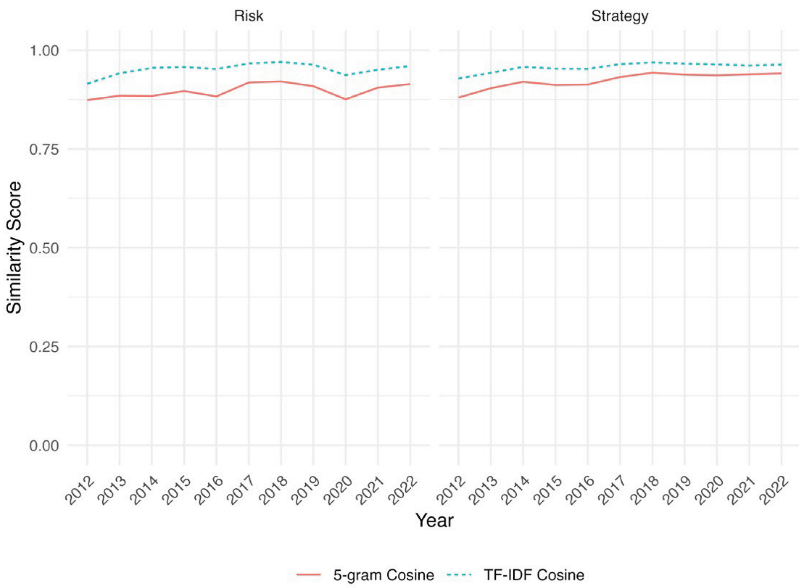
Table 2: Summary and Comparison of Text Similarity Measures Used

Method	*Input*	*Comparison*	*Discussion*
TF/IDF cosine	Frequency of each word (token) and weighted term frequencies	Measures the cosine distance between the texts based on the relative weights of each token	Highlights important word changes as opposed to minor syntactical changes
5-gram shingle cosine	Frequency of 5-word (token) increments	Measures the cosine distance between texts based on shingles	Accounts for word order and provides context

As a preliminary matter, we find that, on average, mutual fund disclosures have a high degree of year-to-year similarity. Table 3 displays average text similarity scores using both measures for the strategy and risk sections, with 0 indicating no common words and 1 indicating perfectly identical text. The TF-IDF/cosine similarity score—indicated by the blue dashed line—produces the most conservative average measures of similarity. This result is consistent with *how* each measure is used to conceptualize similarity. The TF-IDF/cosine approach weighs words that are unique to a disclosure more heavily, meaning distinctive features of each fund, like its name, have a greater influence on the score. Intuitively, any truly distinctive elements of the fund's investment strategy or risk profile should stay relatively similar across time, so this approach best reflects funds' stability over time.

The 5-gram/cosine measure, by contrast, shows less variability over time. This measure calculates similarity using 5-gram token frequencies, meaning it captures textual overlap across a high-dimensional space defined by every five-word sequence in each disclosure. This measure is sensitive to local phrase-level patterns rather than individual word counts. As a result, it is more robust to minor textual changes: substituting a synonym or reordering a clause will disrupt far fewer 5-grams than it would unigrams. This stability holds even when the underlying texts are relatively short, where sparser data might otherwise produce erratic similarity scores. The result is a measure that tracks genuine structural repetition in language rather than superficial lexical overlap.[129]

FIGURE 1: COMPARISON OF TEXT SIMILARITY MEASURES ACROSS TIME (2011-2022) AND BY DISCLOSURE SECTION



Comparing funds' risk and strategy disclosures reveals that, for both score types (TF-IDF/cosine and 5-gram/cosine), risk sections exhibit *less year-to-year similarity* than strategy sections.[130] This result intuitively makes sense. The risks associated with

129. Figure 1 also illustrates that disclosure language in both the risk and strategy sections increase in similarity over time—although the growth in repetitive language does not consistently increase over the period of study.

130. We conducted a series of t-tests comparing our text similarity measures for a fund's risk section to text similarity measures for a fund's strategy section by year. Across the 44 t-tests conducted (four measures times 11 years per measure), the difference between the (lower) risk section text similarity score and the (higher) strategy section score was statistically significant in 33 (75%) of our t-tests. In the other 11, we found no statistical difference between the risk and strategy section scores. T-tests comparing scores for risk and strategy sections for all years indicate that the differences between lower average similarity scores for risk disclosures and higher similarity scores for strategy sections are also statistically significant when pooled across all years. For replication code, see *GSU Mutual Fund Research*, *supra* note 125.

these strategies are a function of external events beyond the funds' control. In other words, risk sections reveal changes resulting from both internal events like altered investment strategies, which are relatively rare, and external events like COVID-19 or inflation spikes. Risk sections, as a result, tend to be revised more frequently than strategy sections.

TABLE 3: SUMMARY STATISTICS FOR TEXT SIMILARITY SCORES BY DISCLOSURE SECTION FOR ALL DISCLOSURES, ALL YEARS

Panel A: Investment Strategy							
	S.D.	*Min*	*25%*	*Mean*	*Median*	*75%*	*Max*
TF-IDF/ cosine	0.1014	0	0.9605	0.9563	0.9943	1	1
5-gram/ cosine	0.1406	0	0.9137	0.9233	0.9719	1	1

Panel B: Principal Risk							
	S.D.	*Min*	*25%*	*Mean*	*Median*	*75%*	*Max*
TF-IDF/ cosine	0.0922	0.0208	0.9477	0.9518	0.9839	0.9973	1
5-gram/ cosine	0.1338	0	0.8664	0.8968	0.9347	0.9805	1

Strategy sections are more stable by design. Investment strategy descriptions—where funds tell investors *how* their money will be invested—should remain relatively constant over time. That is, mutual funds are more likely to make incremental changes in investment strategy than radical ones.

While strategy sections are more stable,[131] funds appear to revise their risk disclosures more consistently—perhaps in

131. We conducted a series of t-tests comparing our text similarity measures for a fund's risk section to text similarity measures for a fund's strategy section by year. Across the 22 t-tests conducted (two measures times 11 years, per measure), the difference between the (lower) risk section text similarity score and the (higher) strategy section score was statistically significant in 13 (59.1%) of our t-tests. In the other nine, we found no statistical difference between the risk and strategy section scores. T-tests comparing scores for risk and strategy sections for all years indicate that the differences between lower average similarity scores for risk disclosures and higher similarity scores for

response to external events. Funds' revisions to their strategy disclosures are more idiosyncratic. Take, for example, funds' responses to COVID-19. In 2020, funds revised their risk disclosures *en masse* in response to this external shock (see Figure 1).[132] But we do not see this behavior mirrored in funds' strategy disclosures. Rather, funds revised their strategies at roughly the same rate as before.

III.
Findings: Boilerplate & Change

In this Section, we use our text similarity measures to evaluate our four hypotheses. We begin with our hypotheses about boilerplate's use in promoting shared meaning and lowering transaction costs. We find that funds holding similar assets tend to contain different levels of boilerplate than other types of funds. We also find that disclosures within fund families are much more likely to share language than disclosures across different fund families. Both findings suggest that boilerplate is widespread—but that boilerplate serves a purpose in creating shared meaning and reducing transaction costs.

We then evaluate our hypotheses about language change. If boilerplate plays a role in developing shared meaning and promotes efficiency, then deviations from boilerplate should be meaningful. Funds executing emerging or evolving investment strategies, such as innovation-related or ESG strategies, are less likely to repeat language from year to year than other types of funds. We also find that changes in a fund's investment strategy disclosure are correlated with changes in the distribution of asset types held by the fund. In other words, the data suggest that changes in fund assets are also reflected in new (not repetitive) language.

A. *Stability in Disclosure Language*

1. *Boilerplate Patterns by Fund Type*

We first evaluate our *Shared Meaning* hypothesis: Funds with similar investment styles will exhibit similar levels of boilerplate.

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strategy sections are also statistically significant when pooled across all years. For replication code, see *GSU Mutual Fund Research*, *supra* note 125.

132. *Aggregated Risks*, *supra* note 7, at 83–89.

We began with the intuition that some types of funds employ more stable strategies (i.e., bond funds) than others (i.e., domestic equity funds). We expected that funds with more stable strategies, like money markets and fixed-income funds, would have higher similarity scores compared to domestic and foreign equity funds.

We assign asset classes using the Center for Research in Securities Prices (CRSP) categories.[133] We group funds into six overarching asset classes using the CRSP codes: domestic equity ("DE"),[134] foreign equity ("FE"),[135] Fixed Income ("FI"),[136] Index ("I"), Money Market ("M"),[137] and Other ("O").[138] We then categorized funds by merging our prospectus data with the CRSP Survivor-Bias-Free U.S. Mutual Fund Database investment objective codes.[139]

Figure 2 displays the distribution of asset class types across our data. DE funds are the largest fund class in our sample, comprising 32% of our observations. FE funds, on the other hand, comprise only 14%. FI funds (including bonds) account for 10.5%, followed closely by M (8.9%) and I (8.4%) funds. O

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133. The Center for Research in Securities Prices began as an academic research endeavor with the University of Chicago Booth, which was acquired by Morningstar in 2026, and provides information about public securities, enabling research on firms and funds. CTR. FOR RSCH. IN SEC. PRICES, https://www.crsp.org (last visited July 31, 2026).

134. "Domestic equity" refers to funds that primarily hold stocks from domestic (U.S.) firms. CTR. FOR RSCH. IN SEC. PRICES, *CRSP Style Code*, https://www.crsp.org/products/documentation/crsp-style-code-0 (last visited Jan. 3, 2023) [hereinafter CRSP Style Code].

135. "Foreign equity" refers to funds that primarily hold stock from foreign (non-U.S.) firms. *Id.*

136. "Fixed income" funds invest in municipal, corporate, and U.S. federal bonds. *Id.*

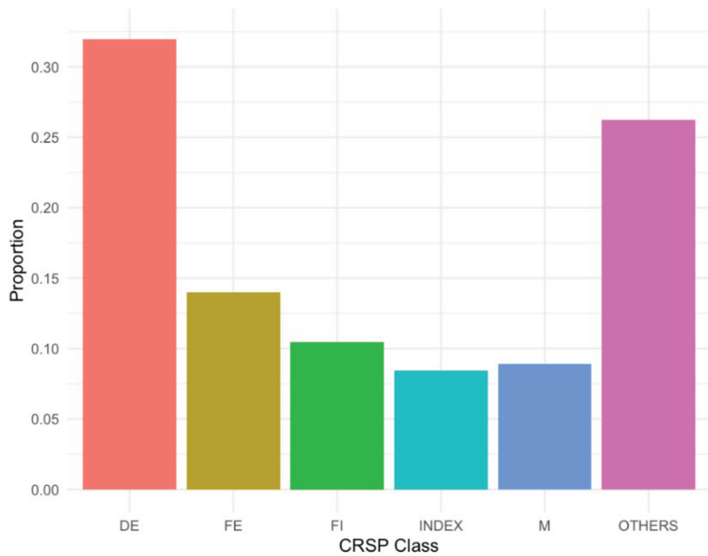
137. "Money Market" funds are "are generally defined throughout the world as regulated funds that are restricted to holding short-term, high-quality debt instruments." 2022 Investment Company Fact Book: A Review of Trends and Activities in the Investment Company Industry, INV. CO. INST., (2022), https://www.ici.org/doc-server/pdf%3A2022_factbook.pdf.

138. Other funds in the CRSP classification include mortgage-backed securities, currency funds and miscellaneous strategies like alternative credit, energy MLP funds, and multi-strategy funds. CRSP Style Code, *supra* note 134.

139. Note the CRSP database excludes closed-end funds and other registered investment vehicles that are not mutual funds, bonds, international equities, or money market funds. *See* CRSP SURVIVOR-BIAS-FREE US MUTUAL FUND GUIDE FOR SAS, ASCII & R, CTR. FOR RSCH. IN SEC. PRICES (CRSP) (Feb. 12, 2026), https://www.crsp.org/products/documentation/survivor-bias-free-us-mutual-fund-guide-sas-ascii-r.

funds account for 26.2% of the sample. We dropped uncategorizable funds from the analysis.

FIGURE 2: DISTRIBUTION (I.E., PROPORTION) OF CRSP ASSET CLASSES IN DATA, ALL FUNDS FOR ALL YEARS (2011-2022)



Similarity scores are high across all fund types and both measures—most over an 85% match of the text between years (see Table 4). Although the similarity scores are high across year, measure, and fund type, they do exhibit year-to-year variation (see Figures 3 and 4).

FIGURE 3: INVESTMENT STRATEGY SIMILARITY SCORES BY ASSET CLASS (CRSP), BOTH MEASURES FOR ALL YEARS (2011-2022)

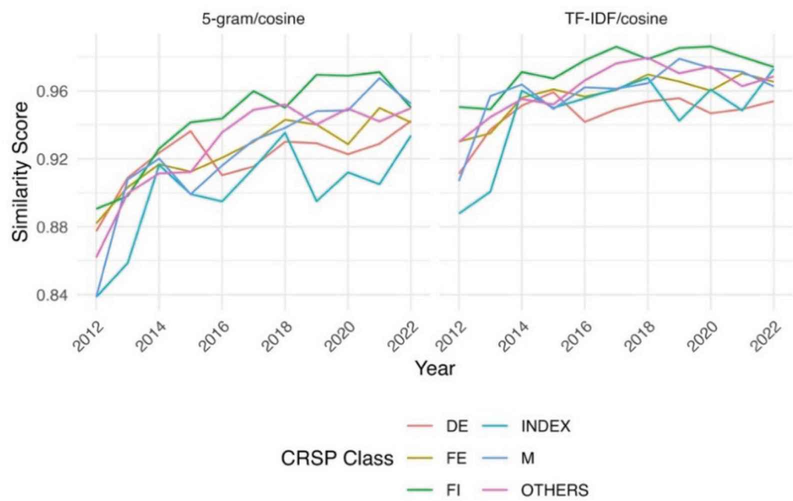


FIGURE 4: PRINCIPAL RISKS SIMILARITY SCORES BY ASSET CLASS (CRSP), BOTH MEASURES FOR ALL YEARS (2011-2022)

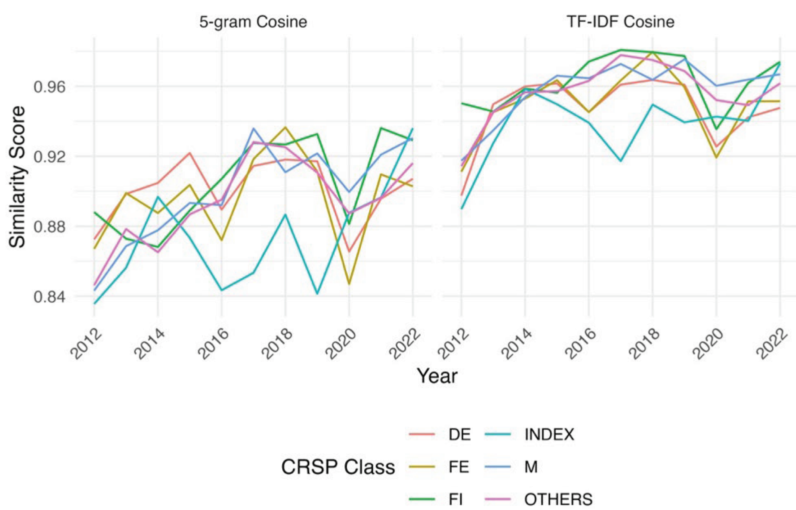


Table 4: Investment Strategy Similarity Mean Scores by Asset Class, both Measures for all Years Combined (2011-2022)

	DE	*FE*	*FI*	*Index*	*M*	*Other*
TF-IDF/cosine	0.94	0.95	0.97	0.94	0.95	0.96
Five-gram/cosine	0.92	0.92	0.94	0.90	0.92	0.92

Table 5: Principal Risks Similarity Mean Scores by Asset Class, both Measures for all Years Combined (2011-2022)

	DE	*FE*	*FI*	*Index*	*M*	*Other*
TF-IDF/cosine	0.94	0.94	0.96	0.93	0.95	0.95
Five-gram/cosine	0.90	0.89	0.90	0.87	0.89	0.89

To test the *Shared Meaning* hypothesis, we first compare the average amount of recycled language in each asset class (by disclosure section) with the average amount of recycled language in *other* asset classes. We use difference-in-means tests (t-tests) to determine whether mean text similarity scores systematically vary across asset classes. We conducted 90 t-tests in total.[140]

First, we find some support for the shared meaning hypothesis—boilerplate patterns emerge when similarity scores are viewed by fund type. Using the keyword-weighted TF-IDF/cosine measure, boilerplate in one asset class differs (in a statistically significant way) from boilerplate in the paired asset class for 60% of strategy sections and 66.7% of risk sections.[141]

For example, disclosures by fixed-income (FI) funds employ a different level of boilerplate, on average, as compared to every other type of fund.[142] FI funds, which invest in debt

140. The t-tests are done for each asset class pair and section. In total, we conducted 90 t-tests: 15 total pairs of asset classes (e.g., DE/FE, DE/FI, etc.) times two text similarity scores (TF-IDF/cosine and 5-gram/cosine) times three different disclosure subsets (strategy, risk, and combined).

141. We observed similar (though somewhat weaker) results using our 5-gram/cosine measure: 10 of 15 (66.7%) of strategy asset class pairs and 6 of 15 (40.0%) of risk asset class pairs demonstrated statistically significant differences.

142. This is true for both the TF-IDF and 5-gram cosine measures. Results from difference-in-means tests as follows. In t-tests using 5-gram/cosine, comparisons of FI with each other asset class type (producing five t-tests) produced t-statistics ranging from 2.88 to 6.54 ($p < 0.01$). Difference-in-means

and the bond markets, are broadly considered more stable as a form of guaranteed or principal-protecting assets, compared to stocks like DE funds.[143] Our finding reflects this reality: FI funds' discussions of strategy exhibit higher similarity and recycled language due to the investment approach.

Other boilerplate patterns by asset classes are not so intuitive. For example, I funds had statistically significantly *lower* similarity scores than DE funds and FE funds using 5-gram/cosine.[144] Yet we expected I funds' investment strategy disclosures—like FI strategy disclosures—to be *more* stable than DE and FE strategies.

Some results, like M funds, were just noisier.[145] Risk section results performed similarly to strategy section scores across the fund categories, but the differences were muted.[146]

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tests using TF-IDF/cosine measures produced slightly stronger results, with t-statistics ranging from 3.47 to 5.88 ($p < 0.01$).

143. For a discussion of fixed income assets see Jeffrey T. Dinwoodie, *Fixed Income Securities and SEC Rule 15c2-11: History, Context, Uncertainties-and A Pathway Forward*, 41 YALE J. ON REG. BULL. 29, 33 (2023) (describing the differences between fixed income securities and equity securities); *Bonds - FAQ*, INVESTOR.GOV: U.S. SEC. AND EXCH. COMM'N, https://www.investor.gov/introduction-investing/investing-basics/investment-products/bonds-or-fixed-income-products/bonds (last visited July 31, 2026) (describing fixed income products and risk exposure); *Money Market Funds*, INVESTOR.GOV: U.S. SEC. AND EXCH. COMM'N, https://www.investor.gov/introduction-investing/investing-basics/investment-products/mutual-funds-and-exchange-traded-5 (last visited July 31, 2026); *Changing Market Conditions*, *supra* note 18, at 864.

144. Results from difference-in-means tests using 5-gram/cosine were as follows. A comparison of Index and DE similarity scores produced a t-statistic of 2.87 ($p < 0.01$); Index and FE, a t-statistic of 3.208 ($p < 0.01$). Difference-in-means tests using TF-IDF/cosine were not statistically significant: Index versus DE produced a t-statistic of 1.363 ($p = 0.173$); Index v. FE, a t-statistic of 1.524 ($p = 0.128$). Shadow indexing, where active funds mimic the allocations within indices can shrink the distance between DE and Index funds. Similarly, indexed products have been used by fund complexes to attract new money and millennial investors, perhaps causing more attention to be placed on distinguishing index funds with unique language. *See, e.g.*, Michal Barzuza et al., *Shareholder Value (s): Index Fund ESG Activism and The New Millennial Corporate Governance*, 93 S. CAL. L. REV. 1243, 1253 (2020).

145. Money market funds' investment strategy sections, for example, exhibited slightly less change than DE funds (TF-IDF/Cosine), more compared to Index funds (5-gram/cosine), and consistently less change than FI funds (both measures). All difference-in-means tests described here demonstrated statistically significant differences between asset class types with a t-statistic of at least 2.73 ($p < 0.01$).

146. Fixed income funds had higher similarity scores than index funds. *See* Table 5.

Different types of funds use boilerplate at different rates, and this provides initial support for our intuition about boilerplate's function to advance shared meaning. To take the inquiry one step further, we examine whether two disclosures of the same asset class are more similar to each other than a disclosure is to the disclosure of another asset class. For example, we would expect two DE disclosures to be more similar to each other than a DE disclosure and an FI disclosure are.

We test this aspect of the shared meaning hypothesis by randomly selecting 500 disclosures in each asset class-year and calculating the pairwise similarity across all possible pairs (i.e., "in-class" pairs). We repeated this exercise for a random sample of 500 disclosures from different asset classes (i.e., "out-of-class" pairs). For each year, we used t-tests to compare "in-class" and "out-of-class" text similarity scores. If the shared meaning hypothesis is correct, we should find that "in-class" pairs have higher text similarity scores than "out-of-class" pairs. In total, we assessed similarity of both investment strategy and risk sections across 12 years (2011-2022) for each of the six asset classes (DE, FE, FI, M, I, and O).[147] We also examined the difference between in-class and out-of-class pairs pooled across all years.

We find strong support for our shared meaning hypothesis when looking across all years. In-class disclosure pairs are more similar than out-of-class disclosure pairs using both TF-IDF/cosine and 5-gram shingle/cosine similarity measures. This is true for both strategy and risk sections (see Table 6).

147. For each comparison, we used pairwise comparisons of 500 randomly sampled "in-class" disclosures and 500 randomly sampled "out-of-class" disclosures. For both groups, N = (500*500-500)/2 = 124,750.

TABLE 6: IN-CLASS AND OUT-OF-CLASS TEXT SIMILARITY COMPARISONS, BY ASSET CLASS AND POOLED ACROSS 2011-2022

	Strategy		*Risk*	
	TFIDF/cosine	*5-gram shingle/cosine*	*TF-IDF/cosine*	*5-gram shingle/cosine*
DE	(0.589, 0.3479) t = 32.1712, p = 0.0000	(0.0110, 0.008) t = 23.4644 p = 0.0000	(0.6926, 0.6886) t = 13.0000 p = 0.0000	(0.0261, 0.0225) t = 18.4975 p = 0.0000
FE	(0.3521, 0.3415) t = 30.9339, p = 0.0000	(0.0101, 0.0071) t = 23.9629 p = 0.0000	(0.6807, 0.6715) t = 28.5618 p = 0.0000	(0.0255, 0.0225) t = 16.3865 p = 0.0000
FI	(0.3536, 0.3465) t = 21.2146, p = 0.0000	(0.0091, 0.0069) t = 20.3948 p = 0.0000	(0.6817, 0.6781) t = 11.6896 p = 0.0000	(0.0244, 0.0235) t = 15.8108 p = 0.0000
INDEX	(0.3496, 0.3431) t = 19.3271, p = 0.0000	(0.0108, 0.0090) t = 15.7111 p = 0.0000	(0.6720, 0.6710) t = 4.4245 p = 0.0000	(0.0255, 0.0227) t = 17.4139 p = 0.0000
M	(0.3384, 0.3296) t = 38.4811, p = 0.0000	(0.0116, 0.0090) t = 22.2003 p = 0.0000	(0.6656, 0.6578) t = 25.5259 p = 0.0000	(0.0260, 0.0227) t = 17.4139 p = 0.0000
OTHERS	(0.3408, 0.3281) t = 38.4811, p = 0.0000	(0.0101, 0.0074) t = 21.4136 p = 0.0000	(0.6673, 0.6619) t = 17.8229 p = 0.0000	(0.0253, 0.0221) t = 16.9300 p = 0.0000

Note: The first number in each cell is the *in-class* mean; the second is the *out-of-class* mean. The differences in means were calculated using a two-tailed t-test.

We see similar results when examining in-class versus out-of-class similarity by year, although our results vary slightly by asset class, disclosure section, and similarity measure.[148] We find the most support for the shared meaning hypothesis in funds' strategy disclosures. This is unsurprising. Funds are exposed

148. A full table of results is available from the authors upon request.

to some of the same external risks—the impact of COVID, for example—regardless of asset class. Strategies, on the other hand, should have elements unique to the funds' asset class. Funds are likely to include more language about investing in U.S. securities in a DE fund disclosure than in an FI fund disclosure.

In each of the 72 tests of similarity using 5-gram shingles, in-class disclosures are more similar to each other than out-of-class disclosures. Of these 72, 70 are statistically significant at $p < 0.05$ using a two-tailed t-test. Using TF-IDF, in-class disclosures show greater similarity in 61 of 72 comparisons (84.7%); all 61 are statistically significant at $p < 0.05$.

Our analysis of risk disclosures produces a similar result. As with strategy disclosures, we found a stronger relationship among in-class risk disclosures when using 5-gram shingles. The in-class similarity was higher in all 72 comparisons using the 5-gram shingle measure and statistically significant in 70 (97.2%). When using TF-IDF, the in-class similarity was greater in 53 of the 72 tests (73.6%) and statistically significant in the expected direction in 51 (70.8%).

Taken together, these results are strongly suggestive—though not definitive—that recycled language convey shared meaning. Stronger results using the 5-gram shingle measure indicate the presence of identical language across disclosures that, on average, share asset classes and year but no other common features.

2. *Fund Families & Boilerplate's House Language*

We next turn to our *Transaction Cost* hypothesis: Funds within the same fund family should share more language than funds outside of their family. The data provide strong support for the idea that within fund families, legal teams develop family-specific boilerplate, or "house language," for both strategy and risk disclosures. House language is evidenced by statistically significant higher similarity scores between funds within the fund family compared to funds in random pairings.

Our findings reflect a market reality. While each fund is a legally distinct entity,[149] most funds operate as part of a complex

149. Mutual funds are structured legally as a corporation or trust. Jill E. Fisch, *Rethinking the Regulation of Securities Intermediaries*, 158 U. PA. L. REV. 1961, 1967 (2010).

or "family" of funds managed by a single fund sponsor.[150] This is more intuitive than it may seem at first blush. Most are likely familiar with large fund families such as BlackRock, Fidelity, or State Street[151]—funds that have brand recognition and are a "household" name. Funds within these fund families often share operational functions such as administration, auditing and reporting, and legal.[152] Researchers have documented that individual funds in large fund families are managed as a part of a broader portfolio of funds rather than on an individual basis.[153]

Does coordination in management and operations translate to coordinated disclosure language? In other words, will the disclosures of BlackRock funds have similar language by virtue of being part of the same family? To examine this intuition, we grouped individual funds by fund family. To group funds, we leveraged the fund names and business addresses to match individual funds to the same sponsor.[154] In our data, we found 208 fund groupings with at least two funds.[155] The number of funds in each grouping ranged from 2 to 105, with a mean of 8.33. But the distribution is skewed by the large number of families with few funds (the left tail) and by the small number of families that have many affiliated funds.[156] To illustrate this

150. At year-end 2022, 812 fund sponsors operated in the U.S. market. INV. CO. INST., 2023 INVESTMENT COMPANY FACT BOOK: A REVIEW OF TRENDS AND ACTIVITIES IN THE INVESTMENT COMPANY INDUSTRY 26 (2023) [hereinafter 2023 ICI Factbook], https://www.ici.org/system/files/2023-05/2023-factbook.pdf; "The concentration of mutual fund and ETF assets managed by the largest fund complexes has increased over time. The share of assets managed by the five largest firms rose from 35 percent at year-end 2005 to 55 percent at year-end 2022." *Id.* at 27.

Common fund sponsors include advisory firms, banks, insurance companies, or brokerage companies—all known as fund sponsors. Choi, *supra* note 17, at 40.

151. Barzuza, *supra* note 144, at 1253.

152. *See, e.g.*, 2023 ICI Factbook, *supra* note 150, at 28 (describing arrangements to share operational services among funds within a fund family).

153. *See, e.g.*, Jose Miguel Gaspar, Massimo Massa & Pedro Matos, *Favoritism in Mutual Fund Families? Evidence on Strategic Cross-Fund Subsidization*, 61 J. FIN.O 73 (2006) (demonstrating that sponsors engage in cross-fund subsidization to create "high-value funds.").

154. We use the following fields to match fund families: 'zipba', 'bas1', and 'bas2' to group funds into families.

155. Note, this number includes all funds that are single actors and thus each fund represents a fund family with 1 fund.

156. Data on file with authors; *see GSU Mutual Fund Research*, *supra* note 125 (hosting replication code).

point, over 400 funds in our sample come from the top five fund families, like Oppenheimer and BlackRock.[157] Conversely, 141 fund families have between 2–5 funds.[158]

We observe less similarity in the strategy sections within fund families compared to risk sections. This finding is intuitive—strategy sections describe the investment strategy specific to each fund. This creates less room for house language to shape the disclosure. However, even funds with different investment strategies may be exposed to similar market risks or external risks such as COVID-19, inflation, and other widespread phenomena.[159]

To explore the effects of house language, we compared similarity scores of DE funds' disclosures within the same fund family to disclosures of randomly paired DE funds (i.e., funds not in the same family).[160] For example, if Fund Family A has 5 DE funds, we compared the risk and strategy statements of A1, A2, A3, A4, and A5 using the two measures and created an average similarity score for Fund Family A in a given year. We repeated this exercise for 10 fund family groupings,[161] and created average, composite scores for each measure, as depicted in Figure 5 and Figure 6.

To create the comparison with the *unrelated* pairs, we randomly generated groupings of DE funds that do not belong to the same fund family and repeated the calculation process. For example, we calculated the similarity of risk and strategy statements between Fund A and Fund B for a given year—so long as A and B are from different fund families. Averages were taken for each measure in each year.

Similarity scores are higher within fund families for both risk and strategy sections across all years for both measures compared to random pairs. All differences in text similarity between within-family and out-of-family pairs were uniformly

157. Data on file with authors. Top 5 means the largest 5 fund families based on the number of funds and assets under management (AUM).

158. Data on file with authors.

159. *Aggregated Risks*, *supra* note 7, at 70–74 (describing a case study of three different types of market risks and funds' varied responses to each).

160. We focus on domestic equity only to exclude variation introduced by different asset classes, i.e., differences between fixed income and equity securities, for example.

161. The top 5 fund family by number of funds in matched business addresses are Oppenheimer, Dreyfus, T. Rowe Price, Deutsche Bank, and BlackRock. Data on file with authors.

statistically significant. (see Tables 7 and 8). In total, we conducted 48 t-tests.[162]

Disclosures originating from the same fund family, especially in the principal risk section, are more similar than disclosures from random pairs. It would be surprising if funds within the same family described similar risks in disparate ways. From this, we can infer that using consistent language for common risks promotes efficiency and reduces transaction costs.

We also observe that within-family similarity is strongest using the TF-IDF/cosine measure. Because this measure uses weighted keywords, this indicates that disclosures from the same fund family include the same unique and/or uncommon words. This is true of both the principal risks and investment strategy disclosures.[163]

Out-of-family disclosure pairs show almost no boilerplate (see Table 8).[164] Using the 5-gram shingle measure, out-of-family pairs share little-to-no common language used in the same order.[165]

162. The 48 tests include 24 each for strategy and risk (two measures per year across 12 years).

163. Funds employing similar strategies or relying on the same subadvisors will use similar and/or identical language across disclosures. Alternatively, this measure may capture the inclusion of the fund family name, which would be weighted heavily under the TF-IDF weighting scheme.

164. This conclusion is supported by an analysis of the variance of each of these out-of-family distributions, which is approximately 0 for all score-year subsets. This means, practically speaking, that the distribution of similarity scores between out-of-family pairs is clustered very tightly around zero.

165. Recall that the 5-gram cosine takes context into account, so formatting and order of text along with the language used are reflected in the near-zero scores.

FIGURE 5: COMPARISON OF TEXT SIMILARITY MEAN SCORES OF PRINCIPAL RISK SECTIONS BETWEEN WITHIN-FUND FAMILY PAIRS AND OUT-OF-FUND FAMILY PAIRS, BY YEAR

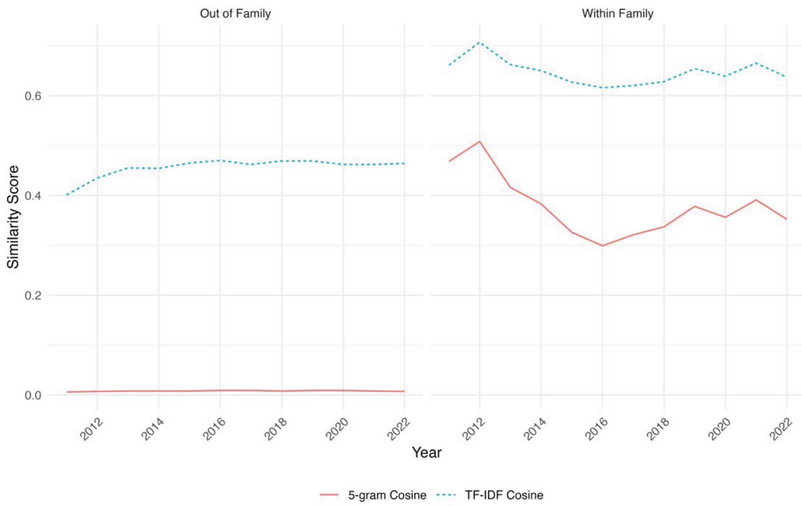

TABLE 7: COMPARISON OF MEAN SIMILARITY SCORES BETWEEN WITHIN-FUND FAMILY AND OUT-OF-FUND FAMILY PAIRS FOR PRINCIPAL RISK DISCLOSURES, BY YEAR

	TF-IDF/cosine	*Five-gram/cosine*
2011	(0.661, 0.401)	(0.468, 0.006)
2012	(0.707, 0.435)	(0.508, 0.007)
2013	(0.662, 0.455)	(0.416, 0.008)
2014	(0.65, 0.454)	(0.383, 0.008)
2015	(0.627, 0.465)	(0.326, 0.008)
2016	(0.616, 0.47)	(0.299, 0.009)
2017	(0.62, 0.462)	(0.321, 0.009)
2018	(0.628, 0.469)	(0.337, 0.008)
2019	(0.654, 0.469)	(0.378, 0.009)
2020	(0.639, 0.462)	(0.356, 0.009)
2021	(0.665, 0.462)	(0.391, 0.008)
2022	(0.637, 0.464)	(0.352, 0.007)

Note: The first number in each cell is the *within-fund family* mean; the second is the *out-of-fund family* mean. The differences in means were calculated using a two-tailed t-test. Every comparison across the period of study and for all scores is statistically significant at $p < 0.001$.

FIGURE 6: COMPARISON OF TEXT SIMILARITY MEAN SCORES OF INVESTMENT STRATEGY SECTIONS BETWEEN WITHIN-FUND FAMILY AND OUT-OF-FUND FAMILY PAIRS, BY YEAR

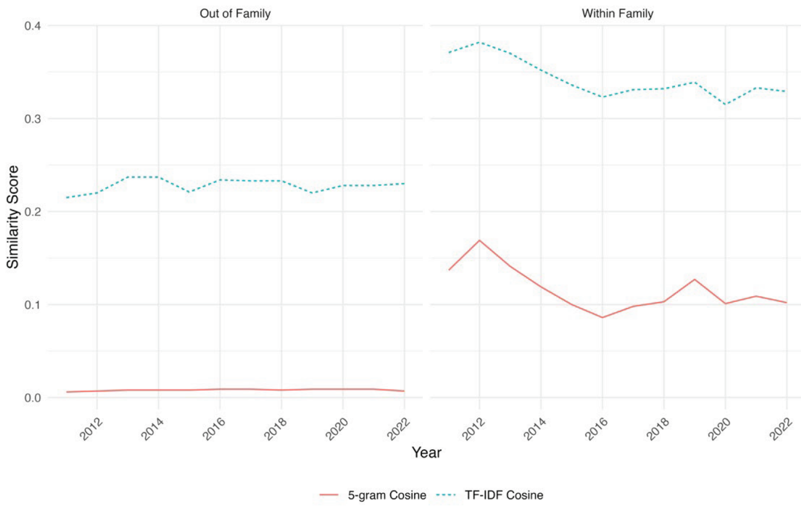

TABLE 8: COMPARISON OF MEAN SIMILARITY SCORES BETWEEN WITHIN-FUND FAMILY AND OUT-OF-FUND FAMILY PAIRS FOR INVESTMENT STRATEGY DISCLOSURES, BY YEAR

	TF-IDF/Cosine	*Five-gram/Cosine*
2011	(0.371, 0.215)	(0.137, 0.006)
2012	(0.382, 0.22)	(0.169, 0.007)
2013	(0.37, 0.237)	(0.141, 0.008)
2014	(0.352, 0.237)	(0.119, 0.008)
2015	(0.336, 0.221)	(0.1, 0.008)
2016	(0.323, 0.234)	(0.086, 0.009)
2017	(0.331, 0.233)	(0.098, 0.009)
2018	(0.332, 0.233)	(0.103, 0.008)
2019	(0.339, 0.22)	(0.127, 0.009)
2020	(0.315, 0.228)	(0.101, 0.009)
2021	(0.333, 0.228)	(0.109, 0.009)
2022	(0.329, 0.23)	(0.102, 0.007)

Note: The first number in each cell is the *within-fund family* mean; the second is the *out-of-fund family* mean. The differences in means were calculated using a two-tailed t-test. Every comparison across the period of study and for all scores is statistically significant at $p < 0.001$.

B. *Boilerplate's Opposite: Change*

Funds repeat disclosure language from year to year and within fund families. But *some* fund language changes over time. In this Subsection, we evaluate whether changes are systematic (i.e., meaningful) or random.

First, we evaluate our *Emerging/Evolving Strategy* hypothesis*:* strategy disclosures for funds pursuing emerging or evolving investment strategies will contain less boilerplate than disclosures with traditional strategies. We find that funds adopting innovation-related or ESG strategies contain significantly less boilerplate than funds not pursuing such strategies.

We then turn to our *Portfolio Change* hypothesis: Strategy disclosures will change more following portfolio changes compared to funds maintaining a stable distribution of portfolio assets. We isolate this effect by looking at funds with high levels of language change (i.e., lower levels of boilerplate). We then evaluate absolute changes in those funds' mix of equity securities, debt securities, and cash compared to other funds without a high level of language change. We find that, across all four asset types, funds with high levels of language change are significantly more likely to also change their portfolio composition.

1. *Emerging Strategy Funds Update Disclosure Language More Frequently Than Stable Strategy Funds*

We first look at funds with emerging or evolving strategies, like ESG and crypto assets. We expect emerging strategy funds will use less boilerplate than funds using established investment strategies—and we find empirical support for this hypothesis.

Language used to describe new strategies and attendant risks will be less settled—the terms of art for that type of disclosure have not yet crystallized. When the field is less settled, funds face higher rates of learning that require more rapid disclosure additions to stem growing liability threats.[166] Researchers have

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166. *Aggregated Risks*, *supra* note 7, at 64–66 (describing how funds learn from the crowd and update risk perceptions and disclosures based on experiences and feedback from other funds' disclosures); *see also*, *Staff Statement on Importance of Delivering Timely and Material Information to Investment Company*

found that disclosure language converges into common themes over time.[167] The convergence suggests that funds learn about risk and ideal strategy expressions from other disclosures—evidencing shared meaning in practice.[168] However, convergence can only occur after sufficient time has passed for funds to learn and change the language to reflect the common, accepted phrasing.[169] With emerging investment strategies, a fund's time to learn is shorter, and the new risks are less known and understood. As a result, funds' disclosure language should be more variable (and less recycled) when using emerging investment strategies versus established strategies.

To test this theory, we identified funds investing in cryptocurrencies and digital assets[170] as one subset of innovation, and funds pursuing an ESG strategy[171] as another subset. We

Investors DIV. OF INV. MGMT: SEC. & EXCH. COMM'N (Apr. 14, 2020), https://www.sec.gov/investment/delivering-timely-material-information.

167. *Aggregated Risks*, *supra* note 7, at 85 (finding convergence in language).

168. *Id.* (finding empirical evidence of funds learning and updating risk perceptions and disclosure language).

169. "Funds' abilities to observe and learn are enhanced and, perhaps, encouraged by the regulatory environment governing disclosures." *Id.* at 65; *see also* Bryan D. Jones & Frank Baumgartner, THE POLITICS OF ATTENTION: HOW GOVERNMENT PRIORITIZES PROBLEMS (1999) (describing learning and convergence in a policy-making setting); Jens O. Zinn, SOCIAL THEORIES OF RISK AND UNCERTAINTY: AN INTRODUCTION 6 (2008) (finding that social processes influence individual risk assessments); Brian T. McCann, *Using Bayesian Updating to Improve Decisions Under Uncertainty*, 63 CAL. MGMT. REV. 26 (2020) (describing the general principles and applications of Bayesian updating which can be applied to mutual funds' learning from other funds' disclosures).

170. To identify innovation funds using cryptocurrencies, we manually reviewed disclosures to find discussions of crypto assets and risks, finding language variation and creating a final set of key words. If a fund included any of the key words in the strategy discussion, then the fund was labeled an innovation fund. The keywords are: 'Virtual currency', 'Digital currency', 'Digital wallet', 'Ethereum', 'Analogies to fiat currency', 'Convertible virtual currency', 'Digital commodity', 'Alternative crypto', 'Derivative in conjunction', 'Altcoins', 'Block reward', 'NFT', 'crypto', 'bitcoin', 'cryptocurrency', Blockchain', 'crypto', 'bit coin', 'digital assets', 'alternative currency', 'Altcoin', 'Blocks', 'Coin', 'Cryptoasset'.

171. To identify ESG funds, we began with a list of sustainable funds provided by Morningstar. MORNINGSTAR, U.S. SUSTAINABLE FUNDS LANDSCAPE 2024 IN REVIEW (2024), https://www.morningstar.com/lp/sustainable-funds-landscape-report. We then added any additional funds with that have "Sustainable", "ESG", "Social", or "Clean Energy" in their name. We also include all funds that belong to any of five fund families that are self-identified as ESG strategies: Calvert, Parnassus, Pax, Praxis, and Trillium. Our approach follows that used by Professor Jonathan Zytnick. *See* Jonathan Zytnick, *Do Mutual Funds Represent Individual Investors?*, 9 (Oct. 18, 2024) (unpublished paper) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3803690.

compare the similarity scores of the innovation fund subgroups against the similarity scores of all other funds (non-innovation) using a difference in means test.[172]

We chose cryptocurrencies and ESG as our two emerging strategies using a most-likely case design.[173] Both cryptocurrencies and ESG investing are subject to changing regulatory environments through new rules[174] and enhanced SEC scrutiny.[175] Both strategies also grew rapidly during our study period.[176] Both

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172. Our sample contains 607 ESG funds and 1498 "innovation" funds. Data on file with authors.

173. Most likely case studies focus on crucial cases that are "most likely or least likely to exhibit a certain outcome." Chiara Ruffa, *Case Study Methods: Case Selection and Case Analysis, in* THE SAGE HANDBOOK OF RESEARCH METHODS IN POLITICAL SCIENCE AND INTERNATIONAL RELATIONS 1133, 1139 (citing JOHN GERRING, CASE STUDY RESEARCH: PRINCIPLES AND PRACTICES 243 (2007)).

174. In March 2022, the SEC proposed rule around ESG investing that would restrict the use of ESG in funds' names and require ESG funds to provide additional disclosures around their ESG integration, focus, or impact strategies. Press Release, SEC, SEC Proposes to Enhance Disclosures by Certain Investment Advisers and Investment Companies About ESG Investment Practices (May 25, 2022), https://www.sec.gov/news/press-release/2022-92.

175. The SEC has brought several enforcement actions against those selling securities and investments in crypto assets and has a page cataloging such actions available here, https://www.sec.gov/spotlight/cybersecurity-enforcement-actions. Perhaps the highest profile of the enforcement actions, which implications for registered funds included in this study, is the enforcement action against FTX in 2022. Michael Thasher, *Institutions Weigh Exposure to FTC Crypto Exchange*, PENSIONS & INVESTMENTS (Nov. 10, 2022), https://www.pionline.com/cryptocurrency/institutional-investors-measure-damage-ftx-collapse-portfolios (noting institutional investors with direct or indirect exposure to FTX including BlackRock).

In 2021, the SEC created an Enforcement Task Force Focused on Climate and ESG Issues. Press Release, SEC, SEC Announces Enforcement Task Force Focused on Climate and ESG Issues (Mar. 4, 2021), https://www.sec.gov/news/press-release/2021-42. For an example of SEC enforcement actions based on ESG strategies in registered funds, see the 2022 action against BNY Mellon for "misstatements and omissions about Environmental, Social, and Governance considerations in making investment decisions for certain mutual funds" for which it agreed to pay $1.5 million in fines. In the Matter of BNY Melon Investment Advisor, Inc., Administrative Proceeding, File No. 3-20867 (2022); *see also* Press Release, SEC, SEC Charges BNY Mellon Investment Adviser for Misstatements and Omissions Concerning ESG Considerations (May 23, 2022), https://www.sec.gov/news/press-release/2022-86.

176. In 2021, Forbes estimated that $17 billion dollars of institutional investor capital entered crypto markets. Lawrence Wintermeyer, *Institutional Money Is Pouring Into The Crypto Market And It's Only Going To Grow*, FORBES (Aug. 12, 2021), https://www.forbes.com/sites/lawrencewintermeyer/2021/08/12/institutional-money-is-pouring-into-the-crypto-market-and-its-only-going-to-grow/?sh=5a7cf3081459. PWC reported that despite "turbulences, crypto /

strategies introduce new risks and uncertainties.[177] In other words, we expect that if emerging investment strategies have a relationship with boilerplate language, we will observe it with ESG and cryptocurrencies.

Table 9 and Table 10 show that both cryptocurrency and ESG funds have less similar strategy and risk section disclosures compared to other (non-innovation) funds, and the differences are statistically significant at $p < 0.001$ for both measures. Funds investing in innovation strategies use less recycled language in the strategy and risk discussions compared to non-innovation funds.

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blockchain has established itself as an essential part of professional and institutional investing." *How Banks and Institutional Investors Are Embracing the Crypto / Blockchain Opportunity*, STRATEGY &: PWC, https://www.strategyand.pwc.com/ch/en/industries/financial-services/crypto-investor-survey.html, (last visited Aug. 4, 2023). After FTX, however, the numbers dropped sharply, some estimating as much as 95% from 2018. Stacey Elliot, *Institutional Crypto Investments Dropped 95% to $433 Million in 2022* DECRYPT (Jan. 4, 2023), https://decrypt.co/118425/crypto-investment-falls-95-percent-to-433-million-2022.

In 2022, the ESG investment market in the US was estimated at $330 billion in assets under management (AUM) with expected strong growth. Greg Norman & Simon Toms, *ESG: 2021 Trends and Expectations for 2022*, HARV. L. SCH. FORUM ON CORP. GOV. (Feb. 25, 2022), https://corpgov.law.harvard.edu/2022/02/25/esg-2021-trends-and-expectations-for-2022; *see also* Zoe Q. Cooper Sutton et al., *ESG in 2021 So Far: An Update*, SKADDEN (Sept. 1. 2021), https://www.skadden.com/insights/publications/2021/09/esg-in-2021-so-far-an-update. In 2022, the Dow Jones issued a press release stating that ESG investing was the "number one growth opportunity" for investment professionals. Press Release, Dow Jones, ESG Investment Expected to More Than Double in the Next Three Years New Research from Dow Jones Shows (Sept. 7, 2022), https://www.dowjones.com/press-room/esg-investment-expected-to-more-than-double-in-the-next-three-years-new-research-from-dow-jones-shows/.

177. For an overview of crypto asset risks and the potential for crypto risks to spillover to financial markets and the real economy, see Maria Teresa Chimienti, Urszula Kochanska & Andrea Pinna, *Understanding the Crypto-Asset Phenomenon, Its Risks and Measurement Issues*, EUROPEAN CENTRAL BANK 19 Econ.Bull. (2019), https://www.ecb.europa.eu/pub/economic-bulletin/html/eb201905.en.html. For a discussion of ESG investment risks and uncertainty, see, e.g., Gil Cohen, *The Impact of ESG Risks on Corporate Value*, 60 REV. QUANT. FIN. ACC. 1451 (2023), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9888342/ (finding that traditional risk models such as CAPM fail to account for social risks and current models do not accurately capture it); Doron Avramov et al., *Sustainable Investing with ESG Rating Uncertainty*, 145 J. FIN. ECON. 642, 663–64 (2022) (finding that ESG rating uncertainty "leads to higher perceived market risk").

Table 9: T-Test Comparison of Similarity Score Means on Investment Strategy and Principal Risk Sections for ESG and Non-ESG Funds' Disclosures, Both Measures for All Years Combined

	Investment Strategy (ESG, Non-ESG)	*Principal Risks (ESG, Non-ESG)*
TF-IDF/Cosine	(0.890, 0.957)***	(0.909, 0.952)***
Five-gram/Cosine	(0.846, 0.925)***	(0.836, 0.898)***

Note: The first number represents the ESG mean, and the second number represents the non-ESG mean. ***: $p < 0.001$.

Table 10: T-Test Comparison of Similarity Score Means on Investment Strategy and Principal Risk Sections for Innovation and Non-Innovation Funds' Disclosures, Both Measures for All Years Combined

	Investment Strategy (Innovation, Non-Innovation)	*Principal Risks (Innovation, Non-Innovation)*
TF-IDF/Cosine	(0.946, 0.957)***	(0.940, 0.952)***
Five-gram/Cosine	(0.910, 0.924)***	(0.883, 0.898)***

Note: The first number represents the Innovation mean, and the second number represents the non-Innovation mean. ***: $p < 0.001$.

FIGURE 7: COMPARISON OF SIMILARITY SCORE MEANS OF INVESTMENT STRATEGY AND PRINCIPAL RISK SECTIONS FOR ESG AND NON-ESG FUNDS' DISCLOSURES, BOTH MEASURES FOR ALL YEARS COMBINED

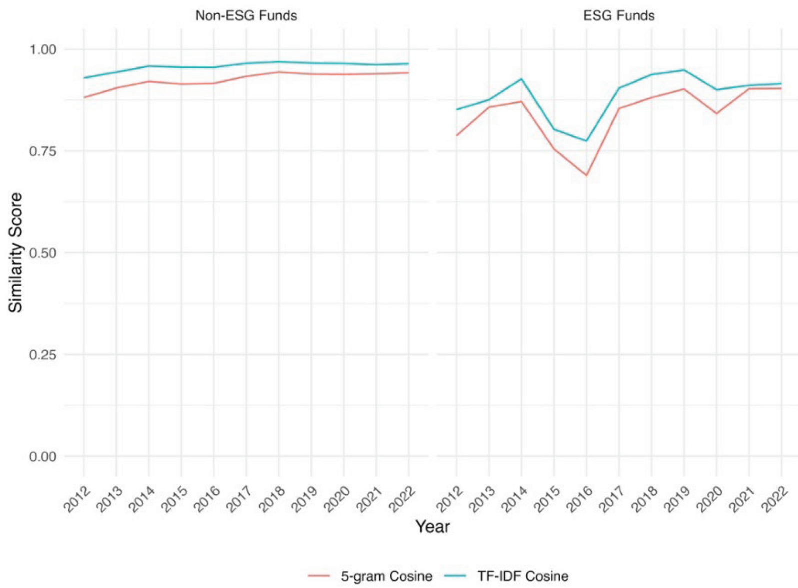
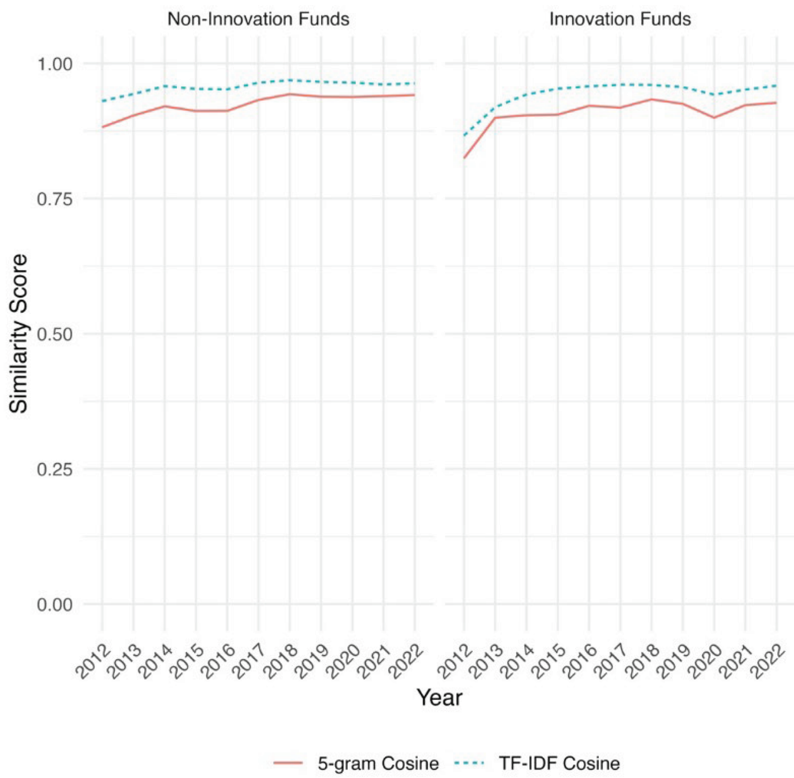


FIGURE 8: COMPARISON OF SIMILARITY SCORE MEANS ON INVESTMENT STRATEGY AND PRINCIPAL RISK SECTIONS FOR INNOVATION AND NON-INNOVATION FUNDS' DISCLOSURES, BOTH MEASURES FOR ALL YEARS COMBINED



Differences in means are most pronounced for the ESG subgroup. The year-by-year average similarity scores also show more movement, with ESG funds exhibiting sharp changes in the risk sections.

To illustrate the differences, consider two disclosures from BNY Mellon DE funds in 2021. The ESG fund, BNY Mellon Sustainable US Equity Fund, Inc., with a similarity score of .817[178] (just below the mean for ESG funds), increased its word count

178. Reporting the 5-gram shingle cosine score.

by 57% and added a new closing paragraph.[179] The non-ESG fund, BNY Mellon Large Cap Equity Fund, with a similarity score of .95[180] (slightly above the mean for non-innovation funds), changed its word count by 10%, dropping a single sentence at the end.[181]

2. *Significant Changes to Investment Strategy Disclosures & Portfolio Changes*

Next, we turn to the relationship between boilerplate language and portfolio change. We know that boilerplate predominates in fund disclosures from year to year and within fund families. As indicated by our *Portfolio Change* hypothesis, we expect that funds with higher levels of language change (i.e., lower levels of boilerplate) will have higher levels of portfolio change. That is, when funds change language, we expect it to be related to changes in the types of assets that they hold. This is exactly what we find.

We begin this assessment by looking at a subset of investment strategy disclosures that exhibited the most change among all disclosure-year pairs. We do not focus on risk statement changes because variability in risk statements may reflect external events, such as COVID-19, and may not signal a true change in the portfolio. In particular, we examine textual changes in funds in the bottom 5% of all five-gram cosine

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179. BNY Mellon Sustainable US Equity Fund, Inc., Summary Prospectus, Form 497K (May 31, 2021). The fund changed portfolio manager to subadvisor and added the following paragraph:

> The fund may also invest in low- or non-dividend paying companies that may not have been identified by the model discussed above, if the fund's portfolio manager believes such investment will manage portfolio risk or have the potential for dividend payments in the future. The fund's portfolio manager monitors the holdings in the fund's portfolio and considers selling a security if the company's relative attractiveness deteriorates or if valuation becomes excessive. The fund also may sell a security if an event occurs that contradicts the portfolio manager's rationale for owning it, such as deterioration in the company's fundamentals. In addition, the fund may sell a security if the portfolio manager believes better investment opportunities emerge elsewhere.

Id.

180. Reporting the 5-gram shingle cosine score.

181. BNY Mellon, Summary Prospectus, Form 497K (Dec. 31, 2021). The disclosure removed this language: "When the fund enters into derivatives transactions, it may be required to segregate liquid assets or enter into offsetting positions, in accordance with applicable regulations."

similarity scores.[182] This qualitative assessment lets us peer into how a reader may perceive the changed text. We then turn to a quantitative assessment of portfolio change associated with the most revised disclosures, examining the correlation between investment strategy disclosure change and portfolio holdings.

Our qualitative assessment suggests that disclosure changes do reflect modifications to portfolio holdings—or at least the ranges of categories in which the fund is planning to invest. Changes also reflect an effort to better explain the fund's investment philosophy, provide more detail about the fund's investment or valuation strategies, or expand on the role of affiliate advisors.

Consider, for example, changes in Brown Capital Management's Mid-Cap Fund strategy disclosure from 2013 to 2014.[183] In 2013, Brown Capital described the "two specific criteria" required for an asset's inclusion in the fund—the Advisor must "believe [the company] can generate a prospective earnings growth rate in excess of the overall market's earning growth rate" and that the asset is "trading at a reasonable valuation." The 2013 investment strategy disclosure focused on describing each of these two steps, providing details about the sources used to construct models to assess a company's projected growth and determine the asset's value.

The 2014 disclosure reveals no fundamental change in these two steps but is less technical in its approach. Whereas the 2013 disclosure discusses how the Advisor constructs "company-specific risk premiums" using the 5-year Treasury yield, the 2014 disclosure focuses on less tangible measures of a company's potential for growth. For example, the 2014 disclosure professes the Advisor's belief that "a sustained commitment to a portfolio of exceptional companies will, over time, generate attractive long-term returns" and that such "exceptional companies save time, lives, money, and headaches and provide an exceptional value proposition to consumers."[184]

182. A fund in the bottom 5% of the *similarity* scores means that the disclosure changes more than 95% of all other fund disclosures.

183. The five-gram cosine score comparing the 2014 investment strategy disclosure to the 2013 disclosure is 0.217. The five-gram Jaccard and BOW scores (0.114 and 0.024, respectively) suggest even less similarity. The TF-IDF cosine score (0.59) suggests that many of the keywords substantially changed—which is exactly what we observe with our qualitative analysis.

184. Brown Capital Management Mutual Funds, Mid-Cap Funds. Comparison of 0001209286-13-000311 with 0001209286-14-000382.

Whether these changes represent an actual difference in portfolio holdings is unclear from a qualitative analysis—but they certainly represent a notable deviation from 2013's dry and technical approach. In short, the extensive changes to the fund's strategy disclosure make it more accessible but also less precise.

Other funds' disclosures reflect the addition of new subadvisors and a description of their strategies. This, in turn, suggests that the changes represent a portfolio shift. For example, Wilshire changed subadvisors for its Large Cap Core Plus fund between 2011 and 2012, dropping UBS Global Asset Management Americas and adding Santa Barbara Asset Management. The 2011 disclosure described UBS as employing a "primarily fundamental analysis and, to a lesser extent, quantitative analysis to identify securities that are underpriced and overpriced relative to their fundamental value."[185] Wilshire describes Santa Barbara, alternatively, as adopting a "Dividend Growth strategy" and focusing on "higher dividend yields."[186]

Next, we turn to a quantitative analysis of portfolio change to assess whether large changes in strategy disclosures systematically portend portfolio change. We examine portfolio change by looking at the distribution of equity securities, debt securities, cash, and other holdings in each fund's portfolio of assets.[187] We use this measure of asset distribution to see how overall risk profiles change for a given fund. Consider the example of a personal savings profile where a person holds a mixture of cash savings, guaranteed income products like bonds and investments in stocks. The individual bonds or stocks may change without the overall risk profile changing. But the risk profile for an individual investor changes as an investor allocates more money to cash or guaranteed assets (less risk) or more money to equities (more risk).

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185. Wilshire Large Cap Core Plus Fund, Summary Prospectus (497K), May 1, 2011, https://www.sec.gov/Archives/edgar/data/890453/000139834411001008/fp0002882_487k.htm.

186. Wilshire Large Cap Core Plus Fund, Summary Prospectus (497K), May 1, 2012, https://www.sec.gov/Archives/edgar/data/890453/000139834412001573/fp0004713_497k.htm.

187. Fund portfolio holdings are assigned an asset type using CRSP data codes. Debt securities include bonds and debt instruments. The "other" category reflects portfolio assets with a negative market_val, which could mean a short, swap, or derivative position, or indicate a missing value. *See Survivor-Bias-Free U.S. Mutual Fund Guide*, CTR. FOR RSCH. IN. SEC. PRICES (CRSP) (2014), https://wrds-www.wharton.upenn.edu/documents/410/CRSP_MFDB_Guide.pdf.

We prefer assessing risk profiles rather than simply counting how much a given fund buys or sells particular assets. Individual sales occur with considerable frequency due to fund flows and economic factors.[188] Changes to specific company holdings of a fund may not signal a change in the overall strategy as strongly as a change to the risk profile. But if a fund changes its distribution of cash to debt or equity securities, its risk profile shifts.

We measure the percentage of equity securities, debt securities, cash, and other holdings comprising a fund's portfolio each year. We then calculate the difference in the portfolio's distribution across these four assets by taking the absolute value of the difference between the prior year's and the current year's portfolio distributions.[189] For example, if a fund held 90% debt securities in 2012 and 85% debt securities in 2013, we would record the difference as five percentage points.

TABLE 11: DISTRIBUTION OF ABSOLUTE CHANGES IN PORTFOLIO (PERCENTAGE POINT CHANGE) IN NON-HIGH AND HIGH CHANGE DE DISCLOSURES (5-GRAM SHINGLE COSINE)

	Mean	*S.D.*	*Min*	*25%*	*Median*	*75%*	*Max*
Panel A: Non-High Change Disclosures							
Debt Sec.	1.86	5.42	0	0.04	0.38	1.53	100
Cash	1.65	5.24	0	0.04	0.28	1.30	98.04
Equity Sec.	1.90	5.05	0	0.01	0.26	1.72	85.71
Other	2.11	4.91	0	0.06	0.41	1.81	57.23
Panel B: High Change Disclosures							
Debt Sec.	4.68	11.72	0	0.11	0.71	2.95	88.29
Cash	3.2	9.65	0	0.06	0.43	2.13	98.04
Equity Sec.	3.27	9.13	0	0.00	0.44	2.70	84.23
Other	3.96	9.62	0	0.60	0.62	2.54	85.71

Note: Portfolio changes are calculated as the absolute difference between the prior year's portfolio and the current year's portfolio. "High Change" reflects whether the five-gram cosine similarity measure for a fund's disclosure of its investment strategy is in the lowest 5% of the distribution for that particular year.

188. Anne Tucker, *The Long & The Short: Portfolio Turnover Ratios & Mutual Fund Investment Time Horizons*, 43 J. OF CORP. L. 581, 588 (2018).

189. We also analyze the data using a measure of squared difference. Our results are robust across measures.

We assess similarity in this Subsection using the five-gram cosine metric. As discussed above, this measure allows us to retain the context of the text. Our findings, however, are consistent across both measures (TF-IDF/cosine and five-gram/ cosine).

To do this, we compare portfolio changes in funds with a great deal of change in their disclosure text to portfolio changes in funds with less change in disclosure text. A disclosure is categorized as "high change" if its text similarity score is in the lowest 5% of scores for a particular year.[190] We limited our analysis to funds' investment strategy disclosures. Changes in these disclosures are the most likely predictors of actual portfolio change.

The summary statistics in Table 11 indicate that portfolio changes are more pronounced in high-change disclosures across all four asset types. In other words, portfolio changes are, on average, larger and more variable when funds' disclosures exhibit the most change for a particular year.[191] Funds with comparatively stable investment strategy language, on the other hand, experience far less change and variability in assets. These differences in average portfolio change are also displayed in Figure 9.[192]

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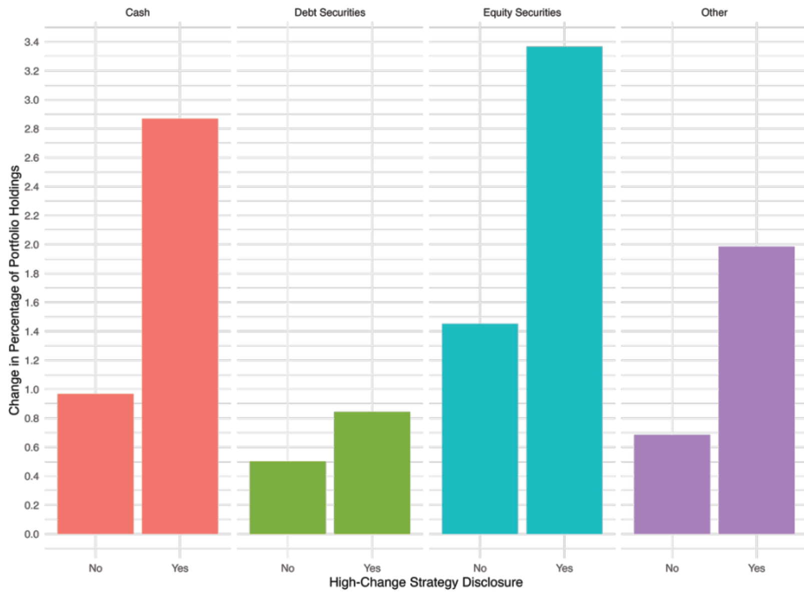
190. We determine change by year to control for external shocks to the market, such as the Puerto Rican debt crisis or COVID-19. Pooling the disclosures and then determining whether a disclosure fell into the lowest 5% of text similarity measures would over-weight years where the market experiences a great deal of turmoil and would bias our results.

191. For clarity, most change is capturing the top 5% of disclosure changes for a given year, which is measured by being in the bottom 5% of similarity scores for that year.

192. We conducted additional sensitivity tests. by repeating the tests above and adding a comparison for large fund families versus small fund families. The analysis is available in our replication file and on file with the authors. Adding fund family size allows us to observe if the portfolio effects are driven by fund size or are a phenomenon that exists across different segments of the market. We find that the results of the large fund family group are similar to the results of the small fund family group and mirror the main findings. In other words, when analyzed by fund family size, our results hold for large and small fund families.

FIGURE 9: COMPARISON OF MEAN PORTFOLIO CHANGE FOR HIGH-CHANGE AND NON-HIGH-CHANGE DE DISCLOSURES
(5-GRAM SHINGLE/COSINE)

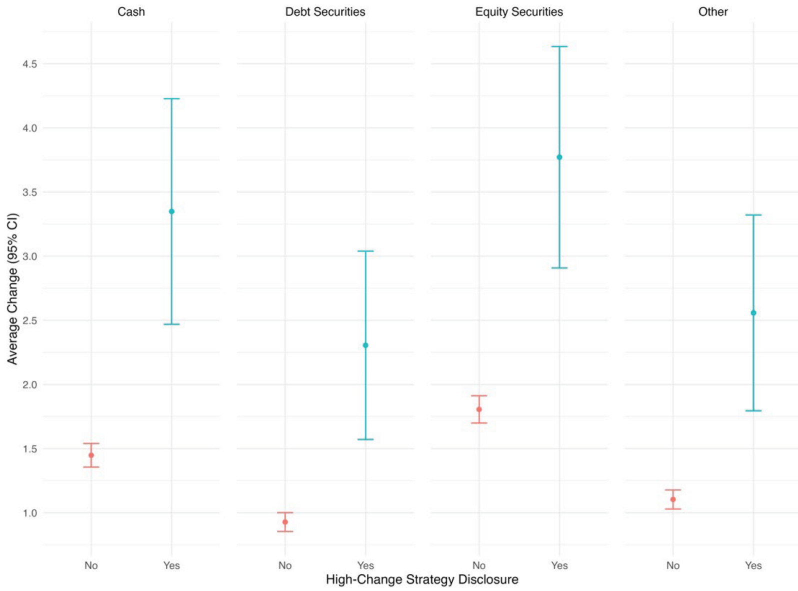


Note: A disclosure is categorized as "high-change" if it scores in the lowest 5% of 5-gram shingle similarity scores for a particular year for all DE funds.

These differences in means are also statistically significant. We used a series of t-tests to examine the difference in average portfolio changes between high-change and non-high-change investment strategy sections. In each case, we were able to statistically distinguish the high-change and non-high-change disclosures at the $p < 0.001$ level. We display the means and our 95% confidence interval estimates in *Figure 10*.[193]

193. Our findings are robust when we calculate the same t-tests using TF-IDF/cosine. These sensitivity results are available from the author upon request.

FIGURE 10: MEAN ASSET CHANGE IN FUND PORTFOLIO IN NON-HIGH CHANGE AND HIGH CHANGE DE DISCLOSURES (5-GRAM SHINGLE COSINE)



Note: This figure shows high-change DE disclosures with the blue line labeled "yes"; non-high change disclosures with the red line labeled "no"; scores reported in the 95% confidence interval; all scores are calculated using the 5-gram shingle cosine similarity measure.

Designating a disclosure as "high change" is a rather blunt instrument. Yet, we find that the relationship between disclosure similarity and portfolio change is quite robust to more granular analysis. We estimated the correlation coefficient (Pearson's *r*) and the concomitant t-statistic between each asset type change (debt securities, cash, equity securities, and other) and text similarity measure (TF-IDF/cosine and five-gram/cosine). The correlation coefficient for each is statistically significant and in the expected direction. Taken together, these findings suggest that as text similarity increases, portfolio change decreases.[194] A summary of these correlation tests is found in Table 12 below.

194. While these findings suggest a strong relationship between language changes and portfolio holdings, we see some reason for caution. It is possible that large funds (i.e., funds with high total net assets (TNA)) both change

TABLE 12: CORRELATION BETWEEN DE 5-GRAM SHINGLE COSINE TEXT SIMILARITY SCORE AND PORTFOLIO CHANGE

	TF-IDF/ Cosine	*Five-Gram/ Cosine*
Debt Sec.	-0.051	-0.076
Cash	-0.069	-0.086
Equity Sec.	-0.076	-0.089
Other	-0.047	-0.082

Note: All correlation coefficients between similarity score and portfolio change are calculated as Pearson's r and are significant at $p < 0.001$. Additional information is available with the replication code.

IV.
DISCUSSION & CONCLUSION

Our empirical approach to boilerplate identifies both stability and change. The findings, combined with the regulatory game model, demonstrate funds' incentives to use boilerplate to promote shared meaning and reduce transaction costs. When conditions on the ground—in the market or at the fund—change, however, funds are more willing to update disclosure language. Collectively, our work provides a theoretically grounded and empirically supported account of boilerplate's role in mutual fund disclosures.

their disclosures more frequently due to greater administrative capacity and are more likely to change their mix of assets. Our current data, however, lacks TNA information for many smaller stocks, which would bias any sensitivity test using this measure. Instead, we use fund family size as a proxy. Our sensitivity tests, which compare the results of large fund families to small fund families softens, suggest that statistical differences in portfolio changes are not driven by fund size. But we continue to explore ways to gauge the robustness of these results. For example, we are planning an additional sensitivity text that would smooth over some missing data across the portfolio by creating average total net asset (TNA) for a fund for purposes of comparing large and small fund results in this section. For an overview of data quality and completeness problems documented in the CRSP Survivor-Bias-Free U.S. Mutual Funds database, see Grace Liu, *Data Quality Problems Troubling Business and Financial Researchers: A Literature Review and Synthetic Analysis*, 25 J. OF BUS. & FIN. LIB. 315, 321–25 (surveying the business literature's critical analysis of data quality and completeness mutual fund data and other financial databases).

Next, we present three practical applications for our theory and empirical approach, focusing on the SEC, internal fund operations, and individual investors and/or their intermediaries.

A. *Boilerplate & Regulators*

The SEC can monitor market movements, identify non-compliant disclosures, and encourage updated language when appropriate, using aggregated boilerplate analysis.

1. *Boilerplate Measures as an SEC Enforcement Tool*

Using a similar methodology to the one outlined in this Article, the SEC can identify problematic[195] boilerplate in mutual fund disclosures, such as:

(1) **Stale Disclosures**—those disclosures where no language has significantly changed for 5 or more years.[196]

(2) **Out-of-Proportion Boilerplate**—those disclosures that display the most boilerplate compared to the funds within the same asset class may trigger an additional review. Boilerplate averages can help identify outliers—the funds or fund families that change comparatively too much, or too little.

(3) **Legacy Language**—those disclosures where a fund significantly changes its investment strategy statement without updating the resulting risk narrative, or vice versa. A significant change to one section should generate changes to the other section, and if not, it should flag the disclosure for additional review.

195. The SEC can use boilerplate to assess and enforce compliance with disclosure regulations and advance consumer protection goals. *See, e.g.*, Michael D. Guttentag, *Protection from What? Investor Protection and the Jobs Act,* 13 U.C. DAVIS BUS. L.J. 207, 217 (2013) (describing the general "[a]cceptance of the centrality of investor protection to securities regulation in the United States").

196. The review window could be refined with more quantitative analysis of optimal review windows. We suggest a 5-year window as a starting point, in part, based on the study of 4 years of disclosure language discussed above.

Incorporating empirical analysis in the assessment adds transparency to enforcement decisions and consistency in application.[197] Empirical tools lessen the burden of individual assessment and allow limited SEC staff resources to be devoted to the most suspicious cases.[198] Further, as SEC agency power comes under increased scrutiny, including empirical data in enforcement actions and comments to quantify regulatory decisions protects the agency's administrative authority.[199]

2. *Boilerplate Measures as an SEC Market Monitoring Tool*

Collecting longitudinal data on boilerplate averages for fund types, individual funds, and fund families can also inform the SEC about disclosure patterns. Widespread and significant disclosure changes, absent regulatory interventions, suggest market changes. While it is unlikely that the SEC would use boilerplate data to confirm, for example, COVID-19's effects on securities markets, tracking changes to climate change risk disclosures may be one way to monitor the evolution of the risk.[200]

Other agencies relying on narrative disclosures as a regulatory and enforcement tool may similarly use our methodology, as could scholars in those fields. Our methodology can be used to quantify recycled language, build a descriptive account of how it is used, and theorize the uses, pitfalls, and problems of boilerplate in other disclosure regimes. What changes in credit card disclosures year to year, or medical billing disclosures between practices? Federal agencies overseeing narrative

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197. A counter argument against empirical analysis is the bright line nature of such an approach invites clever evasion by tailoring behavior to be just outside or inside of a regulatory boundary. These types of regulatory interventions can be easily gamed to avoid meaningful oversight. In the context of boilerplate, a fund may change the minimum number of words to avoid a "stale" flag or stay one work under the "meaningful change" flag. For a discussion on the tension of principles based versus rules based regulations see, e.g., Dan Awrey, William Blair, & David Kershaw, *Between Law and Markets: Is There A Role for Culture and Ethics in Financial Regulation*?, 38 DEL. J. CORP. L. 191, 219–20 (2013) (describing rules-based financial regulations); Cristie L. Ford, *Financial Innovation and Flexible Regulation: Destabilizing the Regulatory State,* 18 N.C. BANKING INST. 27, 29 (2013) (describing dynamic financial regulation).

198. *See supra* Section I.B.

199. Loper Bright Enters. v. Raimondo, 603 U.S. 369, 412–13 (2024).

200. *Aggregated Risks*, *supra* note 7, at 93–95 (discussing the rise in climate change disclosures beginning in 2020 and the evolution of risk disclosures); *see also id.* at 97 (describing the different types of climate risks disclosed by funds).

disclosures and compliance regimes, like the Environmental Protection Agency,[201] Department of Education,[202] Commodity Futures Trading Commission,[203] and Federal Deposit Insurance Corporation,[204] may also find similar applications for boilerplate analysis. As disclosure continues to be a preferred regulatory solution, a better understanding of the limitations and potential of disclosures can help serve the underlying policy goals.[205]

B. *Boilerplate & Internal Audiences*

Funds are already the beneficiaries of boilerplate—reaping the transaction-cost and operational efficiencies of recycled language.

As the data show, legal teams in fund complexes develop family-specific boilerplate, or "house language," for disclosures. Such practices likely reduce the costs of implementing and monitoring disclosure language once the fund is operating.[206] House language also advances shared meaning among the internal review teams and those who operationalize compliance controls within a fund. Evidence of house language supports our argument that disclosure boilerplate functions as legal terms of art that balance regulatory requirements while providing fund managers with necessary operational flexibility.

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201. For an example of EPA disclosures, see https://www.epa.gov/compliance/epas-edisclosure.

202. For an example of Department of Education disclosure, see https://fsapartners.ed.gov/knowledge-center/fsa-handbook/2022-2023/appendices/appx-e-institutional-reporting-and-disclosure-requirements.

203. For an example of CFTC registration and disclosure, see https://www.nfa.futures.org/registration-membership/who-has-to-register/fcm.html.

204. For an example of an FDIC-required disclosure, see https://www.fdic.gov/resources/regulations/federal-register-publications/dfoi.html.

205. "The American polity has for the better part of this century carried on a vigorous romance with the idea that the free flow of information is a potent remedy for social and political ills." Russell B. Stevenson, *The SEC and the New Disclosure*, 62 CORNELL L. REV. 50, 50 (1976).

206. House language resulting from shared resources bolsters claims about the internal governance function of disclosures made by other scholars. *See e.g.*, *supra* notes 163–169 and accompanying text (describing fund family house language effects). Shared resources result in shared language, reflect internal compliance mechanisms within fund families, and signal the role of in-house legal departments in crafting and implementing consistent language across a fund complex.

Stylized statements of strategy and risk also manage the complexity of certain strategies and risks.[207]

Beyond the drafting costs, a standardized approach to disclosures is logical under the securities regime, where funds must say what they do and do what they say. Disclosures create self-policing regulations. Funds are legally obligated to do what they say in the strategy section.[208] Funds must also provide a current assessment of investment risks. Fail to do either, and a fund risks regulatory enforcement or, worse, investor litigation. When investors lose confidence that a fund makes honest disclosures and hews to its own stated limits, they have new incentives to exit the fund and invest elsewhere. Funds have internal operational incentives to recycle language to make review, implementation, and adherence easier for the legal, compliance, and other internal fund shops. When funds set their own rules, they are held to a high standard if they fail to comply. Repeating familiar, well-known language helps those inside the fund tasked with monitoring and ensuring compliance with the disclosures.

C. *Boilerplate, Investors, & Intermediaries*

Given the incentives for funds to continuously recycle language, *what changes* becomes all the more important to intermediaries who review disclosures on behalf of investors (and the most diligent of individual investors). Isolating boilerplate reveals what changes—creating a red line of year-to-year changes. This goes to the heart of our findings. The incentives motivating language changes (and restricting them) suggest that most language changes are more than mere wordsmithing. Incentives to stay the same, coupled with the narrow scope of what changes, ratchet up the value of updated language. Our analysis of portfolio changes correlated with high disclosure changes confirms this. Funds incur transaction costs and regulatory risks to change language only when it is worth it, like when the countervailing threat of noncompliance—enforcement

207. *See, e.g.*, *supra* Section I.B.2. (discussing boilerplate as legal terms of art that promote shared meaning and reduces transaction costs).

208. *See, e.g.*, *Investment Company Registration and Regulation Package*, SEC, https://www.sec.gov/investment/fast-answers/divisionsinvestmentinvcoreg121504.

or litigation—is greater.[209] Investors (or more accurately, their intermediaries) should care about what changes.

Even if most individual investors are not sufficiently motivated or resourced to monitor their own investments, investment professionals, the sophisticated parties that read disclosures on their behalf are.[210] Investment intermediaries and professionals include broker-dealers, plan administrators, and industry analysts like those at Morningstar.[211]

For example, defined contribution plan administrators who oversee 401(k) and 403(b) plans care about what changes in funds because they must review and file on behalf of the plan annually,[212] and owe fiduciary duties to participants for these and other actions.[213] Recent litigation against university-sponsored defined contribution plans has brought renewed attention to plan administrators who facilitate many investors' market investments through employer-sponsored plans.[214]

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209. Proving this last point is beyond the scope of this Article. We set out to primarily provide a descriptive account of boilerplate and the tools to do so. Our preliminary results find a relationship between those funds that change their disclosure the most and changes to their portfolio. Further, our qualitative assessment of what changes between disclosures bolsters the assertion that changes are informative by describing new investment advisors, new risks, and new strategies.

210. McClane, *supra* note 9, at 219–20 (expressing skepticism that individual investors read disclosures and discussing how disclosed information reaches investors, through analytics and other intermediaries).

211. *Aggregated Risks*, *supra* note 7, at 63–64.

212. *See, e.g.*, VANGUARD, *supra* note 7 ("Plan fiduciaries should review the prospectus and the fund's performance as they select and monitor plan investments."). *Id.* at 22–24 (describing fund selection for plan menus and the link to employee selection); *Hughes*, 142 S. Ct. at 738 ("[P]lans are defined-contribution plans governed by the Employee Retirement Income Security Act of 1974 (ERISA), under which each participant chooses an individual investment mix from a menu of options selected by the plan administrators.").

213. For a discussion of defined contribution plans and fiduciaries, see Anne Tucker, *Retirement Revolution: Unmitigated Risks in the Defined Contribution Society*, 51 HOUSTON L. REV. 153, 195–200 (2013). *See also* Employee Retirement Income Security Act of 1974 (ERISA), Pub. L. 93-406, 88 Stat. 829, (codified as amended in part at 29 U.S.C. Ch. 18); Hughes v. Nw. Univ., 142 S. Ct. 737, 742 (2022) (reversing the Seventh Circuit's grant of an ERISA plan administrator breach of fiduciary duty claim motion to dismiss).

214. *See e.g.,* Complaint, Garnick v. Wake Forest Univ. Baptist. Med. Ctr., 629 F. Supp. 3d 352 (M.D.N.C 2022); Tibble v. Edison Int'l, 575 U.S. 523, 531 (2015) (remanding a case on the issue of the statute of limitations application to a breach of fiduciary duty claim); Hughes, 142 S. Ct. at 742 (remanding the breach of fiduciary duty case on the merits); *see also* Duke 403(b) Plan Settlement, DUKE UNIV., https://duke403bsettlement.com [https://perma.cc/NX58-GSGM]. For a recently approved settlement, see generally Complaint,

Focusing administrator reviews on what has changed would be an efficient and effective aid for plan fiduciaries.[215]

When investors enter funds for long-term investments with goals of saving for retirement or college education,[216] knowing what changes tells an investor where to focus, especially over the life of an investment. Most investors know they should reassess investment selections, but few do, taking a "set it and forget it" approach.[217] Intermediaries can focus investors' attention on significant language changes to confirm the portfolio allocation or identify reasons to change investments.

Relatedly, in 2022, the SEC finalized rules for open-ended mutual funds and ETFs to summarize material changes in a fund's annual shareholder report.[218] These rules took effect in the summer of 2024 and can advance the investor and plan administrator uses identified above. Using our boilerplate assessment tool, the SEC can also confirm material change descriptions and flag potentially noncompliant filings.

Conclusion

Our comprehensive analysis of mutual fund disclosures over an 12-year period reveals that prevalent but meaningful changes still occur when investment strategies or market conditions shift. The balance between stability and change highlights

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Brookins v. Ne. Univ., 731 F.Supp.3d 112 (D. Mass. 2024); Vellali v. Yale Univ., No. 16-cv-1345, 2022 WL 13684612.

215. Using the methodology described herein and code available at *https://sites.google.com/view/gsu-mutual-fund-research*, parties can generate line-by-line comparisons to see exactly what language changes.

216. 2023 ICI Factbook, *supra* note 150, at 34.

217. Laurent E. Calvert et al., *Fight or Flight? Portfolio Rebalancing by Individual Investors.* 124 *The Quarterly J. of Econ.* 124, 301–48 (2009), http://www.jstor.org/stable/40506230 (finding that few individual investors rebalance investment portfolios); *see also* Anne Tergesen, The Wall Street Journal, *Portfolio Rebalancing Is a Good Retirement Habit*, June 4, 2021, https://www.wsj.com/articles/portfolio-rebalancing-is-a-good-retirement-habit-11622815200.

218. Tailored Shareholder Reports for Mutual Funds and Exchange-Traded Funds; Fee Information in Investment Company Advertisements, 87 FR 72783-84, https://www.federalregister.gov/d/2022-23756. The rules require funds to disclose material changes to the fund's name, investment objectives, fees and expenses, principal investment strategies, principal risks, and investment advisers or sub-advisers. *Id. See also*, SEC, *Tailored Shareholder Reports for Mutual Funds and Exchange-Traded Funds*; fee information in investment company advertisement, Dec. 22, 2022, available at https://www.sec.gov/investment/tailored-shareholder-reports-mutual-funds-etfs.

the SEC's rational regulatory framework, where standardized language mitigates compliance risks, increases shared meaning, and reduces transaction costs. The consistent use of stable language in investment strategy sections and the development of "house" language within fund complexes underscore the practical benefits of reusing language, especially language that acts as disclosure terms of art. Funds often recycle previous language or adopt generic phrasing from competitors to efficiently navigate SEC mandates, meet investor demands, and maintain operational flexibility in dynamic markets.

Boilerplate, at first blush, may appear to be a bug in the SEC's regulatory design and a signal of a weak oversight system. Our regulatory model and empirical findings paint a more nuanced portrait of disclosure boilerplate, articulating the theory and finding evidence that boilerplate can be a feature of the system.

Our findings emphasize the importance of updated language, particularly when conditions on the ground change. Funds with evolving strategies, like ESG funds, and funds with observable shifts in portfolio composition are two examples.

Our theory and empirical approach offer practical insights for the SEC in enforcing disclosure requirements, identifying compliance concerns, and monitoring market trends. It also benefits investors and their intermediaries by making reviews easier and highlighting crucial changes. Funds, as both creators and beneficiaries of boilerplate, reduce transaction costs and regulatory uncertainty while providing enhanced clarity for investors and the SEC when they recycle road-tested language.