Credit Benchmark®

Something Better Change

Securities Lending Indemnification Is Unsustainable in Its Current Form

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Table of Contents

1. Executive Summary 3
2. My Perspective 5
3. Purpose 8
4. Background 10
5. Economics and the Real World 11
6. How Did We Get Here? 12
7. The Resurgence of Standardization 16
8. Market Forces and the Established Securities Lending Model 17
9. There Is Nothing New Under the Sun 22
10. Conclusion 34
11. The Opportunities 36

1. Executive Summary

The longstanding issues surrounding Securities Lending Indemnification are symptomatic of the need for change in an industry that has always struggled with inertia and structural and economic change.

In this paper we will explore some of the challenges associated with Securities Lending Indemnification, attempt to explain the confluence of events behind these problems, assess their impact upon the market structure and make some suggestions to help mitigate the issues moving forward.

- Securities Lending is a long-established secure activity, offering small but incremental returns.
- It plays a critical role in facilitating the efficacy and "lubrication" of the capital markets.
- Any historic losses have typically come from the overly aggressive reinvestment of cash collateral.
- Securities Lending Indemnification does not protect the beneficial owners from reinvestment risk losses[1].
- Beneficial Owners have become overly dependent upon Securities Lending Indemnification, with many requiring it as a matter of course rather than after assessing its value as a true risk mitigant.
- Traditionally, the custodial agent banks have provided indemnification; however, Asset Management Lending Agents have not – which is to be expected given that they operate under differing regulatory regimes - but unusual given their similar roles and responsibilities.
- Indemnification protects the beneficial owner from two unlikely, concurrent events – a borrower default and a contemporaneous collateral shortfall post liquidation.
- The economic benefit associated with Securities Lending Indemnification is very low – about 0.2bps.
- The true economic / real-world cost of indemnification is about 0.9bps - exceeding the benefit BUT the cost is not passed on to the beneficial owners by the custodial lending agents.
- The regulatory capital cost of indemnification under Basel III is approximately 13bps, significantly exceeding the economic cost. Yet it is similarly not passed on to either the beneficial owners or borrowers. Agent advocacy with regulators has gone some way to reducing this cost - but the spreads between the benefit, economic cost / regulatory capital cost of indemnification remain material.
- Macro events and structural changes in the securities lending market have conspired to make the business less profitable over recent years – a phenomenon that is true across the industry and especially so for lending agents.
- The term "market" can only be loosely applied to an industry resistant to adaptation to economic forces.
- The growing adoption of Capital Relief Transactions is one important way of mitigating the capital challenges of the industry. However, U.S. regulators are currently seeking a pause in new transactions after a record level of activity in 2021.
- The decoupling of the cost, the benefit, and the regulatory capital cost of indemnification is unsustainable in the current market conditions and will hopefully prove a catalyst for change.
- There remains a window for regulatory engagement and advocacy and we encourage all parties to get involved – both as individual organizations and as trade associations.

The growing capital implications associated with indemnification are just an example of the myriad of regulatory capital challenges faced by the securities finance industry. Regulatory capital issues are not "bank-related" issues; they impact all participants in the securities finance industry including the agent banks providing indemnifications, the prime brokers and their clients, and the traditional "buy-side" beneficial owners. We implore all interested parties to work together with the regulators to ensure that the securities lending

[1] Unless cash collateral is reinvested in explicitly indemnified reverse-repo programs offered by some lending agents.

industry can perform its critical role in the provision of short-side liquidity for the global capital markets. There remains a window of opportunity for trade associations to join the banks on the front line to lobby and engage with the regulators before Basel IV for example.

Addressing the issues associated within the securities lending industry in general and those of Securities Lending Indemnification in particular has major capital markets ramifications and it is time for all parties to realise that something better change.

2. My Perspective

After a career spanning 35 years, this paper is intended to be a reflection upon the securities finance industry from a personal, rather than corporate perspective. I will discuss the resistance of the industry to change in general and in particular the fundamental issue of Securities Lending Indemnification. Before I explain the purpose of the paper in detail, I will summarise my career journey. I do so, not for nostalgic purposes but to show how my vantage point has shifted over the years. You will notice that I've name-checked a number of the colleagues who have accompanied me at different stages of my journey. Inevitably I will have omitted many others to whom I send my gratitude and apologies – you know who you are.

In 1986 I began my career in securities finance as a Money Broker at LM Moneybrokers. The firm was a Stock Exchange Money Broker and found itself at the epicentre of structural change in the UK money markets at the time of the "big bang." On the day I joined the firm, Gilt and UK equity lending rates halved. Much was expected of the incoming and inexperienced Head of International Securities Lending. It was in this role that, working with Sir Anthony Scott, Jimmy Scade and Nick Hodge, I learned how to build a viable business and to operate under the supervision of the legendary "Old Lady of Threadneedle Street" AKA The Bank of England.

At Goldman Sachs I worked alongside Alex Ehrlich, Barry Weiss, Tom Tesauro, Neil Moskowitz, Joe McManus, Sarah Redfern, Mark Williams, Andrew Fontein and Terry Miller. We were all focused on playing "catch up" with the then market leaders, Morgan Stanley and Lehman Brothers. During my three intense years at the firm, we expanded our securities lending supply side from 11 to over 150 lenders. A journalist at the time wrote that whilst "Goldman was late to the European securities lending market", we "hit it like a sledgehammer" – we did have a lot of ground to make up. We were supporting the voracious trading demand of many proprietary traders including Michael Hintze, who would go on to found CQS.

At Lehman Brothers I joined a large team including Mark Haas, Jerry Tamburro, Eddie Reid, Kevin Gerlitz, Jeff Dorman, Shaun Sulllivan, Mark Whitehead, Penny Pieri, Roselyne Renel, David St Claire-Nelson and Puneet Mahli. We were all driving the firm forward as an innovator in the marketplace – specifically in the equity repo and collateral rehypothecation fields. Lehman was active as a Money Broker and Prime Broker.

I vividly remember standing at the back of a conference hall with Jeff listening to some "industry expert" pontificating that he thought "one day equity repo might just catch on." I turned to Jeff and asked how big our equity repo book was at the time, to which he replied "$10 Billion." The Lehman Brothers equity finance team really were pioneers and ahead of our time in collateral management and that was back in the early 1990s, when $10 Billion was a lot of money!

In 1993 I left the "mainstream" (never to return), co-founding Securities Finance International and Spitalfields Advisors with Charlie Stopford Sackville. SFI was first and foremost a consultancy and our client roster included many banks – principals and agents, beneficial owners, exchanges, CCPs and even regulators. We also organised an annual conference that we called The Symposium. If you were there, you will no doubt remember The Below Average White Band's amazing set in the undercroft at Whitehall Palace. I also wrote a paper called "An Introduction to Securities Lending[2]" which was translated into many languages and remains available on the web to this day – something my mother is so proud of as it makes me a writer! Charlie and I met and worked together at Lehman Brothers and I'll never forget a story that Charlie told me about the first

[2] The paper was commissioned by The International Securities Lending Association, The London Stock Exchange, The Association of Corporate Treasurer, The British Bankers Association, The London Investment Banking Association and remains available on the web to this day.

time his friend, Robert Appleby, mentioned "stock lending" to him. He genuinely thought that Robert was talking about lending livestock - cattle perhaps? We both learned a lot at Lehman Brothers and it gave us the confidence to set up SFI.

In 1996 we founded Securities Finance Systems, which later became known as Data Explorers. The Data Explorers mission was to gather data on securities lending transactions and become what I called "short side Bloomberg". As with many start-ups, the business plan morphed over time in response to events. To help us adapt we assembled an excellent team including David Lewis, Bill Cuthbert, Andy Dyson, Julian Pittam, Oliver Smith, David Carruthers, Sejal Amin and Sarah Young.

Whilst listening to a client I realised that although risk was "interesting", performance was "fascinating." As a result of that conversation in 2002, on a memorable 14th February (Valentine's Day and Charlie's Birthday), Data Explorers pivoted from risk to performance and the business transformed. Trying to explain how this dramatic transformation felt for the company, I often referred to it being as if a giant tree had fallen in a rainforest and that Data Explorers had exploded into the newly available light and space, growing as fast as was possible. We didn't look back and I now know that this was my first big "fintech pivot."

Over the next decade, Data Explorers went from receiving five data files quarterly to processing hundreds of files up to three times a day. In 2008, we secured private equity investment from Charles Ind's Bowmark Capital and I happily relinquished CEO responsibility to my incoming CEO and longstanding business partner, Donal Smith.

Little did I know at the time that this was to be the first of my several unsuccessful attempts to extricate myself from the securities finance industry. Much later, I was to realise just how right Michael Corleone was when he said in The Godfather, "just when I thought I was out, they pull me back in." It really isn't easy to leave the securities finance industry behind.

Donal successfully scaled the Data Explorers business in a manner that I never could have and in April 2012 we sold the business to Lance Uggla's Markit, where it continues to lead the market and prosper to this day under the S&P moniker.

After a short six-day period of 'rest and reflection', Donal and I co-founded Credit Benchmark. Credit Benchmark was intended to be like a 'Data Explorers' or 'Totem' - but for credit information and a final departure from the securities finance world for me. Credit Benchmark presented the opportunity for me to learn about the credit markets and I have benefitted greatly from working alongside Michael Crumpler and his banking team - often admitting that I'm now "extremely dangerous in the credit field" and that Michael "has forgotten more about credit that I will ever know." I am delighted to say that over the intervening years we have established a strategically important business that is helping our clients make better informed credit decisions. However, how wrong I was proven to be regarding my escape from securities finance.

Looking back with the benefit of hindsight, I now recognise that there was a pivotal moment in the Data Explorers journey. In 2002, nudged by client feedback, we realised that performance, not risk, held the key to the company's success. A similar Credit Benchmark 'epiphany' came recently when I recognised that we were in the credit *and* capital benchmarking business. It became apparent to me that the unique credit dataset we have created is now potentially part of the foundation for informing capital-related decision making in addition to the more obvious credit and risk management use cases. This increasing capital-orientation, amongst other things, drew me towards the topic of this paper.

With this realisation alongside the ongoing Risk Weight Assets ("RWA") and Capital challenges facing the securities finance industry it feels somewhat like my career has come full circle. I am astonished to see that the

securities finance industry still suffers from many of the structural challenges it faced decades ago. For example, it is difficult to believe that the Agency Lending Disclosure (ALD) solution which was first developed in an analogue 2006 is yet to be properly updated for this digital age. Whilst it is encouraging to see ISLA members and some vendors finally grasping this nettle, it is frustrating to see it has taken so long. Ever the optimist, I'd like to think that real change is coming and that the availability of Credit Consensus Ratings data, the significant post-SFTR digital progress the industry has made, and the desire to find solutions to the pressing binding constraints will be the catalyst for real change. I believe that what the industry needs is the effective execution of innovative ideas that builds upon these important foundations and delivers tangible change.

However, this industry does suffer from systemic structural inertia that might once again prohibit progress. I am reminded of the time when I asked my good friend Mark Haas how it felt returning to the securities finance market after a two-year sabbatical with his wife Tammy and their two dogs (Bear and Ranger); Mark replied in typical fashion that there was "good news and bad news." I asked for the bad news first. The bad news was that "nothing much had changed." And the good news? That "nothing much had changed." How right he was. Today, I believe that the time is now right for this industry to be bold and embrace very necessary changes. I hope that you will agree.

3. Purpose

The purpose of this paper is to draw the readers' attention to the significant and growing challenges associated with providing services at the epicentre of the capital markets. We could have selected many different discussion topics or focal points to illustrate the manner in which regulation, market structure and behaviour have combined to impact the industry and create material distortions and challenges for all of the firms involved. One significant example is the pending Basel IV regulation[3] which has been delayed as a result of the pandemic. In this paper, we will focus upon a prime current example of structural inertia in securities finance: the provision of indemnification to support securities lending. We will demonstrate how the distortions associated with agency lending indemnification have been most detrimental to the lending agents, whilst broadly benefitting the beneficial owners and the borrowers.

The genesis for this paper was observing that, despite its prevalence within the agency lending business model, Securities Lending Indemnification remains poorly understood by those receiving the benefit, mispriced by those providing it, artificially subsidized by providers, and suffers from a growing penalisation from a capital perspective by regulators. We will observe that the regulatory capital cost associated with providing an indemnification to beneficial owners has risen dramatically since 2015. Furthermore, despite the forthcoming Basel IV regulation, this regulatory capital cost will continue to remain at severely elevated levels compared to those prior to 2015. We will also discuss the extent to which the regulatory capital costs have decoupled from economic reality whilst addressing several important issues regarding Securities Lending Indemnification including:

- Why does indemnification remain so prevalent to this day in custodial agency lending?
- Why do custodial lenders typically self-insure their programs?
- Why are so few asset management agency lending programs indemnified?
- What is the real-world economic benefit of indemnification to beneficial owners?
- What is the regulatory capital impact upon the cost of indemnification for banks?
- Why have agent banks failed to pass on the cost of indemnification?
- Why are insurance specialists relatively underrepresented in the indemnification market?
- What are the implications for market structure and peer-to-peer business models in particular?
- How might the provision of indemnification change in the future?

As we seek to quantify the inexorable rise in regulatory capital requirements associated with Securities Lending Indemnification, we will identify the impact upon market structure and the economic outcomes. We will explore whether the disparity between rising regulatory capital requirements and real-world economic risk in the markets are justified. We will discuss whether or not these rising regulatory costs might be having a detrimental impact and unintended consequences upon the efficient functioning of the capital markets. Debating the role of securities finance within the capital markets is a well-trodden path and beyond the scope of this paper. Notwithstanding that, from my perspective, I believe that well-functioning capital markets need an efficient securities financing market and that impediments to that efficiency are not to be taken lightly and are potentially detrimental.

[3] Credit Benchmark has written extensively on this topic including: "Basel IV Rules: The Impact Upon Capital Markets and the Securities Finance Industry", "Impact of Pending Basel Rules on the Buyside" and "Consistency in Risk Weights for Corporate Exposures Under the Standardized Approach"

It has become increasingly obvious recently that these issues matter not just to the regulated banks facing the capital requirements first hand, but to the full capital market ecosystem, including the entire buy-side fund complex from institutional to alternative; from pensioners to retail investors. Please read the papers referenced in the footnotes of page 8 for a more thorough explanation.

Inevitably, as with all changes faced by the capital markets, both challenges and opportunities are emerging. We will highlight some of them and discuss the broader themes that are driving these changes.

We shall begin by discussing the background and the cumulative impact of the regulations that have driven and continue to drive change forward. We will spend some time highlighting the distinction between real-world risk and the economic cost of capital with the regulatory cost of capital.

The reader may ask why we are so focused upon regulation in general and the regulatory cost of capital in particular. We are focused here because we believe that regulation has become, since the Global Financial Crisis, the factor having the single largest impact driving capital changes; far greater than real-world factors such as commercial logic, economic reality, prudent risk management and technological advancement. Regulation can therefore be seen not only as a primary driver of capital change but also, more worryingly, as a potential source of continued market distortion.

One could argue that these distortions are not always obvious to many active in the marketplace. We would observe that they often seem to be “hiding in plain sight”, obfuscated by the scale and complexity of firms and businesses that offer the potential for significant cross-subsidisation, internalised costs, and transfer pricing. This is particularly prevalent at the large Prime Brokers, and those that are also global custodians and agent lenders are particularly well-placed benefit from these distortions. That being said, most organizations irrespective of any cross-subsidisation or transfer pricing conduct detailed calculations of the performance of distinct business units and produce numerous KPIs. This analysis will typically include a calculation of return on both economic and regulatory capital. As one agent recently shared with me, “We think about capital being fluid and moving around our organization seeking returns. With the cost of capital across the street circa 10% and targeted post tax returns of 15%, using capital to support a Securities Lending Indemnification is not the best use of capital for any organization – especially when significantly higher returns on capital are obtainable elsewhere.”

A more widespread understanding of the extent of the possible distortions could prove be a catalyst for market participants from all sides (not just the banks) to engage with regulators to impact the direction of future regulation in a way that might benefit the market more widely.

Time is of the essence, and the time to influence the unintended and potential harmful outcomes of the regulatory capital impact upon the market is running out. It is disappointing to see the ongoing inertia and acquiescence of this once-vibrant industry, and if this paper achieves nothing other than to raise the level and intensity of the discussion and to prove to be a catalyst for broader engagement, we will be pleased.

4. Background

Before getting started we thought that it might be useful to set out our position on regulation in general. It's a well-worn cliché that "regulation is a growth business" and intervention by policy makers has proven necessary post the Global Economic Crisis of 2008. We welcome this external intervention and believe that the regulation imposed upon the markets since then has been broadly positive. Left to their own devices it is sad but true to say that the markets have, at times of great stress, proven themselves incapable of protecting the global financial system and its' clients properly. It is in the nature of markets, if left unchecked, to follow a boom-and-bust cycle and if regulation can help smooth this cycle it is a positive force. However, I would recognise that the agent banks have typically bent over backwards to accommodate their beneficial owner clients when losses have occurred – going above and beyond their legal obligations to retain relationships and ensure continuity. Furthermore, we would also observe that in the main regulation is well-intended in origin and to be welcomed.

Much of the regulation imposed post-2008 has left the global financial system in a much stronger position. This, we would argue, has been net beneficial to the financial system and greatly helped when dealing with shocks such as the COVID pandemic and the recent invasion of Ukraine.

We are therefore not against regulation per se. Left to its own devices the financial system has repeatedly shown a predisposition to gradually over-extend itself. With this tendency in mind, strong regulation, focused upon robust first-, second-, and third-line risk management, capital requirements, and leverage limitations are to be welcomed. The proviso that we would add to that welcome is "as long as regulation does not excessively distort the capital markets, restrict liquidity and have unintended consequences that undermine the positive outcomes." In summary, sensible regulation is necessary, well-intended and helpful – in other words, a serious business and not a joking matter.

"These new regulations will fundamentally change the way we get around them." [4]

[4] Peter C. Vey, "These new regulations will fundamentally change the way we get around them", [online], The New Yorker, accessed June 2022, https://condenaststore.com/featured/these-new-regulations-will-fundamentally-change-peter-c-vey.html

5. Economics and the Real World

I must now confess that I attended The London School of Economics, but unfortunately not often enough to obtain a great degree. However, I continue to remain fascinated by economics. It is not easy to be an economist – especially a "lapsed" one like I am. I am drawn to complexity and find markets - especially inefficient ones - really interesting. The complexities of the financial system and the numerous interconnected variables make it challenging to understand and that is part of the appeal to me. Thomas Carlyle referred to economics as the "dismal science" and many (not me) might agree with him. His observation was made in reference to a bleak but prophetic paper from Thomas Malthus who claimed that humanity was trapped in a world where population growth would always strain natural resources and bring widespread misery.

As a student of economics, I didn't agree with Carlyle. Although I thought he might just be onto something as I struggled with econometrics and statistics - but then I found salvation in a simple assumption. The simplicity of the "Ceteris Paribus" assumption, meaning "all other things being equal" is not only an elegant solution to facilitate the isolation of variables but for me it proved to be a gateway to a better means of understanding highly complex systems and things like markets.

I have already admitted to a love of economics and the complexity it brings. However, I continue to struggle with a lack of logic and consistency and the resultant distortions borne of precedents that all too often no one can recall the source of or take responsibility for. That is partly why I am writing about the topic of Securities Lending Indemnification. What is going on just does not make any practical sense to me and I believe that sensible and necessary changes will inevitably come at some stage. Only time will tell whether I'm right or not.

As we focus upon the securities finance component of the capital markets and the evolution of the capital required to support indemnification, we will deliberately avoid being drawn into the many familiar arguments about the merits or otherwise of short selling or the best route to lend securities. That debate is for another day. Furthermore, we will make the simple assumption to treat capital as fungible, just like cash is, and we will view securities finance as just one place where capital may be allocated.

"Snap out of it, Hornblatt. You knew economics was a dismal science when you took this job!"

6. How Did We Get Here?

I believe that we got here under the influence of two primal forces that drive the capital markets forward – market forces and regulation.

The current regulatory capital regime is the bi-product of regulation that continues to develop. Below we provide a timeline that highlights the major relevant regulatory implementations since the 1990s - it is not an exhaustive list and should not be seen as such. The current regulatory capital position is the result of decades of reform and we have attempted to capture globally relevant reforms that have impacted the global capital markets, not just those that have impacted securities finance. The good news is that as a result of COVID some regulation has been pushed back, offering the opportunity to interested parties to engage with the regulators. Part of the motivation for writing this paper is to get more organizations – especially beneficial owners and asset managers – interested and engaged.

Unfortunately, it is very much the case that the beneficial owners and to some extent some agents have historically viewed capital allocation and Risk Weight Assets ("RWA") as borrower-related issues, and this is fundamentally not the case. Capital allocation generally is a capital market-wide issue; capital allocation within the securities finance industry is an issue for all participants, not just the borrowers and the banks. It is of grave concern to see regulatorily driven capital issues that impact market structure normalising to the extent that they can hide in plain sight.

Basel I[5]

Finalized in 1988 to be implemented by end of 1992. Called for an 8% minimum RBC ratio. RWA calculations under this regime were based just upon credit risk. In 1996 the Market Risk Amendment was introduced.

Basel II

Finalized in 2004, published trading book rules with IOSCO in 2005 and integrated text in 2006. Issued in the U.S. in December 2007 with an effective date of April 2008. In the U.S. Basel II called for a parallel run and transitional floors to ensure that a precipitous drop in required capital did not occur. Basel II was still being implemented when Lehman Default occurred. From a Securities Finance perspective Basel II allowed the use of a simple Value at Risk (VaR) methodology to calculate credit risk. This was previously allowed in the U.S. under the Fed Letters to State Street Bank (May 2003 and August 2006).

Basel III

Basel III was formalized in December 2010 and included the Basel III: International framework for liquidity risk measurement, standards and monitoring and Basel III: A global regulatory framework for more resilient banks and banking systems.

Basel III introduced the following concepts to the regulatory framework:

[5] Bank for International Settlements, "History of the Basel Committee", [online], accessed June 2022, https://www.bis.org/bcbs/history.htm

- Counter cyclical capital buffer
- Leverage Ratio (a requirement that already existed in the U.S.)
- Liquidity requirement (Net Stable Funding Ratio "NSFR" and Liquidity Coverage Ratio "LCR")
- Global Systemically Important Bank "G-SIB" requirements and surcharges
- Strengthened cross border supervision and regulation

Basel III had a phased-in implementation timeline from 2013 through 2019.[6]

In 2013, U.S. regulators finalized risk-based capital, leverage, and LCR rules under Basel III[7].

In June 2018 the Single Counterparty Credit Limits rules were finalized in the U.S. with an effective date of January 2020[8].

The Net Stable Funding Ratio was finalized in the U.S. in October 2020 with an effective date of July 2021[9].

Basel IV[10]

In December 2017 Basel issued Basel III: Finalizing post crisis reform (referred to as Basel IV within the industry). The implementation of Basel IV has been delayed until 2025 by most jurisdictions. While the aim of Basel IV is to be capital neutral across the industry, some banks and business lines may see an increase or decrease in RWA.

Of particular note is the new Standardized Approach for Securities Finance Transactions, which takes into account correlation and diversification; thereby, significantly reducing RWA for those entities that must calculate under the standardized approach. However, even after this implementation the remaining capital requirement will still be an order of magnitude larger than it was before 2015. Furthermore, the majority of borrowers utilise Internal Ratings Based ("IRB") models, and the floor to the standardised approach will lead to an increase in RWA for these firms as shown in figure 6.1 below. The impact will be driven by the regulatory regime (Basel vs U.S.). The potential removal of the Securities Listing Requirement ("SLR") is potentially good news for U.S. banks should the regulators be persuaded to remove it. Credit Benchmark and the Bank Policy Institute have written a paper to support its removal and a link is provided to that paper earlier.

It is also worth noting the significance of the operational risk RWA component – which some consultants believe to be underestimated at present (corporate actions are an area highlighted) and is anticipated to increase RWA significantly outside of Securities Finance under Basel IV. One agent recently commented that he "anticipates Basel IV to be an RWA-increasing event for the majority of banks. Together with the ongoing "internal subsidy" / reallocation that will inevitability take place, the outcome in terms on capital costs actually borne by the Securities Finance businesses post Basel IV is not at all clear yet." In other words, he predicts that the pricing distortion will not change and that we will continue to live in "interesting times."

[6] January 1st 2015 saw the implementation of the standardized model for risk weighted assets as applied to repo style transactions - which includes securities lending. This was a watershed moment in terms of the increase in required capital.
[7] Federal Reserve Board approves final rule to help ensure banks maintain strong capital positions; Federal Reserve Board issued proposed rules to strengthen the liquidity positions of large financial institutions. Federal Reserve, "Basel Regulatory Framework", [online], accessed June 2022, https://www.federalreserve.gov/supervisionreg/basel/USImplementation.htm
[8] Federal Reserve, "Federal Reserve Board proposes rule to strengthen liquidity positions of large financial institutions", [online], accessed June 2022, https://www.federalreserve.gov/newsevents/pressreleases/bcreg20131024a.htm
[9] Federal Reserve, "Board memo: Final rule to implement a net stable funding ratio requirement for large banking organizations", [online], accessed June 2022, "https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20201020b2.pdf
[10] Bank of International Settlements, "Basel III: Finalizing post-crisis reforms", [online], accessed June 2022, https://www.bis.org/bcbs/publ/d424.pdf

Figure 6.1 Risk Weights Summary[11]

	Basel / US Banks (Sovereign)	Basel Regulated Banks (Funds)			US Regulated Banks (Funds)	
Regulatory RWA Categories	Standardised	Standardised	IRB	Unrated Proposal (EU)	Current	Removal of SLR?
AAA to AA-	0%	20%	c. 10%	65%	100%	65%
A+ to A-	20%	50%	c.15%	65%	100%	65%
BBB+ to BBB-	50%	75%		65%	100%	65%
BB+ to BB-	100%	100%		100%	100%	100%
B+ to B-	100%	150%		100%	100%	100%
CCC+	150%	150%		100%	100%	100%
NR	100%	100%				

Dodd Frank Act[12]

The Dodd-Frank Act was legislated in 2010 in response to the financial crisis. It mandates several regulatory actions that are closely related to initiatives undertaken by the Basel Committee. Of particular importance for large U.S. institutions is the Collins Amendment which requires large banks to calculate RWA under both the advanced and standardized approaches and apply the more conservative of the two. This is especially relevant to securities finance transactions as the standardized approach does not account for diversification and correlation, resulting in many multiples higher RWA.

Standardized Approach to Counterparty Credit Risk (SA-CCR)

The SA-CCR replaces the Current Exposure Method (CEM) and Standardized Method for derivative transactions with a scheduled effective date of January 2017. U.S. regulators finalized SA-CCR in November 2019 with an effective date of April 2020. While SA-CCR does not apply to securities finance transactions it does potentially result in lower capital requirements for economically similar exposures[13]. SA-CCR became effective on 1st January 2022 and resulted in increased capital consumption of derivative transactions for most banks. SA-CCR

[11]Credit Benchmark, "Impact of Pending Basel Rules on the Buy-side", [online], accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2022-03-17/x145/892021/1647540195mtokzKJ3/GPFA_and_Basel_March_16_2022.pdf

[12] Congress.gov, "H.R.4173 - Dodd-Frank Wall Street Reform and Consumer Protection Act", [online], accessed June 2022, https://www.congress.gov/bill/111th-congress/house-bill/4173/text

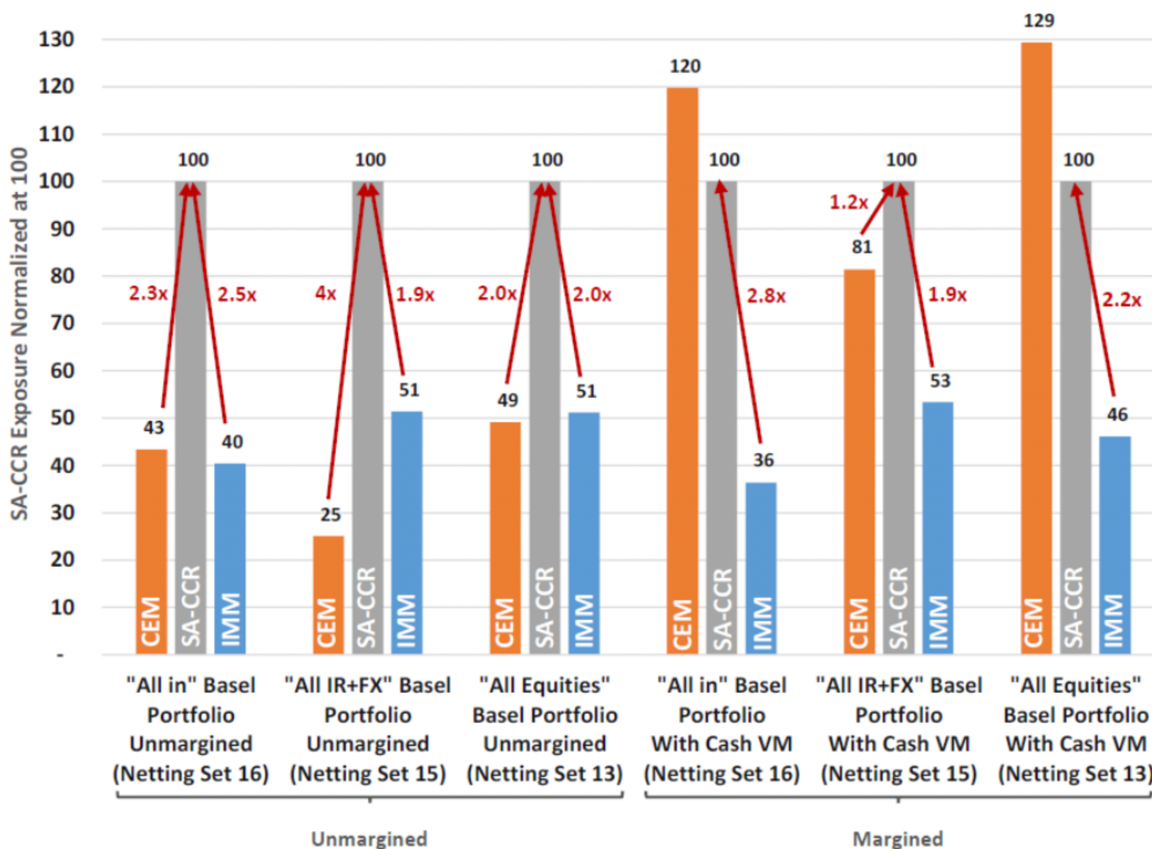
[13] Federal Reserve, "Federal bank regulatory agencies finalize rule to update calculation of counterparty credit risk for derivative contracts", [online], accessed June 2022, https://www.federalreserve.gov/newsevents/pressreleases/bcreg20191119c.htm

impacts exposures across the regulatory capital framework (RWA, SCCL, Leverage Ratios etc.) and had a major impact in the FX derivative business – where the custodial banks really felt the regulatory capital pain. Specifically for FX derivatives the SA-CCR regulatory capital drivers include:

- The Alpha factor (1.4x Expected Loss at Default (EAD))
  - Alpha factor is conservatively calibrated and has been much debated
  - The rationale behind the alpha factor is to maintain conservatism over IMM
- Punitive treatment of unmargined portfolios
  - Many clients are only required to post Variation Margin for NDFs and Options. Forward / Swap activity is generally not collateralized.
- Segregations of netting sets / hedging sets by currency pair
  - The prior methodology netted by currency / cash flows had a greater effect of netting overall
- Figure 6.2 below from joint ISDA / FIS QIS shows that SA-CCR exposure can be a multiple of CEM or IMM exposures across products and portfolios. NB. The unmargined IR / FX portfolio (second from the left) could be up to 4x the capital consumption of CEM.

All of this, in addition to the growing cost of regulatory capital associated with Securities Lending Indemnification, has made the bank securities lending agents change their behaviour and consider driving change. The economies of scale which are so necessary in the custody lending business mean that the size of securities lending books brings with it very large regulatory capital expense.

Figure 6.2 Comparison of SC-CCR, CEM and IMM Exposures[14]



[14] ISDA & FIS, "SA-CCR: Why a Change is Necessary", [online], accessed June 2022, https://www.isda.org/a/hTiDE/isda-sa-ccr-briefing-paper-final1.pdf

7. The Resurgence of Standardization

There has been a growing realization that all too often, as a result of historic shocks, anomalies and regulation, capital requirements for the Securities Lending Indemnification (which is typically provided by agent banks) have decoupled from reality. Historically and prior to regulatory intervention, capital allocation decisions were made by the market, driven by real-world economic factors and in combination with stress testing, statistically relevant data, historical experience, and sophisticated risk modelling.

These risk management models sensibly replaced a prior dependency upon the traditional issuer-pays Credit Rating Agency model (if you have read the book or seen the film "The Big Short" - need I say more?). However, we can now see a widespread reversal of the support for the internal modelling approach from the regulators. Banks are now being called out for allegedly "exercising too much expert judgement" - a strange and somewhat oxymoronic statement if there ever was one. The banks' risk management models are supervised and approved by the very regulators who are now adopting an approach which is more in favor of increased standardization. The application of these models has been under pressure for several years – most notably when the ECB conducted its recent Targeted Review of Internal Models ("TRIM") review.

The European Central Bank has recently published the results of its targeted review of internal models ("TRIM")[15]. Large, more complex banks typically use internal models to determine some of their RWA, which serve as a basis for banks to calculate their capital needs.

This review aimed to ensure that internal models comply with the ECB rules and provide different outcomes only when the underlying risks are different. During the review the ECB investigated 65 significant banks. Andrea Enria, Chair of the ECB's Supervisory Board said that the review ensured that "internal models are reliable and their outcomes are comparable."

The ECB identified over 5,000 findings and issued binding supervisory measures for banks to take corrective action within given deadlines. Through those measures, TRIM resulted in a 12% increase, or about €275 billion, of risk-weighted assets for the investigated models. The Common Equity Tier 1 ratio of banks using internal models declined on average by about 70 basis points as a result of TRIM over 2018-2021.

TRIM confirmed that banks can continue to use internal models to calculate risk-weighted assets, provided they remediate the identified shortcomings within the given deadlines, i.e. they restore full compliance with legal requirements. In the future, banks will need to continue to invest in high-quality models. For that purpose, it is particularly important that banks further strengthen their internal validation function.

Going forward, the ECB will continue its demanding risk-based supervision of internal models to ensure that banks continuously meet the requirements for the use of such models.

The 65 Banks really have their work cut out for them[16].

[15] European Central Bank, "ECB's large-scale review boosts reliability and comparability of banks' internal models", [online], accessed June 2022, https://www.bankingsupervision.europa.eu/press/pr/date/2021/html/ssm.pr210419~94c010eb9d.en.html
[16] Credit Benchmark, "A Call to Action", [online], April 2022, accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2022-06-06/25gml/892021/1654515427IfHoLrfL/A_Call_to_Action.pdf

8. Market Forces and the Established Securities Lending Model

Market forces can often be categorised as either headwinds or tailwinds. It would be fair to say that the securities lending industry has recently been experiencing a prolonged period of turbulence probably best categorised as headwinds.

All industries face challenges of many kinds. The securities lending industry is no exception. What we believe really matters is how the industry responds to these challenges. Do they adapt, innovate and grow or do they dig in, King Canute-like, attempting to exert control, seeking to retain the established order whilst holding back the incoming tide? The former approach offers cause for hope, whilst the latter is doomed to fail.

In addition to the regulatory pressure rising, there are also a number of additional headwinds that have impacted the securities finance industry since 1990. Some of these headwinds are macro-economic in nature, whilst two bring more micro / technical challenges; Securities Finance Transaction Regulation ("SFTR") and Agency Lending Disclosure ("ALD"). These technical headwinds are unavoidable for the global players and represent an ongoing source of material expense. However, it should be noted that the technical digital solutions that they both require do offer potential opportunities too. Below we provide some examples of the headwinds faced by the established securities lending model. Given the scale and breadth of these headwinds it is surprising to see how little change to the long-established business model that there has been.

Securities Finance Transaction Regulation ("SFTR")[17]

SFTR was introduced in the European Union in 2016 with a phased-in effective date beginning in July 2020, with full implementation by January 2021.

SFTR requires detailed two-sided reporting of securities finance transactions.

It required material technological investment and now provides a foundation for a data driven digital transformation in addition to improved reporting. It now offers a digital launchpad for change that has yet to be realized. We encourage the industry, vendors and innovators in fintech companies to embrace this opportunity.

In a similar vein to SFTR the proposed SEC 10c-1implementation has also attracted more than 100 submissions by U.S.-based firms and trade associations. The onerous nature of the proposed regulations, in particular the proposed reporting requirement to provide data within 15 minutes of a securities lending transaction being modified is causing concern within the industry. ISLA has submitted comments to the SEC as up to 18% of U.S. lending transactions involve beneficial owners based outside of the U.S. It is imperative that the global reporting standards being set are consistent so as to facilitate efficiency and technological support in a consistent manner. The consultation process continues.

[17] European Securities and Markets Authority (ESMA), "SFTR Reporting", [online], accessed June 2022, https://www.esma.europa.eu/policy-activities/post-trading/sftr-reporting

Agency Lending Disclosure ("ALD")[18]

Agency Lending Disclosure was established in 2006. It provided an industry standard means for agent lenders and borrowers to exchange underlying principal level detailed information related to transactions executed under securities lending agreements. Prior to this time borrowers typically booked their securities lending trades from custodial agents as if they were borrowing from "an agent acting for undisclosed principals." This was inaccurate as their real risk was to the myriad of beneficial owners who were their principal counterpart not the agent.

Agent lenders must provide to borrowing counterparties detailed information on the many unique principals participating in their agency lending programs at an underlying fund level. Borrowers must then actively accept or reject principals based on an internal credit review process and communicate their response back to an agent lender, prior to borrowing from each principal underlying fund or beneficial owner.

Agent lenders must communicate daily loan contract level information and principal level loan and collateral details to borrowing counterparties.

The requirements listed above result in both administrative and financial burdens on both the agent lenders and the borrowing counterparties for the following reasons, made more expensive by the sheer volume of principals and borrowers in the industry today:

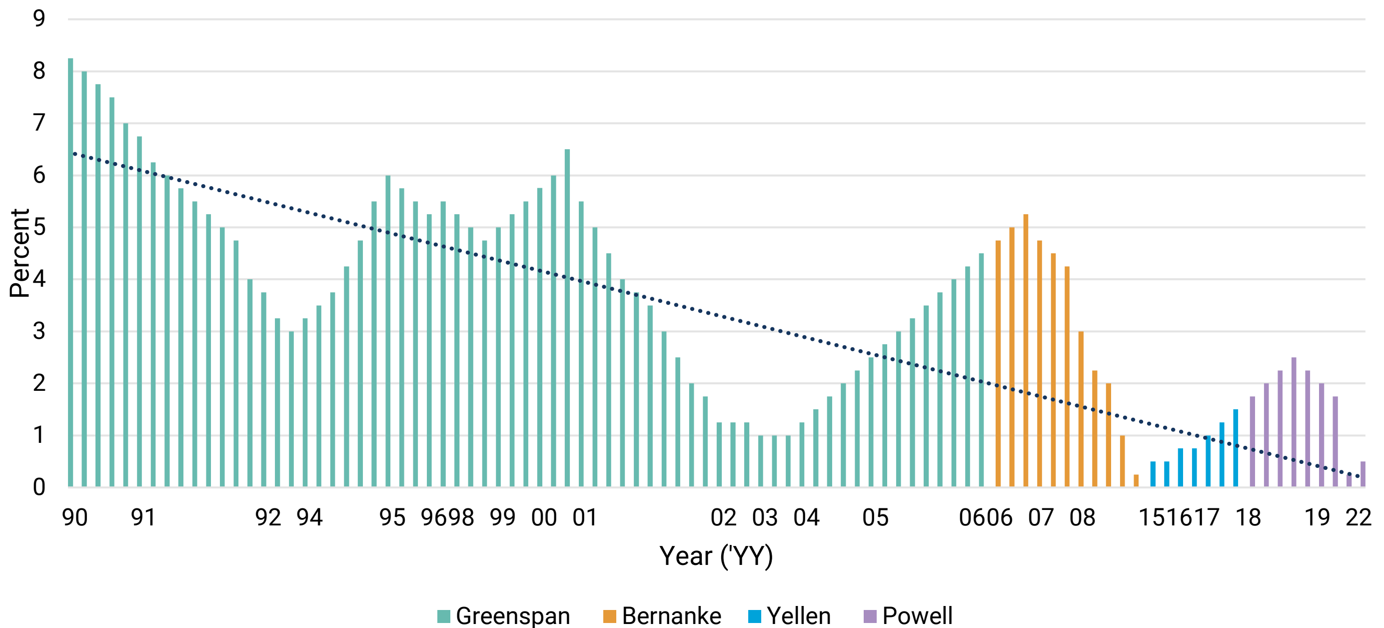
- There are fees associated with using an ALD vendor to facilitate the transfer of counterparty data, approvals / rejections, and loan and collateral information.
- Both agent lenders and borrowers must commit full time employees in a Credit Risk role to complete the compilation of financial information and the credit review of each individual principal, both initially and on an ongoing basis.
- There is a significant administrative burden required to maintain up-to-date financial records, and process add / delete files on a regular basis in order to continue trading. The lack of digitization in this process has historically led to backlogs and frustrated all parts of the industry. There is growing recognition of the need to streamline and revisit this process and industry bodies such as The International Securities Lending Association (ISLA) and several vendors are seeking to galvanize the industry into long overdue change.

Historically Low Interest Rates

Figures 8.1 shows the interest rate movement under consecutive Chairs of the Federal Reserve between 1990-2022.

[18] Securities Industry and Financial Markets Association (SIFMA), "Agency Lending Disclosure", [online], accessed June 2022, https://www.sifma.org/resources/general/agency-lending-disclosure/

Figure 8.1 Interest Rates, 1990-2022[19]



The reduction in interest rates combined with the lessons learned from the 2008 Global Financial Crisis has reduced, and in many cases eliminated the opportunity to generate significant cash reinvestment returns associated with the cash collateral provided by borrowers. This macro impact has reduced the profitability of the general collateral lending business for beneficial owners and agents alike. The average collateral reinvestment USD spread for large asset owners since January 2007 is estimated to be just over 20 Basis Points[20].

Lower Market Price of General Collateral Equity Loans

Below we share the typical price for large, indemnified lending agents under non-stressed market conditions for typical lenders and borrowers.

- Prior to 2008, GC priced at Fed Funds – 15bps
- 2008 to 2016, GC priced at Fed Funds – 10bps
- 2016 to Current, GC priced at OBFR – 10bps

Downward Fee Split Trends Since 1990s

For large, institutional asset owners, the following represents the trends of agency lending fee splits for Indemnified Lending:

- Early 2000s: 25-30% to the agent, 70-75% to beneficial owner
- Later 2000s: 20-25% to the agent
- Early 2010s: 15-20% to the agent
- Late 2010s-today: 10-15% to the agent

[19] Bloomberg Terminal
[20] Confidential informal research from Custodial Lending Agents.

Today, the very largest asset owners sometimes pay under 10% to the agent for indemnified programs. Given the cost of supporting the activity and of the indemnification it is clear that these kinds of fee splits will not generate sufficient revenue to cover the cost of the indemnification, as we will explore later in more detail.

The change in fees split distribution has inevitably increased pressure upon the lending agents. As one recently shared with me, "with about 10 bps for General Collateral loans and a 10-15% fee split this gives the agent lender 1 - 1.5 bps before costs / tax. Given the cost of indemnification of 10.3 bps in a Basel III world one has to seriously ask whether it's worth doing."

With regards to un-indemnified lending via the custodial route to market, our research shows that there are too few un-indemnified clients for this number to be meaningful. Indemnified lending remains the dominant choice via custodial bank - somewhat ironically it is less prevalent when a fund lends via an asset manager acting as their agent. It is understandable why lending via an Asset Manager is not typically indemnified – they do not operate on a level playing field when compared to the bank agents – they have a different regulatory regime, don't have the capital required and don't see the benefit. Given the real-world experience and the benefit provided to the beneficial owners, the asset management model approach seems to have gotten it right.

Environmental, Social and Governance ("ESG") Challenges

The securities lending industry will have to adapt to the demands of beneficial owners and their evolving ESG policies. This will impact lending and collateral management and have technological and cost implications for providers. There will inevitability be an ESG cost to compliance and it will be interesting who will pick up the tab.

Reduced Demand

A number of factors have combined to reduce the demand for traditional securities lending.

Equity Bull Markets

Whilst difficult to believe at the time of writing in May 2022, the long-running equity bull markets have reduced the proportion of special or hot securities in the market. How fast and fickle the markets can be.

Internalisation of Demand at Borrowers

Borrowers have significantly improved their technology and now as standard have ability to manage positions and optimise their borrowing only to seek loans when they need to after netting across all available inventory.

The Rise of Synthetic Prime Brokerage

The benefits of using Total Return Swaps to replace traditional lending is rising and more hedge funds and prime brokers are using "synthetics" instead of the "cash" markets, further reducing the demand for traditional lending. Balance sheet pressure has encouraged an increase in two-way intra-bank activity to net balance sheet exposures and reduce borrowing costs. With a decrease in the volume of special, high-priced lending, there is less incentive for the borrowers to maintain high general collateral ("GC") balances with agent lenders to gain access to specials.

Peer-to-Peer

The interest from the largest lenders of securities to conduct business directly between one another has always been of theoretical interest and now the Global Peer Financing Association ("GPFA")[21] has helped make it more tangible. Credit Benchmark is delighted to be a supporter of this ground-breaking association.

Sponsored Repo

Over recent years there has been significant growth of the FICC program for lending U.S. Treasury securities.

Combine the headwinds outlined above with the regulatory cost of capital associated with the provision of an indemnification by a regulated bank and the economics of this traditional custodial route to market are questionable to say the least – most especially for the agents.

Sponsored Repo requires an indemnification where the sponsor (the bank) is required to guarantee the sponsored participants (the beneficial owners) to the FICC. In addition, if the client already has an indemnification requiring the sponsor to indemnify them against FICC, there is a double RWA hit. Thinking about where securities lending indemnification might be re-imagined by the participants, this might be a good place to start i.e. by potentially removing the need for the bank (sponsor) to indemnify the lender against the default of a CCP.

[21] Global Peer Financing Association, "GPFA Homepage", [online], accessed June 2022, https://globalpeerfinancingassociation.org/

9. There Is Nothing New Under the Sun

Proof positive of this cliche is the November 2013 paper[22] entitled "The Value and Cost of Borrower Default Indemnification" written by Glenn Horner of State Street on the subject of the value and cost of borrower default indemnification.

In this paper Glenn and his colleagues do a wonderful job explaining to the reader the true economic value of indemnification and explore the real and regulatory capital cost of agents providing indemnification. They not only find a sensible way to calculate the benefit of an indemnification but are unerringly accurate at predicting the future regulatory capital cost of agents providing indemnification. I make no apologies for referencing his work to avoid "reinventing the wheel." I wholeheartedly encourage readers, especially those with a mathematical interest to read the paper in detail.

This transparent approach should have raised alarm bells at the time and encouraged an industry-wide discussion of the cost-benefit analysis of indemnification provision. This did not happen. Part of my motivation for writing this paper was to have another attempt to encourage just such an industry-wide discussion. I'd be delighted if this were to happen, and if it doesn't, I wouldn't be at all surprised. Unfortunately, logic and a willingness to embrace change are all too often lacking in this industry.

In Glenn's paper it was observed that established precedent in the securities lending market prior to 2013 was for the agents to provide indemnification to all beneficial owners without factoring in the cost of such a service. It was effectively given away by agents as a cost of doing business – a decision that would haunt the industry to this day.

Glenn used a conditional option pricing model to approximate the benefit / value of indemnification = 0.2 Basis Points, something that remains stable to this day.

Historical events across the industry have not typically required a call upon the indemnity to cover losses on securities lending. There are a number of long-established mitigants that have been developed by the industry to protect the beneficial owners:

- Industry standard documentation
- Established Triparty procedures
- Cross-principal and cross-product netting – reducing RWA under advanced standardized calculation
- Improved technology
- Greater price transparency
- Independent pricing
- Positive margins
- Daily mark to markets – would live / intraday mark to market reduce the "need" for indemnification?

A draw down on an indemnification is driven by two independent and statistically unlikely events:

1. Borrower default
2. A collateral deficiency

[22] Glenn Horner, "The Value and Cost of Borrower Default Indemnification", [online], State Street, November 2013, accessed June 2022, https://www.statestreet.com/content/dam/statestreet/documents/SecFinance/SL_InView_Indemnification.pdf

To help understand the likelihood of an immediate borrower default one can look at a table based upon real world experience. In Figure 9.1 below you can see the average cumulative default rates from 1990-2021 provided by Fitch for Global Financial Institutions[23].

Figure 9.1 Fitch Global Financial Institution Average Cumulative Default Rates: 1990-2021

(%)	Year One	Year Two	Year Three	Year Four	Year Five	Year Six	Year Seven	Year Eight	Year Nine	Year Ten
AAA	0.13	0.27	0.42	0.57	0.73	0.90	1.07	1.25	1.43	1.63
AA	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07	0.08	0.10
A	0.07	0.17	0.28	0.37	0.47	0.59	0.81	1.02	1.24	1.45
BBB	0.11	0.42	0.79	1.13	1.58	2.05	2.40	2.80	3.27	3.75
BB	0.53	1.66	2.66	3.57	4.42	5.03	5.67	6.27	6.91	7.49
B	1.02	2.25	3.15	4.16	4.86	5.64	6.30	6.80	7.04	7.30
CCC to C	14.80	15.90	18.31	19.83	21.02	22.43	24.24	25.37	25.19	24.30
Investment Grade	0.08	0.23	0.41	0.56	0.75	0.94	1.14	1.35	1.57	1.78
Speculative Grade	1.56	2.74	3.80	4.82	5.68	6.46	7.18	7.74	8.23	8.62
All Financial Institutions[a]	0.38	0.73	1.07	1.38	1.67	1.95	2.23	2.48	2.73	2.95

[a]Includes banks, finance and insurance companies.

Such a table factors in the default experience related to Barings and Lehman Brothers (both significant borrowers at the time of their defaults). A more gradual credit transition would mean that the market could react in a deterioration and adjust exposures, margin and collateral policy. What indemnification effectively deals with is the risk of an immediate shock default.

So, what is the appropriate starting point for assessing the likelihood of any borrower default?

Many counterparts in the securities lending industry are not rated by the traditional rating agencies. Often the brand name or name over the door may be rated at a holding company level but the specific legal entity that is actually the borrowing counterpart may not be rated. What matters to the lender is the creditworthiness of the borrower that they are exposed to. Figure 9.2 below is an extract from The Prime Broker, ISDA & GSIB Subsidiary Monitor[24] showing the consensus and traditional ratings coverage for North American Counterparts and their subsidiaries. Credit Benchmark also produce a CCP[25] and Buy-Side Monitor[26] monthly.

Figure 9.2 Prime Broker, ISDA & GSIB Subsidiary Monitor

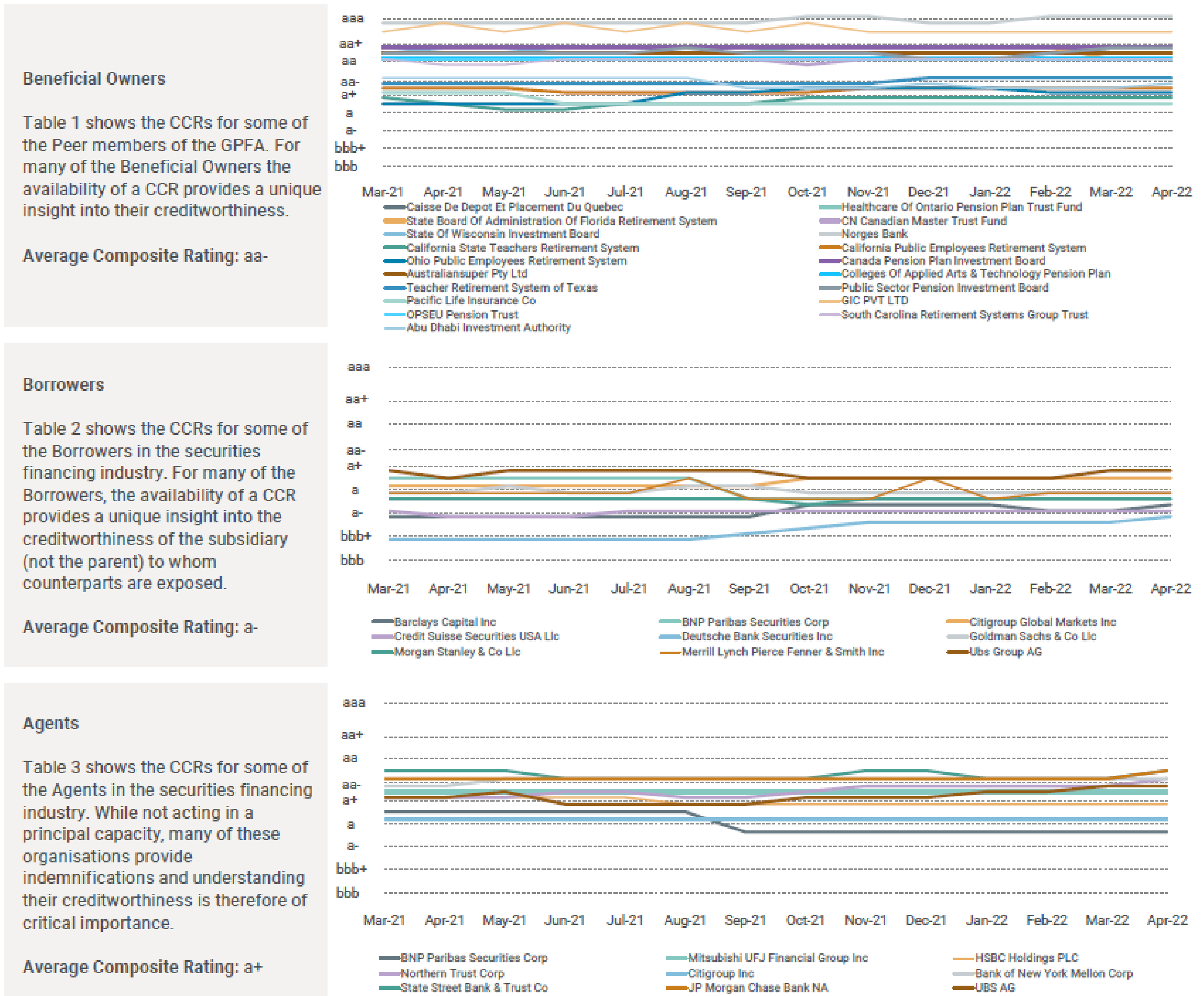
				Bank Subsidiary Aggregate								
Name	Bank CCR	Subsidiaries with a CCR[1]	Publicly Rated[2]	aaa	aa	a	bbb	bb	b	c	UG↑[3]	DG↓
North America												
BANK OF AMERICA CORP	a	27	11/27 (41%)		1	19	4	3				
BANK OF NEW YORK MELLON CORP	aa-	14	6/14 (43%)		7	3	3	1				7%
BANK OF NOVA SCOTIA	a+	16	5/16 (31%)			9	5	2				
CANTOR FITZGERALD LP	bbb-	5	1/5 (20%)				2	3				
CHARLES SCHWAB CORP	a	4	2/4 (50%)		2	1	1					
CITIGROUP INC	a	35	15/35 (43%)			20	4	6	3	2	3%	
COWEN INC	bb-	3	1/3 (33%)					3				33%
GOLDMAN SACHS GROUP INC	a	26	10/26 (38%)		1	18	4	3			4%	4%
JEFFERIES GROUP LLC	bbb-	9	4/9 (44%)				5	4			22%	
JPMORGAN CHASE & CO	a+	30	9/30 (30%)		3	25	1	1				
MORGAN STANLEY	a-	25	11/25 (44%)			11	13	1				
ROYAL BANK OF CANADA	aa-	12	7/12 (58%)		3	8		1				
TORONTO DOMINION BANK	aa-	9	4/9 (44%)		3	6					22%	
WELLS FARGO & CO	a	15	6/15 (40%)		2	12	1					

[23] Fitch Ratings, "2021 Transition and Default Studies", [online], accessed June 2022, https://www.fitchratings.com/research/corporate-finance/2021-transition-default-studies-31-03-2022
[24] Credit Benchmark, "Prime Broker, ISDA & GSIB Subsidiary Monitor", [online], accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2020-12-10/2tqn
[25] Credit Benchmark, "CCP Monitor", [online], accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2020-12-10/2tqx
[26] Credit Benchmark, "Buy-Side Monitor", [online], accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2020-12-09/2svd

If the borrowing entity is rated publicly, one could use that rating; if it is not, consider using a Credit Consensus Rating (CCR).

A CCR of **a-** is good starting point for the creditworthiness of a typical borrower - see the tables below from the Credit Benchmark GPFA Monitor[27] showing Beneficial Owner, Agent and Borrower creditworthiness. The probability of an immediate credit deterioration from **a-** straight to default is 0.07%, based upon established credit transition matrices such as Fitch. This is a possible but a statistically highly unlikely event.

Figure 9.3 Global Peer Financing Association ("GPFA") Monitor



In the State Street paper, the risk of an immediate high quality borrower default is shown to be very low. The paper also quantifies the likelihood of a collateral shortfall, with positive margin within a specified timeframe to

[27] Credit Benchmark, "GPFA Monitor", [online], accessed June 2022, https://creditrisk.creditbenchmark.com/l/892021/2022-05-23/23rqn

be low too. The product of these two unlikely events equates to the value of the indemnity which in 2013 at the time the paper was written was 0.2 Basis Points.

In 2013, under the prevailing regulatory regime, the cost of capital associated with providing an indemnification was estimated to be 0.9 Basis Points.

Whilst over four times higher than the expected value of the indemnification, it was still being effectively given away by the agents. At the time they made this decision they calculated that they could afford to do this because they were making good money via the other services that they provided to lending clients.

However, the beneficial owners were typically not aware or engaged in a discussion regarding the numbers being highlighted or that the economic reality bore no relation to the unavoidable regulatory cost of capital for their agents. There was a widespread feeling at the time that they *needed* an indemnification to be in the securities lending business. It should be remembered that the shockwaves associated with the 2008 Global Financial Crisis including the Lehman Brothers default (the firm was a major borrower and prime broker at the time of their default) still resonated throughout the global markets and understandably impacted decision making – for beneficial owners in particular. With the benefit of hindsight, this was a missed opportunity for the agent banks to explain to their clients the regulatory challenges that they were facing and to potentially reset the economics of the securities lending market. The fact that they decided to absorb the cost and cross-subsidize the regulatory capital cost of indemnification meant that the beneficial owners were only too happy to continue to receive them.

The irony was that the large losses in securities lending came from cash reinvestment - which was and remains to this day un-indemnified[28]. Historically cash reinvestment losses were often absorbed by the agents / bartered with their clients in exchange for extending contracts or changing fee splits. This had the impact of reducing any headline losses and ensuring beneficial owners did not withdraw from lending despite suffering losses. The perceived need for Securities Lending Indemnification was effectively a "comfort blanket", not the protection imagined by the risk committees of beneficial owners.

The lending agents' decision made some sense when one looks back - given the low likelihood of a borrower default and subsequent collateral shortfall the agents felt that they could factor this cost into their business models. They effectively chose to accept and cross-subsidize the loss associated with indemnification.

At the time, securities lending was a highly competitive industry with adjacent profitable activities (often bundled as part of a custody relationship e.g., foreign exchange) supporting increasingly well-informed and powerful clients that made the cost benefit analysis seem sensible.

As time and regulation advanced one could argue that the "decision" by the competitive agent banks not to grasp the nettle and attempt to price indemnification appropriately at the time was a big mistake and a missed opportunity.

In the paper, the estimated capital cost of indemnification post 2014, factoring in Basel III, Dodd Frank and the Collins Amendment would rise dramatically to 10.3 Basis Points. This would prove to be very accurate and in fact a slight underestimation of the regulatory cost today due to an additional capital surcharge applicable to the largest, globally systemically important banks ("GSIBs").

[28] Except where cash is invested in reverse repo, which in most cases is indemnified.

Figure 9.4 expresses the regulatory cost of capital associated with a notional $1,000,000,000 loan balance under differing scenarios. They key observations are that prior to 2014 the cost was under 1 Basis Point in all cases and that now the cost has risen dramatically.

Figure 9.4 Regulatory Cost of Capital Associated with a Notional £1 Billion Loan Balance

	US Equities vs USD Cash			Non-US Equities vs USD Cash			
Bill Costs - since 2014 ($'s)	**Non G-SIB Bank**	**1% G-SIB**	**3.5% G-SIB**	**Non G-SIB Bank**	**1% G-SIB**	**3.5% G-SIB**	**Commentary**
Notional	1,000,000,000	1,000,000,000	1,000,000,000	1,000,000,000	1,000,000,000	1,000,000,000	
Equity Haircut	10.6%	10.6%	10.6%	10.6%	10.6%	10.6%	Liquid Main Index Equity w/ 5 day liquidation period (repo style transaction under BIII)
FX Haircut	n/a	n/a	n/a	5.7%	5.7%	5.7%	
Margin Cash	102%	102%	102%	105%	105%	105%	
Indemnity on Reinvestment	No	No	No	No	No	No	
Bill Counterparty Risk Weight	100%	100%	100%	100%	100%	100%	
RWA Calculation							
EAD	86,066,017	86,066,017	86,066,017	112,634,560	112,634,560	112,634,560	
RWA	86,066,017	86,066,017	86,066,017	112,634,560	112,634,560	112,634,560	
Regulatory Capital Ratio Requirements							
Min CET1 Requirement	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%	Regulatory required minimal capital by Basel
Capital Conservation Buffer	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	Conservation Buffer required by Basel
G-SIB Surcharge	n/a	1.00%	3.50%	n/a	1.00%	3.50%	Surchage range of 1%-3.5% based on 2021 G-SIB's with Lending programs
Buffer	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	Estimated internal bank buffer
Total CET1 Ratio	**9.00%**	**10.00%**	**12.50%**	**9.00%**	**10.00%**	**12.50%**	
Regulatory Bank Capital Exposure Requirements							
CET1 Requirement	7,745,942	8,606,602	10,758,252	10,137,110	11,263,456	14,079,320	See Line 19
T1 Capital Requirement	1,290,990	1,290,990	1,290,990	1,689,518	1,689,518	1,689,518	1.5% based on Basel Capital Stack
Tier 2 Capital Requirement	1,721,320	1,721,320	1,721,320	2,252,691	2,252,691	2,252,691	2% based on Basel Capital Stack
Total Capital Requirement	**10,758,252**	**11,618,912**	**13,770,562**	**14,079,320**	**15,205,666**	**18,021,530**	
2021 Cost of Bank Capital (Avg 4 top Securities Lenders)							
Before Tax CET1 Capital Cost	1,076,384	1,195,982	1,494,978	1,408,663	1,565,182	1,956,477	Assumes 23% Corporate Tax Rate (US) and AVG ROE from top 4 Lenders
Before Tax Tier 1 Capital Cost	85,214	85,214	85,214	111,519	111,519	111,519	Assumes 23% Corporate Tax Rate (US) and WAVG Preferred Stock Expense from top 4 Lenders, 1.5% Tier 1 Capital
Before Tax Tier 2 Capital Cost	75,509	75,509	75,509	100,128	100,128	100,128	Assumes 23% Corporate Tax Rate (US) and WAVG Sub-Debt Expense from top 4 Lenders, 2% Tier 2 Capital
Total Capital Cost	**1,238,107**	**1,357,705**	**1,656,701**	**1,620,310**	**1,776,828**	**2,168,124**	
BIII Bps Cost	**12.4**	**13.6**	**16.6**	**16.2**	**17.8**	**21.7**	
BIII Bps Cost (Before 2014)	**<1bps**	**<1bps**	**<1bps**	**<1bps**	**<1bps**	**<1bps**	

The disparity between the cost and the benefit remains to this day and when combined with other regulatory capital drivers is having a major impact upon the capital markets and raises several important issues.

Notwithstanding my earlier observation about there being "nothing new under the sun" the regulatory engagement by the industry has actually moved the needle for the banks since the paper was written. The 10.3 bps estimated is based on the standardized collateral haircut approach. Today, most of the larger agents have permission from their regulators to utilize a Value at Risk (VaR) model to calculate RWA for their agent lending books under the advanced approach which results in very low RWA. In the U.S. under the Collins Amendment banks need to calculate their regulatory capital requirements under both standardized and advanced approaches and apply the highest at the top of the house. This often means that many are bound by the standardized approach.

For a period of time, the advanced approach was the controlling ratio for some banks due in large part to the extremely outsized operational risk component. Standardized has no operational risk add-on. This may have been one reason that banks were slower to address the indemnification issue as it relates to RWA. This is changing as operational risk models have developed and there is the potential that we could see the end of internal models in the U.S. – the rise of standardization as I call it. However, even under standardized, the

10bps does not take into account the revised comprehensive approach for repo style transactions that Basel adopted and that we expect to see in the final U.S. changes.

Some of the unsung heroes in the U.S. securities lending market such as Glenn Horner and Mike McAuley have spent many years advocating for this revised formula with a host of regulators and they seem finally to have succeeded. The new calculation methodology will significantly lower standardized RWA especially given the large netting sets that agents maintain. This is not to say that there will no longer be a diversion from reality but that the diversion may be smaller than originally portrayed – something that is to be welcomed by all. As the quantifiable economic benefit of an indemnification is so low, why do the beneficial owners still feel the need for an indemnity in order to lend?

Maybe the answer is simply because they pay almost nothing for the coverage, and we all know that free goods will be consumed infinitely. Maybe it's because they misunderstand the benefit and what risk it protects them from. Maybe the agents need to articulate the cost / benefit analysis much more clearly and stop cross-subsidizing the provision of indemnifications. It is a longstanding and complex conundrum and continues to perplex me to this day. Trying to make sense of this situation was one of the motivations behind writing this paper. I wonder whether things will ever change and who might blink first. Will it be a single agent, a group of agents or the more enlightened beneficial owners that precipitate change? Our sense is that the GPFA members are at the vanguard and that members of this group self-select to represent the larger and more sophisticated beneficial owners who have the experience, scale and understanding to potentially to take the initiative and lead the charge.

What about making it even more explicitly clear to the risk committees that typically govern securities lending policies at the beneficial owner level that cash reinvestment risk is not covered? The irony that reinvestment risk is still not indemnified is shocking, for that is where, based on real world experience, real losses are most likely to happen. That being said, cash collateral reinvestment in reverse repo transactions is often indemnified and in some agent programs this forms a major part of the collateral pool. The growth of equity vs equity lending has also shifted the risk profile of the lending industry significantly – hence our earlier comment about whether a move towards intra-day mark to market might reduce the demand for indemnification from beneficial owners that are more comfortable with highly correlated asset classes and more frequent marks.

From a neutral perspective one can argue rationally the following points; that the comfort blanket is no longer necessary – however, if the agents are offering one free of charge, who can blame the beneficial owners from asking for one?; that the tangible benefit of indemnification is overstated – but there is little grounding in economic reality in this debate; and that economic, not emotional, decisions should drive demand for indemnification – but the market behaves otherwise. There are several other factors worth mentioning, including:

- The creditworthiness of the indemnifiers is variable – but it seems that the market is not discerning enough to take this into consideration.
- Borrower default and a contemporaneous collateral shortfall are the risks covered by the indemnity and yet the agent banks pay for the indemnity.
- There is no differentiation in the cost or value of an indemnity driven by the different levels of borrower creditworthiness and default probability.
- Third-party indemnification is now available; the insurance sector is getting more involved as it should be. The reason that they are not more engaged is because the pricing makes no sense at the moment.

- The terms of indemnities vary significantly; we would encourage the indemnified to take a good look at the deductible under your policy.

- There is some good news to report regarding innovation coming to the market. Led by a FinTech[29] company and supported by open-minded agents, beneficial owners and borrowers, they are exploring the possibility of providing indemnification at sensible market price levels for transactions, portfolios or specific to counterparts.
- The pricing of any future indemnification solution will be challenging until the current subsidized "free" offering is either properly priced or withdrawn.

Why don't the agents pass on the true capital cost of indemnification? Is it because they continue to make cross-subsidize regulatory capital loss-making trades from their excess profits in other areas? This was certainly the case in the past, but I doubt this is as prevalent today. The unbundling forces of the larger beneficial owners and their consultants are considerable and have driven pricing down, transparency up, and reduced the potential for as much cross-subsidization as in the past.

We would argue that the insurance sector should be much more active in the provision Securities Lending Indemnification; it really is in their business model "sweet spot." Whilst the insurers enjoy their own regulatory regime they are better placed than the agent banks for whom the regulatory cost of capital associated with their provision is so expensive and so decoupled from economic reality as to be ridiculous.

We are aware that there are some encouraging examples of insurance companies getting more engaged in a business line that is right down their street: providing independent third-party indemnification. However, this is not yet part of the mainstream – partly due to the wholesale mispricing of the indemnification, partly since the agents give it away and partly due to the fact that for years the largest borrowers have effectively been "free riding" the provision of effectively free indemnification, which has systematically reduced the price of the easy to borrow or general collateral lending market. It is strange to observe that the agents have, for years, effectively been picking up the tab for facilitating business between principals whilst insuring one side of the trade against the default of the other. There would seem to be a very strong driver for the market to change from the agents' perspective – but not so much from where the principals (borrowers and beneficial owners) stand.

At some point the scale of this activity (current estimates suggest that the outstanding securities lending balances are close to $2 trillion) will force change and we predict that at some stage a major lending agent will make the prudent and very brave decision to change in pricing and / or their lending business models. This would involve a move from a GC vs specials ratio driven business model to a business model based upon the intrinsic value of the loans being made, the collateral being taken, and the counterparts involved. This would inevitably result in smaller – but potentially more profitable business for that pioneering agent and bring the benefit of significantly reducing their regulatory capital footprint. The real risk comes from the possible backlash from the larger prime brokerage firms that might withdraw business and direct balances where possible elsewhere, and the follow-on impact upon beneficial owner fees. Given the fee splits in the lending business (85:15 in favour of the beneficial owners is typical now) the agents need to consider not only their own profitability and capital position; they need to be cognisant of the importance of securities lending to their underlying beneficial owner client base and the interconnected revenue streams associate. This would be a complex, high stakes decision – but one that we think is already being considered by most if not all lending agents.

[29] Finoptsys is one fintech working on innovation related to indemnification https://www.finoptsys.com/

As we have demonstrated earlier, there is now a significant decoupling of the true economic benefit of indemnification, its real-world cost, and the regulatory capital cost. Unfortunately, I'm increasingly of the opinion that the securities lending market is a "market" in name only. In a real or efficient market, competitive forces would have removed or at least reduced such anomalies and disparities long ago. The fact that they continue to remain entrenched and persist is evidence of embedded structural and economic inefficiency.

As we meet with and listen to the largest beneficial owners, one question keeps coming up in our minds. Why do so many beneficial owners continue to see capital and RWA challenges predominantly as bank and broker issues? By continuing to demand indemnifications that are neither properly priced nor aligned to either the benefits or the regulatory cost associated with their provision they, alongside the borrowers and agents who continue to take no corrective action, are culpable in perpetuating this longstanding market distortion. Recently my colleagues and I have presented to the GPFA a paper reviewing pending regulations with the goal of highlighting the impact upon them and their lending activity. We hope that we captured their imagination and have encouraged them to join with the banks and engage with the regulators.

There are some signs of behavioural change and a few of the biggest / more sophisticated beneficial owners now operate in the market today without borrower default indemnification. They effectively weighed up the cost / risk / return dynamics and deemed it unnecessary to operate their program effectively. The added flexibility these enlightened beneficial owners enjoy from breaking free from being indemnified manifests itself in several ways which can actually enhance their lending programs and even generate increased risk-adjusted returns:

Directed Trading

The agents – directed by their lending clients are free to support them without providing indemnification – can now partner with their clients and provide life cycle support services at sensible prices.

Collateral Flexibility

The clients can now craft a collateral policy that makes sense for them rather than being part of "lowest-common-denominator" pools. Collateral flexibility is often highly prized by the borrowers and paid for.

Being Treated Fairly, NOT Equally

Far too many regulations insist on equal treatment for clients that are NOT equal – in terms of AUM, scale, collateral flexibility, quality of supply, term trading etc. There is however an important distinction to be made between equality and fairness. Being treated fairly is something that makes increasing sense to the larger funds and is, I would suggest, one component part of the rationale behind the establishment of the GPFA. These larger, more sophisticated funds understandably want to be treated fairly.

We believe that more of the larger beneficial owners should ask themselves whether they really need an indemnification given the risks it actually protects them from. Furthermore, we believe that if they determine that they need an indemnity, they should then seek an indemnification from a specialist provider at sensible market levels. They should reconsider insisting upon the provision of an indemnity from an agent bank that suffers such high levels of regulatory capital expense and can only do so by charging them in a bundled / cross subsidized manner supported by revenues from other part of their business. Is it now time to understand and pay the going rate for the transactions undertaken and services consumed rather than persist with this untenable obfuscation and cross-subsidization? In making this decision one needs to factor in the benefits and flexibility outlined above. These properly priced indemnifications may well be underwritten not by the bank or agent providing the lending service, but hopefully by unrelated specialists such as insurance companies.

The agent banks should recognize they are culpable too and should consider acting like economic animals rather than cross-subsidizing via other services. They should consider be more prepared to say “no” to beneficial owners that add nothing of value from a securities lending supply perspective. The market is saturated with general collateral supply for many reasons outlined previously and it is about time that some lenders left the market. It is in the best interest of the beneficial owners and the agent banks to understand the true economic value of services consumed and provided.

It is incumbent upon all participants in an industry that has now, thanks to many expensive and necessary investments such as SFTR and ALD, established the necessary technological foundations to understand the value and cost of supply, indemnification and all the associated regulatory capital costs to act in an economically rational manner. The borrowers are doing so – seeking out the attractive supply directly or via the agents – so why do the agent banks and beneficial owners not join them and follow suit? We would argue that it is time for them to consider change. There are a number of very valid questions that can be asked by those looking at the problem from the outside.

Why Has the Securities Finance Market Not Embraced Central Clearing?

The issue of rising regulatory capital is not a new one and in other areas of the capital markets we have seen central clearing provide a practical solution. This has yet to be fully adopted in the securities lending industry. It may well be due to the market structure - which all too often involves both agent (bank or asset manager) and principal (prime broker) in a transaction. In preparation for writing this paper I spoke with several large lending agents and the following comment sums up the CCP challenge from an agent lender’s perspective: “There simply is no central clearing model that would operationally work in today's market. One example is that most only accept one type of collateral and only process single allocation loans. Another key issue is the fact that any reasonably sized clearing cost, which includes a default fund contribution, will greatly exceed the basically non-existent payment for the indemnification today.” Furthermore, it should be noted that many CCP models require the agent to guarantee client performance. This effectively means that the agents receive RWA relief on one side of a transaction BUT get impacted on the other side - effectively reducing the attraction of a CCP model.

Why Hasn’t the Insurance Sector Played a More Significant Role in the Provision of Indemnification?

Whilst this is a growing marketplace for the specialist insurance sector, especially in the third-party lending space, the provision of indemnities associated with securities lending is dominated by the very lending agents conducting the business. However, until indemnification is both properly understood and valued by the recipient beneficial owners *and* the agent banks desist from cross-subsidization, we believe that there will be limited growth potential here. These two significant gating issues are holding back progress. The insurance sector often suffers less onerous regulatory capital requirements than the banks do and are well placed to play a larger role. We are hopeful that things can change.

Why Are Regulatory Costs of Capital at Times So Divergent From Economic Reality?

The regulators are well intended, responsible for ensuring the ongoing stability of the financial sector and the capital strength of banks in particular. We think that the regulators certainly intend to make the banks provide more capital to support their overall activities – see the ECB’s TRIM example from earlier. However, sometimes they seek capitalization that is perhaps too high and somewhat disconnected from reality, with Securities Lending Indemnification a case in point. When the banks attempt to persuade their regulators to rethink their positions, they often do so without the support and engagement of the rest of the market - especially the trade

associations that represent the Sovereign Wealth, Pension and Mutual Funds that make up the "buy-side". The lack of buy-side support often undermines the advocacy and case being made by the banks who seem, all too frequently from a regulator's perspective, to be "crying wolf". Far be it for us to comment in this paper on the propensity of banks to cry wolf to their regulators, especially when capital is concerned. Nevertheless, given the extreme divergence of regulatory capital cost form economic reality in this instance, we would encourage all parties, including the buy-side, to get involved when the unintended consequences of regulation negatively impact the efficiency of the capital markets.

How Is the Market Is Taking Action to Address and Mitigate the Cost of Doing Business?

Un-Indemnified Programs

It is widely recognised that "prevention is better than cure." The agents have tried to offer un-indemnified programs, with limited success to date. We encourage them to continue to engage the larger more sophisticated beneficial owners with the true benefit of an indemnification and to be transparent about the coverage provided. It is time for the comfort blanket to be thrown aside. Deciding to adopt an un-indemnified lending approach does not materially impact the risk profile of a well-managed program whilst bringing many benefits associated with flexibility.

Peer-to-Peer

The agents (and some principal intermediaries) have historically seen peer-to-peer lending as a threat to their business models. We would argue that this is not necessarily the case. They seem to be coming around to our way of thinking and several are actively embracing a new wave of peer-to-peer programs and it feels like these are here to stay.

These peer-to-peer programs are often complementary to their existing agency programs, bringing significant technological expertise and essential economies of scale.

Credit Benchmark is proud to be associated with the Global Peer Financing Association ("GPFA")[30] and recognise it as being at the vanguard of the rapidly developing peer-to-peer movement.

Many of the GPFA's members might agree that the role of a securities lending agent is integral to the efficient running of many lending programs, especially and irrespective of how the original trade is made. A securities lending transaction needs ongoing specialist support e.g., loan, administration, compliance, marking to market, collateral management, fees and billing, corporate actions etc. Todays' peer-to-peer structures recognise the need for and pay for the vital support that an agent (or principal such as a Prime Broker) intermediary provides throughout the life cycle of the loan transaction or repo.

What is clear to see from the outset is that the precise definition of the roles being performed and that payment for those conducting those roles need to be transparent and understood by all parties. A small but growing number of peer-to-peer securities lending transactions now take place and involve no indemnification, and we predict that those that continue to be indemnified will increasingly have the protection provided by non-banks at sensible rates. Change is finally coming.

[30] Global Peer Financing Association, "GPFA Homepage", [online], accessed June 2022, https://globalpeerfinancingassociation.org/

Specialised Indemnification

We have already mentioned the challenges facing the insurance sector as they explore the possibility of providing indemnification to substitute for those banks who are being priced out of providing indemnities by regulation. What we are now seeing is welcomed innovation in the marketplace with some parties actively exploring transactional, program and event counterpart specific indemnification. This is made possible by a combination of forces, including the technical advances made by the industry over recent years, and the recognition and use of Credit Consensus Ratings ("CCRs"). The buy-side remains typically unrated by the traditional CRAs, but over 25,000 Credit Consensus Ratings are available today. As figure 9.5 shows, not only do they have a CCR but the majority have a CCR of **a** or better.

Figure 9.5 Benefical Owner CCR Coverage for Mutual Funds and Pension Funds

Below is a distribution of our Consensus coverage for Mutual Funds and Pension Funds.

Total: 21,068 Mutual Funds

Total: 1,969 Pension Funds

Capital Relief Transactions ("CRT")

The banking industry is known for many things, one of which is for being innovative. Banks are also using regulatorily-approved ways in which to transfer risk from themselves to willing buyers to reduce their regulatory capital footprint. These transactions go by a variety of names, as is so often the case as a marketplace develops a new asset class and technique. Common names for the transactions include risk transfer trades, significant risk transfer ("SRT") trades and capital relief trades – although there are many others as Figure 9.6 demonstrates.

Figure 9.6 Capital Relief Transactions Go By Many Names

Traditionally the risk being transferred was associated with corporate lending, including loans to large companies and even Small and Mid-sized Entities ("SMEs") on a disclosed or undisclosed basis via bilateral or club deals. There is a long-established and vibrant market in these capital relief transactions, and they require careful documentation and regulatory approval to facilitate the intended outcome.

We are aware of significant interest in risk transfer transactions related to Securities Lending Indemnification from both bank issuers and investors. These conversations are at an early stage and could offer the agent banks the possibility of simultaneously transferring risk and reducing their regulatory capital levels with appropriate supervisory approval. These potential risk transfer transactions will require careful planning, documentation and execution but bring the possibility of removing / reducing a binding business constraint for some agents.

Ironically, the challenges faced by the banks' providing Securities Lending Indemnification to "protect" the buy-side has proven to be a catalyst for these transactions. In these capital relief transactions, the risk transferred is often transferred to the larger more sophisticated buy-side investors looking for long dated low risk returns. It's strange to see the transactions come almost full circle.

10. Conclusion

We recognise the desire of regulators and their regulations to be prudent and to protect the global capital markets by ensuring banks maintain sufficient capital to support their operations. However, we would encourage them to ensure that such regulation does not continue to result in unintended consequences and market distortions.

Combine what some might consider the somewhat overzealous regulatory capital regime associated with the provision of Securities Lending Indemnification with the inertia of price changes that fails to reflect reality and you have a real structural problem at the heart of the capital markets which is distorting behaviour and pricing and liquidity. There is a political aspect of inertia worthwhile considering. There is a clear cost to getting something wrong – but not a clear benefit for getting something right – resulting in an understandable fear of failure.

Many of the bank participants in the securities lending industry are operating in a capital constraint environment. Return on capital has long been an area of major focus for businesses and their shareholders. The growing concentration and scale of these securities lending businesses cannot be sustained with such heavy regulatory capital burdens. Capital is fluid and will be allocated where it can secure an appropriate risk adjusted return. The return on capital dynamics for Agency Lending businesses do not compare favorably to other businesses competing for capital, especially for Investment Banking organizations. Something needs to change.

General Collateral lending is a big consumer of capital and provides low returns, yet it remains priced at an unrealistic level. To continue to support this activity the market needs to embrace new business models, reduce the historic and unnecessary dependency upon indemnification, potentially reduce supply and embrace change. There is widespread recognition that capital is fungible and needs to be allocated and flow efficiently throughout the capital markets.

Further industry consolidation in the custody arena seems inevitable; it is somewhat surprising that there has not been more. Senior management at these global custodians, reflecting their investors' focus, have sought to provide them with additional transparency, which has highlighted the folly / danger / extent of business cross-subsidization

As observed previously, we are beginning to see the decoupling of some custodial services, especially by the most powerful clients e.g., securities lending as exemplified by the GPFA members.

The value chain remains distorted and resistant to change – why?

We believe that this price in-elasticity is a result of a concentration of power and a resistance to change by some players in the value chain.

However, the illogical response of the market to years of regulation and market challenges has meant that there have been a limited number of new entrants – because the dominant incumbents have successfully built moats around their businesses – which cross subsidize any loss-making activities. We believe that these days are close to ending.

Insurance companies are underrepresented in the indemnification space, and we believe that they have an opportunity to play a much more significant role – but they will need to base their pricing upon economic reality NOT historic precedent or the implied regulatory cost.

Insurance companies and many institutions active peer-to-peer lending *are* already significant players in the SRT / CRT business - whereby risk / portfolios are transferred from banks to investors with a different capital treatment. Perhaps it is time for some of these institutions to join up more of the dots?

One must wonder if this risk transfer is the intention of the regulators. If this is indeed intended, perhaps this can go some way to explain the clearly conservative approach to regulating bank capital? – i.e., to encourage risk transfer outside of banks into the non-bank financial sector.

Many hedge funds / alternative managers would welcome more innovation, choice and transparency in the pricing of securities lending. However, they are often fearful of leading innovation because of the danger of a backlash from the dominant incumbent providers of bundled prime brokerage and custodial services.

One simple question shines a light on the market structural issue better than most. Why do so many beneficial owners invest directly in a hedge fund BUT insist on dealing with them via multiple intermediaries and receiving an indemnification? This would be a great question for them to raise at their risk management meeting.

11. The Opportunities

We believe that there is genuine potential to innovate that has not really taken off yet. Maybe this is the time that peer-to-peer really comes of age? There are several positive developments that point to this being a realistic possibility:

- The GPFA is a most welcomed force for innovation
- Peer-to-Peer repo is becoming mainstream
- Where possible indemnification will be refined and potentially be removed[31]
- Enhanced custody offerings will compliment and challenge prime brokers
- Internalization is driving balance allocation post optimization
- Crossing between funds within fund families where possible
- Dark pools - the ability to trade with approved counterparts (even competitors) in confidence and securely
- Recognition that not all buy-side funds are equal – price differentiation / service level differentiation
- RWA and capital will remain at the forefront in counterpart approval and business direction

Competition for loan balances is increasing – as a result historic market segmentation has begun to erode. In the past under the traditional lending model, beneficial owners competed with other beneficial owners. Today the market is much more comingled and competitive with beneficial owners versus beneficial owners, agents versus agents, prime brokers versus prime brokers and even hedge funds versus hedge funds.

We believe that the confluence of regulation and consolidation of businesses will drive change and innovation. We would be delighted to receive your feedback and to hear whether you agree with our view that something better change.

[31] This is not always a straightforward business decision as indemnification is frequently insisted upon by legislation - as the following extract from an RMA comment to regulators notes:- "We have not performed an exhaustive review, but list some examples here. See, e.g., Texas Government Codes 825.303(b)(3), which states that, in order for a bank to be eligible to lend securities on behalf of a Texas Public Fund, the bank must "execute an indemnification agreement satisfactory in form and content to the retirement system fully indemnifying the retirement system against loss resulting from borrower default." See also, e.g., New York Slate Teachers' Retirement System Investment Policy Manual (Oct. 2011), available at www.nystrs.org/main/library/IPM201l.pdf, Securities Lending section, at 3, which requires that the agent lender indemnifies the System for losses resulting from a default by the borrower. See also, e.g., New Mexico State Investment Council Securities Lending Policy (Dec. 2006), available at http://www.sic.state.nm.us/PDF%20files/Section_ l5_Seclend_l2142006.pdf, which requires that the investment Office staff will execute securities lending contracts that include " [a]t least the standard securities lending industry indemnification against borrower default." See also, e.g., City of Seattle Statement of Investment Policy, available at http://www.cityofseattle.net/executiveadministration/invpol.htm, which authorizes the Director of Executive Administration of the City of Seattle, "under the supervision of the Mayor and consistent with policy direction given by the Director of Finance, to invest all moneys in the City Treasury which in the judgment of the Director are in excess of current City needs in ... providing indemnification against borrower insolvency."

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