Abstract

A key promise, responsibility, and assumption underpinning democracy is that its participants are bound by a social contract that delivers win outcomes for those who adhere to its rules. But our social contract is under threat. Governments and large corporations are today being tempted to abandon the ancient conventions of our social contract by the allure of emerging technology that promises the leaders...
of large corporations and institutions greater control over LIQUIDITY + DATA. It has traditionally been inaccessible because the digital integration required to create the market was not possible. People intermediated transactions and played an important role in safeguarding important conventions. Machines, however, do not always adopt our conventions. And a big question is, who really owns the data rights anyway? In the absence of concerted action by democracies, the nation the largest source of aggregate demand will set the global standards for the ownership rights of data released from silos by digital integration. Unless democracies work together, with Joe Biden’s election as President of the United States there is now an opportunity to convene the world’s democracies in a call to arms to defend freedom, including our human right to be able to make informed choices.

**Keywords**

Accounting Standards · AgTech · Authoritarianism · Big 4 · Bill of Exchange · Bottom Up · BREXIT · Capital Markets · Cash Cycle · Compliance as a Profit Centre · Corporate Treasury · Counterparty Data · Democracy · Digital Integration · Ethical Standards · FinTech · Freedom · Fully Informed Consent · Human Rights · LIQUIDITY + DATA · Obillex · Off Balance-Sheet Finance · Procurement · RegTech · SME · Social Contract · SupplierPay Pledge · Supply Chain · Supply Chain Finance · Top Down · Trade Credit · Trade Payables

**Introduction**

In sharing expert insights into the ethics of FinTech and Trading that I learned along my journey, I will draw heavily upon two important, directly relevant sources of structured information for appropriate discussion topics:

1. On the Ethics of Trade Credit: Understanding Good Payment Practice in the Supply Chain, by Christopher J. Cowton and Leire San-Jose
2. Australian Small Business and Family Enterprise Ombudsman – Supply Chain Finance Review (https://www.asbfeo.gov.au/sites/default/files/Final%20Report%202.pdf).

The Cowton and San-Jose paper is important to the context of my insights because I am the founder of a “Supply Chain Finance” FinTech: The need for trade credit gives rise to the opportunity for supply chain finance.

The Australian Small Business and Family Enterprise Ombudsman (ASBFEO)’s Supply Chain Finance (SCF) Review is important because it provides a structured, nonexpert analysis of SCF trading activity derived from interviewing dozens of stakeholders in the industry. The Review comments extensively on ethical issues arising from FinTech trading activity using a structured approach that provides a valuable platform for my insider’s perspective on those issues.
The approach I have taken in writing this chapter is to copy a statement from one or the other or both above two authoritative sources and then provide you with my commentary, drawing upon my professional experience. In addition, I have added a section to list issues that are topical to SCF but not covered in the authoritative sources. Then at the end of the chapter, I will share with you my views on the likely future.

Why Is Supply Chain Finance So Important?

Imagine an uninterrupted digital network connecting the entire world comprising the financial and underlying data detail of every transaction of every micro, small, medium, and large business, every government department, and thus effectively, every person on the planet. Then imagine all that data is accessible and available to create new, highly disruptive business models. That is the size of the potential market for SCF. It is the largest untapped market in the world – in 2015, McKinsey estimated the size of the financeable trade payables market at $2 trillion (https://www.mckinsey.com/~/media/mckinsey/dotcom/client_service/financial%20services/latest%20thinking/payments/mop22_supply_chain_finance_emergence_of_a_new_competitive_landscape_2015.ashx) – and that is just the aggregate value of the accounts payable balances. More recently, Greensill estimated that the size of the potential financing flows at $56 trillion market (https://www.greensill.com/whitepapers/an-introduction-to-supply-chain-finance/).

The value of the data that accompanies those financial transactions is a platform for the future prosperity of humanity or potentially the means with which to enslave it. The question is, who owns the data and how will its value be realized? Traditionally, data associated with those transactions has sat in isolated silos, written on pieces
of paper, or held in local client-server accounting systems in a box under your desk. But now, the world’s trading data is being migrated into the cloud and is becoming accessible. Supply chain finance provides the core business case for accessing that data. Some say that “data is the new oil” (https://www.wired.com/insights/2014/07/data-new-oil-digital-economy/) because of the power and wealth that it promises. And therein is a warning about the ethics of FinTech and Trading: Some people who chase power and wealth are nice, but not kind. The potential for power that comes with control over Data + Liquidity is immense, so some governments have begun to colonize the digital landscape. Some governments have even demonstrated they are willing to compromise their standards and harm small businesses all over the world to gain control over data. Colonization of the digital landscape risks becoming as insidious as colonization of the physical landscape in past centuries, particularly if it undermines the potential of Liquidity + Data for capacity building in all countries, including, developing countries. The potential to create new wealth from this data is real: tens of trillions of dollars in new wealth from digital disruption opportunities, in addition to the financial value of the liquidity flows. That combination of Data + Liquidity will eventually be like the nervous system for one or more super intelligent AI capable of a global perspective that is out of reach for humans. Therefore, now is a good time to think about the control systems to mitigate humanity’s risks from authoritarianism, because regardless whether it is AI or human, authoritarianism is a threat to democracy and human rights.

In regions that want their own identity while remaining part of a larger national or regional economy such as Catalonia, supply chain transparency enabled by the combination of Data + Liquidity could empower the region’s economic independence by delivering new value from data released silos in supply chains in which Catalanian businesses participate in Spain and the rest of the world. The opportunity for identifying new business models from the data is Greenfield, so at this moment in time Catalonians have an open shot at goal. Data + liquidity really is either the enabler, or the end to humanity’s freedom; it is the decisions our generation and the next generation will make that will determine which it is, and that is the context with which the ethics of FinTech and Trading and the importance of SCF should be considered.

The Need for a Minimum Set of Ethical Standards for FinTech and Trading (SCF Context)

The following paragraphs draw upon my experience as a leader in the FinTech industry and Leire San-Jose and Christopher J. Cowton’s paper on the ethics of trade credit (Cowton and San-Jose 2017).

1. The need for a formal standard to distinguish between “operating” trade credit and “financial” trade credit
Cowton and San-Jose point out that “Trade credit is created when a supplier provides goods or services to another firm in the expectation that payment will be received at a date in the future. Instead of payment in cash or near-cash, the goods or services are supplied “on credit,” usually with an invoice that specifies the payment terms (e.g., payment to be received within 30 or 60 days).” (Cowton and San-Jose 2017, p. 674).

**Comment:** standards to report the difference between “operating” trade credit and “financial” trade credit already exist, but they are being compromised in a geopolitical struggle for control over Liquidity + Data and by a failure of governments and politicians to defend our social contract against senior executives at corporations, vendors, and institutions who are willing to misuse their market power to seize an unfair advantage. The standards include the accounting standards that distinguish between “Trade Payables” and “Financial Liabilities” which are reported separately in statutory financial statements, and have significant implications for calculation of gearing ratios and thus a corporation’s legal obligation for managing risk as described in bank covenants. Following special focus by the UK Cabinet Office on the practice, large accounting firms in London began to sign off Statutory Financial States for listed companies who were using “off balance sheet financing.” Several subsequently collapsed, taking down family-owned suppliers with them. The explosion in cheap debt around the world, which has damaged the ability of the global economy to recover from the pandemic, was not the fault of the former UK Prime Minister, David Cameron. However, he signed his name and that of the Office of the Prime Minister of the United Kingdom up to practices such as delayed/nonpayment of suppliers invoices, pushing out payment terms to remove suppliers’ choice and to force them to fund the working capital requirements of large buyers in a blatant abuse of market power that was specifically identified as such within Citibank when I worked there, by the US government under President Obama, and more recently by Australia’s Conservative Federal Government.

The use of off-balance sheet financing to make the balance sheets of large corporations appear more efficient while misleading banks and investors as to the true nature of a corporation’s risks, and abusing small, family-owned businesses to remove their choice and effectively turning them into banks, is a blatant breach of our Social Contract. There must be a better way to deploy SCF.

2. The Need for a Formal Standard to Specify the Purpose of Trade Credit

Cowton and San-Jose’s paper “develops a framework for thinking about it (trade credit) by grounding the granting of trade credit in the underlying provision of goods and services used by a purchasing firm in pursuit of its productive activities.”

- Trade credit can enable a company to increase sales.
- Trade credit can enable a company to ramp up production.
The purpose of trade credit has traditionally been governed by a business convention. This is a good example of an unwritten law that has governed trading for hundreds of years. I think of these conventions as part of our Social Contract. The risk with FinTech and Trading is that these business conventions upon which our economy depend are not coded into the new trading systems and that may result in a loss of one of the key advantages of English Law over alternatives.

3. We Need Standards, so We Can Defend Our Social Contract

For many small firms, companies trade credit is the only source of external financing. It enables buyers to receive necessary supplies in advance of receiving payment for their own products, thus helping to support their production processes and economic activity. However, it puts a strain on suppliers’ own financial resources because goods or services are produced and provided without, at least for a time, receiving cash. (Cowton and San-Jose 2017, p. 674)

- “Man is born free, but he is everywhere in chains” (Rousseau 1762). “Rousseau asserts that modern states repress the physical freedom that is our birthright, and do nothing to secure the civil freedom for the sake of which we enter into civil society. Legitimate political authority, he suggests, comes only from a social contract agreed upon by all citizens for their mutual preservation (https://www.sparknotes.com/philosophy/socialcontract/).” The COVID-19 pandemic has shown just how badly our social contract has been broken by parties on both sides of the political spectrum. It is an opportunity because it has revealed facts that we have previously hidden and priorities that may previously have been forgotten or misunderstood.

- Donaldson and Dunfee describe the Social Contract as “an existing (extant) implicit contract that can occur among members of specific communities, including firms, departments within firms, informal subgroups within departments, national economic organizations, International economic organizations, professional associations, industries, and so on. The aggregate of these extant social contracts contains much of the substance of business ethics” (Donaldson and Dunfee 1994, p. 254). Their paper provides a detailed analysis of the ethics of the Social Contract, some of which might be a bit socialist. However, at the other end of the political spectrum, I think Objectivists’ simple articulation of the value of the Social Contract is probably the best: “Because there are no conflicts of rational interests among individuals, the proper society is one in which individuals cooperate for mutual advantage, exchanging value for value (Miller, Foundations Study Guide: Political Philosophy, 2010)” (https://atlassociety.org/commentary/commentary-blog/3634-foundations-study-guide-political-philosophy). So, independent of left-wing socialism, our unwritten Social Contract is justified simply on the grounds of rational self-interest. It offers at least some common ground for everyone.
• The rules that govern trade credit are described in the case law that applies to Bills of Exchange, in religious laws, in accounting principles, and in the business conventions that govern the heart of the Social Contract. The purpose of trade credit was always limited to the working capital required to support the cash cycle of the joint endeavor of the economic actors in a supply chain and not more than that. We know that because that is how the accounting disclosures in balance sheets for investors and other stakeholders used work before they were degraded in the current geo-political struggle for control over Data + Liquidity.

• But as the scalability of treasury technology gradually evolved from low-volume, high-value transactions conducted in ivory towers, to also provide oversight of the processing of high volumes of low value operating payments in Accounts Payable, so did the scrutiny of the group treasurer. Fresh from her ivory tower, unconstrained by the business conventions honored by local Procurement and Accounts Payable with their local small suppliers and communities where they did business together, she now had oversight and policy control of payment operations. Some group treasurers, financially incentivized by their boards, used market power to trash those old, unwritten Social Contracts and force family-owned businesses to supply them with finance beyond mere trade credit, to make balance sheets appear more efficient while misleading users of financial statements on corporations’ risk. Many of the performance targets for which Group Treasurers have traditionally been rewarded have no direct relationship with our Social Contract. And the controls that traditionally safeguard small businesses against such parasitic practices were bound in our Social Contract, laid down through business convention a long time before “Corporate Treasurer” was even acknowledged as a profession let alone had oversight of operational payments to suppliers. Some Group Treasurers are using nonpayment of invoices (removal of choice) as a tactic to force their suppliers onto third-party vendor systems where suppliers risk loss of control over their data and its value. Shortly after I founded Obillex Limited, the group treasurer of Carillion Plc told me that if he could not screw his suppliers with a new financial product, then he would not be interested using it. That is how he interpreted his job mandate. Carillion later collapsed, owing its suppliers hundreds of millions of pounds. When BREXIT came along with the potential of using emerging technology to concentrate data (the new oil) into London, UK establishment institutions including its Government, apparently supported by several Big Four accounting firms, and the Association of Corporate Treasurers worked together to try to seize the opportunity.

• Historically, the technology capability required to release supply chain data from millions of fragmented data silos did not exist, and so the data was not available for processing. However, technologies such as cloud are now making that data available. By some estimates, the value of the data is worth tens of trillions of dollars. Unless we have standards over how the value from that data is released and stored and to whom the value accrues, it will just be a stampede with governments and large corporations trampling the rights of people and small business owners. Our Social Contract was one of the casualties as authoritarian
governments (some nominally democratic) try to force small businesses to give up their data to governments or large corporations controlled by a politically connected “Top End of Town” elite. One of the biggest risks is that the potential of data (FinTech, RegTech, AgTech, and other Tech) to deliver capacity building in vulnerable communities may be lost.

- Historically, the technology capability required to usefully process vast amounts of data from supply chain transactions were not available, and so the legal precedents needed to govern rights over the ownership; control and use of that data have not yet been fully established. However, the technology is now available, and a geopolitical battle is currently taking place for control over data (the new oil) and for the value it contains. The risk is that nations will compromise their standards, including standards of ethics, accounting standards, legal standards and human rights standards to seize control of it. And that is a threat to all of us. The issue the Trump Administration has articulated with WeChat is an example (https://www.ft.com/content/a7e1d9cf-9d86-4a87-8e03-37a6a2327390). It is a legitimate concern.

Cowton and San-Jose go on to say “Delay (or, even worse, default, the possibility of which tends to increase with delay) in paying by customers, especially major ones, can have severe, if not fatal, financial consequences for suppliers, which in turn has repercussions for their own suppliers and other stakeholders, such as employees.” (Cowton and San-Jose 2017, p. 675).

In my experience:

- Buyers and suppliers have a range of responsibilities to each other and to the communities where they do business. These are unwritten conventions we call our Social Contract.

- Given the risk to suppliers increases when buyers delay in payment, small suppliers should be entitled to outsource their credit risk management to capital markets where credit risks can be managed efficiently. That is achieved by making the confirmation that an invoice has been approved for payment available to suppliers on the same day the invoice has been submitted for approval. The technology is already available. FinTech can give suppliers the option, but not an obligation to take early payment, and competitive capital markets can give them the best pricing for the early payment and services such as management of their credit risk on outstanding invoices not yet paid by large buyers.

- Digital integration technology now makes it possible for small- to medium-sized suppliers to efficiently outsource their credit risk management function to capital markets, not just for the money they are owed by large businesses, but at volume, even for the money they are owed by other small businesses. And capital markets can trade with small suppliers’ access to liquidity that is priced below small suppliers’ weighted average cost of capital and even below small suppliers’ cost of debt, so that allowing small suppliers to outsource their credit risk management function to capital markets can be very profitable for them indeed.
• If it is done at scale, there may even be potential for suppliers in developing
countries to outsource their credit risk management function for their trading
activity with each other to capital markets and to obtain a short-term credit rating
to better manage working capital and to enable capacity building and growth.
Lack of a short-term credit rating and lack of access to liquidity are key con-
straints to growth for many small businesses in developing countries.
• Capital Markets are a suitable match for any large business that might be
contemplating using their market power to abuse their relationships with small
to medium-sized suppliers. Capital Markets play an important role influencing the
credit rating of large companies. If a large company default on its payment
obligations to small suppliers who outsource their credit risk management to
capital markets, the slap they receive from capital markets will hurt. A lot.
Because Capital Markets calls late payment a “default,” even if the late payment
is for a debt that was owed by the big corporation to a little family-owned
business and then transferred to capital markets. Buffer systems can (and should)
be built in to lessen the damage to a big business that can be caused by Capital
Markets if they accidentally pay their trade payables late. The implication is late
payment by big corporations to small suppliers and is far less likely if Capital
Markets (or an associated agency) is the debt collector. And from a systems
perspective, given the group treasurer is accustomed to dealing with Capital
Markets and is treating suppliers like banks, closing the loop, and bringing capital
markets in as the big corporation’s debt collector from hell, has a certain balance
about it.

4. We Need Standards Because Conventional Teaching on Trade Credit Is Immoral

Cowton and San-Jose state “Conventional wisdom regarding the taking of trade
credit—as reflected in financial management texts, for example—is, at best, amoral,
and perhaps immoral” (Cowton and San-Jose 2017, p. 676).

• One does not need to be a socialists to make this case. It is entirely within the remit
of traditional, conservative capitalism to make this judgment. The world’s rules
are based on an international order that has been unbalanced by BREXIT and
attempts by the UK to seize control over Data + Liquidity as it finds a place for
itself outside the European Union. In relaxing its standards to increase its com-
petitiveness as it positions for BREXIT, the UK has damaged the global economy.
We need to get back to win-win outcomes for humanity. For those of us who
believe in it, we need to reaffirm our commitment to freedom, democracy, and the
Rule of Law, because humanity is facing an inflection point in the fight between
democracy and authoritarianism, and the global digital economy will eventually
deliver a decisive winner.

• In 2014, President Obama announced the SupplierPay Pledge to a set of strict
ethical standards that were consistent with the minimum standards proposed by
Citibank for a transaction banking product to be promoted by the President.
Around the same time, the UK Prime Minister, David Cameron, who was contemplating a BREXIT referendum, announced a similar promotion but at a much lower set of ethical standards. Off-balance-sheet finance transactions saw financial liabilities classified as trade creditors on balance sheets by CFO’s of large companies and signed off by their auditors. At least some of the Big Four accounting firms corrupted generally accepted accounting standards, conventions and our social contract and with enthusiastic support from Association of Corporate Treasurers (ACT) qualified Group Treasurers. Investors are being misled as to the true nature of the liabilities of large corporations. The relaxation of existing standards of disclosure has led to an explosion in cheap debt described as “off balance sheet finance” that is contributing systemic fragility to the global economy. Along the way, overleveraged companies such as Carillion Plc, BrightHouse, NMC Health, Agritrade, and Abengoa collapsed, harming communities and tens of thousands of small- to medium-sized businesses all over the world. We need existing standards, including those pertaining to financial reporting of balance sheet disclosures for investors and supply chain stakeholders, to be defended. That means, if trade credit is extended beyond the buyer’s cash cycle, the difference is accounted for as a financial liability.

- Conventional teaching may refer to the idea of mandated 30-day (Australia) or 60-day (United Kingdom) payment terms. Both are immoral because neither of them bears any relationship with the purpose of trade credit. Both lack reason! Trade credit should be based upon the cash cycle required to convert production into cash receipt from sales. Thirty days is an approximation that is appropriate for most small business-trading activity with other small businesses. But in some industries – construction, for example, the cash cycle can be significantly longer. If politicians want to make a point about payment times, their focus should be on the time it takes a large buyer to approve an invoice for payment after it has been received. Technology advances including AI and an electronic three-way match (Purchase Order, Goods Received Note and Invoice) mean that approval time for an invoice should be same day unless an issue is identified.

- Not only are some of the recent supply chain finance practices unethical, a breach of business convention, and a breach of our Social Contract at the microlevel of the individual supplier, but also when these practices are scaled up across a nation or at the global economy, it results in outcomes that are significantly against the public interest. For example, cheap debt scaled up to a macrolevel has made the global economy more fragile, and that is making it more difficult to recover from the current economic crisis. Parasitic business practices in breach of our Social Contract expose the world to greater systemic risk.

5. We need standards to protect rights and opportunities for participants in extended supply chains and for the communities where they live.

Cowton and San-Jose point out: “The inappropriateness of suppliers acting as providers of financial capital is reinforced if stakeholders are considered. Given that a supplier’s stakeholders (such as employees, its own suppliers and local
community) can be adversely affected if it has a major customer default or delay significantly on payments, then it can be argued, generally, that suppliers are under an obligation not to grant trade credit inappropriately” (Cowton and San-Jose 2017, p. 680).

- So, the risk posed by Cowton and San-Jose is that if a supplier grants trade credit to its customers beyond the cash cycle and thus begins acting like a bank, then that might have knock-on effects and risks damaging the entire supply chain. In 2020, the risk became an issue because of the impact that excessive corporate debt is having on hindering the COVID-19 economic recovery.

Cowton and San-Jose point out that in calculating the maximum ethical period for trade credit: “Thus suppliers can be seen as taking part in a joint enterprise with their business customers. Suppose the purchasing company/debtor is a supermarket that sells to the final consumer on a cash basis. The supplier provides goods to the retailer, whose role is to get the supplier’s product to market. Once the final consumer pays, then a sum of money becomes available to pay the supplier, with the balance remaining with the retailer to pay its other costs and generate a margin. Not only can this be seen as a joint enterprise, but imagine if the supplier were vertically integrated to the final consumer market—it would still have to wait until the final consumer paid before it had the money earned by its efforts. This scenario demonstrates that it is reasonable for the business customer to take trade credit while both it and its supplier wait for a sale to be made, and cash received, in the final product market (here, the supermarket). However, once the cash is received, the supplier should be paid immediately; there is no longer any justification for taking the trade credit, and to hold the money back is to forcibly borrow the money due to the supplier, with implications for financial positions within the supply chain. This analysis thus argues that the trade credit period can justifiably be as long as, but no longer than, the period taken to receive the money from the final consumer. At that point, the rewards of the joint enterprise should be shared between the collaborators in accordance with the terms of an appropriate agreement between them. If the supplier is not paid by that point, the position moves from one of real or “operating” trade credit to one of “financial” trade credit. Moreover, rather than there being a collaborative endeavour under way, the continued taking of trade credit can be viewed as exploitative; the business customer is hanging on to the supplier’s money simply because it can. If a trade debtor wishes to have more cash in its possession, it should go to a bank or similar source of funding” (Cowton and San-Jose 2017, p. 679).

- The point about entire supply chains working together in a “joint enterprise” is crucial. It provides an explanation as to why businesses work together in a supply chain.

Cowton and San-Jose state “If suppliers matter as a stakeholder group—either in themselves or as the embodiment of a network of indirect stakeholders—then
trade credit matters, since it affects their ability to survive and flourish” (Cowton and San-Jose 2017, p. 676).

- Governments are currently attempting to enable digital integration through top-down institutional pressure (market abuses of power, regulatory pressure, and procurement pressure) against small family-owned businesses. If top-down pressure fails, then the alternative is education and bottom-up democratic dialog and change.
- The greatest value from Data + liquidity for people only arises if data currently sitting in silos within the same supply chain but in different countries is released. Data + liquidity information belonging to small business owners is most valuable when it can flow seamlessly across borders while simultaneously respecting the sovereign rights of people and nations. Standards are required so that the full value of released data can be enjoyed by humanity because the greatest value can only be created if Data + liquidity is able to flow across borders. That will only be possible if there is an agreement to enable international collaboration. Conditions are emerging for that type of agreement to be reached (@ 5th September 2020).
- Small- to medium-sized family-owned businesses are core foundations of both democracy and capitalism. They represent resilient supply chains, prosperous communities, disruptive innovation, and endeavor. But they lack market power. So, that is where our focus for building a platform for prosperity from data should be.
- A standardized, global digital working capital regime (digital supply chain finance) has the potential to connect small businesses to Capital Markets for liquidity for growth and for risk management services. Buffer systems can address capital markets’ requirements for standardization and volume.
- Choice and win-win outcomes are important. There is a belief emerging among democracies that China’s authoritarian regime may be pursuing a win-lose strategy for humanity and for democracy, including by displacing our relationships with emerging markets that were once “colonies” of European countries. The large size of China’s economy means that its Data + liquidity flows will have greater critical mass than most developed nations and that is their competitive advantage. If our democratic model is going to survive the competition, we need international standards and teamwork on Data + Liquidity to regain our competitive advantage. In the digital economy, our relationships with former colonies are fragmented because they are based on “analogue” relationships. Teamwork on development and adherence to standards for the global digital economy will deliver the win-win outcomes needed for democracies to recover our competitive advantage over authoritarianism including removal of choice. The global growth potential from a market governance model that safeguards win-win outcomes is extraordinary. Note that while I am up for the competition, I have no issue with the Chinese people. When my Grandfather, who was my mentor, spoke to me about China, he emphasized the potential value of dairy to their food security. He
believed top quality food security is mutual ground for anyone who has common sense.

- Note, however, that authoritarian models can also emerge in democracies. In Australia, the implementation of the Modern-Day Slavery Act was followed by Australian Border Force raids on Rural Communities in search of undocumented workers, many of whom have lived in Australia for up to two decades. As at 5th September 2020, the Australian Federal Government is preferring to confront and criminalize family-owned farms for their use of undocumented workers, instead of bringing those workers into the regulated economy and then use the associated potential for supply chain transparency to close down horticulture as a channel for human trafficking into Australia and exploitation, while delivering an economic boom from demand from a productive newly legal workforce of 70,000 people who actually want to live with us in Rural Australia (most new immigrants want to go to the big cities). In the wrong hands, supply chain transparency can be a bad thing, even in democracies. We need standards so we can develop a Data + Liquidity solution that will compete with solutions from China and without using the resulting supply chain transparency to engage in human rights abuses ourselves.

- Note that I am optimistic that the Australian Federal Government will eventually do the right thing; given my expert insights and ability to offer the government a better solution, I am giving them a particularly hard time on this point. It directly affects the community where I was born and grew up, and where my family have lived for more than a hundred years.

6. We Need Standards to Regulate the Mandate of Group Treasurers

The liquidity flows and responsibilities for which the performance of a group treasurer of a large global multinational is assessed may be much larger than any bank. But the functions of a corporate treasury are only lightly regulated, if at all. And the changing potential of technology has transformed the group treasurer from an isolated figure in an ivory tower to core payment operations personnel.

Treasury (FinTech) applications have become vastly more powerful than ever before, and for the first time in human history, global multinational treasury departments are plugging in Artificial Intelligence to screw as much value out of small businesses as they possibly can (think about that Authoritarian, top-down political philosophy). FinTech technologies have evolved from isolated spreadsheets on your computer to spreadsheets stored on a client server, to sophisticated client server corporate treasury technology workstations comprising a rich product feature set, to Internet-enabled technologies to n-tier technology, to ERP solutions that connect global multinational corporations’ high-value/low-volume “ivory tower” corporate treasury teams to their low-value/high-volume local procurement and accounts payable operations and payments departments all around the world, and then finally to cloud-based FinTech applications that also give the group treasurer overseer visibility of supply chain counterparty relationships.
everywhere. At each stage in the evolution of the technology, more and more datasets were released from enterprise silos and made available to increase shareholder value. However, now for many large corporations, the next stage in their evolution has been to try to gain access to counterparty data that at least belongs equally to their small, medium, and large suppliers, and it is that fight for control over data where major ethical issues in FinTech began to arise. And now that fight for access to and control over data is being scaled up to the macrolevel of nations, both the potential of the data for industry-wide digital transformation and the ethical-associated ethical issues have begun to become intense.

On the website of regulator Australian Competition and Consumer Commission (ACCC), in a paper on misuse of market power, the ACCC states “a business with a substantial degree of power in a market is not allowed to engage in conduct that has the purpose, effect or likely effect of substantially lessening competition in a market” (https://www.accc.gov.au/business/anti-competitive-behaviour/misuse-of-market-power). The ASBFEO’s Final Report demonstrates that the issue of misuse of market power in the global SCF industry is currently widespread.

Big corporations are much more likely to be able to exercise misuse of market power over small suppliers. Misuse of market power may occur when a big buyer delays payment to suppliers, who are then offered a loan from a third-party vendor working with the big buyer, as a way of getting paid. The delay in payment is typically not being forced on the joint enterprise by a lengthening of the buyer’s cash cycle. The vendors involved are typically a lender and a supply chain finance FinTech with an eInvoicing system attached. They are employed by the buyer, and they exercise the buyer’s authority and market power. The buyer typically receives kickbacks in the form of money (or discounts) and data. In return for the “rent” the vendor pays the buyer, the vendor gets to exercise the buyer’s market strength, often in conjunction with the market strength of other big buyers. The implication is that these systems are capable of working for a network of buyers to yield enormous market power, forcing suppliers onto “top down” data integration solutions (abuses of market power against small businesses by big businesses working together via top-down eInvoicing/supply chain finance networks).

There is another way to build the digital integration network: from the bottom up (or a combination of bottom-up and top-down).

**President Obama’s SupplierPay Pledge**

In early 2010, I had just started a new role with Citibank Europe Plc in Dublin, Ireland. I was hired to help Citi deploy a new electronic transaction banking platform, like the one I had already deployed successfully to 56 countries around the world for Dutch bank ABN AMRO. However, shortly after I commenced work, Citi decided it had backed the wrong technology and would have to start the
software development process again from scratch. I was told to “go find something useful to do.” My senior sponsor at Citi invited me and my personal mentor to dinner with a senior member of Citi’s Supply Chain Finance team (Banker X) and another guy, who helped create Kenya’s M-Pesa mobile payments solution. After dinner, we were treated to a performance by Banker X as he put on a solemn face and delivered his sales pitch for SCF – “it is good for large corporate buyers, it is good for their suppliers, it is good for their employees, it is good for communities, etc.” As I listened to the pitch I thought, hmmm, but if all of what I had heard is true, then why is not SCF being promoted as core government policy? I was thinking deeply about a pledge I gave my grandfather as a 14-year old, to dedicate my career to food security. In the months that followed, I began developing an idea that could scale supply chain finance up so that it could harness the trillions of dollars (https://www.irishfunds.ie/facts-figures/irish-domiciled-funds) including profits of global multinationals from the United States and other countries, concentrated into Ireland for its low taxes but then trapped there in enormous money market funds. The money is trapped in Ireland because if it is repatriated as dividends back to (say) the United States, it attracted corporate tax at the rate of the US-Ireland tax differential (22.5% at that time). I understood that if US multinationals simply paid their suppliers early, their trapped profits could be repatriated to the USA without having to pay tax on it. I also understood that self-funded supply chain finance is consistent with the fiduciary obligations of C-level executives at listed corporations because they could earn a yield on their early payment. But how to get the CEOs of large corporations to prioritize SCF? Around that time, I had been introduced to an American lobbyist. She pointed out the Billionaires Pledge that Warren Buffett and Bill Gates had just announced. Why not call it a pledge? I loved the idea. It was entirely consistent with the pledge my grandfather had invited me to take and with the Social Contract that he had demonstrated to me when I was growing up in our small rural community back in Australia. In the heart of this corporate supply, chain finance pledge was the pledge I had given him during the Ethiopian Famine. The lobbyist said she believed she could position the idea with the White House to get an event hosted there with the CEOs of some of the USA’s largest companies for the purpose of getting them to prioritize SCF at the top of their to do list, to get liquidity flowing back through the US economy. And that is how the original concept for President Obama’s SupplierPay Pledge was born.

I began socializing the idea for the SupplierPay Pledge among Citigroup’s leadership team. Some loved the idea, and others worried that it might be perceived by the market as Citigroup using its relationship with the US government to try to pressure the leaders of US companies to adopt a Citigroup transaction banking product.

Citigroup had only recently been bailed out and was now largely owned by the US taxpayer. When bankers know they are backstopped by the taxpayer, they may take excessive risks in pursuit of bonuses because they know that if anything goes wrong taxpayers will foot the bill (moral hazard). From the perspective of those
bankers in pursuit of bonuses, the bigger the risk the better. And here, Citi was prevaricating in the middle of a crisis that it could help to resolve.

I became even more suspicious when Banker X told me that everyone senior at Citi knew that its corporate and social responsibility activities were just a function of its marketing activities and not serious. I began to lose trust in Banker X and some of the other bankers I had met at Citibank. I doubted their commitment to corporate and social responsibility after they described it to me as “just a marketing ploy,” and I feared they might somehow steal my idea. So quietly, I applied for a trademark for my working title “Supplier Finance Corporate Pledge” (https://trademarks.justia.com/851/32/supplier-finance-corporate-pledge-85132871.html). I then allowed my trademark application to fail because I wanted the indelible link, but I did not want to be accused of stealing Citigroup property. I decided to keep it as a “surprise” on the basis that if my concerns were unfounded it would not matter, and if my fears were real, it was better to stay quiet.

Then the Irish economy went into its 2010 economic meltdown, and in the news, President Obama announced a call to arms to protect the US economy from a liquidity crisis with a $50 billion stimulus package. But the media said he was struggling to get his spending bill passed by the US Congress (https://www.nytimes.com/2010/09/07/us/politics/07obama.html), and I had a realistic opportunity to respond to the President with an idea to help the US economy recover. Citi was prevaricating. I had an Irish contact with connections with a senior member of the US National Security Council. I asked for advice from my Citi sponsor and Banker X, and they both encouraged me to go to a meeting with the US NSC staff member (while both declined my invitation to join). At the meeting, after I pitched my idea, he said to me quietly, “Mr Crowe, that is the best idea I have ever heard from a banker.”

In 2014, President Obama announced “the SupplierPay Pledge” (https://obamawhitehouse.archives.gov/sites/default/files/docs/supplierpay_pledge.pdf). It became White House and US Government policy and got billions of dollars of new liquidity flowing through the American economy. It became one of the most successful Obama policy initiatives (https://www.commerce.gov/sites/default/files/migrated/reports/supplierpayv25.pdf). I quietly received permission from the US National Security Council staff person to whom I first presented the Pledge to be allowed to say that I “responded to President Obama” following his call to arms to support the US economy during the 2010 liquidity crisis.

However, the SupplierPay Pledge had significant weaknesses. It is an analogue solution, and I had an idea for a digital supply chain finance (data + liquidity) upgrade to the Pledge. I was made redundant by Citigroup, but a wealthy business associate and friend, Les Halpin, invested £500,000 to help me start up a UK-based FinTech to develop the upgrade. The way I saw it, the SupplierPay Pledge was like a bazooka against a liquidity crisis. But I was now starting work on something truly transformational for humanity – the solution to the pledge I gave my grandfather, way back when I was just a child during the Ethiopian Famine. And I had found a mechanism to do it that could deliver win-win outcomes for all stakeholders.
**SupplierPay Pledge**

Strengthening small business access to capital is a ‘win-win’ for small companies and us, their large customers. We recognize that we thrive when supply chains are healthy, when firms of all sizes are able to support our growth, investing in new ideas and new equipment, and creating new jobs. We do best when Main Street is strong, as small businesses are critical to our reaching our full economic potential as a company and a nation. Small firms are responsible for the majority of U.S. job creation and generate close to half of U.S. gross domestic product. While small firms have made momentous strides in recovering from the depths of the Great Recession, too many small businesses continue to struggle to access capital, including working capital, which creates a drag on growth and employment.

We are committed to addressing this marketplace gap in small business lending. Our efforts are intended as a meaningful step in reinvigorating our supply chains, making them more resilient over time while supporting Main Street today. Accordingly we resolve to:

1. **Provide A Working Capital Solution to Our Small Business Suppliers**: We will take active steps to lower the working capital cost of small business suppliers through either:
   - Paying our small suppliers faster than we do today in order to reduce their capital needs.
   - Enabling a financing solution that helps small suppliers to access working capital at a lower cost.

2. **Share Best Practices**: Our pledge is a first step in a larger effort to strengthen supply chains and support small firms with the goal of driving impactful follow on action from the broader marketplace. To encourage wider support, we’ll highlight tangible outcomes for our own efforts, providing visibility into our actions and publicize key learnings in implementing this pledge.

3. **Implement a ‘Win-Win’ Solution**: We will implement this pledge in a manner that ensures our small suppliers are able to take advantage of our commitment while minimizing new administrative or operational burdens. We will define ‘small supplier’, and if we choose to offer these solutions to the entire supply chain we will continue to focus our efforts on the small suppliers that will benefit most. We will not use our pledge to offer financing solutions as a means of extending payment terms with our current small business supplier base.

Courtesy Barack Obama Presidential Library. [https://obamawhitehouse.archives.gov/sites/default/files/docs/supplierpay_pledge.pdf](https://obamawhitehouse.archives.gov/sites/default/files/docs/supplierpay_pledge.pdf)
The SupplierPay Pledge got billions of dollars flowing through the US economy. However, as an analogue solution, it had some major weaknesses. For a start, it had no compliance monitoring capability. It was too easy for a large corporation to sign the Pledge even while systemic risks were rising because of non-compliance on a massive scale. Banker X resigned from Citi, partnered with the UK Prime Minister, David Cameron, and together they began promoting an unethical version of SCF to large UK Corporations, delaying payment to family-owned businesses in the UK, USA, and all over the world, forcing them to take out a loan with Banker X and to give up control over their data to get paid on time. At Citi, we had specifically precluded such tactics as “unethical,” particularly in terms of an endorsement by the President, so why was David Cameron using the Office of the Prime Minister to promote a solution that had already been ruled out as unethical? I watched as some of the Big Four accounting firms in the UK quietly dropped their responsibility for ensuring that balance sheets accurately depict the difference between trade finance and financial liabilities on the balance sheets of listed UK companies and then watched as large companies such as NMC Health (https://www.ft.com/content/4dbbe048-a426-4551-9c4f-3968235adcdb) (UAE) and Carillion Plc (https://www.nortonrosefulbright.com/en-us/knowledge/publications/f5497f95/supply-chain-finance) (UK) and Abengoa (https://www.theguardian.com/business/2015/nov/25/citi-criticised-investor-abengoa-collapse#:~:text=Abengoa%20shares%20dropped%2070%20%25%20in,of%20%E2%82%AC2.80%20a%20share) (Spain) and Agritrade (https://www.reuters.com/article/us-agritrade-international-banks/banks-accuse-singapore-commodity-trader-agritrade-of-massive-fraud-idUSKBN20T1E4) (Singapore) and others collapsed with enormous off-balance sheet financial liabilities and allegations of fraud, wiping out tens of thousands of unsecured trade creditors. I watched as Banker X and the former Prime Minister lived a luxury lifestyle, all the while using delayed payment to force millions of suppliers all over the world to take out loans to the tune of hundreds of billions of dollars, just to get paid on time. Soon, their practices were being copied by other vendors, and misuse of market power by large corporations and even governments against small suppliers became acceptable behavior in the rush to seize control of the new gold. When I bumped into Banker X in Victoria Street near Westminster 1 day, he threatened me if I ever told anyone about my role creating the original concept for President Obama’s SupplierPay Pledge. And almost none of the senior people I worked with at Citibank stepped forward to point out that it was me who had developed the idea for the Pledge and then took the risk with my career to position it with the US Government. But only “almost.” Eventually, when the economic crisis following the COVID-19 pandemic came along, the global economy had been so weakened by the use of “balance sheet engineering” in the form of big corporations using small suppliers like banks, our economic recovery from this crisis has been made so much more difficult than it would otherwise have been without these unethical practices. There is now sufficient public interest for me to go public with the truth. There is still an opportunity for a model that defends win-win outcomes.
**Voluntary Codes Do Not Work**

The problem with the Pledge and with other voluntary codes is that they do not work. They have no effective monitoring mechanism. Per Cowton and San-Jose: “There have been multiple voluntary codes for dealing with late payment in the UK, but none have been successful at eliminating the scourge of late payment by big business of their debts to small suppliers” (Cowton and San-Jose 2017, p. 676).

- *The Prompt Payers’ Code (1991), developed by the Confederation of British Industry (CBI)*
- *The Better Payment Practice Code (1997), developed by the Dept of Trade and Industry (DTI)*
- *Prompt Payment Code (2008)*
- *Payontime initiative (2008)”*

Payment terms in an industry should reflect the cash cycle for that industry. The most important thing is how fast a buyer communicates to a supplier that their invoice has been approved for payment – technology means that same day approval is now possible. In terms of supply chain finance, the key to a successful solution is something that is consistent with a CEO’s fiduciary obligations to shareholders and to the Social Contract, and that gives suppliers an opportunity to exercise fully informed choice.

**Obillex and the Ethical Digital Supply Chain Finance Product Suite**

After I was told I was being made redundant by Citigroup, I met with a friend and former business associate, Les Halpin, who had been the CEO of a corporate treasury technology company (Integrity Treasury Solutions) when I was a corporate treasury systems expert at PwC UK. I told him about an idea I had, to use paper bills of exchange legislation on the books of almost every Commonwealth country in the world. I believed we could develop an open and tradeable, quasi-sovereign dematerialized (digital) version of the bill of exchange and use it with a strategy to overcome the shortcomings of the SupplierPay Pledge. Paper bills of exchange had fallen away in their use in the 1980s following the Big Bang deregulation of the UK financial services industry because at that time, the technology did not exist to read all of the data attached to paper bills of exchange. But since then, I knew that the capacity for technology to usefully process massive amounts of data had improved. I had not appreciated it at the time, but Les was a wealthy man, and during our very first meeting over lunch, he asked me how much of an investment I was looking for. I told him £500,000. He said “Damian, you can stop looking.” And then and there, he became the first investor in the business I founded to overcome the weaknesses of President Obama’s SupplierPay Pledge. And that is how my FinTech startup Obillex Limited began.
In the following years as President Obama announced the SupplierPay Pledge, I was working away quietly on the Obillex product suite. Les had been diagnosed with motor neurone disease and had stepped down as Chairman of Obillex and was replaced by a former McKinsey partner, Alan Morgan. When I told Alan about my encounter with Banker X in Westminster, he advised me to just stay quiet about my role creating the original concept for the SupplierPay Pledge. I understood that I was working on a major upgrade, and at the time I felt there was no real public interest in me stepping forward because I did not understand that large numbers of small, family-owned suppliers were already being harmed by the practices being promoted by Prime Minister David Cameron and Banker X. That is how I rationalized Alan Morgan’s advice to me, and I trusted him at the time.

Instead, I focused on developing the Obillex product suite, which comprises the following:

- O-Bill™ – the digital bill of exchange
- FLOW-Bill™ – a version of the digital bill of exchange that allows digital liquidity to flow down a supply chain and simultaneously, for data to flow back up it
- P-Bill™ – a purchase order finance solution
- I-Bill™ – a Shariah-compliant solution for Islamic finance

The unique selling point that distinguishes the Obillex Solution from other supply chain finance solutions is that it allows liquidity and data to be transferred digitally,
through extended supply chains, and the legal framework has been validated under English law with leading British institutions.

Recently, during the COVID-19 pandemic and its accompanying global economic crisis, EY Germany and Switzerland and geopolitical strategic affairs specialist, Heiko Borchert, together with a EY German corporate treasury partner, published a joint paper based upon the Obillex “Liquidity + Data” product suite that highlights the importance of cooperation between democracies on standards for supply chain transparency. Their paper describes the Obillex product suite as “the solution to Europe’s economic recovery from the pandemic,” by specifically referencing the FLOW-Bill (https://www.ey.com/en_ch/supply-chain/the-european-way-how-to-advance-europes-strategic-autonomy (p. 7)).

The EY paper was followed up by a much shorter paper written by Heiko Borchert, which was published in the East Asia Forum, and highlights the economic and strategic security value of an effective supply chain transparency regime (https://www.eastasiaforum.org/2020/06/29/supply-chain-management-and-economic-state craft-a-five-point-agenda/).

The Importance of Defending Ecosystems

A crucial point regarding the ethics of trade credit is that buyers and suppliers are participants in an ecosystem for trading relationships that depend on the primacy of win-win outcomes for trading relationships based on choice to work.

According to Cowton and San-Jose, “It might be contended that the granting of trade credit and the payment of trade debts is simply a matter between the two contracting parties; it is open to the supplier and purchaser to agree mutually acceptable terms of trade and equally open to them to seek legal redress in civil, rather than criminal, law if the other party does not perform according to the contract. However, it will be argued below that there are two respects in which ethical, and not only legal, considerations should be brought to bear: first, because of the nature of the relationship between the two parties; and second, because of the possible impact of their relationship on third parties” (Cowton and San-Jose 2017, p. 676).

- Nature of the relationship (impacts of misuse of market power).
- Possible impacts of their relationship on third parties (ecosystem) – Justification for the FLOW-Bill.
- The systemic issue is not when poor ethical behavior by a large company affects one or a handful of small- to medium-sized suppliers. The systemic issue arises when those poor business practices are scaled up to the size of a national or the global economy . . . our experience is that the impact seriously damages the economy, undermines investor confidence, damages capital, and can result in a cascading series of bankruptcies in a regional or even national economy.
• Made worse by the issue of emerging data and digital systems integration, including rights over ownership to and control over information that will have a fundamental impact on democracy and the future prosperity of humanity.

According to Cowton and San-Jose, “A supply chain can have many links. However, the principle argued for remains the same. Once money enters the supply chain, it should pass quickly back along it, assuming payment has not already been made and received according to “standard” terms.” (Cowton and San-Jose 2017, p. 681).

Perhaps, though, following our analysis, there should, in principle, be no need to set a period of credit since, as explained, cash would simply be received and a share passed on promptly, back through the supply chain. It would thus appear that we are suggesting that money received is “earmarked” and must be paid the minute it is received. That might be possible in some special situations, but, being more pragmatic, a suitable alternative would be to set the credit period with some regard to the underlying business process. (Cowton and San-Jose 2017, p. 681)

• This is particularly important in public sector projects, where the government typically wants to minimize the cost associated with managing large numbers of suppliers by working with a managed service provider or prime contractor but needs to support as many local subcontractors as possible. Digital working capital provides a monitoring capability along the lines of “earmarked.” Ultimate buyers can ensure local small suppliers are paid on time. It would help to reverse the issue in Australia, with large prime contractors bidding for contracts at below the cost of delivery and then trying to recover a profit margin via exceptions and via screwing subcontractors (supply chain transparency).

**Philosophy of Trading**

• Win-Win outcomes because that is why trading exists (and it is why we have a Social Contract). It is when one or more actors in the ecosystem harness misuse of market power to target win-lose outcomes that everyone may end up losing.
• The potential to use data to turn compliance into a profit center for suppliers.
• The challenge of supply chain transparency in the private sector (top down red tape and regulation vs. explaining options for digital integration to small businesses and bringing them onboard enthusiastically and voluntarily because they are the big winners from the value created when data is released from silos).
• Top down versus bottom up digital supply chain finance. Who owns the data? Who gets the value)?
• Why an ethical trading philosophy is so important to supply chain finance trading strategy?
  – The potential of digital working capital to entrench democracy in the battle for supremacy – both authoritarian communism and authoritarian populism
  – Rise of the machines – how to use bottom up digital supply chain finance as a defense against the risk of disintermediation of humanity by advanced artificial intelligence
  – Focus on deployment of data for the advantage of small businesses and communities as opposed to big institutions and big business

Issues to Consider

This section, “issues to consider,” is drawn upon my experience of the issues I encountered as the founder of a FinTech.

• The problem of data silos (fragmentation of markets)
• Scaling mechanism – communities are where people live (not enterprises or central government department)
• Operations
  – Supplier onboarding strategy – mandate versus opt out versus make aware.
  – Supplier onboarding strategy – DPO extension.
  – The importance of leadership (senior sponsorship).
  – The importance of teamwork (Procurement, Technology, and Finance) in supply chain finance.
  – What does an ethical working capital pricing strategy look like?
  – How does ethical pricing of supply chain finance relate to ethical trade credit terms?
  – How to track the flow of liquidity down a supply chain?
  – KYC at scale.
  – Risk weighted systems audit.
• Ecosystem
  – Bottom-up versus top-down digital integration, the ownership of data released from silos, and how stakeholders should be rewarded for their data
  – The role of accounting firms and regulators
  – When accounting firms and regulators screw up
  – When eMarketplaces fail (e.g., construction industry – when builders and plumbers quote for work at below the cost of delivery)
  – The crucial role of Capital Markets
  – New high-yield cash-equivalent assets class (course of money)
  – Outsource credit risk
  – Competitive market for pricing trade credits
  – The role of central banks
  – The role of local banks
The issue of abuse of market power – when eInvoicing vendors lock in finance

- Model of a Supply Chain Finance FinTech

O-Bill: Process and notice framework

1. Buy er's ERP

2. Approved invoices

3. Investors

4. Receive notice of payment (Auto Discounting)

5. Maturity Reminder to pay

Notice of revenue due to BCC

Submit invoices

Receive requests and Price O-Bills

Request O-Bill Finance (Ad-Hoc) after invoice submission
[if needed, before offer to investors]

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Australian Small Business and Family Enterprise Ombudsman (ASBFEO): Supply Chain Finance Review, Final Report (https://www.asbfeo.gov.au/sites/default/files/Final%20Report%20202.pdf)

Source: The Australian Small Business and Family Enterprise Ombudsman

The ASBFEO conducted a review of payment terms, times, and practices in March 2019 (https://www.asbfeo.gov.au/sites/default/files/documents/ASBFEO-payment-times-report-2019.pdf). One of the recommendations of that review was for a further review into the impact (including ethics) of supply chain financing (SCF) options on small and family businesses. This next section looks closely at the findings in the ASBFEO’s final report, particularly insofar as they are relevant to the ethics of FinTech and Trading.

1. Ethical Issue: Politicians Have a Responsibility for Ensuring Small Business Owners Understand Their Choices

Small businesses also need to be clear about the ability for firms to collect data on them and manipulate the platforms to their detriment, as highlighted in this report. (ASBFEO SCF Review, Final Report, p. 3)
Comments: Yes. But given digital integration is happening anyway, and given it releases data and thus enormous amounts of value, politicians have a responsibility for ensuring small business owners understand the options for digital integration including the pros and cons of each option from their perspective. Governments have not done enough to educate small business owners on their options. When I spoke to an Australian politician pointing out that horticulture farmers should adopt “bottom up” digital integration of the food supply chain, his response was “but Damian, the farmers don’t want it.” I thought, how could they not want the bulk of the benefits released from digital integration flow to them, their workers, and their communities at the bottom of the supply chain instead of to the big supermarkets and category managers at the top of the supply chain? How could they prefer top-down red tape over bottom-up benefits flow to farmers? Digital integration is happening anyway, either through legislation such as the Modern-Day Slavery Act, the way Plant Breeders Rights, and the various quality platforms which are stripping data from family-owned farms, or through competitive pressures in the industry, such as e-invoicing. Then it occurred to me: The only possible reason that farmers do not favor “bottom up” over “top down” is because (a) this is actually all very new and hardly anyone understands the opportunity; and (b) government and politicians have not yet addressed their obligation to small, family-owned businesses to explain to them their options in the digital integration of their industries; or (c) they do understand, but the top end of town is busy trying to secure the opportunity for themselves. This is so important, because once digital integration is complete, it will set the future course of humanity for many years, perhaps even centuries. It is crucial that small business owners understand now, before it is too late. The world’s most valuable commodity is no longer oil, but data (https://www.economist.com/leaders/2017/05/06/the-worlds-most-valuable-resource-is-no-longer-oil-but-data). So, I decided to explain the opportunity to the farmers in my region, and now they would like a payroll FinTech in a Federal regulatory sandbox. They now understand their farm best practices are potentially products that could be distributed via global AgTech.

In my experience as a treasury systems consultant with PwC London, when a large corporation is evaluating its strategy with a view to a possible change of IT systems, all of the key stakeholders in the system are interviewed so that their requirements can be gathered. The process includes sharing with all key stakeholders of a range of strategy options for addressing both the needs of both the corporate head office as well as those of the subsidiaries and pros and cons of each option relative to the business requirements that have been gathered. The process is open and objective and helps to build buy-in from stakeholders, bottom-up as well as top-down. If I now take this back to the responsibility of our politicians: Humanity has reached an inflection point. We can choose between top-down digital integration, bottom-up digital integration (defense of freedom, small businesses, communities, democracies, and widespread prosperity), or a combination of the two. If we do not make a decision, the default is top-down, such as China (misuse of market power). That also is Australia’s current destiny (top-down) unless our politicians learn to distinguish between leadership and authoritarian domination. Bottom-up digital integration releases the bulk of the value from digital integration to small business
owners and communities. But leaders need to explain to stakeholders (small business owners) so they can make an informed choice.

**Comments:** The length of the cash cycle for each industry is already calculated, down to each major business. Digital technologies can manage the data interchange. Digital supply chain technology will allow suppliers to take payment at any point in the cash cycle, if capital markets are able to price the transaction.

2. **Public Sector Immediate Payment Terms Can Be Unethical**

“The Department of Defence has moved to paying suppliers in 2 business days, ensuring money enters the supply chain at record rates.” And: “I would also like to particularly commend businesses who have implemented immediate payment options for their small suppliers.” (ASBFEO SCF Review, Final Report, p. 3)

**Comments:** The Department of Defense early payment solution misses the Department of Defense supply chain other than prime contractors. This presents ethical issues, including:

- The DoD supplier payment policy allows prime contractors to the DoD to hoard cash while delaying payment to subcontractors. The ASBFEO writes that “business and communities operate in an ecosystem.” But the ASBFEO’s recommendations ignore the potential of digital supply chain integration and the possibility that FinTech presents for deep tier supply chain finance.
- It is possible to build a zero-knowledge SCF application that maintains the secrecy of the DoD’s suppliers, so security risks can be mitigated.
- It is more likely that subcontractors and subsubcontractors are small- to medium-sized Australian family-owned businesses than prime contractors, so the DoD policy is like a lot of Australian Government policies – biased against Australia’s small, family-owned businesses.
- The DoD supplier payment policy is inconsistent with business convention and thus represents a hidden subsidy for suppliers to the public sector.
- The DoD supplier policy undermines the potential for a business model that would allow Australian FinTechs to accelerate payment to suppliers by leveraging the Australian Federal Government’s A1+/P1 short-term credit rating. That then locks suppliers out of the additional capacity building and profit potential from the more effective use of Data + Liquidity.

There is a massive growing global market in FinTech. It is a key infrastructure of the emerging global digital economy. Australia’s DoD payment terms lock opportunities for Australian small, medium, and large businesses out of a closer funding relationship with capital markets and our FinTechs out of the rapidly growing global digital working capital market.
3. The ASBFEO’s Ethical Judgments on Buyer Behavior During a Crisis Are Wrong Because It Was Misguided on the Mathematical Relationship Between Trade Credit and the Cash Cycle

I have been extremely disappointed to receive numerous reports of large businesses extending payment times, or even suspending payments to small businesses in a time of significant pressure for the business community. (ASBFEO SCF Review, Final Report, p. 3)

**Comment:** The ASBFEO has missed the point of the purpose of trade credit and working capital. Payment terms should match the cash cycle. During a recession, the time it takes to turn a supplier’s inputs in a product and then sell it increases. The ASBFEO should not expect large buyers to finance the working capital of small- to medium-sized businesses during a crisis. Capital markets is better equipped to do that. The report overlooks the potential for capital markets to manage debt collection. Capital markets prices the credit ratings of large businesses and is equipped to professionally evaluate large corporations’ credit risk. Data from digital supply chain finance can help capital markets do a better job. Small businesses should be able to outsource credit risk management to capital markets. Digital SCF offers that possibility.

Per Cowton and San-Jose: “Indeed, in certain circumstances, perhaps where there is some unforeseeable change of severe or catastrophic proportion, late payment might even be justified or at least defensible. Such a situation might include a sudden downturn in the economy, collapse of demand for a particular product or the trade debtor; if it supplies businesses in turn, having difficulty collecting payments due from a major trade customer” (Cowton and San-Jose 2017, p. 677).

Sorell and Hendry (1994) make the point, though, that “this should also tend to entail the creditor firm acknowledging its ability and willingness to withstand the delay, rather than such delay being merely presumed by the trade debtor and not communicated. Such a decision might entail actions on the part of the trade debtor, such as the provision of appropriate information on its financial position and prospects.”

This is what should happen. But because of the power imbalance between buyer and supplier, it does not. Digital supply chain finance (data & liquidity) enables small businesses to outsource credit risk management to capital markets. That is a particularly valuable option for small businesses during an economic crisis.

4. Ethics of Delaying Payment to Force Suppliers Onboard a Supply Chain Finance Solution

Companies such as CIMIC Group, which are responsible for building much of this country, are in many ways working to undermine our strong foundations by extending payment terms to their small suppliers and pushing supply chain financing on those suppliers, to sure up their cash flow at the expense of those down the supply chain. (ASBFEO SCF Review, Final Report, p. 4)
Comment: Give thought to the fact that we are in a recession. To some extent, the actions of CIMIC Group may be reasonable, given the current economic environment. However, to the extent that CIMIC Group’s DPO extension does not reconcile with its cash cycle, and instead is a strategy to force suppliers onboard to a supply chain finance solution, point to the poor leadership of politicians such as former UK PM, David Cameron. How did he get involved in promoting DPO extension (delayed payment) as a means of removing suppliers’ choice and forcing them to act as bankers to large corporations, giving up control over their data in the process? It is a solution specifically precluded by the SupplierPay Pledge because it is unethical.

5. **Voluntary Codes of Conduct Do Not Work**

“I recognise this will be a significant shift in business practice for some entities, but the evidence from Australia and overseas shows that voluntary codes and gentle encouragement simply do not work.” And “While those businesses that believe in supporting their small business ecosystem are already choosing to do the right thing, those that see their suppliers as expendable will not change their behaviour until they are legally required to.” (ASBFEO SCF Review, Final Report, p. 5)

Comment: This is true with analogue supply chains. But digital supply chain finance can provide a monitoring and policy reporting capability (supply chain transparency). All supply chains will eventually be digital. If the public sector wishes, it can then weed those corporations out via public sector procurement processes. This is already how it works in the private sector, and it is how it should work in the public sector too rather than more unnecessary regulatory red tape.

6. **Ethical Issue: Definition of “Small Business” May Be Inappropriate**

**Recommendation 1:** Unfair contract terms regulations – $10 million definition of small business. (ASBFEO SCF Review, Final Report, p. 5).

Comment: Where does this $10 million definition come from? A business typically cannot afford to hire a dedicated corporate treasurer until their turnover is $500 million or more per annum. What assumptions is the ASBFEO making about the financial competence of small businesses with turnover of more than $10 million that warrants their lower protections? Beware the risk that lobbyists for big corporations have influenced politicians’ thinking on a definition as important as this.

7. **Ethical Issue: Top-Down Red Tape Versus Bottom-Up Compliance as a Profit Center**

**Recommendation 2:** Transparent payment times: The Commonwealth Government’s Payment Times Reporting Framework (PTRF) be promptly implemented with
that Framework being administered and enforced by an appropriately funded, empowered and proactive entity. (ASBFEO SCF Review, Final Report, p. 5)

More costly bureaucratic red tape, hitting small businesses as costly overheads. A bottom-up model will deliver better compliance. Why not leave it to the auditors to do it? But note risks arising from political alignment of audit firms.

8. **Mandated Payment Terms Are Unethical**

Recommendation 3: 30-day payment standard: Maximum payment terms of 30 days from receipt of invoice from small businesses should be legislated. Businesses should be encouraged to pay all suppliers within 30 days, however no legislated outcome should be imposed for businesses falling outside of the small business definition (ASBFEO SCF Review, Final Report, p. 5).

Comments: This is not an objective measure (neither the 30 days, nor the arbitrary definition of “small supplier”). It is CSR/ESG marketing spin but not reality. The objective, ethical measure is the length of the cash cycle. Anything longer than that is treating suppliers as a bank, and that should be regulated.

Elsewhere, the ASBFEO acknowledges that after 60-day payment terms were introduced into the UK and Europe, some suppliers waited even longer to get paid! The important point is not how quickly the supplier gets paid by the buyer, but rather how quickly the buyer approves the supplier’s invoice for payment and shares that information with the supplier. Given modern technology, approval should be on the same day, unless there is an exception. At that point, Capital Markets can price the buyer’s payable and deliver early payment to the supplier on the same day.

9. **Ethical Issue: Financial Reporting Disclosures**

Recommendation 5: Appropriate coverage by accounting standards: The accounting standards need to provide greater clarity and properly cover SCF to ensure that accounts cannot be manipulated, particularly to mask cash flow issues and insolvency (ASBFEO SCF Review, Final Report, p. 5).

Comments: Yes. Accounting firms have not been working up to standards of professionalism we would expect. The Big 4 firms’ independence and objectivity may have been compromised because they need to win government contracts to survive.

10. **Ethical Issue: Managing Artificial Intelligence Risks**

Recommendation 6: Further review from competition perspective: The ACCC should review SCF provider activity from an Australian Competition Law viewpoint, including how data is applied through using artificial intelligence and algorithms (ASBFEO SCF Review, Final Report, p. 5).
Comments: Yes, look at it from the “bottom up” perspective. Enable suppliers’ direct access to capital markets. Allow capital markets to manage the relationship with large buyers, on behalf of small suppliers – a fitting match.

Digital integration technologies mean that small businesses can extract value from their own aggregated data (as an industry). So, data and value can be released from digital integration from the bottom up so that small, family-owned businesses and communities accrue the bulk/a fair share of the value of their data.

One day, all the data from trading transactions all over the world will be analyzed in real time by artificial intelligence. At that point, it might be too late to implement the internal control systems that are necessary. So, a good way to build this type of digital network is from the bottom up, starting with small businesses. A data bank with a consent engine guards access to small businesses’ data. In a future with artificial intelligence mining our data, it will be important for us to be able to turn data access rights off. It may be a way of preserving democracy and sovereignty. And it would be unbeatable against an authoritarian dictatorship of any kind.

Government should be educating small- to medium-sized suppliers on their strategy options for digital integration. Staying silent on such an important matter risks digital integration driven from the top down because some governments find it easier to act as an authoritarian dictator rather than as government for the sovereign (people).

11. Inconsistent Application of Ethical Standards in Developing Countries

A prominent player in the SCF market and CEO of London-based Greensill Capital, Lex Greensill, has stated ‘The focus of people like Kate Carnell has caused us to pause and say we actually need to think about the way that our capital is being delivered . . . We’re in the process of formulating a position on eligibility for our products moving forward that is consistent with the view that Kate . . . has espoused.’ Following the release of our position paper, Greensill Capital have announced that they will not allow their product to be used by large businesses that push out payment terms to SME suppliers beyond 30 days. (ASBFEO SCF Review, Final Report, p. 7)

Comments: Why do we accept levels of exploitation by a UK/Australian FinTech in overseas communities that we say we would not tolerate in Australian communities?

12. Ethics of Immediate Payment

The New Zealand Government also holds the view that current technology means 60 or even 30-day payment terms are no longer reasonable. Technology gives businesses the ability to process invoices almost immediately. (ASBFEO SCF Review, Final Report, p. 16)

Comments: Yes, instant payment is possible. But the purpose of trade credit is not because technology and the ability to process a payment quickly did not previously exist . . . it is a factor of the cash cycle and the joint endeavors of a supply chain. Rather than speed-up payment to suppliers, we should ask buyers to speed up communication confirmation the supplier’s invoice has been approved for payment.
That will allow capital markets to deliver immediate payment. It also avoids the risks associated with damaging Australia’s embryonic FinTech ecosystem from an inefficient policy on early payment.

13. **Data + Liquidity Can Support a Compliance Monitoring Mechanism**

Specifically, the evaluation sought to assess if the directive is fit-for-purpose in terms of effectiveness, efficiency, relevance, coherence and EU added value. This was a challenging task for several reasons, not least of which was the lack of a compulsory and common monitoring system across Member States. (ASBFEO SCF Review, Final Report, p. 20)

**Comments:** A digital working capital solution such as the Obillex Mechanism can provide a monitoring and reporting capability, as a deep tier supply chain finance and transparency solution all the way up and down the supply chain and as a capacity building mechanism horizontally across the supply chain. A foundation can manage the implications of different interpretations of the Social Contract between Members States.

14. **Appropriate Regulation Can Deliver Efficient Markets and Prosperous Communities**

One negative outcome that surfaced was the fact that in some Member States that have traditionally had a prompt payment culture, the directive is perceived to have normalised longer payment periods. Other industry sources alleged that some public entities known for being ‘good payers’ have extended their payment terms to reach the maximum allowed under the directive. (ASBFEO SCF Review, Final Report, p. 21)

**Comments:** Supplier payment terms should be based upon the cash cycle of the buyer. Some businesses will be cash businesses (e.g., supermarkets’ sales of fresh produce) which means their payment terms should be less than a week. Others such as the construction industry or manufacturing might have a cash cycle that is longer than 60 days. The secret is not how fast the buyer pays the supplier but rather how fast the buyer confirms they have approved the supplier’s invoice for payment. With modern technology, the buyer should be able to approve the supplier’s invoice on the same day it is received. Capital markets can then pay the supplier’s invoice, also on the same day, at a market discount rate that is below the supplier’s weighted average cost of capital (‘WACC’) and possibly even below the supplier’s cost of debt. It is thus profitable for the supplier to take immediate payment (albeit at a tiny discount).

15. **Our Social Contract Needs to Be Defended with Coordinated International Action**

It is widely acknowledged that these objectives could not have been achieved by Member States acting individually. (ASBFEO SCF Review, Final Report, p. 21)

**Comments:** Most nations lack sufficient critical mass in their transaction flows to interest capital markets. Numbers must be vast for capital markets because the
margins are typically slim. It is an important point. We need for coordination within government and between governments on definition of digital working capital and on the sharing of business capacity/data across borders. The greatest value can be created if data is traded seamlessly (within the context of the Social Contract) across borders. Bills of exchange legislation provide a common definition and existing regulatory framework. Case law provides further interpretation.

16. Compliance Monitoring Can Defend Our Right to Choose

During the course of the Inquiry, we heard from one subcontractor to a state government project who alleged that he was not given a choice but to accept SCF or he would not be awarded the contract. The contractor, when questioned, denied that this was the case. (ASBFEO SCF Review, Final Report, p. 24)

A digital bills of exchange regime would enable transparency in SCF programs. If tied to trade credit that is limited to the length of the cash cycle, they would be a powerful combination. Suppliers receive the option but not the obligation to be paid early with pricing provided competitively via capital markets. The value of their data is held in trust and safeguarded by guarantee.

17. Project Bank Accounts

Project Bank Accounts: Both Queensland and Western Australia have implemented and extended PBAs which are put in place by the Head Contractor and protect the next level subcontractor. The legislation in both States indicates that the head contractor must pay the progress payment to the subcontractor entity named in the contract. This appears to exclude a financier in an SCF arrangement receiving the payment from the head contractor. (ASBFEO SCF Review, Final Report, p. 24)

Comments: Project Bank Accounts are an attempt at addressing the late payment issue for extended supply chains. However, they are inefficient compared to a combination of Liquidity + Data. Project Bank Accounts cannot link suppliers to Capital Markets, for example. They have a very limited capability to move data up and down supply chains.

O-Bills, FLOW-Bills, and P-Bills were developed under the governance of a non-executive board member who was the senior UK public sector procurement professional who led the introduction of Project Bank Accounts into the UK public sector. He told me the Obillex product suite is superior to Project Bank Accounts in every way.

18. Fully Informed Consent: A Technology Strategy for Digital Integration

A key principle in the use of algorithms and AI is that of transparency. Companies and people should be informed when an algorithm impacts them, particularly when data they are providing may be used to manipulate outcomes against them in the future. Ensuring that small businesses are providing fully informed consent is difficult for a number of reasons, including:

• Power asymmetries, where the small business has little choice but to consent to the use of their data. For example, where a small business joins a SCF program. Clarity is required around what a business owner is consenting to, and how that data will be used.
• Information asymmetries, where a small business owner may consent to their data being stored and used without properly understanding the nature of this use.

• Secondary uses of data, where data that is collected for a given purpose may be put to additional or new uses at a later stage. It is imperative that the conditions under which such uses are appropriate are made clear. While the Privacy Act indicates that consent be “current and specific,” it is difficult for a small business to assert whatever rights they may have due to the cost and knowledge required to pursue legal action. (ASBFEO SCF Review, Final Report, p. 29)

People and small business owners have a right to an informed choice. As a PwC-trained expert on the selection and implementation of complex FinTech systems, I learned that there is a right way and a wrong to select and implement systems that may have profound implications for the lives and livelihoods of stakeholders. A robust methodology should be followed, including awareness briefings to mobilize stakeholders, requirements gathering, strategy selection, system selection, and implication. Digital supply chain integration technologies such as FinTech can be implemented in multiple ways. At present, governments and large corporations are using top-down red tape, elimination of freedom of choice, procurement strategy, and intimidation to drive top-down digital integration models where the bulk of the benefits from the data that is released from silos flows to the government, institutions, and huge corporate buyers. But Government has an obligation to engage small business stakeholders properly in this process, to ensure they understand their options so that they can make informed choices. In Australia, a rural politician confidently asserted that horticulture growers are not interested in bottom-up digital integration. Really? Because digital integration is happening anyway and at the moment it is being driven by top-down red tape (such as the Modern-Day Slavery Act) and intimidation by supermarkets and their category managers. The fact is the digital economy is genuinely a new paradigm, and critical choices and options together with the pros and cons of each option have not been explained to voters and small business owners. If the government remains silent on this optionality, then by virtue of the government’s silence, small business owners are being condemned to the “top down” solutions promoted by Big Business because that is the model that serves them best.

The solution is bottom-up digital integration with a data bank with a consent engine that is consistent with informed choice because it allows small, medium, and large businesses to retain control over how their data assets are being used and ensures they can receive a fair share of the value their aggregated assets create. Governments should not be enabling coercion via FinTech to drive digital integration. If it cannot do it top-down based upon freedom to choose based on the economic benefits being offered, then the alternative is bottom-up. Key is to explain to small business owners their strategy options and then give them a choice.

The world’s BREXIT experience so far includes plummeting standards in the UK (accounting and auditing standards, off-balance-sheet financing, and misuse of market power (e.g., removal of full informed choice) to try to force small suppliers to take out loans using a mechanism that concentrates their data into London). They are not standards the world should embrace. There is an important role for English law to play if unwritten conventions and a Rules Based International Order are
upheld. Otherwise, Data + Liquidity global financial markets need to bypass the UK so that value creation from the global digital economy can be optimized. There is an opportunity to harness a set of converging factors to extract the socio-economic development potential of the data that FinTech (Liquidity + Data) releases from silos and to ensure its owners understand its value. These are just some of the emerging factors driving the need for a minimum set of standards from FinTech and Trading:

- Free trade agreement negotiations
- Need to recover from the socio-economic catastrophe from the COVID-19 pandemic
- Need for resilient supply chains
- Geopolitical tensions
- Need for resilient supply chains
- An attack on democracy from China
- Need to be able to extract the value of aggregated data while preserving data ownership and personal privacy
- Need to preserve freedom, informed choice, democracy, and property rights
- Need for truth telling and reconciliation in recognition that Black Lives Matter

We need standards because politicians everywhere are often in pursuit of money and power more than they are great outcomes for communities. Data + Liquidity (FinTech) is a source of power (information) that should be kept out of politicians hands to the extent needed to ensure the interests of small business owners all over the world are not sacrificed for authoritarian oppression. Fully informed choice is a key.

**Concluding Remarks and Future Predictions**

The COVID-19 pandemic has demonstrated the fragility of nations that overly depend upon globalization. The pandemic has reminded politicians that resilient supply chains are important to national security. That has led to a focus on the importance of Data + Liquidity for enabling resilient supply chains. And the pandemic led to recognition there is a geopolitical struggle for control between authoritarian regimes and democracy, and so standards for sharing data within and between democracies are important for defending freedom.

The issues that have arisen because of BREXIT will pass. English Law and its institutions have significant value in the deployment of global standards for supply chain transparency. England has more to lose than perhaps any other nation from an international loss of respect for conventions. While some English politicians may have forgotten the importance of our Social Contract, I am confident that emerging leaders will not make the same mistakes. Scotland might be an excellent place to govern the UK’s Social Contract as data, and there is likely to be hundreds of billions, if not trillions of pounds worth of
value for people and small business owners from the value of data released from silos in its domestic market. I am hopeful that this may help to hold the Union together. I am watching UK Chancellor Rishi Sunak – I think he is future UK Prime Minister material. Opposition leader Sir Keir Starmer is also looking more capable than his predecessor. The fight against authoritarianism will only be won if democracies work together, so I am hopeful that someone such as Mr. Sunak can turn the UK’s relationship with Europe around.

English law and the Commonwealth of Nations are exciting channels for rapidly deploying the benefits of Data + Liquidity to developing countries. I predict that eventually there will be agreement between the UK/Commonwealth, Europe, USA, and other nations on a model for sharing the value to be released by digital working capital. The unparalleled potential of win-win model for creating value and widespread prosperity will eventually succeed over win-lose models.

To the extent that there is uncertainty over the ownership of the data released by digital working capital from silos, I propose a foundation to defend the rights of small- to medium-sized business owners in the data and the opportunity for developing countries to build capacity. I think it is important to defend the rights of families and communities to prosperity. I believe that a solution that delivers widespread prosperity for developing nations can deliver even greater prosperity for developed nations. The foundation may also hold the intellectual property rights for Data + Liquidity supply chain transparency solutions. It may enable a global digital economy in multiple interpretations of the Social Contract that be supported.

We have a Social Contract to guide and enable win-win outcomes. The Black Lives Matter movement has articulated a compelling case for change in the way the global economy works to address systemic racism that is leading to Win-Lose and Lose-Lose outcomes. Emerging Data + Liquidity solutions will help to defend win-win outcomes that lead to widespread prosperity. I have only just discovered a hidden message (https://trove.nla.gov.au/newspaper/article/173678236) that may have been left by my ancestors in the legislation that created the State of Victoria’s first National Park – I am still trying to understand what it all means, but it appears to me to be an acknowledgment by Irish-Australian colonial settlers of a debt owed to indigenous Australians that can never be fully repaid. I believe there may be a relationship between that hidden message and the pledge my grandfather invited me to take during the Ethiopian Famine.

Food security will be treated as a “special case.” If we have food security, humanity can beat most crises we might face. It is common ground with China and every other nation. Food security will be recognized as an overriding output needed from the global economy. The pandemic will lead us to reevaluate risks to food security. Redundancy will be built back into supply chains so that food security can be assured during any crisis.

International standards are needed between democracies for sharing data (supply chain transparency) and defending and promoting the interests of small businesses in data including its value on an individual and aggregated basis.
Cross-References

▶ A Virtue Ethics Approach in Finance
▶ Applying Ethics
▶ Corporate Government as a Structure for Control and Promotion of Ethics in Banks
▶ Ethical Considerations About the Implications of Artificial Intelligence in Finance
▶ Ethical Orientation in Banks
▶ Ethical Responsibility of Financiers
▶ Ethics for Automated Financial Markets
▶ Ethics in the Independent Audits of Financial Statements
▶ Financial Institutions and Codes of Ethics
▶ Stakeholder Accounting for Sustainability Applied to Nonfinancial Information in Banking

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