

**LAURENCE INGLE**

**SMART CONTRACTS IN CONSUMER LAW: DOES NEW ZEALAND  
NEED TO WISE UP?**

**LAWS520: Private Law – Shifting Boundaries**

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***Abstract***

Blockchain-based smart contracts represent a shift towards an automated world. While their immutable and self-executing nature present numerous economic benefits, these characteristics give rise to issues. One of these issues is that the burden of issuing proceedings changes from a party looking to enforce the agreement to a party who wishes to relieve themselves of an automatic enforcement mechanism. The ‘practical burden’, as the paper terms it, could potentially be most problematic in a consumer context, which is characterised by a significant imbalance between contracting parties. The paper assesses consumer law in New Zealand to determine whether this issue will arise under the current law. The paper concludes that New Zealand’s current consumer law is practically robust, however it recommends some practical measures that can be taken by the Commerce Commission in order to prepare for smart contracts as a dominant method of transferring property.

***Key words***

*Blockchain, Smart Contracts, Consumer Law, Consumer Lending*

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## *I Smart Contracts and Why They Matter*

A car can be started using an electronic key, accessed through a smartphone app.<sup>1</sup> The car's owner enters into a coded "smart contract" to lease it to a consumer for one year. The program automates direct-debit weekly rental payments of \$100 from the consumer and gives them access to the car through the electronic key for the period of the lease. If the user is unable to pay, or the lease ends, the program immediately removes their access to the car. The owner can locate the car using a GPS tracker and reclaim it.

The arrangement is a basic smart contract: a *self-executing* agreement in the form of a digital set of instructions to a computer.<sup>2</sup> The code is then stored on the blockchain, digitally linking the car and the smartphone app with the user's funds, in the form of an electronic wallet.

There are two important points of difference between blockchain-based smart contracts and ordinary legal contracts.<sup>3</sup> First, smart contracts are '*immutable*', meaning that the code cannot be changed once enacted by the parties.<sup>4</sup> Secondly, smart contracts *automatically* execute when the coded conditions are met. Combined, smart contracts therefore have the significant advantage over traditional contracts of being "trustless, autonomous and self-sufficient".<sup>5</sup> However, what happens if the car owner adds a self-serving function to automatically renew the lease at \$500 a week? It would self-execute, leaving the consumer to seek recourse through the courts. There would be a 'practical burden' on the consumer to relieve themselves of a code running amok upon them, with no technical means of stopping it.

This paper will consider the future of smart contracts in New Zealand and the various issues they could pose under current consumer law, with a specific focus on the practical burden that they could put on consumers. Part II outlines the premise and underlying assumptions of the paper. Part III looks at the broad benefits and issues arising from smart contracts, from a legal point of view

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<sup>1</sup> This paper will primarily deal with blockchain-based smart contracts, so assume that the two are connected via the blockchain. Inspiration drawn from: Jeremy Sklaroff "Comment: Smart Contracts and the Cost of Inflexibility" (2017) 166 U Pa L Rev 263.

<sup>2</sup> See: Cheng Lim, TJ Saw, Calum Sargeant "Smart Contracts: Bridging the Gap Between Expectation and Reality" (11 July 2016) Faculty of Law, University of Oxford <[www.law.ox.ac.uk](http://www.law.ox.ac.uk)>; and Scott Farrell, Heidi Machin, Roslyn Hinchliffe "Lost and found in smart contract translation – considerations in transitioning to automation in legal architecture" (2018) 33(1) JIBLR 24.

<sup>3</sup> Sarah Green "Smart contracts, interpretation and rectification" (2018) 2 LMCLQ 234 at 235.

<sup>4</sup> Green, above n 3, at 238. While there are means of variation that can be provided in the smart contract's code, as is discussed below, these must be deliberately included and will therefore be uncommon in many cases.

<sup>5</sup> Green, above n 3, at 236.

and how smart contracts fit within New Zealand's existing framework of contract law. Parts IV and V investigate whether New Zealand's law on consumer contracts, including credit contracts, adequately regulates smart contracts through hypothetical situations. Within this, the paper will consider the future of consumer smart contracting and whether New Zealand's current policy settings are able to adequately protect consumers. Part VI discusses whether reform is necessary. The paper concludes that New Zealand's consumer law is substantively robust. Smart contracts do not therefore represent the death of contract or consumer law in its current state.<sup>6</sup> Regardless, the paper discusses some practical measures that could ease the practical burden moving forward.

## *II Assumptions and Technical Underpinnings of the Paper*

This paper assumes that smart contracts will become the dominant means of transferring digital property over time. While smart contracts may not change the world, the significant benefits that they provide are may lead "to the demise of drafting and exchanging paper contracts", though this may be "a long way off".<sup>7</sup> Smart contracts represent the "mature end of the evolution of a wide category electronic agreements" over many years.<sup>8</sup> Over 25,000,000,000 'smart' devices are expected to be connected to the internet by 2020, from light switches to door locking mechanisms.<sup>9</sup> Eventually, smart contracts will allow these devices to "operate autonomously, share resources, and exchange data without central management" in dealings between parties.<sup>10</sup>

The paper continues on the basis that agreements between parties as a means of exchange will continue to be the foundation of trade and the transfer of property. Regardless of technological developments, alongside the concept of private property ownership will always be a demand for agreements between parties to transfer their property. Smart contracts are likely to be adopted by shipping lines or cargo would be a significant advantage over traditional systems. Conceivably, most property will be "digitised" eventually, introducing a role for smart contracts as the primary mechanism of property transfer. Therefore, while the introduction of smart contracts into the consumer context may take some time, consumers will potentially be forced to use them eventually.

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<sup>6</sup> Contrast: Alexander Savelyev "Contract Law 2.0: 'Smart' Contracts as the Beginning of the End of Classic Contract Law" (2017) 26 Info & Comm Tech L 116.

<sup>7</sup> Alexandra Sims, Kanchana Kariyawasam and David Mayes *Regulating Cryptocurrencies in New Zealand* (New Zealand Law Foundation, September 2018) at 25; see also: Kevin Werbach and Nicolas Cornell "Contracts Ex Machina" (2017) 67 Duke LJ 314 at 317. More detail on the benefits will be outlined in Part III.

<sup>8</sup> Werbach and Cornell, above n 7, at 317.

<sup>9</sup> Werbach and Cornell, above n 7, at 337. These devices comprise the "internet of things".

<sup>10</sup> Werbach and Cornell, above n 7, at 337.

### *A How Smart Contracts Work*

Smart contracts are based on blockchain technology. Blockchains are public electronic databases, known as digital ledgers, containing a complete and comprehensive record of transactions made using its software and digital assets held by each user on the network.<sup>11</sup> These records are stored and confirmed by each user on the network and can represent the legal title to a car or to digital currency to its owner, for example.<sup>12</sup> Theoretically anything of value can be ‘digitised’ through a record of ownership to be stored on the blockchain. Having a distributed ledger requires all computers on the network to keep an identical record of information collectively, rather than having a “master copy”.<sup>13</sup> The ledger is updated in real time with new transactions as they occur.<sup>14</sup> If someone attempts to manipulate the ledger on their own system illegitimately, for example by trying to create counterfeit digital currency, the record will not line up with the network and the new record will be rejected.

Each blockchain user has both a public key and a private key to participate in transactions.<sup>15</sup> The public key is similar to an email address; it is publicly known and is the destination used to send anything to a user who owns the address.<sup>16</sup> The private key is similar to a password; it facilitates control of the assets tied to the key.<sup>17</sup> Each time someone adds a record to the blockchain, for example by spending currency, the transaction is timestamped and added to the ledger, along with a unique identifier for the asset.<sup>18</sup> Therefore, a user cannot ‘double-spend’ currency or duplicate assets.<sup>19</sup> Users can code a program to be put on the blockchain, thereby creating a smart contract.

The blockchain system removes the need for external trust and co-operation. Blockchain will potentially remove the need for intermediaries such as vehicle registers or banks, giving parties the ability to trade directly through the blockchain. Similarly, to some extent, smart contracts may take over the courts’ role as an intermediary enforcing conditions that parties have agreed to.

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<sup>11</sup> Green, above n 3, at 325; and Farrell, Machin and Hinchliffe, above n 2, at 24. A helpful explanation video can be found here: <[www.youtube.com/watch?v=SSo\\_EIwHSd4](http://www.youtube.com/watch?v=SSo_EIwHSd4)>.

<sup>12</sup> Green, above n 3, at 235.

<sup>13</sup> Werbach and Cornell, above n 7, at 325.

<sup>14</sup> Green, above n 3, at 325.

<sup>15</sup> Green, above n 3, at 236.

<sup>16</sup> Green, above n 3, at 236.

<sup>17</sup> Green, above n 3, at 236.

<sup>18</sup> Green, above n 3, at 236.

<sup>19</sup> Green, above n 3, at 236.

Finally, true smart contracts, which self-execute via the blockchain, are different from more narrow digital contracts. Digital contracts have been used for online transactions for years, such as clicking “purchase” on an e-commerce platform. While it wears a digital cloak, an “electronic” contract formed in this way is merely electronic in form, with its substance and execution dependent on humans.<sup>20</sup> These contracts are not practically different from paper contracts. Even if they somewhat exist in exclusively in code, they are not smart contracts because they are neither immutable nor self-executing and are not recorded on the blockchain.<sup>21</sup> Therefore, buying something online does not necessarily form a smart contract as discussed in this paper, though this may change in the future.

### *B Smart Contracts and Variation*

While the default position is that smart contract transactions are technically irrevocable, parties can still consciously build flexibility into the code of their smart contracts before putting it onto the blockchain.<sup>22</sup> However, immutability is still a dominant aspect of smart contracts because it is the default position.<sup>23</sup> As will be discussed below, some rogue parties will want not want to give the other party a chance to ‘escape’ from the execution mechanism enforcing a lopsided bargain. Strong parties in consumer smart contracts may therefore be reluctant to use flexible code when creating their programs to be accepted by a potentially vulnerable party. Regardless, it is worth outlining how flexibility can be incorporated into a smart contract.

One type of variation mechanism for a smart contract is when the parties include a self-destruct function in the code, which terminates the code when called remotely, before they put it on the blockchain.<sup>24</sup> They can activate the self-destruct function on the original program and put a revised smart contract onto the blockchain, achieving the practical effect of changing the digital outcome. Such functions must be coded into the smart contract from the outset, but their inclusion undermines the immutability and self-execution that smart contracts otherwise provide.<sup>25</sup> The phrase ‘variation function’ will be used throughout this paper to represent such code, even though it effectively refers to a self-destruct function.

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<sup>20</sup> Werbach and Cornell, above n 7, at 321.

<sup>21</sup> Werbach and Cornell, above n 7, at 321.

<sup>22</sup> Werbach and Cornell, above n 7, at 335.

<sup>23</sup> Werbach and Cornell, above n 7, at 335.

<sup>24</sup> Green, above n 3, at 238.

<sup>25</sup> Werbach and Cornell, above n 7, at 335.

### *III Benefits and Issues Arising From Smart Contracts*

The self-executing nature of smart contracts automates the performance of private obligations. Automation reduces the cost of enforcement and increases certainty, allowing the parties to rely on an electronic mechanism to deliver their bargain.<sup>26</sup> With the car rental, the owner has certainty of knowing that the user will pay with no need for invoicing or confrontation, reducing the transaction and intermediary costs.<sup>27</sup> There is no lengthy removal process and the risk of user theft is non-existent.<sup>28</sup> Similarly, the user has a guarantee of uninterrupted use because the owner cannot access the car themselves. There are also administration benefits; for example, the consumer no longer needs to worry about forgetting to make a payment because automation means that they have no choice in the matter. In a consumer context, these benefits could reduce the price of consumer goods, services and credit by reducing enforcement risk.

Smart contracts can also cause issues for the parties. Automatic performance prohibits a forgiving owner from mercifully accepting a lesser sum if the borrower is only a few dollars short. Similarly, if the owner's personal car is written off in an accident and they decide that they desperately need to use the rented car themselves, they cannot prevent the existing smart contract's execution and cannot agree with the user to vary the terms. As mentioned, these issues can be foreseen from the outset and preventative measures can be built into the code.<sup>29</sup> However, unforeseen practical issues can always arise and too much power to terminate would defeat the benefits of certainty and immutability that smart contracts bring.<sup>30</sup>

There are also limits to the application of smart contracts with current technology. For example, a clause in the car rental smart contract which requires the user to keep the car "in reasonable condition" would be problematic.<sup>31</sup> Such a clause requires the exercise of judgement, conscience and discretion as to what constitutes "reasonable", which cannot be properly expressed in computer code to be executed by computers yet.<sup>32</sup> These limitations are particularly difficult in the context of consumer law, where terms such as "misleading", "(un)reasonable" or "(un)fair" are commonly used to introduce discretion and judgement into adjudication.

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<sup>26</sup> Mark Giancaspro "Is a smart contract really a smart idea? Insights from a legal perspective" (2017) 33 CLS Rev 825 at 827.

<sup>27</sup> Giancaspro, above n 26, at 827.

<sup>28</sup> Max Raskin "The Law and Legality of Smart Contracts" (2017) 1 Geo L Tech Rev 305 at 330.

<sup>29</sup> Green, above n 3, at 238.

<sup>30</sup> Werbach and Cornell, above n 7, at 335.

<sup>31</sup> Farrell, Machin and Hinchliffe, above n 2, at 25.

<sup>32</sup> Farrell, Machin and Hinchliffe, above n 2, at 25.



### *A Smart Contracts Within Existing Legal Frameworks*

Despite their name, smart contracts do not create legal obligations, *prima facie*.<sup>33</sup> For the mechanism of a smart contract to be part of a binding contract, the formation of the wider ‘agreement’ must meet the ordinary requirements for a contract at common law. Under New Zealand law, these requirements are: agreement, certainty, consideration and intention to create legal relations.<sup>34</sup> A smart contract that does not meet the criteria is merely an electronic execution mechanism for a set of instructions that a court will not recognise. Legally, this means a smart-contract will be ‘wrapped’ in a traditional legal contract.<sup>35</sup>

Arguably, an effective execution mechanism is practically as useful as a legally binding contract, as both smart contracts and contract law are effectively just a set of rules for regulating interactions between parties.<sup>36</sup> Some extreme commentators have even argued that smart contracts “eliminate the need for legal enforcement”,<sup>37</sup> representing “a technological alternative” to the legal system itself.<sup>38</sup> While these arguments seem overly-dramatic, smart contracts can be used to sidestep core statutory and common law principles and policy in the law of contract. Notably, it seems that neither Australian nor New Zealand courts have addressed a smart contract dispute yet.<sup>39</sup>

Under an ordinary contract, an aggrieved party will go to court to demand damages, restitution or specific performance. However, the immutable and self-executing nature of a smart contract means that a party will be seeking a remedy on the basis that the contract has already been executed or is in the process of being performed and cannot be stopped.<sup>40</sup> As such, remedies like specific performance and rectification may be overshadowed and prohibitory injunctions may be of limited use over time.<sup>41</sup>

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<sup>33</sup> Green, above n 3, at 327; See also: Merit Kõlvart, Margus Poola, and Addi Rull “Smart Contracts” in Tanel Kerikmäe and Addi Rull *The Future of Law and eTechnologies* (1st ed, Springer, London, 2016) at 135.

<sup>34</sup> See: Stephen A Smith Aityah’s *Introduction to the Law of Contract* (6th ed, Clarendon Press, Oxford, 2005) at 93; and John Burrows, Jeremy Finn and Matthew Barber *Burrows Finn and Todd on the Law of Contract in New Zealand* (6th ed, LexisNexis, Wellington, 2017).

<sup>35</sup> Green, above n 3, at 238.

<sup>36</sup> Lim, Saw and Sargeant, above n 2.

<sup>37</sup> Werbach and Cornell, above n 7, at 339.

<sup>38</sup> Savelyev, above n 6, at 132.

<sup>39</sup> A Lexis Advanced case search on 18 August 2018 for the term “smart contract” yielded no case results in Australia or New Zealand.

<sup>40</sup> Raskin, above n 28, at 322.

<sup>41</sup> Green, above n 3, at 251.

#### *IV Use of Smart Contracts in Ordinary Consumer Contracts*

Consumer contracts are characterised by an imbalance between parties. One party is usually a large retailer. The other is a consumer with few resources. The legislature has traditionally acted to minimise this gap through consumer legislation to protect the consumer as the weaker party. Using smart contracts as an enforcement mechanism distorts the effectiveness of these measures.

The following scenario will be developed throughout the paper to illustrate how parties can use smart contracts in a practical sense in a way that may be contrary to the purpose of consumer and contract legislation.

Scaley Sales (“Scaley”) is a retailer that offers consumer financing on large purchases. They make significant margins on sales and charge an interest premium by offering finance on purchases. Scaley’s customers are unaware of their true legal rights, but Scaley often has difficulty getting the courts to enforce its questionable paper agreements. Scaley would be able to use smart contracts to practically enforce:

- a) Terms of a contract that are potentially unfair and/or not drawn to the consumer’s attention; and
- b) Credit contracts procured through pressure at high rates of interest with unreasonable fees attached.

Despite this, as the following scenarios will demonstrate, New Zealand’s consumer law is substantively robust. However, there are some procedural issues that may need to be considered when looking at the potential harm smart contracts could cause to consumers.

##### *A Terms in the “Fine Print”*

Suppose that Scaley advertises a special price (\$80, compared to \$200) on a one-year subscription to its office software platform. Scaley advertises through YouTube videos. At the end of the two-minute videos, after most consumers will have pressed the ‘skip ad’ button five seconds in, Scaley puts in unreadable print: “the purchaser agrees to automatic renewal of their subscription indefinitely at \$500 per annum, directly debited from their wallet”. When the customer purchases the deal, the term is coded into the smart contract for the sale. Scaley uses the same code for every sale of this product and hides the term under a mess of syntax.

Legally, Scaley would have difficulty enforcing the fine print in an ordinary contract for a number of legal reasons. At common law, the unwilling consumer could argue that the nature of fine print was such that they never objectively manifested an intention to be bound to that term as part of

contract formation under the *Smith v Hughes* principle.<sup>42</sup> There may also be a potential action in unconscionable bargain or even contractual mistake.<sup>43</sup>

However, the New Zealand consumer would have two stronger, and potentially more straightforward, alternative arguments against the enforceability of the term under the Fair Trading Act 1986 (FTA). These arguments do not change simply because Scaley has used a smart contract mechanism to fulfil its bargain. The arguments will be discussed before considering the smart contract implications of the transaction.

### 1 Section 9

First, the consumer could argue that Scaley has engaged in misleading and deceptive conduct generally under s 9 of the FTA. While a breach is determined on the facts,<sup>44</sup> the following principles are most relevant to determining whether Scaley's actions contravene s 9:<sup>45</sup>

- a) The “dominant message” of the headline is important when assessing whether the FTA has been breached, rather than the effect of separate representations.
- b) Where there is a “glaring disparity” between the dominant message of the headline and relevant qualifying information, the statement maker must draw the consumer's attention to the true position in the clearest possible way.
- c) Whether qualifying information is sufficiently prominent depends on its proximity, prominence and whether the qualifying information is sufficiently instructive to nullify the risk that the headline claim might mislead or deceive.

By putting the term in such fine print at the end of the video a consumer is unlikely to finish and at over six times the original purchase price, a court would likely find Scaley's conduct misleading and deceptive. It entices consumers to enter blindly into an obligation that they failed to fully appreciate through a greatly reduced entry price. The dominant message of the headline seems to be a one-off cheaper subscription for a year, without any commitment to renew. The difference between the dominant message and the relevant qualifying information around the high cost renewal gives rise to a glaring disparity that Scaley has not drawn the consumer's attention to, instead they have simply hidden the renewal clause in the smart contract code. As the Commerce

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<sup>42</sup> *Smith v Hughes* (1871) LR 6 QB 597 (QB).

<sup>43</sup> See *Gustav & Co Ltd v Macfield Ltd* [2008] NZSC 47 [2008] 2 NZLR 735.

<sup>44</sup> Lindsay Trotman and Debra Wilson *Fair Trading: Misleading or Deceptive Conduct* (2nd ed, LexisNexis, Wellington, 2013) at 3.121.

<sup>45</sup> *Godfrey Hirst NZ Limited v Cavalier Bremworth Limited* [2014] NZCA 418 [2014] 3 NZLR 611 at [59]; see also: *Red Eagle Corporation Ltd v Ellis* [2010] NZSC 20 [2010] 2 NZLR 492.

Commission (the Commission) says, fine print should not “conceal important information which would be critical to a person’s decision to buy goods or services”.<sup>46</sup> Here, the ongoing extortionately high cost would likely be critical to a consumer’s decision to purchase. Failing to draw attention to this is likely a breach of s 9.

A breach of s 9 allows a court to make a range of orders to remedy a rogue smart contract under s 43, including refunding money and an award of loss or damage.<sup>47</sup> A court can also grant an injunction or order disclosure of information to those affected.<sup>48</sup> However, breach of s 9 does not give rise to civil liability, unlike the unfair terms provisions.<sup>49</sup>

## 2 *Unfair Contract Terms*

A consumer could also rely on the unfair contract terms provisions of the FTA, which apply to standard form consumer contracts.<sup>50</sup> These provisions allow the Commission to apply to the court to declare a term is unfair, prohibiting their enforcement and inclusion in future contracts.<sup>51</sup> The two key characteristics of a standard form consumer contract are:<sup>52</sup>

- a) To be a standard form contract, the terms (other than the exempt terms) have not been subject to effective negotiation between the parties.<sup>53</sup> The contract is instead offered on a “take it or leave it” basis; and
- b) To be a consumer contract, the goods or services must be supplied in trade and be of a kind ordinarily acquired for personal, domestic or household use or consumption, and under the particular contract in question must not be acquired for any of the commercial purposes listed in the FTA.<sup>54</sup>

<sup>46</sup> Commerce Commission New Zealand “The Fair Trading Act: Fine Print” (July 2018) <[www.comcom.govt.nz](http://www.comcom.govt.nz)>.

<sup>47</sup> Section 43(3).

<sup>48</sup> Sections 41 and 42.

<sup>49</sup> Section 40.

<sup>50</sup> Section 46J.

<sup>51</sup> Section 46I. The consumer can ask the Commission to apply to the court under s 46H.

<sup>52</sup> Commerce Commission New Zealand “Unfair Contract Terms Guidelines” (February 2018) <[www.comcom.govt.nz](http://www.comcom.govt.nz)>.

<sup>53</sup> Section 46J(1). Section 46J(2) lists a range of factors that the court must take into account when determining whether a contract is a standard form consumer contract. The Commerce Commission’s definition of standard form contracts effectively encompasses section 46J of the Fair Trading Act 1986.

<sup>54</sup> Under s 2(1) “consumer” means a person who does not acquire the goods or services for the commercial purposes of – (i) resupplying them in trade, (ii) consuming them in the course of a process of production or manufacture, or (iii) in the case of goods, repairing or treating, in trade, other goods or fixtures on land.

There is a presumption that a contract is a standard form contract, unless Scaley can prove otherwise, which is unlikely.<sup>55</sup> The software sale agreement is likely a standard-form contract, due to the lack of negotiation between the parties as to the terms. Scaley prepares its own contractual terms for its sales, which a consumer must accept by buying a product.<sup>56</sup> The same smart contract code is used to exercise the same terms with each transaction. As in most retail contracts, there is likely a sufficient “take it or leave it” nature as there often is not an opportunity to negotiate with a salesperson for a cheaper price or different terms of use for the software. Finally, neither the software nor the price is tailored or negotiated as it would be for a bigger institutional buyer, indicating that the goods are supplied for personal, domestic or household use. Therefore, the Commission has jurisdiction to apply to the court under s 46I of the FTA and prove that the term is unfair.<sup>57</sup>

The renewal term is almost certainly unfair. The Commission’s view is that automatically renewing a contract or subscription without taking sufficient steps to inform the customer beforehand may be unfair.<sup>58</sup> Scaley has done this, using the smart contract mechanism to execute the renewal term. Even still, when considering the contract as a whole, a court would probably be satisfied that the term causes significant imbalance in the parties’ rights and obligations arising under the contract due to the significant increase in price and indefinite term of the contract.<sup>59</sup> In determining unfairness, the court must also consider the extent to which the term is transparent.<sup>60</sup> As the term is hidden at the end of the video, a court would be more inclined to see it as unfair. Additionally, the extortionately high renewal price is not reasonably necessary in order to protect the legitimate interests of the retailer.<sup>61</sup> Finally, the subscription price is so disproportionately high and ongoing that it would likely be seen to cause financial detriment to the consumer if it was applied, exemplified by the immutable nature of the smart contract used to execute the term.<sup>62</sup> A court would likely deem the term unfair as a result.

If a court deems the term unfair, this prohibits its *inclusion*, application or enforcement in similar standard form contracts.<sup>63</sup> Under s 40 of the FTA, Scaley could be fined up to \$600,000 per breach

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<sup>55</sup> If alleged by the Commerce Commission. Sections 46J(3).

<sup>56</sup> Sections 46J(2)(b) and 46J(2)(c).

<sup>57</sup> Under s 46L.

<sup>58</sup> Commerce Commission New Zealand “Unfair Contract Terms: Subscriptions and Automatic Rollovers (August 2018) <[www.comcom.govt.nz](http://www.comcom.govt.nz)>.

<sup>59</sup> As required by s 46L(1)(a) of the Fair Trading Act.

<sup>60</sup> Section 46L(2).

<sup>61</sup> Section 46L(1)(b). Particularly due to the presumption in s 46L(3).

<sup>62</sup> Section 46L(1)(c).

<sup>63</sup> Section 26A.

if it attempts to use the term in its contracts again. This provides a substantial disincentive for Scaley to use smart contracts to enforce such terms.

### *3 The Practical Burden*

Regardless of the consumer's strong legal arguments against enforcing the agreement, adding self-executing smart contracts to these otherwise ordinary situations can be problematic. The practical burden of issuing proceedings has changed. Ordinarily, in this situation a consumer could simply cancel payment for the ongoing service with their bank, cutting the flow of money to the service provider. While this would not necessarily relieve them of the obligation to pay if the court upholds the term later, Scaley would bear the burden of instigating proceedings and proving breach of contract. This would take considerable time and initial resources, even if costs were later awarded in the Scaley's favour. Scaley would be incentivised to consider the likelihood that the terms of its agreements are enforceable and only litigate when its chance of winning is high. Furthermore, Scaley would want to ensure that the terms of its contracts were not likely to be seen as "unfair" from the outset, to maximise the likelihood of ongoing enforceability. These incentives would benefit the consumer and the \$500 automatic renewal clause might no longer be put into the contract, or perhaps would become \$200 (the ordinary price) with an option to cancel any time before the next billing period.<sup>64</sup>

Instead, due to the self-executing and immutable nature of smart contracts, the consumer is automatically charged \$500 annually and the burden is on them to remove this obligation. While they have numerous bases on which to argue that the term should not be legally enforceable, there is no guarantee that they will succeed and avoid payment. Additionally, this assumes that such consumers have the acumen to seek legal advice on this matter. In reality, consumers could easily be confused by the terminology of "smart contracts" and assume them to be legally binding at face value, confusing them as to their true legal rights. This outcome would put Scaley, who is already the better resourced party, in a better position than if they had been required to enforce the contract in an ordinary form through the courts. It seems that this situation is one where the existing law in substance is likely sufficient to protect the consumer but will fail to do so in reality. The blow of the practical burden is softened by the potential civil liability that Scaley could face by trying to include unfair terms in their contracts and enforce them through a smart contract mechanism. On balance, while the potential for abuse still exists and Scaley must first be taken to court before they could potentially be prosecuted, civil liability would be a strong deterrent, particularly for large retail chains who rely on their reputation for sales.

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<sup>64</sup> Many services like Spotify and Netflix do this already.

Even if the consumer brings a claim successfully, there are still issues. The immutable nature of a smart contract means that a court could not simply order the obligation void with any practical effect, as is the case with an ordinary contract, because the courts are no longer the primary enforcement mechanism. This presents something of a “logistical nightmare” for a court to resolve, requiring it to somehow reverse the operation of the smart contract.<sup>65</sup> Ideally, the smart contract would have a variation function to account for such contingencies which a court could use to make alterations.<sup>66</sup> However, such a term would not favour Scaley and therefore likely would not form part of the smart contract code, given that they would create it. A more complicated solution would be to order a cancelling smart contract going in the other direction.<sup>67</sup> This would require Scaley to automatically reimburse \$500 to the consumer each year as soon as it was paid. Notably, these complex solutions show the difficulty of regulating smart contracts entirely through ex-post means and the issues that arise when the court is competing with a powerful digital enforcement mechanism outside of their practical jurisdiction. A person may even commit contempt of court because the technology they used is unable to adapt to the court’s order, though this is an issue that is outside of the scope of the current paper.

#### *4 Solutions?*

The unfair terms mechanism in the FTA provides a reasonable solution to the practical burden. At present, only the Commission can bring an unfair term claim under s 46I.<sup>68</sup> While the inability for a consumer to bring a claim may seem problematic, perhaps having the Commission act on behalf of Scaley’s aggrieved customers leads to more accessible justice.<sup>69</sup> The Commission has significantly more resources at its disposal than average consumers. It can use these resources to seek out organisations like Scaley who are constantly abusing standard form smart contracts with unfair terms. While this mitigates the reversed practical burden that smart-contracts present in the consumer context, it relies heavily on the Commission being sufficiently resourced and proactive in its role as a watchdog for consumers. While the ability to issue large fines is good, the Commission could be given wider powers to monitor the use of smart contracts specifically and shut down retailers abusing them repeatedly for unlawful means. However, such a solution could be extreme and it is uncertain what level of power the Commission should be given.

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<sup>65</sup> Giancaspro, above n 26, at 832.

<sup>66</sup> Green, above n 3, at 238.

<sup>67</sup> Farrell, Machin and Hinchliffe, above n 2, at 5.

<sup>68</sup> This has been controversial. The withdrawn Fair Trading (Oppressive Contracts) Amendment Bill 2018 aimed to change this, as will be discussed below. See also: Alexandra Sims “The end of unfair contract terms?” [2015] 6 NZLJ 212.

<sup>69</sup> Note that the Commission can also act on complaint from a consumer.

Another solution could be to amend the FTA to reverse the general burden of its provisions when smart contracts are used in consumer transactions. While a consumer (or the Commission) would still need to instigate proceedings, it could be made a retailer's task to prove that its conduct was not misleading or deceptive, or that particular terms that a consumer challenged were not unfair. The FTA already has prohibitions against unsubstantiated representations and this change could be seen as in line with these.<sup>70</sup> However, such a solution may have unintended consequences with particularly litigious consumers seeking to challenge agreements on many different grounds in the hope that the retailer will settle to avoid significant legal costs. It is important to achieve a balance between the parties, while recognising that consumers have fewer resources than retailers. Perhaps, given this, while the FTA does not completely overcome the practical burden, it is enough to be able to rely on the unfair terms and related civil liability provisions on the FTA to deter smart contract offending.

### *V Smart Contracts and Consumer Finance*

While the FTA will cover ordinary consumer transactions, credit contracts provide some new issues for regulating smart contracts in consumer law.

Suppose that Scaley sells a customer a new car for \$2000 on credit, after a highly pressured engagement on the showroom floor. Scaley provides the finance at 39 per cent per annum, after charging the customer a \$300 application "fee". The smart contract takes minimum repayments directly from the consumer's account. In the event of non-payment from insufficient funds, an electronic controller in the car stops it from starting off until reactivated by authorised personnel. An employee can then locate it via a GPS system for repossession.

In addition to being able to bring a claim under the FTA, the consumer would be able to seek some relief from the smart contract mechanism in this case through the various provisions in the Credit Contracts and Consumer Finance Act 2003 (CCCFA). Overall, the CCCFA seems to adequately protect consumers from the practical burden of self-executing smart contracts through relatively prescriptive lender requirements and sizeable penalties for non-compliance.<sup>71</sup> At the very least, Scaley will need to include a variation function in the smart contract's code to satisfy multiple

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<sup>70</sup> Unsubstantiated representations are prohibited under s 12A of the Fair Trading Act, putting the onus on retailers when making representations. However, these do not cover misleading and deceptive conduct other than when one party makes a representation without reasonable grounds, whereas hidden terms involve a failure to draw the other party's attention to a particular term in the written agreement.

<sup>71</sup> Credit Contracts and Consumer Finance Act 2003, ss 9C, 102A and 103.



different lender obligations, with a number of other probable requirements that will be discussed below.

### *A Is this a Consumer Credit Contract?*

The CCCFA was enacted to promote the interests of consumers in connection with credit contracts and consumer leases.<sup>72</sup> Its provisions apply to credit contracts, which are contracts under which credit is or may be provided.<sup>73</sup> This includes those with a smart contract execution mechanism. Scaley's contract with the consumer falls within the definition of a consumer credit contract as the consumer is incurring a debt to purchase the car, to be used for domestic use, with its payment deferred until a later date.<sup>74</sup>

### *B Responsible Lending*

The Credit Contracts and Consumer Finance Amendment Act 2014 introduced significant lender responsibility principles to the CCCFA that Scaley must comply with under its credit contracts, even when using a smart contract.<sup>75</sup> Section 9C(1) of the CCCFA requires Scaley to comply with the lender responsibility principles. Notably, these principles require Scaley to exercise the care, diligence and skill of a reasonable lender before entering into an agreement to provide credit and in all subsequent dealings with the consumer in relation to the agreement.<sup>76</sup>

The Responsible Lending Code (the Code) elaborates on the lender responsibility principles and offers guidance on how lenders can implement these principles.<sup>77</sup> While the Code is not binding,<sup>78</sup> evidence of compliance with the Code is treated as evidence of compliance with the lender responsibility principles.<sup>79</sup> The Code and lender responsibility principles are extensive and there could be an argument that using smart contracts as an execution mechanism for consumer credit contracts is in breach of these. The guidance in the Code is intended to be "technology neutral", so no specific guidance is given on lending through smart contract mechanisms.<sup>80</sup>

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<sup>72</sup> Section 3.

<sup>73</sup> Section 7.

<sup>74</sup> Section 11.

<sup>75</sup> Section 9A. The current finance contract is an "agreement" and Scaley is a "lender" within s 9B(1).

<sup>76</sup> Section 9C.

<sup>77</sup> Section 9E(1).

<sup>78</sup> Section 9E(2).

<sup>79</sup> Section 9E(3).

<sup>80</sup> Ministry of Business, Innovation and Employment *Responsible Lending Code* (June 2017) at 6.

### *1 Smart Contracts and General Lender Responsibilities*

A consumer has two strong arguments here against the unconstrained use of smart contracts in consumer lending. First, the general lender responsibilities in the CCCFA may prevent the use of smart contracts without a variation function, unless Scaley has made sufficient inquiries to determine whether this is in the best interests of the consumer. Section 9C(3) requires Scaley, before entering into the agreement, to make reasonable inquiries about whether the credit will meet the borrower's requirements and objectives and whether the borrower will be able to make payments under the agreement without suffering substantial hardship. The Code elaborates on this requirement, indicating that a lender's inquiries may extend to "whether the borrower requires particular product features or flexibility" and "whether the borrower is prepared to accept any additional costs or risks associated with these features".<sup>81</sup> A generous reading of "product features" could arguably include the features of the smart contract mechanism itself, as the terms and mechanism of execution forms part of the overall product package (including the means by which the car could be repossessed in the event of default). In light of this, Scaley would need to ensure that using a smart contract mechanism actually suited the consumer's requirements. In addition, it would be difficult for Scaley to argue that the ordinary consumer is prepared to accept the "additional costs or risks" associated with using a smart contract mechanism such as the inability to vary and the self-executing nature which removes the consumer's option to refuse to perform and dispute their obligations if they so choose.

Arguably, the result could mean smart contracts used in credit contracts should *always* have a variation function in the code. However, there may be some situations where the consumer is fully aware of the risks of using a self-executing mechanism and may accept these in return for a lower interest rate. Regardless, creditors like Scaley need to be careful when choosing to impose smart contracts on the unwary. If Scaley fails to meet the lender responsibility principles, a court can make Scaley pay compensation or grant an injunction to stop Scaley's behaviour generally.<sup>82</sup>

### *2 Is Using Smart Contracts in Consumer Lending "Oppressive"?*

Secondly, the use of smart contracts in consumer lending may be "oppressive", allowing a court to "reopen" the contract and make changes to the legal terms as necessary, unless a variation function is coded into the smart contract.<sup>83</sup> Section 9C(3)(e) of the CCCFA requires Scaley to ensure that the agreement is not oppressive, that it does not induce the consumer to enter the agreement by oppressive means, and that it does not exercise a right or power conferred by the

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<sup>81</sup> At 4.3.

<sup>82</sup> Sections 93(aa) and 96(1)(aa).

<sup>83</sup> Section 120.

agreement in an oppressive manner.<sup>84</sup> Oppressive means objectively “oppressive, harsh, unjustly burdensome, unconscionable, or in breach of reasonable standards of commercial practice”.<sup>85</sup> The Code says that, to avoid oppression, a lender should avoid pressuring borrowers into entering an agreement without allowing them time to consider the relevant information about the agreement.<sup>86</sup> As such, a court may consider the current contract to be oppressive because Scaley procured it through a high pressured engagement. It may also be that using a smart contract mechanism with no built-in variation function falls within the definition of oppressive. Being locked into an irrevocable program seems unjustly burdensome and potentially unconscionable in most consumer lending situations and is therefore likely sufficiently oppressive.

Furthermore, the court may be able to consider the abuse of smart contract mechanisms in its determination of whether a contract is oppressive and should be reopened. By considering “all of the circumstances relating to the making of the arrangement” and “the relative bargaining power of the parties”, the court could consider whether the smart contract format itself is oppressive.<sup>87</sup> Additionally, the court can also consider “any other matters” that they think fit.<sup>88</sup> A smart contract mechanism may form part of “other” relevant matters and deem such an agreement to be oppressive if the court thinks that Scaley has taken advantage of another party through such means. Such a finding is particularly likely if Scaley has failed to include a variation function in the smart contract’s code, as it indicates that Scaley does not want to give the other party a chance to ‘escape’ from the execution mechanism enforcing a lopsided bargain.

The above arguments could be further strengthened if the Code directly addressed smart contracts in lending transactions. While the Code claims to be technologically neutral in terms of the obligations on lenders, this refers to not relaxing obligations for online lending channels such as SaveMyBacon.co.nz, rather than a new digital transaction mechanism. Arguably, the potential risks, admittedly with some benefits, for consumers are significant enough to warrant specific clarification of the issue in the Code and it would be an easy way to prevent borrower abuse through smart contracts.

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<sup>84</sup> Part 5 applies to the current agreement, as it applies to every credit contract (whether or not it is a consumer credit contract). Sections 18 and 19 set out continuing disclosure requirements, but these are immaterial for a smart contract related analysis.

<sup>85</sup> Section 118; see also: *GE Custodians v Bartle* [2010] NZSC 146, [2011] 2 NZLR 31 at [46].

<sup>86</sup> At 14.1(b).

<sup>87</sup> Sections 124(1)(a) and 124(1)(c).

<sup>88</sup> Section 124(1)(o).

The idea that the format of a contract can be oppressive shows that a subjective, qualitative analysis of a contract and its surrounding circumstances can be useful for maintaining balance between the parties when regulating smart contracts in the consumer context. Perhaps, therefore, the use of “oppressive” could also aid consumers outside of the lending context. The Fair Trading (Oppressive Contracts) Bill (the Bill) proposed a repeal of the current unfair contract terms in the FTA, replacing them with a prohibition on including “oppressive contract terms” in a standard form contract and enforcing any contract term in circumstances that would be oppressive to the consumer.<sup>89</sup> The Member’s Bill was withdrawn for unknown reasons before its First Reading, but it imported similar language to oppression under the CCCFA, with the same definition of “oppressive”.<sup>90</sup> If the Bill had passed, many of the above arguments around whether the use of smart contracts as an enforcement mechanism is oppressive would apply under the FTA. While not a vital change, the wider concept of oppression replacing unfair terms would have been ideal for the purposes of regulating smart contracts, allowing the courts to consider the circumstances and format of the arrangement, rather than its strict content. The previous example around ‘unfair’ hidden terms could have been resolved more simply through this wider analysis, though the outcome would have been the same. Introducing the concept of oppression into the FTA could thereby ease the practical burden by allowing an easier resolution of the issue. Regardless, the Bill’s withdrawal means that this change is unfortunately unlikely to return in the foreseeable future.

### *C Smart Contracts Acting as a “Disabling Device” for Repossession*

The CCCFA has special rules and prohibitions around using “disabling devices” to enforce credit contracts. These regulate Scaley’s use of a smart contract mechanism to disable and locate the car. Smart contracts can act as a “disabling device” under the CCCFA to the extent that they prevent consumer goods from being used, limit the debtor’s use of the consumer goods, or enable the creditor to locate the goods.<sup>91</sup> The electronic application linked to the car and the smart contract fits within this definition by preventing the car from being used when payment fails and allowing Scaley to locate the car via GPS.

Scaley must meet two key requirements before the smart contract can disable the car and these will need to be accounted for in the code of the smart contract. First, under s 83L(2) neither Scaley, nor its agent (including an employee) can activate the disabling device unless there is a sufficient breach, according to the terms of the contract, to give rise to the creditor’s right to activate the

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<sup>89</sup> Fair Trading (Oppressive Contracts) Amendment Bill 2018 (42-1), cl 6.

<sup>90</sup> Clause 4.

<sup>91</sup> Section 83L(3).

disabling device.<sup>92</sup> Scaley must therefore not set-up the smart contract mechanism to activate arbitrarily. However, lack of repayment is likely a sufficient breach within the meaning of s 83L(2). Secondly, before activating the disabling device, Scaley must give the consumer reasonable notice and advise them as to what actions the consumer can take to prevent the use of the disabling device.<sup>93</sup> This could be done digitally, perhaps by sending a notification sent to the consumer's smartphone. As such, Scaley would need to ensure that these requirements are provided for in the code of its smart contract, rather than simply programming it to stop the car in just any circumstance. If Scaley fails to do so, they commit an offence under s 103(1) and can be civilly liable for a fine of up to \$600,000. Additionally, the consumer would be able to bring a tortious action for trespass to goods.<sup>94</sup> However, the practical burden may make it difficult for them to do so.

The self-executing nature of smart contracts may cause issues around the requirement for the creditor or its agent to "activate" the device. Such an active verb and phrasing in the section's wording suggests that Scaley or its representative must take positive steps themselves to turn on the disabling function of the device, compared to simply setting up a self-executing mechanism and having it do so autonomously when certain conditions are met. However, a court would likely take a purposive approach to interpreting the section and hold a self-executing mechanism as sufficient, due to the section's focus on the effect of activation.<sup>95</sup> Provision for disabling devices was included in the CCCFA following concerns that creditors might disable cars or electronic devices remotely to avoid the usual repossession process.<sup>96</sup> Excluding a disabling device from s 83L merely because of how it is actually activated in a technical sense would provide an unprincipled exception that fails to protect consumers from the harm of unfair use of disabling devices.

If the car is able to be accessed, unlocked or started via a smartphone app as a "key" there will likely be repossession issues when combined with smart contracts. Under s 83N(2) of the CCCFA, Scaley cannot hold keys "or other devices" that enable access to the consumer goods unless they are either made voluntarily available by the consumer after a repossession notice has been served

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<sup>92</sup> Section 83L applies to Scaley's car sale, as they have a security interest over the goods to which have a disabling device connected and they have a right to activate the disabling device.

<sup>93</sup> Section 83L(2).

<sup>94</sup> Tony Dellow and others *Commercial Law in New Zealand* (online looseleaf ed, LexisNexis) at [49.3].

<sup>95</sup> For example, under s 83L(3), "activated" is defined as when "the disabling function of the device has been *switched on*". The passive wording of this phrase implies a focus on the device being active, rather than the person or mechanism activating it.

<sup>96</sup> Law Commission *Consumers and Repossession* (NZLC R124, 2012) at [3.4].

or the car has been repossessed through the correct procedure.<sup>97</sup> This would encompass access through a smart contract. Scaley would instead need to follow the procedure under Part 3A of the CCCFA before being able to give themselves a digital key to access the car.

Scaley should consider how the disabling device connected to the smart contract will operate to prevent harm to the consumer or damage to property. GPS immobilisers can be fitted to the starter motor, the fuel pump, or the ignition of a car.<sup>98</sup> If Scaley fitted the GPS immobiliser to the fuel pump and programmed the smart contract to shut it down immediately on activation, it could cause the car to stop while in use. This could potentially cause a consumer driving on the motorway to have an accident where they are hurt or even killed. Some installers in New Zealand refuse to connect a GPS immobiliser to the ignition or fuel pump, meaning that the car cannot be stopped while moving but can, more safely, be prevented from starting.<sup>99</sup> However, there is no direct regulation around GPS immobiliser use or installation in New Zealand.<sup>100</sup> Regardless, coding a smart contract to disable a vehicle in a dangerous manner would likely constitute failure to treat the borrower and their property “reasonably and in an ethical manner”, as required by s 9C(3)(d), while failing to take “all reasonable steps to ensure that goods and property are not damaged” during a repossession process.<sup>101</sup> As this would constitute a breach of lender responsibilities, a court could award the consumer compensation for the loss.<sup>102</sup> Scaley and its employees could also potentially be criminally or civilly liable if they disabled the car in a way that caused injury or damage to property.<sup>103</sup> As such, Scaley should ensure the immobiliser is fitted only to the starter motor and that care is taken when activating the device, perhaps in accordance with a company-wide safety policy.

While not applicable in the current situation, s 83ZN prevents a credit contract from providing security interests over specific essential consumer goods. Scaley could not secure a loan against a refrigerator, cooking equipment, a washing machine, a portable heater or medical equipment.<sup>104</sup> The natural follow-on from such prohibition is that Scaley has a statutory duty to ensure that they

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<sup>97</sup> Section 83N.

<sup>98</sup> Emma Hatton “Worker drives through intersection as boss remotely turns off vehicle” (5 September 2018) Radio New Zealand <[www.radionz.co.nz](http://www.radionz.co.nz)>.

<sup>99</sup> Hatton, above n 98.

<sup>100</sup> Hatton, above n 98.

<sup>101</sup> Section 9C(3)(d)(iii).

<sup>102</sup> Sections 93(aa) and 94.

<sup>103</sup> While the discussion as to liability is outside of the scope of this paper, potential causes of action could include (but are not limited to) negligence or manslaughter. See: Hatton, above n 98.

<sup>104</sup> Section 83ZN(1)(a).

do not use a smart contract as a disabling device in contracts for the sale of these items on credit.<sup>105</sup> The inability to use smart contracts to shut off vital devices like life-supporting medical equipment or refrigerators somewhat limits the potentially harmful situations that could arise by turning devices off while in use. However, there are other devices outside of the prohibition that could be shut off through a smart contract mechanism at the consumer's peril. For example, Scaley could secure a loan against a consumer's smartphone. If the consumer fails to pay and the smart contract mechanism stops the smartphone from working, they may be unable to make an emergency call if their house catches fire and may suffer additional harm as a result. Scaley should take care when setting up their smart contracts to disable the use of anything, ensuring that the consumer is given as much notice and information about the potential consequences of failing to meet the conditions of the smart contract as possible. Depending on the type of goods, they should potentially include a mechanism so that the consumer can use the goods in the event of an emergency. Perhaps, for example, the smart contract could block all calls and other functionality on the smartphone except for those to emergency services.

Commentators have said the using disabling devices are "electronic repossession" which, much like smart contracts, is a new concept in New Zealand.<sup>106</sup> The full implications of technology in this area are yet to be determined, but smart contracts used for this purpose can create potentially dangerous situations when used in vehicles or other machinery.<sup>107</sup> The Ministry of Transport has said that it currently does not plan to introduce legislation to regulate immobilisers, but would consider doing so if the misuse of immobilisers becomes common.<sup>108</sup> The convenience of being able to link such a device to a smart contract may increase the popularity of immobilisers to make it a legislative priority.

#### *D Smart Contract Disclosure*

The disclosure requirements under the CCCFA minimise Scaley's ability to use a smart contract to enforce similar 'hidden terms' to the previous hypothetical example.<sup>109</sup> The creditor must ensure that the consumer has a copy of all of the terms of the contract *before* entering into it.<sup>110</sup> Of importance for smart contracts, sch 1 also requires Scaley to disclose: the annual interest rate, the method of charging interest, a description of the credit fees and charges, and payments required.

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<sup>105</sup> Sections 83M(1) and (3).

<sup>106</sup> Dellow and others, above n 94, at [49.3].

<sup>107</sup> Dellow and others, above n 94, at [49.3].

<sup>108</sup> Hatton, above n 98.

<sup>109</sup> Section 17.

<sup>110</sup> Credit Contracts and Consumer Finance Act, s 17(2).

In addition, if using a disabling device, there must be a clear description of how the device functions, when the device might be activated and how the consumer may use the goods if required in an emergency. To some extent, such requirements effectively require Scaley to explain the effects of the self-executing mechanism to the consumer upfront, rather than being able to introduce sneaky automatically enforced terms and leave the consumer to discharge the practical burden. Failure to disclose the required information is an offence under s 102A and Scaley would be civilly liable for up to \$30,000.<sup>111</sup>

#### *E Recognising Debtor's Rights in Smart Contract Code*

The consumer has three key rights under the consumer credit contract that will need to be provided for in the code of the smart contract. They have a right to cancellation, early repayment, and relief in the event of unforeseen hardship.

The right to cancellation is provided in s 27 of the CCCFA, so a variation function would need to be built into the smart contract's code to allow this. The consumer may cancel the contract by giving written notice of the cancellation to Scaley within five working days of disclosure being made under s 17. Assuming the consumer takes immediate possession of the car, s 27(1)(a) will apply and require the consumer to pay the cash price of the car to Scaley within 15 working days to validate the cancellation.<sup>112</sup> While the formal cancellation procedure under the CCCFA itself would not necessarily need to form part of the automated program, the ability to cancel the activation of the automated mechanism generally would need to be functionally incorporated.

The right to early repayment in part or in full prevents Scaley from being able to prolong the credit contract at the consumer's expense through a smart contract.<sup>113</sup> It is in Scaley's interest to introduce a term to the agreement that only allows the consumer to make minimum repayments, charging 39 per cent interest per annum in the meantime. However, such a term breaches s 50(3) of the CCCFA. While the smart contract would automate regular minimum payments, it would need to be coded in such a way as to recognise additional prepayment at the consumer's election and deactivate when the consumer's loan balance has been reduced to zero.

Finally, failing to include a variation function in the smart contract's code would inhibit Scaley's ability to discharge its obligations in relation to unforeseen hardship applications. Sections 55–59A provide a mechanism for the consumer to apply to Scaley to have the terms of the agreement

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<sup>111</sup> Section 102A(8).

<sup>112</sup> As possession is taken immediately.

<sup>113</sup> Sections 49 and 50.



changed when they are reasonably unable to meet their repayment obligations because of illness, injury, loss of employment, the end of a relationship or “other reasonable cause”.<sup>114</sup> The consumer can seek to have the term of the contract extended (reducing the amount of each payment), payment postponed, or a combination of the two.<sup>115</sup> While Scaley does not have a specific statutory obligation to approve the application, they must consider the application and comply with the Code when doing so.<sup>116</sup> In particular, the Code says that a lender should not decline unforeseen hardship applications for “spurious reasons”.<sup>117</sup> Part of compliance with the Code would require Scaley to ensure that there is a variation function in the code in the event that such unforeseen hardship arose, irrespective of whether they later decide to approve any given application. Simply refusing an application due to the technical limitations around smart contract variation would be irresponsible.

#### *F Using Smart Contracts to Enforce ‘Unreasonable’ Fees*

It is questionable whether Scaley can use a smart contract to automatically enforce a \$300 establishment fee on the transaction, creating a grey area in Scaley’s favour. Section 41 of the CCCFA prohibits “unreasonable” credit or default fees, which includes and establishment fee, in consumer credit contracts.<sup>118</sup> The issue then becomes whether \$300 is “unreasonable”.

Section 42 requires a court to have regard to the amount charged compared to the creditor’s “reasonable costs” in relation to the processing and considering the application, documenting the agreement and advancing the credit. However, even the Supreme Court note that:<sup>119</sup>

The “reasonableness” standard is imprecise and difficult to apply to particular situations. Fees have to be set in circumstances where the creditor may not have precise information on its costs and will not know how many transactions it will enter into during the period that the fee level is applied. Allowance has to be made for the situation where circumstances transpire that do not reflect those that the creditor predicted would apply. In applying the “reasonableness” standard lines have to be drawn. Reasonable minds may differ on where those lines should be drawn. That does not, however,

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<sup>114</sup> Section 55.

<sup>115</sup> Section 56. However, the consumer cannot seek more extensive relief than is necessary to reasonably expect to be able to discharge their obligations and the change must be fair and reasonable to both the debtor and the creditor in all circumstances.

<sup>116</sup> See: Ministry of Business, Innovation and Employment, above n 80.

<sup>117</sup> At 12.11.

<sup>118</sup> A “credit fee” is defined in s 5 as including establishment fees (costs incurred in connection with processing and considering the application, documenting the contract and advancing the credit), prepayment fees, insurance premiums for credit-related insurance and fees that are passed on under s 45.

<sup>119</sup> *Sportzone Motorcycles Ltd (in liq) v Commerce Commission* [2016] NZSC 33, [2016] 1 NZLR 1024 at [116].

mean that including costs on one side of the line and excluding those on the other leads to absurdities.

Much like the arguments made under the FTA, it would be difficult for a consumer to seek relief in this area. Cases have stressed that investigations are complex and time-consuming by their nature.<sup>120</sup> A court will likely find a fee based on the relevant variable costs associated with the application as at, or below, the level that would be considered “reasonable” for the purposes of s 41, assuming that the costs themselves are reasonable.<sup>121</sup> A consumer may have difficulty proving these precise costs if they wished to challenge an executed smart contract that has taken a large fee. The consumer may have to incur considerable expense to find that Scaley’s costs were only \$150, instead of the \$300 they were charged. Considering these facts, the amount may be sufficiently “unreasonable”, however very few consumers would bother challenging this. Comparatively, a \$1000 fee would give the consumer incentive to challenge the fee and far stronger grounds to prove that it was unreasonable. Under the current system, Scaley is incentivised to set its fees just slightly higher than its actual costs, leaving consumers who want to challenge them with minimal chance of success and only a small payoff for doing so successfully.

Charging an unreasonable fee is an offence under s 103, with Scaley potentially being fined up to \$600,000 for doing so. Civil liability of this magnitude may provide sufficient incentive for Scaley to ensure that their fees are reasonable, even when using a smart contract.<sup>122</sup> Perhaps, in addition, reversing the legal onus of s 42 or a presumption of unreasonableness in certain circumstances may provide a further solution. In effect, lenders like Scaley would be required to justify their fees as reasonable. Lenders would likely be more conservative with their estimates and the amount that they charge as a result. However, a reasonably large fine alone ensures Scaley will not want to stray too far from its true costs.

### *G Summary and General Analysis*

To summarise, Scaley would probably have to do the following in relation to using a smart contract in its consumer credit contracts:

- a) Include a variation mechanism in the code to allow it to comply with its responsible lending obligations and the debtor’s rights;
- b) Explain the operation and effect of the smart contract mechanism to the consumer to comply with its disclosure obligations;

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<sup>120</sup> *Commerce Commission v Acute Finance Limited* HC Christchurch CRI-2016-009-004647, 23 June 2017 at [7].

<sup>121</sup> At [112].

<sup>122</sup> The amount was increased from \$30,000 by the Credit Contracts and Consumer Finance Amendment Act 2014.

- c) Build a notice mechanism into the code before disabling and locating the car, while ensuring that the disabling mechanism is set up with care to avoid harm to the consumer or their property; and
- d) Avoid using a smart contract to enforce an “unreasonable” fee.

A court can prohibit Scaley from acting as a lender if it deems Scaley not to be fit and proper after failing to comply with any provision of the CCCFA more than once, including the lender responsibility principles.<sup>123</sup> This gives the court a useful power to shut down rogue lenders using smart contracts to enforce dubious consumer credit contracts, before further smart contracts can be enacted, which is lacking from the FTA. Coupled with prescriptive lender requirements and obligations, compared to the FTA’s vague notions of “misleading” or “unfair”, the CCCFA largely overcomes the practical burden and cases are less likely to come to court initially. Scaley are unlikely to risk the potentially large civil penalties and potential shutdown if they knew a court would be highly likely to find that its behaviour constituted various offenses under the CCCFA. The CCCFA thereby does a reasonably good job of regulating smart contract abuse in consumer lending.

The biggest issues arise in the grey areas, such as “misleading conduct” under the FTA and “unreasonable fees” under the CCCFA. These areas allow Scaley to take advantage of the smart contract’s self-executing mechanism for its own gain, while lessening a consumer’s chance of success if they take the case to court. However, it seems that the sizeable and consistent penalties under both the FTA and CCCFA would deter this behaviour, particularly if it were deliberate. Previous cases in this area have indicated that deliberate breaches of the relevant legislation would naturally attract penalties near the higher end of the \$600,000 maximum to serve a deterrence and denunciation function.<sup>124</sup> This may be enough to stop rogue traders like Scaley from engaging in devious conduct, instead incentivising them to be conservative.

## *VI Recommendations*

As discussed, practical issues arise from using smart contract mechanisms in the consumer context. However, the current system protects consumers. After taking account of the potential penalties arising under both the FTA and CCCFA and the deterrence effect they would have, only very minor practical measures need to be considered to help the regulation of smart contracts. It is also important to bear in mind the previous benefits of smart contracts that mean New Zealand should encourage their use and therefore avoid a significant additional regulatory burden.

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<sup>123</sup> Section 108(1).

<sup>124</sup> See: *Commerce Commission v Acute Finance Limited*, above n 120.

### *A Consumer Law in New Zealand*

The solution to coping with the issues smart contracts raise is not to make all requirements under consumer legislation precise and certain, removing concepts like ‘fairness’ and discretion. This ignores the intentionally broad approach taken when drafting the FTA in order to increase the importance of substance over form.<sup>125</sup> Taking a broader approach to consumer legislation allows the law to better respond to changing producer and consumer practices and attitudes with lower compliance costs overall.<sup>126</sup> Counterintuitively, while broad law is expected to allow room to keep up with future trends, this does not appear to be the case with smart contracts. There is no need to repeal or significantly alter the FTA and remove relief for conduct that is “unfair” or “misleading” simply because it causes issues for smart contracts. These are inherently vague concepts that must be applied to the facts of the individual case and cannot be articulated more precisely. Whether the price or terms of a product or service are “unfair” is always going to be controversial because value is based on judgement. Removing true judgement from the law because code cannot yet comprehend it is not a viable option. Instead, it is important to have solutions that minimise the potential harm done by smart contracts.

### *B The Commission: Practical Suggestions*

The Commission could give guidance around the use of smart contracts in consumer transactions, as they have done for other issues such as unfair terms.<sup>127</sup> While guidance only provides the Commission’s view and is not binding, guidelines in good faith can be helpful for those trying to use the efficiency of smart contracts to lower consumer costs to comply with the law. Part of this may involve the Commission taking test cases to court before smart contracts become common in consumer transactions. Test cases would help to mark the boundaries for retailers like Scaley to help them comply with the law before they set up immutable smart contracts that do not comply with the existing law.

In addition, some have suggested that the Commission could approve all smart contracts that are to be used in a consumer setting before they become active.<sup>128</sup> While a nice idea theoretically, this is likely too impractical to implement. It would require a single organisation to check every consumer contract for compliance with the current law, which would heavily slow down the contracting process and remove many of the efficiency benefits that smart contracts bring.

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<sup>125</sup> Trotman and Wilson, above n 44, at 1.3.

<sup>126</sup> Trotman and Wilson, above n 44, at 1.3.

<sup>127</sup> See: Commerce Commission New Zealand, above n 58.

<sup>128</sup> Jeffrey Glass “Smart Contracts and Consumer Protection” (15 November 2015) Columbia Business Law Review <<https://cblr.columbia.edu>>.

Instead, Parliament could give the Commission the obligation of creating a publicly available database and application programming interface (API) of all relevant consumer contract legislation.<sup>129</sup> Ideally, this would contain the necessary compliance terms in computer code. An API lets two pieces of software interact, which could connect a smart contract to the master database of consumer compliance terms. All retailers could be required to “link” their smart contracts into these and the smart contract could call the terms, thus making the Commission’s standard terms part of the smart contract’s code. This could guarantee compliance with some more straightforward laws, such as creating a code that prevents retailers from attempting to contract out of the Consumer Guarantees Act 1993 or including a variation mechanism as previously discussed.<sup>130</sup> Such a solution, if made mandatory for all consumer contracts, has the same effect as Commission approval, since they are writing a set of standard compliance terms without having to appraise individual contracts. However, at the current time it is virtually impossible to write an algorithm to analyse compliance with more complicated and judgement-based laws, such as determining whether a term is “misleading or deceptive” under s 9 of the FTA.<sup>131</sup> This solution may be of limited use until technological developments allow computers and artificial intelligence to make more human-like judgement.

### *VII Conclusion*

Smart contracts represent a stage of maturity for electronic agreements over time. They present significant benefits for commerce. The use of smart contracts in consumer transactions can give rise to practical issues due to the self-executing and immutable nature of the technology, shifting the burden of issuing proceedings from a party looking to enforce a set of conditions to a party looking to be freed from them. However, in the area of consumer law, New Zealand’s position is strong and rogue retailers can be deterred from questionable behaviour with sizeable fines. Therefore, while smart contracts may be a major step forward in many ways, they will not take over the core ideas of fairness and discretion to protect consumers.

Given the nature of the procedural issues and the already reasonable penalty system for breach of the relevant consumer law statutes, only minor changes to the law are necessary. Most notably, the Commission’s powers and resources could be strengthened. However, overall, New Zealand is well positioned to cope with the future of smart contracting in consumer situations.

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<sup>129</sup> Raskin, above n 28, at 327.

<sup>130</sup> Section 43.

<sup>131</sup> See: Raskin, above n 28.

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