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Urgent Challenges for Christian Social Thought

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In his 2017 speech on fintech, the Governor of the Bank of England quoted Ecclesiastes 1:9 ‘What has been is what will be, and what has been done is what will be done; there is nothing new under the sun’ (Carney, 2017). Whether a bill of exchange is created with a quill pen on parchment or with a smartphone app linked to a credit card, the underlying contractual relationship remains the same. The ethical issues surround the relational dimensions of such a transaction and how these are affected by the change in technology. In particular we are concerned with striking the right balance between the contractual exchange of equivalents – market exchange – and the need for gratuity, for giving something for nothing, in order to bring about a healthy market economy which fosters wholesome human relationships and embraces the poor and the weak.

This paper singles out three areas of market exchange that appear most relevant and of concern to the Church: the nature of debt, the nature of incorporation and the tendency towards speculation in the securities created by those fundamental contracts. The first links to the historical teaching on usury; the second to more recent teaching on the nature of work; and the third back to the notion of a just price and the legitimacy of profit. The following three sections review some first principles before attempting to connect these areas with today’s digital transformation of the financial services industry.

The rental of money

At least since Bentham’s *Defence of Usury* (1787) and the abolition of the usury laws in England in 1854, the medieval Scholastic usury doctrine has been considered in the West to be obsolete, ‘buried long ago by both classical and modern economists’ (Cannan et al., 1932).

Usury is now generally understood to refer only to exploitative lending and such debate as there is takes place only in relation to whether there should be a legal cap on credit charges.

Nevertheless the formal teaching of the Catholic Church has remained unchanged since its last exposition in the papal encyclical *Vix Pervenit* of Benedict XIV in 1745, which firmly reasserts the traditional prohibition of any payment for the use of money. The pastoral practice of the Church recognised the politics and practice of the Western secular world when in 1830 Pope Pius VIII advised the Bishop of Rennes that the faithful were not to be troubled further about this matter, pending any future statement by the Holy See – which has not so far been forthcoming.[1]

It is important to clarify precisely what is meant by the terms 'usury' and 'interest'. By usury Benedict XIV meant any payment for the use of money under a debt contract: not simply an excessive charge. The term 'interest' was reserved for the charges that might legitimately be claimed – the difference or *id quod interest* to reinstate the lender's position – by way of cost or damages in making the loan, as opposed to a charge for use or rental. Such claims for damages attach, not to the loan of money *per se*, such as its amount and term, but to its effect on the particular lender. These claims were referred to as the extrinsic titles to interest and included charges for late payment (*poena conventionalis*) or consequential loss (*damnum emergens*). Originally, the claim could be made only after the event of loss and might have to be proven in court. Consistent with this, a third title (*lucrum cessans*, meaning compensation for loss of profits) was not accepted by Thomas Aquinas or by other early Scholastics if the charge was fixed in advance; however, its inclusion in the debt contract from the outset was eventually conceded as legitimate by the later Jesuit scholastics Molina, Lessius and de Lugo. This acceptance led in turn, by about 1750 via the doctrine of implicit contracts, to the modern distinction between legitimate interest and exploitative usury.

Mills (1989) argues correctly that the acceptance of claims for *lucrum cessans* from the outset of a loan was the turning point that both undermined the usury doctrine and permitted the

[1] *Vix Pervenit* was promulgated on 1 November 1745. Although originally addressed to Italian bishops, the Holy Office declared on 29 July 1836 that it applies to the whole Church. Pius VIII's response on 18 August 1830 to the bishop's letter is recorded in Denzinger (2012, 2722–2724.). Canon 1543 of the 1917 Code of Canon Law repeats the basic prohibition yet permits an investment agreement for modest lawful profit, and for a higher profit to the extent warranted by a just and proportionate claim. This has been taken as assent to the practice of lending at interest, leaving it to experts to determine whether the conditions are met in particular cases (Noonan, 1957, p. 391). The 1983 Code mentions only the payment of interest by church bodies and again refers simply to the investment of money without placing any limits on the form of investment (1284, 2). The 1992 Catechism mentions the prohibition of interest but only as a matter of charity (Fidei Depositum, 1994, s. 2449).

development of modern deposit banking.[2] *Lucrum cessans* shifted from being compensation for actual consequential loss to the economists' conception of opportunity cost. Originally a claim would be made for damages consequent upon default in repayment, e.g. through being unable to purchase materials or labour for lack of cash. The lender would have to be engaged in some form of commercial enterprise; the loss of the opportunity simply to lend for profit to someone else is clearly a circular argument. The loss would be assessed in relation to the particular circumstances of the lender and the general rate of profit or interest was not directly relevant. No claim could be made for money that would otherwise have rested idle.

In this paper, using the language of the economists rather than the Scholastics, 'interest' will be used to refer to any payment for the use or pure rental of money, rather than to a specific charge for costs or damages under the extrinsic titles. Indeed in modern debt contracts such additional charges are normally distinguished quite clearly from interest. *Thus all lending at interest today represents usury as it was understood between the 5th and the 15th centuries*. The relevance of the usury doctrine is not simply to a rent-charge at a rate in excess of a legal or moral standard of what constitutes a legitimate maximum.

At the heart of the ancient dispute is the legitimacy of lending money for profit, not to be confused with the payment of compensation for any costs arising from an otherwise unremunerated loan or credit, nor with the investment of money in capital goods for profit. The usury doctrine does not prohibit investment in capital goods, directly or indirectly, for profit, provided that there is an acceptance of the risk of loss. More exactly, financial investment should be some form of equity partnership.[3] Such investment involves not only risk of loss but also a relationship involving some degree of ownership and control.

In the context of the finance of business, the payment of interest can be seen as an information-saving device (Mills, 1989). The interest charge removes the obligation to account for profits and avoids the agency costs of ensuring the accountability of management to owners. One consequence of the advances in technology has been the advent of credit rating based purely

[2] *Vix Pervenit* stays out of the argument over *lucrum cessans*. It states clearly both that a pure rent-charge is illicit and also that there may be a legitimate basis for a payment under the extrinsic titles ('not at all intrinsic to the loan contract'). An example of a legitimate payment in a modern context might be index-linking to protect purchasing power. The Pope left the discernment of the status of a particular payment to the theologians and canon lawyers. Later Vatican documents do not provide any further clarification.

[3] This can take many forms, from simple partnership to incorporation as company or co-operative society. The extent of limited liability is a separate and complex issue. The 'triple contract', by which the usury law was undermined in the 16th century, relied nevertheless upon a contract of partnership.

on financial data, so that a credit score has become a substitute for a genuine relationship. We can expect further refinement of credit scores from fintech. In terms of usury doctrine, the payment of interest undermines the need for, and the incentive to create, the more complex and difficult human relationship involved in an equity partnership.

The risk of default on a loan contract was wholly rejected as an extrinsic title to interest before 1600, although there was no objection to the taking of a pledge or guarantee.[4] In stark contrast, the standard assumption of today's corporate finance literature is that a 'risky debt' contract is optimal (Gale and Hellwig, 1985) under asymmetric information with limited liability. The fact that borrowers know more about their business than lenders leads to two pathologies, moral hazard and adverse selection. Moral hazard means borrowers undertake higher risk projects with borrowed funds than they would with their own money, since the lender bears part of the cost of failure through limited liability. Adverse selection means that lenders are unable to discriminate between borrowers in terms of the riskiness of their projects. The literature argues that under these circumstances the optimal financial contract is a 'risky debt' contract incorporating a premium to compensate for the risk of loss on default.

Bohren (1998) has observed that there is something deeply unsatisfactory about an economic theory that depends on breach of fiduciary duty to explain widespread phenomena, if only because such behaviour (to the extent that it is carried out in practice rather than merely assumed by theory) ultimately leads to market failure. From an ethical perspective, it is disturbing if interest-based finance positively encourages opportunistic behaviour – cheating – and the use of limited liability as a calculated strategy, rather than as a protection from unforeseeable events beyond the control of the borrower.

Risky debt was at the heart of the explosion of credit associated with securitisation before 2008. The direct relationship between investor and user of the funds is eliminated by the move from 'originate and hold' to 'originate and distribute'. The concept of the CDS (credit default swap) and the conversion of sub-prime lending into secure investment grade securities by the alchemy

[4] St Bernadine of Siena (1380–1444) writes 'If someone lending 100 ducats wishes to have thence something beyond the principal because they are not so secure to him as if he had them in a chest, because, indeed, by lending he exposes himself to many chances of losing them, he is not excused because of such risk from usury … to profit from this risk is to profit from the act of lending alone' (quoted in Noonan, 1957, p. 130).

Shortly after *Vix Pervenit*, Francis Zech of Ingolstadt articulated the modern argument for a risk premium as an estimate of probable loss. Zech argued that a guarantor may ask a fee and accordingly so may an unsecured lender as a self-insurer. On the contrary, as Dominic Soto of Salamanca had argued two centuries earlier, a guarantor stands ready to replace the original lender if necessary; the fee is for a stand-by loan facility, it is not an insurance premium. See Noonan (1957), chapter XIV.

of the CDO (collateralised debt obligation) depends on the treatment of loans as simple transferable claims on future cashflow with well-behaved probability distributions of default. This system is only possible through lending at interest on a completely impersonal basis and accepting debtor bankruptcy as a normal cost of doing business.

The fruit of funding equity risks with debt was the 2007/8 crisis. The problem is not securitisation or the shadow bank in themselves, nor even the dishonesty of mortgage brokers and investment bankers. Buchak et al. (2018) show how since 2008 the share of securitisation in the US mortgage market has increased to 50%, with the major change that the mortgages against which shadow banks issue their securities are now exclusively those that qualify for government agency guarantee. Private risky debt has disappeared, at least from this sector and for the present. The natural law has re-asserted itself. Risky debt was always driven by the search for yield, the very thing forbidden.

Associative work and the corporation

Beginning with the encyclical *Rerum Novarum* ‘on the condition of the working classes’ of Pope Leo XIII (1891), Catholic teaching on the nature of human work developed over a period of a century, receiving its most detailed exposition to date in the encyclicals of John Paul II, *Laborem Exercens* ‘on human work’ (1981, ‘LE’) and *Centesimus Annus* ‘on the centenary of *Rerum Novarum*’ (1991, ‘CA’). At its core is the concept of the dignity of the human person and the distinction between the subjective and objective aspects of work.

A person is always the subject, the active agent, in any form of work, whatever objective form work may take, from that of the independent artisan or farmer to the scientist working in a university. While technological progress has radically changed the objective nature of work over the last few centuries, its subjective character is permanent. Furthermore, large-scale production involves a community of persons acting together so that the individual’s work cannot be separated from their participation in that community. An important nuance is that the emphasis on work creates a qualitative distinction between those directly engaged in production, whether directly through their own labour or indirectly through the labour embodied in the means of production whose use they provide, and other stakeholders with whom the productive community interacts.

Although the emphasis on labour is similar to Marxist analysis, and this has been taken much further by the field of liberation theology, the Church repudiates the concept of class struggle, while acknowledging the potential for real conflict between the interests of labour and capital. There is agreement that wage labour creates a problem of alienation, yet the wholesale transfer of ownership from private individuals to the state objectively fails to overcome this. Alienation can be overcome only through individual persons sensing that they are working for themselves, even as part of a common enterprise. Private ownership of the means of production is the default, unless the case can be made for socialisation in the interests of the common good; this is the meaning of the principle of subsidiarity in this context. Furthermore private ownership is subject to a social mortgage: the underlying principle is that material goods are private by use but public by intention. The goods of this world are intended for the benefit of all, yet that benefit is usually best achieved through personal responsibility, initiative and enterprise.

The commitment to private enterprise appears politically rather conservative and has been so interpreted by economic theologians following Michael Novak (1991). Yet the Church resists a simple affirmation of capitalism:

> If by 'capitalism' is meant an economic system which recognizes the fundamental and positive role of business, the market, private property and the resulting responsibility for the means of production, as well as free human creativity in the economic sector, then the answer is certainly in the affirmative, even though it would perhaps be more appropriate to speak of a 'business economy', 'market economy' or simply 'free economy'. But if by 'capitalism' is meant a system in which freedom in the economic sector is not circumscribed within a strong juridical framework which places it at the service of human freedom in its totality, and which sees it as a particular aspect of that freedom, the core of which is ethical and religious, then the reply is certainly negative. [CA 42]

In the context of the ownership of enterprise, this distinction is spelled out even more explicitly and with great moral force:

> In the Church's teaching, ownership has never been understood in a way that could constitute grounds for social conflict in labour … property is acquired first of all through work in order that it may serve work. This concerns in a special way ownership of the means of production. Isolating these means as a separate property in order to set it up in the form of 'capital' in opposition to 'labour' - and even to practise exploitation of labour - is contrary to the very nature of these means and their possession. They cannot be possessed against labour, they cannot even be possessed for possession's sake, because the only legitimate title to their possession - whether in the form of private ownership or in the form of public or collective ownership - is that they should serve labour, and thus, by serving labour, that they should make possible the achievement of the first principle of this order, namely, the universal destination of goods and the right to common use of them. [LE 14]

From this point of view the position of 'rigid' capitalism continues to remain unacceptable, namely the position that defends the exclusive right to private ownership of the means of production as an untouchable 'dogma' of economic life. The principle of respect for work demands that this right should undergo a constructive revision, both in theory and in practice. [LE 14]

In fact, the purpose of a business firm is not simply to make a profit, but is to be found in its very existence as a **community of persons** who in various ways are endeavouring to satisfy their basic needs, and who form a particular group at the service of the whole of society. [CA 35, original emphasis]

A business cannot be considered only as a 'society of capital goods'; it is also a 'society of persons' in which people participate in different ways and with specific responsibilities, whether they supply the necessary capital for the company's activities or take part in such activities through their labour. [CA 43]

Ownership of the means of production, whether in industry or agriculture, is just and legitimate if it serves useful work. It becomes illegitimate, however, when it is not utilized or when it serves to impede the work of others, in an effort to gain a profit which is not the result of the overall expansion of work and the wealth of society, but rather is the result of curbing them or of illicit exploitation, speculation or the breaking of solidarity among working people. Ownership of this kind has no justification, and represents an abuse in the sight of God and man. [CA 43]

The final paragraph could hardly be expressed in stronger terms. The challenge is to translate these abstract moral principles into policies and legislation that command democratic support. The way forward proposed here is to recognise the distinction between the company, which is a legal construct, and its business or businesses, which are communities of persons.

By working as part of such a community, a person becomes intrinsically a member of that community, if not immediately then at least over a reasonably short time; work and membership cannot be separated. To deny that link is to promote another form of alienation. The corollary is that workers possess an inalienable right of membership of the community in which they participate through their labour. This right should be seen as natural, just as over the last two millennia it has come to be recognised that people enjoy natural and inalienable rights of property in their own bodies. In prohibiting enforced slavery, modern societies have also prohibited voluntary slavery. A person may not sell themselves even if it is to their economic advantage. Similarly it should not be acceptable for people to be deprived of their right of membership of their productive community even under the most advantageous employment contract.

The UK Company Law Review that led to the current Companies Act 2006 recognised that 'one of the most important influences on the behaviour of directors and members is the market in corporate control' (CLR, 1999, p. 34). This strictly economic rather than legal factor cannot be neglected when considering director's duties and corporate purpose. The surest way for directors to lose their office and any employment is in consequence of a hostile takeover. Personal interest aside, the UK legal framework and the culture and practice of the City prohibits directors from blocking a hostile bid by one of the many devices common in the US, and regards as absolute the sovereignty of shareholders over the disposal of their property, namely the shares in a company, subject only to a limited understanding of the public interest in terms of national security and competition policy. It is only to be expected that the interests of shareholders will rank paramount in the minds of directors as they consider their position. This factor has become ever stronger as technology has made equity markets more and more liquid, shareholding periods shorter and shorter, and hedge funds more and more powerful. The share register can change dramatically within days of the initial offer and become dominated by those with a purely short-term financial interest.

This dogma of the absolute property rights of shareholders must be regarded as radically incompatible with Catholic Social Teaching because it takes no account of the community of persons engaged in the business enterprise. As indicated above, the Church holds that 'capital' should not be set up in opposition to 'labour'; capital cannot be possessed against labour or possessed for its own sake; the legitimacy of private ownership of the means of production is contingent on their being put at the service of labour. No legitimate decision can be made which considers only the interests of shareholders.

Despite outstanding leadership by some individuals, there is no prospect of a permanent commitment by a public company to a corporate purpose other than enlightened shareholder value (and perhaps not even enlightened, as many critics point out) without the prohibition of the hostile takeover.[5] This is a pre-condition of change, alongside the statutory recognition of qualifying employees as members of the company. For directors to be able to pursue the success of the actual enterprise for which they are responsible, as opposed to the interests of shareholders, they must have the discretion to make an impartial judgement as to what constitutes the long-term success of the business for the benefit of both shareholders and

[5] This may not be so much a question of a prohibition as of a removal of the duties imposed by the Takeover Code in its present form. The Code might be limited to the conduct of recommended takeovers (i.e. recommended by the Board) including the requirement for employee consent here proposed.

workers. Thus any takeover offer should, at the very least, require the approval of the board of directors.

From the perspective of the community of persons, even the prohibition of the hostile takeover is not sufficient. Boards may recommend a takeover as in the interests of shareholders without outside pressure and even if this is not in the interests of the company's continuing business enterprise. This implies that the minimal rights of the employee member, deemed a member for this purpose by statute, should include the approval of any takeover recommended by the Board. Such approval should be sought in the form of a majority vote by ballot, in a similar fashion to a shareholder resolution.

There are many occasions when workers will approve a takeover, even if this involves redundancies for some or all of them. A struggling business has few options and its workers usually understand this better than anyone. A merger with a larger business may make strategic sense. They may even approve the closure of a viable enterprise when an offer is too good to refuse, provided that an appropriate share of the benefit flows to them.

Speculation

Both debt contracts and shares issued with limited liability under articles of association reduce complex and demanding human relationships to relatively simple commodities, securities that can be traded easily on organised markets. This brings us to the third area of concern: speculation.

Whether speculation is regarded as benign or malign depends at root upon different views of the capacity of markets to identify what the economist Alfred Marshall called 'Normal' prices – and Adam Smith, 'natural', and Thomas Aquinas, 'just' prices. From this difference follow quite opposed attitudes to the social value, or cost, of speculation.

Speculation can be defined as trading in assets in order to profit by the rise or fall in the market price, as distinct from regular trading or investment (OED). Speculation differs from gambling in requiring ownership of goods or securities, even if in practice contracts are usually 'closed out' before delivery of physical goods become necessary. Pure speculation should be distinguished from the abuses with which it is often associated, such as market manipulation, naked short selling, insider trading and extortion. A capital gain is not intrinsically speculative, since price may increase to reflect changes in productivity or other economic characteristics (e.g. of an underlying business, or of wine in a cellar).

Furthermore, since any decision to buy or sell an asset in a fluctuating market involves a question of timing in an attempt to obtain the best price, the term speculation is best reserved for transactions that are intended from the outset to be reversed, with no account being taken of the economic benefits of ownership, apart from the price. Thus while direct speculation in physical assets is an ancient practice, speculation on a large scale required the emergence of organised exchanges, for transferable contracts for standardised commodities and for currencies and financial securities, which permit 'short' positions (sales for future delivery covered by borrowed securities) and the ability to profit from falling as well as rising prices.

The benign view sees speculation as a form of insurance or risk-bearing which stabilizes markets, a form of specialisation and extension of the division of labour between producers and merchants. This view was first clearly articulated by Emery (1896) and applied to currencies by Milton Friedman, who argued that destabilizing speculators would go out of business, although his critics responded by showing how destabilizing trade could be profitable. From this perspective, the panoply of sophisticated trading tools such as futures, options, swaps and derivatives does not alter the basic case for speculation. Futures contracts were introduced into the American commodity exchanges precisely to make it easier for primary producers and processors to hedge against the volatility of spot markets. There is historical evidence that temporary bans on futures trading increased volatility (Jacks, 2007), although this does not tell us the extent to which volatility is exogenous (through variations in supply and demand conditions) or endogenous (through speculation in spot markets).

It is plausible that trends in commodity prices are influenced by the conditions of production and final demand. In Marshall's terms, it can be argued that there is a normal price at which production and final demand would match over the medium term, given the productive resources in place, the available technology and the preferences of consumers. Marshall's normal price is a just price in the terms of Aquinas, reflecting the cost of production. The social role of the speculator should be to identify these fundamental factors and profit by smoothing the path of prices over the production period and eliminating the cobweb cycle. In a different context this is the role of the minimum price in Fairtrade.

Nevertheless high carrying costs and the availability of finance limit the ability of a private speculator to take more than a very short term position. Thus destabilizing activity may be the only profitable option:

> Experience teaches those who are able and willing to run the speculative risk that when the market starts to move downwards it is safer and more profitable to await a further decline … Even if would pay [the speculative purchaser] to buy at the existing price on longer-period considerations, it will often pay him better to wait for a still lower price. (Keynes, 1938, p. 449).

Even if a theoretical case might be made for speculation in commodities, it does not follow that it extends to speculation in currencies or securities. Markets cannot identify normal, or fundamental, values for currencies or equities. The reasons differ slightly in the two cases.

In the case of currencies, mainstream economists argue that flexible prices and exchange rates produce a tendency towards equilibrium in the balance of payments so that, conversely, balance of payments equilibrium defines the fundamental value of a currency. This argument is based on a standard supply-side model which assumes, among other things, a similar tendency towards full employment in the long run. This claim can be rejected on both theoretical and empirical grounds. Changes in aggregate income, differences in sectoral productivity and an evolution of the composition of demand dominate price effects as the determinants of the balance of trade, while there are substantial barriers to the free movement of labour across borders. The historical evidence suggests that any stability of exchange rates is not natural, but the result of particular circumstances underpinned by a large trade surplus.

The Gold Standard depended on Britain's willingness to lend its surplus to its colonial territories, while today the ability of emerging economies to peg their currencies against the dollar has depended on running and accumulating trade surpluses as a war chest against speculative attack. Deficit countries are forced to restrict output in order to keep their balance of payments in line with the level of capital inflow permitted by the multilateral institutions, whose main interest has been to secure the repayment of their own and private bank lending.

Exchange rates are therefore conventional and within broad limits, arbitrary. Although there may be some long-term tendency towards fundamental value, it is weak and sluggish (Rogoff, 1996). Meanwhile currency markets remain a speculator's playground and furthermore, with the free movement of capital, sovereign states lose the power to enforce the adjustable peg which could be used to manage the balance of trade over the long term in the social interest. Instead, they are forced either to float, to join a currency union and lose the ability to realign their exchange rate, or to amass foreign currency reserves in order to peg their rate against a major currency.

With regard to equities, the premise of the benign view of speculation is the idea that stock market prices reflect fundamental value, usually referred to as the 'efficient markets hypothesis'. Speculation is said to play a positive role in 'discovering' the correct price. We have already noted in the case of commodities that market prices may have some connection with the 'normal price' based on the fundamentals of supply and demand, even if in practice so much can change over a horizon of even one or two years that the connection is tenuous. By contrast, the value of a long-term capital asset (or a share in a bundle of assets) is the stream of future income that it generates over a period of many years. In principle, this value could be identified in retrospect by observing the market interest rates and the money yield of an asset over its economic life. However the attempt to estimate that value in advance faces the insuperable obstacle of the irreversible, historical nature of time. As Keynes puts it:

> The outstanding fact is the extreme precariousness of the basis of knowledge on which our estimates of prospective yield have to be made. Our knowledge of the factors which will govern the yield of an investment some years hence is usually very slight and often negligible. If we speak frankly, we have to admit that our basis of knowledge for estimating the yield ten years hence of a railway, a copper mine, a textile factory, the goodwill of a patent medicine, an Atlantic liner, a building in the City of London amounts to little and sometimes to nothing; or even five years hence. (Keynes, 1936, p. 149)

The problem is the durable character of physical capital assets: if the expectations upon which an investment was based prove mistaken, it is not possible either to reverse the investment today or to go back in time, adjust the original investment decision, and then check the revised results in the present. It is only in a stationary or steady state (allowing for stochastic risk, an 'ergodic' system) that adjustments made today might (given stable dynamics) be expected to have the same effect in the future as the same adjustments, made in the past, would have had today. So the convergent feedback mechanism necessary for supply and demand to generate a set of long-term equilibrium 'normal' prices, as a fundamental basis for the prospective yield of a capital asset, is absent in a world subject to unforeseeable change.

In the face of such inescapable uncertainty, the prices of capital assets are in practice based not on fundamental value, but on a convention as to what those prices should be. A convention may be simple (e.g. tomorrow will be the same as today, or during a bubble, that prices always go up), or grounded in a sophisticated valuation model, perhaps machine intelligent, which takes into account a wide set of present information that may change from day to day. However wide that set, it cannot contain factual information about the future and is therefore subject to sudden discontinuous change if new information alters the underlying assumptions.

Furthermore, in the context of a highly liquid investment market, it is only rational to pay more attention to tomorrow's market price than to tentative and unreliable expectations of fundamental value. Indeed the only thing that matters is the intentions of other investors. The real business of the professional investor or indeed the algorithms must, perforce, be the study of market sentiment, in which the study of fundamental value is at best a minority option. As Keynes puts it:

> Investment based on genuine long-term expectation is so difficult to-day as to be scarcely practicable. He who attempts it must surely lead much more laborious days and run greater risks than he who tries to guess better than the crowd how the crowd will behave; and, given equal intelligence, he may make more disastrous mistakes. There is no clear evidence from experience that the investment policy which is socially advantageous coincides with that which is most profitable. It needs more intelligence to defeat the forces of time and our ignorance of the future than to beat the gun … it is the long-term investor, he who most promotes the public interest, who will in practice come in for most criticism, wherever investment funds are managed by committees or boards or banks. For it is in the essence of his behaviour that he should be eccentric, unconventional and rash in the eyes of average opinion. If he is successful, that will only confirm the general belief in his rashness; and if in the short run he is unsuccessful, which is very likely, he will not receive much mercy. Worldly wisdom teaches that it is better for reputation to fail conventionally than to succeed unconventionally. (Keynes, 1936, p. 157)

Thus, as in the case of currencies, the value of equities cannot reasonably be held to be anchored by fundamental forces of productivity and preference; the case for speculation as a stabilizing force cannot be sustained. There can be no stability if 'the centre does not hold', if the tendency towards equilibrium is not only weak, as in the case of commodities, but devoid of practical content.

Furthermore, the social justification for the stock market has a second element: not only the idea that it values assets correctly, but that it allocates finance accordingly to the best new investments. The empirical evidence (Hayes, 2003, considers data for the UK and US for the 50 years 1952-2001) is that the bulk of real investment, property and regulated monopolies apart, is financed by accumulation (corporate cashflow), both directly and indirectly through corporate borrowing. Corporations raise new equity to finance acquisitions or occasionally, to reduce borrowings when expectations have been disappointed. The exceptional cases, such as the uncritical flood of speculative equity into technology stocks in the late 1990s are, just as in the South Sea Bubble of 1720, more likely to have encouraged waste and misallocation than to have supported enterprise and innovation. The primary purpose of the stock exchange has always been the transfer of existing assets in the secondary market, whether between long-term investors or speculators. In recent years, share buy-backs and the process of merger and acquisition have tended to withdraw capital from the real economy.

Application to fintech

The previous sections have reviewed three main areas of the Church's concerns about market exchange and brought to bear some up-to-date technical thinking from the perspectives of theology, law and economics. The challenge now is to apply these high-level considerations to the specific ethical issues surrounding the digital transformation of the financial services industry, or fintech as it has become known.

We began with the quotation from Ecclesiastes, that there is nothing new under the sun. It is not clear that fintech raises distinctive ethical issues beyond those raised in the previous sections and those related to the wider phenomenon of big data. The concerns expressed about our financial system predate fintech. The control and exploitation of data raises concerns that extend well beyond finance. The control and tagging of people within the workplace has taken the factory system to new limits, but this form of technocracy does not relate directly to finance.

Nevertheless there are grounds for thinking that fintech brings new pressures to bear in the old areas of concern. Given the ownership and control of technology, it is not alarmist to be concerned that fintech may push the financial system still further away from serving the common good. The earlier analysis suggests two particular areas of risk: the application of fintech to personal unsecured lending; and the enhanced liquidity and speculative capacity that fintech may bring to equity markets.

First, a clear distinction needs to be made between retail and wholesale financial services. Retail needs to be re-personalised, not further de-personalised. Technology can be used to enhance communication and human interaction and make everyone's life easier. Equally it can be used to exploit, control and exclude. The most infamous case is the pay-day loan promoted by television advertising and delivered through a website or smartphone app. Thanks to the leadership of the Archbishop of Canterbury, some progress has been made in the UK towards reining in these practices. Yet even the move to telephone banking in the 1980s led to the disappearance of the relationship with the traditional bank manager.

There is no mandate in Catholic Social Thought for high-interest unsecured consumer credit, which has always been a profitable area for traditional money-lenders and now for banks and fintech upstarts. Although the purist would also rule out asset finance such as housing mortgages and car loans, the collateral security offered by the asset in these cases keeps the interest rate in line with the cost of finance including intermediation. Leaving aside the fact that most depositors do not qualify for *lucrum cessans*, the traditional building society or savings and loan, lending against security with modest intermediation costs, was similar to the *montes pietatis* approved by the Fifth Lateran Council in 1516.

In the UK, following bad experiences of reckless lending in the 1930s, the building societies operated an interest rate cartel from 1939 until 1971 of which the main effect was to keep lending interest rates below market-clearing levels and to limit risky debt by credit rationing. Some tax advantages helped to keep interest rates competitive for savers and had the side-effect of keeping banks out of the mortgage market, with the societies taking a 96% share in 1978. Lending for hire purchase and leasing was also limited and controlled.

It may be argued that the moral prohibition of interest has been superseded by the introduction of limited liability for both corporations and individuals. Indeed the repeal of the usury law in England coincided with the development of bankruptcy law and was soon followed by the abolition of imprisonment for debt. The unrelenting legal claim represented by an interest charge can accordingly be ended by a legal process.

However the experience of insolvency is very different for corporations and individuals. Corporate insolvency is unpleasant and disruptive but impersonal. The legal rearrangement of claims and apportionment of losses recognises the reality of financial liabilities incurred in the normal course of business. This amounts to a return in some degree to the concept of partnership, of risk sharing. Directors of insolvent companies are not usually held personally liable or even disqualified from setting up a new company. In the banking context, living wills and effective resolution arrangements combined with adequate capital may protect us from the domino effect of failing debt during the next crisis; time will tell. The building society has its own built-in resolution mechanism, since its deposits are actually withdrawable shares.

By contrast personal insolvency is a deeply traumatic and demeaning experience. Debtors will impose severe privation on themselves and their families in order to avoid it. Although insolvency can arise from excessive spending or unexpected liabilities, it is compound interest that creates the bulk of debt in these cases. The Financial Conduct Authority cites the case of a debt of £1,500 for a cooker with a market price of £300 (FCA, 2018).

Some positive steps have been taken in the UK to help individuals manage their finances, with the FCA responsible for the regulation of consumer credit since 2014 and the Money Advice Service being funded from a levy on financial services firms. The Government's Financial Capability Strategy recognises the complexity of the issue. The FCA has conducted a High-Cost Credit Review, identifying starkly the manner in which banks make excessive bank charges for overdrafts as well as the predatory nature of instalment credit, catalogue and store cards, and door-to-door lenders (FCA, 2018). It also makes the case for strengthening the non-profit alternative providers such as credit unions and community development finance institutions.

The problem is that where lending is unrestricted, the poor and the weak always pay the most. Technical innovation leads to ever more creative ways of exploiting them. In the absence of concerted action by government or indeed the Church, it is difficult and takes many years, indeed decades, for individuals to establish strong charitable, co-operative and mutual institutions. It takes no time at all to demutualise them or undercut them in the name of competition and consumer choice.

If it is a counsel of perfection to suggest that interest on consumer credit should once again be prohibited, still it should be much harder to obtain interest-bearing credit. The Church's constant teaching remains the moral counter-weight to the utilitarian arguments in favour of free contract and provides an underpinning, whether recognised or not, for the efforts of the regulators. Fintech must not be allowed to find the loopholes in the regulated system. The preferential option for the poor requires a system which protects the small minority of distressed borrowers – the Money Advice Service records about 500,000 seeking debt advice (MAS, 2017) – at the cost of some inconvenience to the credit-worthy and impatient majority. Non-profit lenders and government sources of interest-free emergency credit should be reinstated as part of a properly resourced national strategy which provides them with an appropriate degree of protection from bank competition. Yet since 1971 the policy of financial liberalisation has actively encouraged demutualisation and since 2010 the UK working age social security regime has become punitive rather than supportive. An unintended consequence of the introduction of Universal Credit was to prevent social landlords from renting essential furnishing to tenants, forcing them into high-cost credit.

The second area of risk relates to the enhanced liquidity and speculative capacity that fintech may bring to equity markets. The Bank of England expresses some enthusiasm about the possibility of using blockchain technology to release capital from the process of settling bargains in securities and also presumably from stock lending (Carney, 2017). Reducing this friction will make it easier to speculate, pushing in the other direction against the dampening effects of a stamp duty or financial transactions tax, which represent the deliberate introduction of a friction.

We can add to this the prospect of intelligent algorithms analysing and probing for weaknesses in market sentiment towards a corporation. We could soon reach a stage where a corporation's entire share register can shift within minutes or even seconds towards a majority of hedge funds ready to launch a hostile bid. Some economists, no doubt, would rejoice in the further reduction of friction in the market for corporate control. As argued earlier, this view is radically incompatible with Catholic Social Teaching.

There is no doubt that the Church's vision of the corporation as a community of persons working for the common good cannot be achieved without the prohibition of the hostile takeover and the requirement of worker consent to recommended takeovers. Fintech has not created this problem but could make it worse. Rather, boards of directors must be empowered to promote the long-term success of the business of a corporation for the benefit of all its members, shareholders and workers alike. Directors must be freed from the scourge of shareholder value, so that finance will serve industry rather than the reverse as at present. Again, without this change in the law, fintech will only make matters worse.

Fintech does not represent a fundamental shift in the struggle to strike the right balance in human relationships between market exchange and giving something for nothing. The ethical risks appear to be a matter of degree rather than kind. Nevertheless by its very nature technology is deterministic and closed in its thinking, if we may allow that algorithms and machine intelligence think. Fintech accordingly favours market exchange and pushes the balance in that direction. Conscious and active measures will be required to guide the application of technology in such a way that it respects human dignity and serves the common good.

Christian social teaching can contribute to the acceptance of different principles from the utilitarian premises, usually tacit, of most thinking about finance and economics. Some of these ideas are challenging for the conventional wisdom, in areas such as consumer credit, hostile takeovers and worker participation. There are some urgent challenges here for the Church in communicating with the world, in continuing to witness to the good news while bearing patiently with the fact that the good news is so often rejected.

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