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Finance Overview

Theology of Work Project

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Note: "Overview" articles are full-length explorations of major topics in the theology of work. If you're interested in a specific aspect of the topic, the table of contents can help you jump there quickly. Most sections of overview articles are also on the website as brief resources in their own right.

Does finance contribute to the flourishing of society and to serving fellow people? The chairman of the United Kingdom Financial Services Administration argues that significant parts of banking are "socially useless".[1] Laura Newland, a recent Duke University graduate, in the New York Times bemoans graduates going to work in finance, when they could instead be working to benefit society.[2] Young people wonder whether studying or working in finance is an honorable occupation.

In this article we will assess the value of finance by drawing from Christian theology—especially the Bible—and from the financial literature and practice. Our conclusion is that finance is **not** socially useless. In fact, our biblical and theological exploration reveals that God created the foundations of finance and commands us to use finance for social good, specifically for stewardship, justice, and love.

Stewardship, justice, and love can have many different meanings, so it is important to establish what we mean by them. Stewardship is obedience to God's mandate to increase his creation from something like a garden to something like a city, all the while remembering it is his. We are to care for it and we will be held accountable as stewards. Justice is treating persons with due respect for their rights as humans, these rights based on the fact that every human is loved by God. Love is caring for another person by seeking to bring about their flourishing as an end in itself, and with due respect for that person as a human. Finance within this framework is an excellent place for a Christian to work and to seek societal renewal and transformation, despite the pervasive impact of sin in finance.

Our approach is to first reflect on what finance is, how its basic building blocks are created by God and how God enables humans to build the institutions of finance on the foundations he created. We will then consider the effects of the Fall on finance, and in particular whether market-rate finance has a positive role in a fallen world. Then we will weave the biblical themes into a redeemed vision of finance with specifics for finance professionals, borrowers and lenders.

What Finance Is

Finance is that human activity whereby we allocate or exchange resources with respect to time. For the most part this article concerns external exchange—that is, borrowing, lending and investing—rather than allocation of resources within entities. The term “finance” will be used here as shorthand to refer to financial transactions among parties. Financial functions within households and institutions also concern the allocation of resources over time, and by analogy many of the same principles apply. Nonetheless internal finance—budgeting or project planning, for example—does have its own particular circumstances, which this article does not cover.

Finance occurs, then, when people who want to borrow some resources in a particular time period do so by entering into arrangements with people who have more resources than they currently need. The borrower is willing to pay a price (interest for example) to gain present access to the resources, and the lender wants to make a profit or return in the future from giving up access to the resources at present. Assuming all goes well, the lender benefits the borrower by providing resources at a time the borrower needs it (now), while the borrower benefits the lender by increasing the borrower’s resources in the future. If all goes well, the borrower uses the resources in such a way that both the borrower and lender are better off after the borrowed resources are returned to the lender.

To put it a bit more formally, finance is that human activity involved in the allocation and exchange of resources with respect to time. As a shorthand, we will use the term “lending” to refer to all forms of making resources available, including debt, equity, derivatives, etc. Thus lenders could be households with deposits at a bank, but could also be, for example, stock investors, private-equity investors, or employees contributing to a pension fund. Similarly, borrowers could be households with bank loans, but could also be, businesses selling stock, households borrowing to purchase a house, or government entities issuing bonds in open markets. In general, we are referring to market-based transactions undertaken in a mutually beneficial voluntary manner.[3] We will not develop a theology regarding non-market types of resource allocation—for example governmental or non-voluntary allocation of resources—which are more properly called “subsidies.” Also, since by “finance” we mean the exchange of resources at one time with the expectation of a reverse exchange of resources later, we are excluding labor markets, markets for goods and services, and the like, which are more properly called “trade.”

The earliest example may have been lending a hunting instrument to a fellow clansman for a period of time with the understanding that it would be returned later along with part of the kill. Perhaps a somewhat later example would be borrowing seed from a neighbor with the understanding that that amount of seed plus a little extra would be returned at the end of the growing season. Later, when currency was developed, more complex borrowing and lending transactions could be handled more easily. A successful fisher might sell the catch and have a bit of money left afterwards. A farmer could borrow that money, buy seed, grow grain, sell some of the grain crop and repay the fisher's original money plus some interest. The fisher helps make the farmer successful and vice versa. In this way people benefit each other in ways beyond their personal skills or capabilities. The history of finance is the history of human creativity and social cooperation applied to make the earth's God-given resources more productive.

Over the centuries several types of institutions have developed which greatly facilitate this borrowing and lending of resources. Banks, investment banks, mutual funds, microfinance organizations, credit unions and many other organizations have emerged to help borrowers and lenders find each other and to exchange and re-exchange resources to fit the needs of the borrowers and lenders. For example, mutual funds make it possible for people to invest modest amounts of money in an array of stocks and bonds that would be too costly and complex to invest in individually. The contracts or instruments used in finance include debt and equity as well as many hybrids and derivatives designed to suit particular borrower or saver needs.

God's Purposes for Finance

Finance has a role in God's purposes for humanity. Three primary purposes of human work revealed in the Bible are to i) reveal God's glory, ii) engage in stewardship, and iii) provide for justice and love. We will explore each of these shortly. But first, let us note that finance—like all human endeavor—suffers from the profound, devastating effects of sin. For example, greed and dishonesty infect finance in many situations, directly undermining the service of God's glory, and human stewardship, justice and love. We will explore the effects of sin in detail a bit later. To begin with, let us explore finance according to God's original purposes for the world, giving us a glimpse of what God intends and what might be possible through Christ's redemption.

Finance Helps Reveal the Glory of God's Creation

In the biblical narrative God creates everything for his glory and honor (Colossians 1:16, Revelation 4:11). The foundations of finance—like all of creation—reveal God's unmatched creativity. God created time—seasons, years, and lifetimes. God knit us together so that we have the desire and ability to live and flourish in community with a rich fabric of social interactions, one of which involves sharing resources over time. When people share resources from one time to another in a network of social relationships, we partake of his bountiful creation and enliven it with the creativity and love he has given us in his image. Like great music and delicious foods, finance reveals God's glory by displaying his omnipotence and creativity in his creation. We will develop a more detailed appreciation for God's glory in the next section when we see that God created the eight specific foundations of finance.

Finance Helps Us Fulfill the Creation Mandate to Be Good Stewards

Stewardship is the fulfillment of God's mandate to fill the earth, subdue (or govern) it, work it, and care for it (Genesis 1:28-30, Genesis 2:15). God's original creation is shown in Genesis as a garden filled with plants and animals and people in perfect communion with God. The garden is good, but it is not meant to stay unchanged forever. When the Bible looks ahead to the fulfillment of God's creation it shows us a world teeming with people from every nation praising God. They are no longer in a garden, but a city with foundations, walls, gates, tree-lined streets, iron, gold, domesticated animals and merchant ships (Isaiah 60, Revelation 21). This development of creation from a garden to a city filled with people and their cultural elements is the conclusion of God's mandate to fill the earth, subdue it, work it and care for it. Even though God's creation at the beginning was perfect and full of resources, it was not complete as God intended it to become. Mouw argues that "God intended from the beginning that human beings would fill the earth with the processes, patterns, and products of cultural formation".**[4]** We are God's creative hands and continue his creative work, building by the grace of God on his perfect and abundant creation foundation. Van Duzer argues that God's perfect, though incomplete, creation provides an excellent foundation for business.**[5]**

Allocating resources well over time so that they grow is vital to fulfilling this creation mandate. Examples of how finance helps humans obey God's creation mandate include saving money to buy seeds in the spring time, raising capital to purchase mining equipment which will produce ore in future years, a young family borrowing money to buy a house, and a community issuing bonds to build a school. Finance provides the future-oriented allocation of resources necessary for growth. It provides resources to those with the greatest opportunity to increase resources in the coming period of time, then shares the increase with those who lent the spare resources that otherwise would have been unproductive. Without finance, people would live each day with only the resources they could garner that day or that they personally had accumulated in prior days. The economic growth humanity has experienced over the centuries would not be possible without finance. It would be impossible for humanity to thrive without borrowing and lending.**[6]**

God mandates us not only to work his creation, but also to care for it.**[7]** Because borrowing and lending is inherently cross-time, finance encourages a long-term perspective on decision making. People who take out mortgages to buy homes tend to take care of them better than those who rent houses short-term. Conversely, unsustainable activities are hard to finance. Who would lend money to a lumber company that is cutting its forests so quickly that they will be depleted in a few years? Finance also makes possible capital improvements that reduce operational use of natural resources. For example a city can borrow money to expand its public transportation system, which will better use God's carbon resources and also provide retirement income to the municipal bond investors.

Finance Can Be a Means of Justice and Love

Finance makes certain activities of justice and love possible. We are using Wolterstorff's conception of justice wherein persons are to be treated with due respect for their rights as humans.[8] Wolterstorff's theistic account bases these human rights solely on the fact that every human is bestowed the honor of being loved by God. Thus "on account of God's attachment to human beings, one wrongs God by injuring a human being."[9] This God-human relationship is what gives rise to human rights, which in turn forms our conception of justice. We are also using Wolterstorff's "care" idea of love which he calls care-agapism—that is seeking to bring about the flourishing of another human as an end in itself, and with due respect for that person as a human.[10] His argument is that love as care is the best way to understand biblical love (*agape*), because care incorporates justice into love. "Care includes seeking that the beloved be treated justly. And care is the sort of love that is typical of love for oneself, that Jesus attributes to God for us, and that Jesus enjoins on us for God and for our neighbor. Understanding love as care gives us a unified understanding of these four manifestations of love."[11] Care includes action, probably involving some risk or sacrifice on the part of the lover.

Love manifested in care is consistent with other Christian conceptions of justice and love. For example, Chris Wright shows that the major biblical themes of righteousness and justice are closely related concepts meaning "what needs to be done in a particular circumstance or relationship" to restore things to what they ought to be.[12] Wright goes on to argue that God chose Abraham specifically as a way to advance his mission of blessing the nations with justice and righteousness.[13] It follows that the reason God chose us was to bless those around us with justice and righteousness. Wright's argument gives us the reason to actually practice this love. We are mandated by God to bless those around us by showing love, that is by bringing about their flourishing in a way that respects them as people loved by God.

And to whom do we show this love and justice? Jesus said his most important teaching is to love God with all our heart, mind, soul and strength and to love our neighbor as ourselves (Matthew 22, Mark 12, Luke 10), which echoed Moses' earlier teaching.[14] Jesus' parable of the good Samaritan illustrates that our neighbor is anybody we can show love and justice to, even those with whom we do not have a prior relationship. Or as Wolterstorff says, "I take Jesus to be enjoining us to be alert to the obligation placed upon us by the needs to whomever we happen on."[15]

Wolterstorff's concepts of justice and love are useful for understanding God's intended purpose for finance for two reasons. First, finance can be useful for bringing about the flourishing of another human, with due respect for that person as a human. Finance provides access to resources. The resources that finance allows to be reallocated can help people flourish, and sharing resources in a mutually beneficial voluntary way is an excellent way, although not the only way, to show due respect for another human. This is the essence of justice. If you don't have resources you need now in order to be productive, and if you are willing to share some of the increase with me later, then it is only just that we would lend, borrow and repay out of respect for each other. Second, finance can be a means to love neighbors—in the sense of caring about their flourishing—with whom we do not have a personal relationship or who do not live nearby. Well-constructed financial arrangements—along with a good legal system—make it possible for strangers to borrow and lend with confidence of a proper return. In this way, we can share resources for mutual benefit far beyond our personal circles. Not all financial arrangements embody justice and love in these ways, but they could and they should. Chaplin urges us to transform institutions, perhaps radically, so they "embody the central norm of love" and so they serve as "conduits" for love and justice.**[16]**

The Foundations of Finance are Created by God

It was God's choice to make us in a particular way that enables finance. This is not to say that God created particular institutions or systems of finance, but that people are created in ways that give finance a role in God's purposes. This concept is critical for our theology. If God did not create the foundations of finance, then finance is a purely human invention that might not have any role in God's intentions for humanity. If however God did create the foundations of finance, then surely he did that for a purpose, and that purpose must align with his revealed will. We will explore eight foundations of finance to see whether they really do spring from God's creation.**[17]**

We are Timebound

God created a world with time and where human time is limited. By God's creation, we have days, seasons, generations and lifetimes (Genesis 1, Psalm 104).**[18]** Further we need to be aware of time and will be held accountable for our time (Psalm 90:12, Ecclesiastes 3, Proverbs 6:6-11, Proverbs 20:4). Kana argues that time is God's resource and we are stewards of time.**[19]**

Allocating resources among people across different time periods is the underpinning of finance. Financial resources are needed for a few days because of production or shipping time, or a few months due to seasonal business, or a half year due to a growing season, or for several years for new product development and launch, or for decades to build a factory or buy a house, or for most of a life time for retirement savings. In a world where people's needs, opportunities, and available resources vary over time, finance is the primary means of matching resources to needs across time.

We are Social

Human beings are created to be social and to live in community, and we have a desire to be with other people. As God put it, “It is not good that the man should be alone” (Genesis 2:18). Moreover, we are created in God’s image (Genesis 1:26-27; 2 Corinthians 3:8), and the Holy Trinity existing in perfect unity is a model of community for us (Galatians 4:1-7). As a form of resource sharing among people, finance is inherently a social activity. By creating us as social beings, God laid the foundation for the exchange of resources, of which finance is a crucial form.

We are Heterogeneous

People are created with a wide variety of skills, needs and desires. In the Bible, we see this in God’s creation in his endowment of people with a wide variety of skills to build the tabernacle (Exodus 35:30-36:5) and to rebuild Jerusalem upon the return of the remnant from the Babylonian captivity (Ezra 7:6-7; Nehemiah 1, 2). Paul emphasizes that we are each gifted differently (1 Corinthians 12:12-31). In addition, since we were not all born at the same time, human society has a rich variety of ages and life stages. Some people are young and not yet able to provide their own food and shelter, others are just beginning to be able to do so, others are in their prime productive years and have resources in excess of their current needs, and still others are older and need help in supporting themselves, or need to draw on resources accumulated during their earlier years.

This heterogeneity is a foundation of financial markets because at any given time some people will have excess resources while others will have need or opportunity to use resources beyond what they currently possess. For example, some of us will want to borrow money to pursue a business opportunity or build infrastructure to fulfill some unmet need in society. Others will be savers at some periods of their lives and will be able to lend to meet that borrowing need.

We Act as Agents

People were created to act on others’ behalf, to be stewards or agents. Prime examples are that God mandates us to steward his creation and steward his grace (1 Peter 4:10). We also see that God called Joseph to act as a steward for both Potiphar and Pharaoh (Genesis 39:2-6; 41:41-44). Jesus’ parable of the talents illustrates that we are his stewards, and will be held accountable for acting as he would want us to (Matthew 25:14-30).

Finance depends on people acting as agents or stewards on behalf of others. Executives act as agents for the shareholders of a corporation. Mutual fund managers act on behalf of investors to decide which stocks or bonds in which to invest. Lawyers apply their expertise to serve their clients’ interests in financial transactions. An entire branch of finance literature is devoted to better understanding the many agency relationships in finance. Finance can exist because God created people with an ability to act on behalf of others.

We Make Promises

God is a God of promises and covenants. The biblical narrative is a story of God's promises kept. Humans are created in his image, and thus we have biblical accounts of humans making promises to each other. The story of Ruth hinges on promises between people of different nationalities, for example (Ruth 1:16 -18). Paul references human promises in Galatians 3:15. Humans are created to be able to make and keep promises to each other.

Every financial instrument is a promise between two or more parties, and would not be possible if promises were not part of God's creation. A mortgage loan is a promise to pay a certain amount each month. A share of stock is a promise for a portion of future dividends and a right to elect board members. In modern finance some of our promises tend to get quite complicated and detailed so it has become common practice to write them down. However, these written contracts simply reflect our created ability to make and keep promises. This ability is so central to finance that the Bible teaches us to not overpromise in our finances (Proverbs 22:26-27).

We Are Not Omniscient

Humanity does not know everything, and individually each of us knows only a tiny fraction of what can be known. God created each of us with our own unique mind which takes in, processes and remembers things differently from anyone else. Human endeavor depends on each of us using our individual knowledge for mutual benefit, rather than on each of us learning everything needed for success.

Limited knowledge and asymmetric information are mediated by financial markets. This means that when a loan is entered into the borrower has more information about his or her ability to repay than does the lender. It means that when we buy a stock it is possible that the seller knows something about the stock that we do not. This asymmetry will impact our willingness to participate in financial markets and will impact financial prices. Finance is built on two obligations that turn asymmetric information from a hindrance into an opportunity. First, we use promises to convey our certainty about information we possess that other parties do not. My promise to repay the mortgage, under penalty of losing the house, gives you the confidence to deposit money in the bank that funds the mortgage, even though you do not know my likely future earnings. Secondly, we prohibit falsifying information in financial transactions. If your investment documents tell me that there is a $3 billion market for products like yours, this information must be accurate. Because of this, we can make use of information provided by others, even if we do not have personal knowledge of its accuracy.

We Create Resources for a Future that We Do Not Know

God created risk, in that we do not know what the future holds (Ecclesiastes 8:7). But God created us with an ability to influence future events, in particular with the ability to create new things that come to fruition in the future. Miller outlines three conceptions of risk, the third being “opportunity creation” wherein human imagination and creativity make the future indeterminate because we might—or might not— be able to bring into existence what was not there before.[20] Consistent with this, Buchanan and Vanberg (1991) argue that the markets are best understood as a creative process, as opposed to a discovery process or allocative process.[21] By God’s design the future is not deterministic, but an unfolding process impacted by human choice.

This risk has a profound impact on financial decisions.[22] Most financial instruments and the pricing of those instruments reflect this uncertainty. Loans get turned down due to uncertainty, or are priced higher to compensate for the percentage expected to fail. Stock prices rise and fall due to uncertainty. Debt contracts have reporting and collateral provisions because of uncertainty. Financial markets are greatly complicated by uncertainty, but also have a greater potential benefit to society due to the ability of risk to be managed and re-allocated via finance.

We Are Risk Takers

God created us to be able to take risk and provides biblical support for taking risks (Genesis 1:28-30; 2:15; Matthew 25:14-30; Luke 19:11-27; John 12:24). We are created in the image of a risk-taking God, who took “risks by making a distinct creation and a free humanity to rule it.”[23] God created us so we feel risk, but we know God will provide.[24] However we also have much biblical teaching to be prudent in our risk taking.[25] Gregersen defines risk as the sum of natural events, social events and the meaning these hold for a person.[26] Gregersen quotes Luhmann who argues that trust is a risk-willing position, creating a virtuous cycle between trust and risk. Gregersen argues that the Bible teaches “the world is created by a benevolent God in such a manner that invites a risk-taking attitude and rewards it in the long term.”[27]

Human attitudes toward risks are crucial in finance. People are willing to take some risk but not too much, and the amount varies by individual and circumstance. This ability to take risk along with an aversion to taking risk unnecessarily is part of God’s creation design. God in his wisdom created us with an innate ability to balance the risks and rewards, and we see this reflected in financial prices. With this awareness we can recognize that a risk understood and managed is consistent with God’s creation design.

Conclusion to the Foundations of Finance are Created by God

These eight aspects of creation—especially of the creation of human beings—form the foundation of finance. Finance bridges the gaps that would otherwise prevent people from making use of spare resources to grow and increase human productivity and from sharing resources socially for mutual benefit. In other words, finance turns the conditions of human existence into opportunities to bring glory to God, to serve as stewards of creation, and to care for each other with justice and love.

Financial Institutions

To complete our theological analysis of finance, we need to demonstrate exactly *how* people can develop financial institutions that bring glory, stewardship, and justice and love from God's created foundations. By institutions we mean those structures and mechanisms which society uses to organize its activities. The four primary finance institutions are currency, intermediaries, instruments and prices. In this section we explore each of these four institutions, show how they are built on God's foundations and are a way in which we obediently respond to God through stewardship, justice, and love. Along the way we address several questions which arise.

Van Duzer argues that institutions may be among the powers and principalities referred to in the Bible and that as such were created by God for good.**[28]** He infers that Colossians 1:16-17 may be referring to institutions such as business or markets.**[29]** He quotes Yoder who argues that God created institutions to provide "regularity, system, order" to his creation.**[30]** Consistent with this we take an optimistic view of finance; a "what was intended by God" view of finance. Later we look at how God's intentions for finance are impacted by a fallen humanity, and recognize that finance institutions can be, and are, used for great harm in society; exhibiting bad stewardship and lack of justice and love for fellow humans.

Currency

God enabled humans to represent material value in media that are durable, storable and transportable. In his original creation design God made some physical elements, such as gold, to be attractive, small, and relatively scarce. He also created in humans an ability to understand and impute value to such articles. Later, God allowed humans to establish governments which would use non-scarce resources, such as paper, to represent scarce resources, such as gold, which in turn could be exchanged for a wide variety of resources.**[31]** We have money which is in modern times very easy to transport (and is almost costless to transport electronically) and which provides access to real resources such as food, housing, education and capital goods. Being able to easily allocate resources via currencies is an important part of fulfilling the creation stewardship mandate.

The Bible contains much teaching about money. Several famous teachings are that “the love of money is a root of all kinds of evil” (1 Timothy 6:10) and, “You cannot serve both God and money” (Matthew 6:24). These teachings are not about money as a medium of exchange, but rather about human attitudes towards money and the power it represents to us. However, money as a medium of exchange is not the root of evil. Money as a medium of exchange is a blessing enabled by God.**[32]**

Intermediaries

Intermediaries are institutions that “remanufacture” lenders’ resources into a form that is useful to borrowers. A simple example is when a bank intermediates between several depositors and one business loan borrower. Intermediaries include all the various types of banks, but there are several other important types of intermediaries such as pension funds, life insurance companies, mutual funds, private equity funds, hedge funds and securitization vehicles. Even “disintermediated” financial transactions—when companies borrow money by issuing bonds to lenders, rather than borrowing from a bank, for example—typically go through some kind of intermediary, such as an investment bank. Any financial vehicle which aggregates on savers' money and invests it in borrower obligations is performing the function of financial intermediation. Intermediaries function because God created humans to be social and heterogeneous, to act as agents, to make promises, and to be prudent risk takers.

Intermediaries allow humans to fulfill God’s stewardship mandate in two key ways. First, intermediaries develop networks of borrowers and lenders, investing their own resources to identify and build trust between parties. You would probably never lend money to a stranger to buy a house, but you would deposit money at a bank that lends to the stranger. You trust the bank because you know the bank has a process to makes sure it lends soundly to appropriate borrowers. Second, intermediaries make resources scalable by enabling many savers’ resources to be aggregated. You can’t lend enough money for someone to buy a house, but a bank with thousands or millions of depositors can pool their funds to make large loans possible.

One way intermediaries enable justice is by allowing non-elite households and small businesses to gain access to resources. Without intermediaries a household’s access to resources would be limited to the social relationships of that household. Poor households would likely stay poor. With intermediaries a poor household can borrow the resources to buy a house, car, college education or start a small business. Likewise with small businesses that do not have the size or reputation to issue bonds directly to investors. This allows for a more just society.

Intermediaries allow borrowers and savers to care for each other, which as we have seen is an act of love. The intermediary enables the borrower to obtain the needed funds more easily and more cheaply than if the borrower relies only on family and friends. Intermediaries also enable savers to save for the future in lower risk and higher return ways compared to hiding money under mattresses or lending only to acquaintances. Although the saver and borrower never meet, they are caring for each other by sharing resources in this way.

Can we really love someone through intermediaries?

If finance is a means of care and love, doing finance through intermediaries raises a question. Can we love someone we do not even know?

We can indeed show love for people whom we do not know. Most of us are familiar with institutions in society that enable humans to show love to each other across distance and time. For example, employees and donors of NGOs such as Oxfam, World Vision and Red Cross, to name a few, are acting out of love for needy people around the world, even though they do not actually know the persons they are loving. Indeed even the work of developing those organizations is an act of love for our fellow humans.**[33]** Similarly, although we do not usually think of this, savers who make bank deposits which allow borrowers to use those resources for a period of time can be acting out of love for the borrowers even if their exact identity is unknown to the savers.

This suggests a possible tension between stewardship and love, however. It seems that larger intermediaries should allow for better stewardship because they have opportunities to borrow and lend in many markets around the world. But smaller local intermediaries with more local relationships might be better at enabling love because they may know their customers more intimately. A big national bank might allow for more optimal stewardship and a small local bank might allow more intimate love. Our theology would urge banks and customers to consider this potential tradeoff when making decisions regarding the scale of their banks. If a bank chooses to be large, it should be with an explicit goal of excellent geographical and scale stewardship. If a bank chooses to remain small it should do so with an explicit mission to be excellent at love.**[34]** Depositors should consider the same tradeoffs when deciding where to do their banking.

Instruments

Financial instruments are promises between two or more parties with differing resource needs which are tailored to allow both parties to be prudent risk takers when the future is unknown. As argued above, God created humans to be a promise keeping people. That element of creation along with the fact that God created humans social, heterogeneous, time bound, and to be prudent risk takers in a world of uncertainty, gives rise to financial instruments. Financial instruments are the products “manufactured” by intermediaries to meet the needs of savers and borrowers and allow humans to obey God’s creation mandate and to show justice and love in significant ways.

Financial instruments enable good stewardship because they can be tailored to fit the risk, return, and time profile of the particular stewardship opportunity. Thus, if a borrower company has a particular project whose outcome is quite contingent on an uncertain future (i.e., it is risky), then a financial instrument can be crafted which anticipates this risk and thus helps the saver and borrower mutually agree on how exactly to share the requisite resources, very likely with an equity-type instrument.

Financial instruments also allow for a more just society. Instruments can be tailored for the needs of those members of society whose needs are the greatest. Small business loans are instruments that have provided countless opportunities for entrepreneurs to serve society. Student loans are an instrument which has provided great opportunity for young people whose families have not been able to save enough for education. The special tailored instruments used in micro-lending also enable justice. Specialized housing loans with smaller down payments and government insurance have enabled countless low income families to gain the benefits of home ownership. Financial instruments allow those members of society with ample resources one way to show justice to poorer members of society. **[35]**

A mortgage loan is an example of love enabled by financial instruments. The saver helps the borrower obtain a physical place in which she and her family can flourish. In turn, the borrower helps the saver prepare for later in life when he is old and no longer productive enough to support himself. Through God’s creation design he anticipated that we would develop financial instruments which would enable humans to love each other in such meaningful and useful ways. Of course, the borrower and saver do not specifically know each other but they do know of the other's existence and can thus love each other in this way.

Prices

Prices in financial markets are expressed as expected rates of return on financial instruments, which in debt instrument are quoted as interest rates.**[36]** Why exactly would the borrower and saver agree to pay or receive a rate of return or interest? Is that part of God’s creation design? We argue yes, as follows.

First consider this from the borrower’s perspective. Ideally, the borrower will be willing and able to pay interest because he or she can use the borrowed resources to produce greater resources in future. These productive opportunities have been created by God and include things like shelter so the borrower can stay healthy, planting seeds to grow a crop, gaining skills through education, building a road or factory, or buying a machine that can make something useful. Time periods and productive opportunities are both parts of God's created order. This is one-half of the important foundation of interest rates.

For the second half of the foundation, consider this from the lender's perspective. The lender is willing to give up access to some resources until some future period for two reasons. At present he or she has more resources than needed. But later, there is likely to be a future period during which he or she will need additional resources, in retirement for example. It makes sense to let the borrower use the resources for a period of time and return them later. To give up control of the resources for a while the lender will want compensation at least equal to the next-best use for the resources. The lender's diminishing appetite for current consumption and knowledge of likely future time periods in life are direct results of God's creation of humans as finite and time-bound.

Thus, the productive opportunities and human consumption needs created by God, along with the above eight foundation of finance, form the basis for interest rates. Interest rates are not some aberrant human idea; rather interest rates are an institution which flow directly from God's creation design. Furthermore, a well-priced interest rate can benefit both the borrower and lender, and will be the result of a voluntary mutually beneficial exchange.

Interest rates are a key part of stewardship. This price mechanism allows for clarity in resource allocation decision making. If you are paying interest, you have an incentive to borrow only if it helps increase your future productivity. Interest discourages you from borrowing simply to live above your means because you have to pay back *more* tomorrow than you consume today. The interest rate mechanism encourages good stewardship of financial resources over time. However, we caution against assuming that this mechanism will automatically lead to the "care" part of God's creation mandate. Not every project with a positive financial return will lead to creation care. It will take thoughtful finance participants to work within the context of interest rates to care for God's creation.

Interest rates facilitate and stimulate a just re-allocation of resources. Interest rates provide a way for those members of society without resources to gain access to resources simply by agreeing to fairly compensate the lenders for the temporary use of the resources. Interest rates allow sharing of resources to be voluntarily agreed and mutually beneficial. Interest rates allow a financial transaction to be good for both parties. Without interest rates (i.e. a zero interest rate) financial activity would be a gift from lenders to borrowers. Without interest rates borrowers would be attempting to gain free access to lenders' resources. This would look a lot like begging, which is perhaps not the best way for justice to work. However, God in his creative genius arranged that one way justice can occur is via sustainable voluntary mutually beneficial activities among humans, one of which is what we call interest rates.

Can a market exchange really be love?

The question of prices raised two questions about finance as a form of love. First, can love be expressed in a market value-exchange relationship? Put another way, if both borrower and lender expect to gain from the relationship, is either one really doing it out of love? Second, since most financial transactions are at arm's length, can one love another human even if there is no personal relationship?

Can one person love another through selling something at a price? Recall that our idea of love is seeking to bring about the flourishing of another human as an end in itself, and with due respect for that person as a human. The answer is yes. People bring about others' human flourishing all the time through providing goods and services at a price. When farmers provide wholesome food, they help consumers to flourish, even though consumers pay for the food. We don't regard good teachers as mere mercenaries simply because they get paid. The majority of work in modern economies is paid, and the goods and services produced by work are sold at a price. If charging a price negates the possibility of love, then virtually *no* work could show love.

Why is it that market-rate finance somehow seems less capable of showing love? Perhaps it is because money—unlike teaching or farm produce—seems like an undifferentiated product. A farmer shows love by selling *good* produce. Can a lender show love by lending *good* money? The answer, surprisingly, is yes. The money itself is not better or worse than any other money, of course. But the circumstances, conditions, and terms of lending are all opportunities for borrowers and lenders to care for one another. The duration of the loan, its payback provisions, collateral requirements, default penalties, insurance, inflation protections, and countless other terms can make a loan better suited to enable the borrower and the lender to flourish. Income verification, property assessment, due diligence, understandability of loan documents, availability of unbiased information, and other factors related to initiating the loan can also show care and respect. The location and convenience of bank locations, loan officers, rate comparisons, community engagement, advertising, and other factors can help reach underserved communities. Credit counseling, respectful dialogue about the use of proceeds—whether for consumption or investment in productivity, product education, and other factors can show love by helping people avoid borrowing if it is likely to harm them. For equity transactions, the openness of markets, the accuracy of financial statements, the integrity of people with inside information also care for and respect investors. Even though the money itself is the same from one lender to another, the love—that is, the care and respect—can vary widely.

For example, a mortgage lender may help a low-income family buy a house instead of renting. If the house, the interest rate, the loan period, the income verification, and all the other factors are handled properly, this can be a tremendous benefit for the family as they begin to build equity. It also benefits all those who lend the money involved, typically bank depositors or pension funds. Similarly, an investment bank that helps an entrepreneur issue an initial public offering to raise capital to grow the business brings a kind of love to the entrepreneurs future customers, employees, suppliers, and community, in addition to the shareholders who purchase the stock. All of these are market-rate transactions that bring love to bear for both borrowers and lenders.

Finally, love can be shown by honoring and fulfilling the promises made in the transaction. Of course much of this is required by law, but here we are arguing that love is shown in market transactions by going above and beyond the law by acting in the other party’s best interest even if it is not required or deserved and even if there is no expectation of a future benefit of doing do so. This means seeking the flourishing of the other party as an end in itself. Again, markets for other goods and services routinely do this—think of health care, for example—and there is no reason finance cannot do the same. Most if not all market transactions could feature this kind of love, and many do.

Does the Bible prohibit charging interest?

Another question is whether financial prices—interest in particular—are prohibited by the Bible. For centuries Christians have debated the applicability of the biblical texts which seem to prohibit interest or the taking of collateral**[37]** as for example in this passage:

> You shall not charge interest on loans to another Israelite, interest on money, interest on provisions, interest on anything that is lent. On loans to a foreigner you may charge interest, but on loans to another Israelite you may not charge interest, so that the Lord your God may bless you in all your undertakings in the land that you are about to enter and possess.(Deuteronomy 23:19-20)

To explore this and other relevant passages, see “Employing Assets for the Common Good (Deuteronomy 23:1-24:13)”, “Lending and Collateral (Exodus 22:25-27)”, "The Sabbath Year and the Year of Jubilee (Leviticus 25)”, “The Righteous Man Does Not Take Advance or Accrued Interest (Ezekiel 18.8a)”, “The Righteous Man Does Not Oppress, But Restores to the Debtor his Pledge (Ezekiel 18:5,7)”.

For the most part, Christians have concluded that interest is not inherently prohibited in modern societies, but that lending practices— including interest rates and collateral—must not take advantage of vulnerable people or make people destitute. This is in fact what we are advocating here—that finance is meant as a means of stewardship, care, and respect.

Conclusion to Financial Institutions

To sum up our theology, we have argued that the purposes of finance are to bring glory to God, to enable humans to be creation stewards, and to allow justice and love. We argued this by showing that God created the foundations of finance and then showing how these foundations enable humans to build four specific institutions on those foundations. These institutions enable humans to obey God's creation stewardship mandate and God's justice and love mandates. Below we provide several examples of how in this framework Christ's redemption can enable stewardship, justice, and love.

Finance and the Fall

Up to this point we have considered finance as God originally intended. But, we know that the Fall of humanity has marred every aspect of creation. Until Christ's redemption of the world is accomplished, we live in a world shaped by both the good of God's creation and the evil of the Fall. Sin has severely damaged the ability and propensity of humans to be stewards and to show justice and love through financial markets.

Several sins are especially damaging to finance. Since finance is fundamentally about allocating resources, the sin of greed has a major impact on finance.**[38]** Since God did not create us to be omniscient, and since information is important in finance, the sin of lying also causes huge problems in finance. In fact, this greed and lying can seriously impair the ability of finance institutions to do the good they are intended for, and begs the question whether these institutions are so corrupted by sin that they cannot be redeemed.

Many authors have explored the problems in finance and their underlying causes. Shiller reminds us that Keynes argued we have a spontaneous urge to action, which he called animal spirits, which causes financial markets to have problems.**[39]** Stiglitz outlines many of the problems with investment banks (the wholesale financial intermediaries), with a special focus on compensation structures.**[40]** He argues that "the financial system failed to perform its key roles: managing risk, allocating capital, and keeping transaction cost low." Terrill argues that a moral breakdown has occurred in investment banking and with consumers, and that we need a soul change to pursue what is "good and right. " **[41]** Van Duzer has a chapter detailing how sin impacts markets, including finance.**[42]** He shows how broken relationships among humans and with God cause many problems in the marketplace. Davis argues that over the past three decades some elements of finance—particularly institutional investing and securitization—have contributed to the waning of organizations which contribute to society and to the rise of a trader mentality which has a shorter term view and can damage society.**[43]**

Given the work of these and other writers, we will not expand on the evils that people intentionally commit in finance, such as fraud, deception, violence, racial, ethnic, gender and other biases, and the like. These are much the same as ethical lapses in other fields of work. The article *Ethics at Work*

Overview at www.theologyofwork.org gives a framework for ethical reasoning in biblical perspective.

We are more interested here in how the Fall may limit the ability of finance—in the sense of voluntary, market-rate transactions—to bring stewardship, justice, and love to both borrowers and lenders. Are there situations in which finance must be replaced with some other form of exchange—private or governmental charity in particular—and if so, how extensive are they? In a fallen world is there still scope for finance to fulfill the purposes God intended?

Unaffordability of borrowing by the poor

Ideally, market-rate finance is a blessing to both borrowers and lenders. This is similar to all kinds of commerce. Producing and selling all kinds or products and services is meant to benefit both buyers and sellers. But, there are times when people need the product or service but cannot afford to buy it. This is as true with finance as with food, shelter, electricity, health care, or any other good. People may need access to money who may not qualify for credit or who may be offered only unaffordably high interest rates. As with any other product, when this happens it is no longer a commercial transaction, but a subsidy, transfer, or gift. We don't usually expect that producers will sell their goods and services at a loss or give them away for free. Instead we depend on donors, aid organizations, or governments to subsidize or purchase and donate items to those in need. Yet at the same time, we do expect, or at least hope, that those who have in abundance will be generous.

Finance is similar to any other sector in this respect. The Bible commends generosity in finance—

> If any of your kin fall into difficulty and become dependent on you, you shall support them. Do not take interest in advance or otherwise make a profit from them. (Leviticus 25:35-36)
>
> If there is among you anyone in need, a member of your community in any of your towns within the land that the Lord your God is giving you, do not be hard-hearted or tight-fisted toward your needy neighbor. You should rather open your hand, willingly lending enough to meet the need, whatever it may be. (Deuteronomy 15:7-8)

—much as it commends generosity in goods,

> In reply he [John the Baptist] said to them, "Whoever has two coats must share with anyone who has none; and whoever has food must do likewise." (Luke 3:11)

Generosity is important. But, markets with prices are likely not the best way to show generosity to family members ("kin" in Leviticus 25:35) and needy people. If we consider the grain market we see that God created the foundation for grain markets in that we are social, not everybody is equally skilled to grow grain, grain does not grow equally well everywhere, grain cannot be harvested every day of the year, grain is nutritious and our bodies cannot ingest enough grain at the time of harvest to last until the next harvest. The Bible does not contain a general prohibition on buying and selling grain. However, the Bible does encourage us to not hoard grain and to give grain away to the poor, the widow, and fatherless (Leviticus 19; Luke 12:16-21). The Bible has similar teaching about financial resources as we have seen above. There is no biblical dissonance between allocating most financial resources via markets with a price (interest rates) as intended by God in his creation design, and also sharing some financial resources freely (zero interest rates) with family or the poor. Both cases can show love to others. To those who have productive opportunities for money, lending with interest can be love. Lending interest-free to family and the poor who have not other access to funds can also be love.

In general, the fact that finance deals in money, rather than goods and services, does not give lenders a greater obligation to do charity than other businesses and institutions. In fact, any business that ceases to operate profitably is actually destroying the value it is meant to bring to society. As we have seen, the foundations of finance include its benefit to lenders as well as to borrowers. Whenever a financial institution gives away money, it deprives its own investors of some of their anticipated return. Given that the largest investors today are pension funds,**[44]** charity to borrowers comes largely at the expense of retirement income to pensioners. So, as in other industries, large-scale charity is not the role of finance.

Exploitation of borrowers

Financiers have a duty to lend profitably, but they are not to profit from the vulnerability of borrowers.

> You shall not lend them [people in difficulty] your money at interest taken in advance, or provide them food at a profit. (Leviticus 25:37)

In other words, a lender should not exploit the "difficulty" faced by a potential borrower in order to gain profit or force onerous terms such as collecting interest in advance. The passage as a whole speaks specifically to the requirement to lend to kin (Leviticus 25:35), but once a decision has been made to lend for whatever reason, the obligation not to exploit the borrower's difficulty applies to everyone.

The moral issue arises from the imbalance in power between the lender and borrower. The lender has plenty of money, but the borrower is in a desperate situation. Even in many market-rate situations today, the lender is more powerful than the borrower. For example, a bank generally has far greater resources, information, legal knowledge, legislative influence, and geographic presence than a customer taking out a loan. Sometimes laws prevent certain kinds of exploitation in lending, but even when exploitative lending is legal, it is wrong. In any case, no industry can thrive over the long term by exploiting its customers. One contribution Christians can make in finance is to use whatever influence we have as depositors, employees, investors, directors, agents, and voters to reduce the exploitation of vulnerable people.

Unproductive use of proceeds

God's intent is that finance be a form of sharing, over time, among borrowers and lenders. There is only something to share if the loan makes increased productivity possible. So borrowers and lenders both have a responsibility for the use of borrowed money. A mortgage may increase the borrower's productivity by reducing housing costs. A car lease may make it possible for the borrower to get to work efficiently. A business loan may be used to finance equipment, inventory, receivables or other assets for growth. On the other hand, a mortgage made on speculative property or without income verification or without sufficient equity may damage both the borrower and lender. A car lease with teaser rates or a back-end balloon payment of more than the car is worth may encourage the borrower to buy a car he or she can't afford. A business loan made without due diligence may be squandered on unproductive assets.

These examples reinforce the biblical view that finance is a shared obligation of borrower and lender. Borrowers are obligated to limit themselves to loans that will make them productive and that they can be reasonably expected to repay. Lenders are obligated to assist borrowers in this task and to decline to lend in unsuitable circumstances. In practice, this can be quite difficult to accomplish. Borrowers may lack the knowledge to gauge the suitability of loans, or they may simply be short-sighted or impulsive. Lenders may also mis-gauge the suitability of a loan, or they may be greedy, unscrupulous, or short-sighted.

For example, the global financial crisis of 2008 began with defaults on mortgages that were based more on speculation—by both borrowers and lenders—than on good housing opportunities. Lenders were aware that repayment would depend on housing prices continuing to appreciate from their already rapidly-growing levels. But because they generally sold the mortgages on to institutional investors and recouped their money quickly, they had little incentive to exercise care for borrowers' long-term interests. Ultimately all three kinds of participants—borrowers, mortgage originators, and investors in collateralized mortgage obligations—paid little attention to the time-bound nature of finance and the importance of relationships in which all parties share in the risks and gains. By contrast, lending according to biblical principles requires that all parties care whether the loan—the borrower's use of proceeds—is truly productive.

Is there still scope for finance to fulfill God's purposes?

As these situations show, in a fallen world, there are situations in which market-rate finance does not meet the needs of some potential borrowers while also benefiting lenders. Just because God created the foundations for markets and prices, does not mean finance is always capable of bringing complete stewardship, justice and love to resource allocation. We must be careful not to worship the market or justify something because it is an outcome of a market transaction. Financial markets are a blessing from God, but they are not the only blessing and will not be a blessing in every circumstance. Governments and nonprofit organizations are also blessings from God. Further, in a fallen world, markets and financial institutions can cause great harm to society and to individuals. The market needs to be balanced with other institutions in society and always evaluated against God's will for us as revealed in his word.**[45]** There is still a scope for finance to fulfill God's purposes, but only through God's redemption can finance be restored to his original design.

Redeemed Finance

What would it look like for finance to participate in God's redemption of the world? God in his grace offered his Son so to that we can be reconciled to him and that his entire creation can be freed from the effects of sin. God's redeeming grace, operating through people in financial institutions, can redeem finance's ability to honor God, foster good stewardship, and show justice and love to people. A reminder of what these terms mean may be useful here. Stewardship is obedience to God's mandate to increase his creation from something like a garden to something like a city, remembering that resources ultimately belong to him. Justice is treating persons with due respect for their rights, which are based on the fact that every human is loved by God. Love is caring for other people by seeking to bring about their flourishing as an end in itself. Using this framework, let us consider some brief examples of redeemed finance in operation.

Finance Professionals

Working in a Bank

Bank workers are at the front lines of financial services. Their first step in acting as means of redemption is to work out how their particular function within a financial intermediary is connected to justice and love for savers or borrowers, and then focus their efforts at being especially good at that kind of justice and love.

For example, a member of a bank loan resolution department could advocate for paying attention to the particular situations of borrowers. The uproar over "robo-signers" in the U.S. mortgage crisis shows that too many borrowers felt that the relational aspect of finance had been lost, and that their needs were not being taken into account. This does not necessarily mean a bank worker should oppose all foreclosures. But, it does suggest advocating for personal attention to distressed borrowers.

A human resource professional at a bank could give special attention to a job applicant's passion for justice and love as a factor in hiring. If finance workers cannot, over time, figure out how their work promotes justice and love for savers and borrowers or cannot transform the organization in that direction, perhaps they are not a good fit for the organization.

Finance professionals need to pay attention to their own practice of two of the biblical foundations of finance. First, finance professionals are usually acting as their customers' agents or stewards. This gives them an obligation to put customers' good ahead of personal gain. Second, finance professionals are frequently negotiating and entering into contracts, or promises. This gives them an obligation to assess carefully their organizations' ability and willingness to perform what they are agreeing to. Stewardship and promise keeping are literally the sacred foundations of finance and finance professionals must thus act before God.

Making Lending Decisions

How does our finance theology inform whether to make a loan to a particular customer and at what interest rate? Several of the foundations of biblical finance come to the fore here. First bankers are not omniscient, so they need to work diligently to understand potential borrowers' situations and needs. They have an important role in helping borrowers evaluate whether a loan is truly beneficial to them, and how to use the proceeds productively.

Second, neither party knows the future, so both parties should be prudent and conservative in thinking about future scenarios. Both are well-advised to discuss what could potentially go wrong over the course of the loan and how to recover from potential difficulties.

Third, bankers can guide lenders towards loans that best show justice and love to the borrower. A loan that the borrower can repay without hardship is a just and loving loan. A loan that does not tease the borrower with a low interest rate that increases later is more likely to be a just and loving loan. Conversely a loan—in many cases a credit card—that is likely to lead to more accrued debt in the future is not a good way to show justice and love.

Interests rates vary with the riskiness of a loan as is necessary for the borrower to share in the risk-adjusted return on the loan. But, an interest rate so high that it prevents the borrower from flourishing is contrary to the biblical purpose of finance. Biblical principles suggest several courses of action when the market rate for a borrower's credit standing is too high for the borrower to afford. First, make the loan at a subsidized interest rate. Second, help the borrower find a way to use the proceeds gainfully even if the rate is high. Third, help the buyer find resources through government or charity rather than borrowing. Fourth, help the borrower discover how to live without the loan. Perhaps the most biblical solution for loans to the poor are zero interest rate loans extended by a nonprofit organization coupled with financial and livelihood counseling.**[46]** Some of these solutions fall outside of finance as we have defined it, but those working in the financial institutions may be the only contact a poor person has to help them navigate the financial maze. This may present an opportunity to show justice and love beyond the requirements—and paid hours—of a financial job. Lending to the poor is very challenging, which is almost certainly why the Bible teaches specifically on the topic.**[47]**

Working at a Hedge Fund

A hedge fund is a mutual fund that invests in specialized financial instruments not usually available to individual savers. Hedge funds are often lightly regulated, highly-leveraged, and can invest in a wider variety of financial instruments, and charge a higher management fee than ordinary mutual funds. Hedge funds have been in the news recently because a few hedge fund managers have earned huge management fees, a few hedge fund managers have been accused of insider trading, and when stock prices sharply decline hedge funds tend to be blamed.

Hedge funds can be understood with the help of our finance framework. Hedge funds can love savers by providing savings opportunity with a higher return for the risk and a lower correlation with economic cycles. Many hedge funds invest in derivatives and as such provide risk reducing opportunities for the parties on the borrowers' side of the derivative contracts, in addition to the investors'. In this way the hedge fund can show love to firms that are looking to reduce risk. Hedge funds can be viewed as wholesalers in the securities market who are in the business of buying oversupplied product and selling undersupplied product, and thus both attempting to make a profit and helping to make the market work better. In this way they are serving society by helping security prices to more accurately reflect intrinsic value.

The complexity of any particular hedge fund's investments can make it hard to describe exactly how they bring justice and love. If all the positions are voluntary, market-rate exchanges, it can be assumed that each party expects to benefit. But, the complexity may also mask hidden subsidies, power imbalances, information asymmetries, tax dodges, or other infringements of the biblical foundations of finance. Some hedge funds, because of their particular investment strategy, can be quite clear about how they are loving savers and borrowers, whereas other hedge funds will have a harder time doing so. Finance professionals and investors would do well to research diligently whether a particular hedge fund—or any investment—results in good stewardship, justice, and love, or whether it primarily serves to make as much money as possible for the hedge fund managers at the expense of other parties.

Borrowers

We have seen that borrowing can be an act of stewardship, justice, and love, enabled by God's creation. Borrowing can allow people to gain access to resources which are used to help both borrower and lender flourish.

The Right Amount of Debt

Can biblical principles help us determine how much to borrow or when to borrow? Several of the biblical foundations of finance can help. First, we inhabit God's *time-bound* world with *social* cycles and *heterogeneous* individual life cycles. There is a time to borrow to invest in a growth or infrastructure opportunity which will serve customers or citizens and then there will be a time to repay debt, and those times will differ among individuals. For example, those with excess resources during a recession can bring justice and love by investing them then rather than hoarding them in cash. In terms of personal cycles, younger people generally benefit from the borrowing that the savings and lending of older people make possible.

Second, the purpose of borrowing is to obtain access to resources which can we can use to *create future resources* which can be used for repayment. Borrowing for education, growth opportunities, and to reduce housing costs can honor God. Borrowing as a crutch to support living above your means does not, as discussed above under "Unproductive use of proceeds." The Bible teaches against greed of all kinds, which can include borrowing money for the wrong reasons (Luke 12:14).

Third borrowers should be reasonably certain they can fulfill their *promise* to repay the debt—or at least that the risks of non-repayment are understood and agreed by lenders—as an act of love. This rules out false or misleading loan applications or personal references. Borrowing today because you expect to lose your job tomorrow is unlikely to show much love to the lender, for example. Running up a credit card balance without a clear plan to repay it is no act of love, either.

Fourth, the amount borrowed should be a modest or prudent amount compared to the *risks* we face. How could it be loving—either to ourselves or to those who lend to us—if we routinely borrow right up to our credit limits with no cushion for unforeseen circumstances?

Biblical principles of finance apply to personal, institutional, and governmental financial decisions, although the examples above are primarily individual. In general, these principles suggest moderate levels of debt in most cases and greater use of equity for individual, corporate, and government finance. In particular, borrowers would probably not take on as much debt if they remembered that by God's design, borrowing creates a long term mutual relationship that God intends to benefit lenders as well as borrowers. Access to debt is not our sole concern. Blessing others through our lending and borrowing is.

Offering Collateral to Get a Loan

We explore some of the biblical passages about collateral in the section, "Bankruptcy, debt forgiveness and loan modification". The mainstream Christian view is that using your house as collateral for a loan is not contrary to biblical teaching. This view is consistent with our arguments regarding the God-intend role of finance in society. However, in light of Proverbs 22:26-27 and in light of the biblical teaching to be prudent risk takers, it seems that at a minimum lenders should not accept a house as collateral unless they are very certain that the borrower will be able to repay the loan. Similarly, according to biblical teaching, homeowners should not pledge their home as collateral unless they are very certain they will be able to repay the loan. This is in stark contrast to current lending practices in many developed countries which allow a person to get a loan which is quite large relative to their level and stability of income and relative to their history of repaying debts. With collateral there is a tendency for the lender to think "I can foreclose if need be, so I don't need to think too hard about whether this is good for the borrower or can be repaid" and a tendency for the borrower to think, "If I cannot make my payments the bank can have the house and I've done no harm." Neither party's thinking is consistent with biblical teaching and with the God-intended role for finance as a form of justice and love.

Bankruptcy, debt forgiveness and loan modification

The created foundations of finance include our creation as social beings who take risk and do not know what the future holds. Inevitably, this will lead to cases where the loans cannot be repaid. Thus, a loan which cannot be repaid is not necessarily a sin. Of course, a loan default may very well result from imprudent borrowing, incompetent management of affairs, hiding, or shielding income from the lender, misrepresentations to the lender when the loan was made, misrepresentations to the *borrower* when the loan was made, or the loan conditions that are not designed to help the borrower flourish. But in other cases, unexpected circumstances may cause a well-made loan to fail. The borrower may lose a job, incur unexpected medical bills, or suffer loss in a natural disaster, for example.

In situations like these, lenders *do* have an obligation to forgive the debt or modify repayment of the loan. In the Bible this takes the form of letting the borrower keep his or her collateral if it is necessary for well-being or the ability to earn a living.

> If you take your neighbor's cloak in pawn, you shall restore it before the sun goes down; for it may be your neighbor's only clothing to use as cover; in what else shall that person sleep? (Exodus 22:26–27)
>
> No one shall take a mill or an upper millstone in pledge, for that would be taking a life in pledge. (Deuteronomy 24:6)
>
> When you make your neighbor a loan of any kind, you shall not go into the house to take the pledge. You shall wait outside, while the person to whom you are making the loan brings the pledge out to you. (Deuteronomy 24:10–13)

A neighbor's cloak taken in collateral must be returned before sundown because the neighbor needs it to keep warm overnight. A millstone cannot be repossessed because that would deprive the miller of the ability to earn a living. Even valid collateral cannot be repossessed by force, e.g. entering the borrower's house. All of these protect distressed borrowers from further calamity, even though they deprive lenders not only of the expected profit from the loan, but actually impose the loss of capital. The borrower's circumstances are shared by the lender. This is the nature of the time-based relationship inherent in finance.

In modern economies, these protections are embodied in bankruptcy laws, which may also be known as insolvency, examination, receivership, administration, or sequestration. Generally, such laws prevent lenders from taking the necessities of life and work as payment from borrowers who default. Modern laws also prevent lenders from entering borrowers' homes to repossess items, although they may allow officers of the law to do so. Laws also prevent borrowers from being thrown in prison for defaulting, a counter-productive and inhumane practice that was common for centuries prior to the modern age. Perhaps the development of modern bankruptcy laws represents a long-delayed fulfillment of principles embodied in the Bible in this regard.

Nonetheless borrowers should do whatever they can to repay their debts. Chewning argues, based on God's immutability and Proverbs 6:1-5, that if we cannot pay our debts we should humble ourselves and plead with our lenders for mercy, rather than seek bankruptcy court protection from our lender.**[48]** Perhaps, this goes too far, given that the passages above protect distressed borrowers by God's law, not lender's mercy. But Chewning is surely right that the first step is for the borrower to seek the lender's aid and counsel. As we have seen, lending is meant to create a long-term relationship between borrower and lender. Filing for bankruptcy without first attempting to work out a mutually agreeable plan with the lender is hardly the way to respect a relationship. Tiemstra urges us to treat risk as a serious matter and that borrowing is not "an easy way to make money instead of working: it is a serious expression of our responsibility before God."[49] Finance is about serious justice and love, and when events unfold different from what a prudent lender and borrower expected, the justice and love should not cease, but indeed should be increased on both sides.

Savers and Lenders

Those who provide resources—lenders and savers—have a responsibility to invest their resources for the common, and not only for their own, gain. This perspective is sometimes called "socially responsible investing." We will explore it through the example of investing in stock, rather than depositing money at a bank or making a loan, although similar principles apply in all kinds of investments.

A company issues stock because it believes it has more productive opportunities than it has resources. It gains access to additional resources by selling stock to investors.[50] The investor is loving the company—and ultimately its customers, suppliers, workers, and community—by letting it use some resources for a period. The company is loving the saver by providing an appropriate return in the form of dividends or stock appreciation.

Investors should buy stock only in companies that fulfill God's purposes for finance. These would be companies acting as good stewards of God's creation, companies showing care and love through the products and services they sell, and companies acting justly in their employment practices and community relations. In practice, this is hard for investors to do, since it is time consuming to gather and analyze the information on thousands of companies. However, there are now several options where investors can invest in mutual funds that filter out companies with poor practices of stewardship, justice, and love. Much has been written on socially responsible investing and biblically responsible investing, and a detailed treatment of this is beyond the scope of this paper.[51] However, this approach to investing is completely consistent with, and indeed is mandated by, the framework developed in this paper. We do not see any biblical basis for delinking one's faith from stock investment decisions.

Conclusions

God created the foundations of finance which have led to the development of the financial institutions of currency, intermediaries, instruments, and prices. Ideally, these institutions would make finance work as one of God's means—among many others—for stewardship, justice, and love. Borrowers and lenders would exchange or share resources over time in ways that grow the resources and help everyone to thrive. However, the Fall has marred finance extensively, as it has every other sphere of God's creation. In particular, the sins of greed and lying are pervasive in finance and severely cripple our ability to obey God's plans. Nonetheless, finance still has a positive role to play in God's redemptive work in the world. Several examples show how finance can be redeemed by God's grace and can be used for stewardship, justice, and love. Finance professionals, borrowers, and savers/lenders all have the opportunity to participate in finance as a redemptive activity. As followers of Christ, we are called to be redeemed ourselves as we work out the applications of renewed foundations of finance to our own decisions and actions.

Further work needs to be done to enable us to better understand and honor God's intentions for finance. First, tighter connections between specific elements of our framework and specific practices need to be developed. Finance professionals, for example, could apply the biblical framework to specific practices in mortgage lending or investment management. Second, we need to better bridge the gap between the redeemed view of finance and the actual fallenness of finance. Although some examples have been given, the thinking, practices, and institutions need to be developed to enable professionals in finance to better honor God's intended role of finance in society. Third, although the theological framework developed in this article could be adapted to derivatives and insurance, this article does not address those topics. Fourth, we have seen that financial markets do not always enable humans to serve each other, especially the poor, and a full development of the role of finance relative to governments and charitable organizations has not been made. Finally, we have limited ourselves to finance in the sense of exchange between borrowers and lenders (and their equity equivalents) over time. In common usage, finance may also refer to allocation of resources within households or organizations, where no exchange is involved, for example in budgeting, accounting, product design, project planning, and internal financial analysis. Another article on these topics may be warranted.

ENDNOTES

[1] Adair Turner, "Speech by Adair Turner, The City Banquet, The Mansion House, London" (September 22 2009), accessed at http://www.fsa.gov.uk/library/communication/speeches/2009/0922_at.shtml. See also Bronwen Maddox, Adair Turner: "The Interview", Prospect (December 14, 2011), accessed at http://www.prospectmagazine.co.uk/economics/adair-turner-the-interview/

[2] Laura Newland, "How Elite Colleges Still Feed Wall St.'s Recruiting Machine", *NY Times DealBook* (April 30, 2012).

[3] We take the view that voluntary transactions are normative because God allows individual humans certain limited property ownership rights and responsibilities over resources. Nonetheless, compulsory transactions—such as those commanded by scripture or duly enacted legislation—are also legitimate. We agree with Wright who argues that although individual property rights are clear and legitimate they are subordinate to human need. Christopher J.H. Wright, *Old Testament Ethics for the People of God*, (Intervarsity Press, 2004): 312-314. Similarly, Lott argues from a Catholic perspective that property is a divine gift and that a system of individual property rights is allowable for human freedom, but those rights must respect the equally important principle that God intended the earth's resource for all humans and peoples. Micah Lott, "All Things Come From Thee: Persons, Property, and the Gifts of Creation," *Cardus* (October 3, 2011).

[4] Richard Mouw, *When the Kings Come Marching In: Isaiah and the New Jerusalem* (Wm. B. Eerdmans Publishing Co, 2002): 11.

[5] Van Duzer, *Why Business Matters to God: (and what still needs to be fixed)*, 35-38.

[6] Paul Mills, "Faith versus Prudence? Christians and financial security," *Cambridge Papers*, Vol 4 No 1, March 1995 argues that in their financial decisions Christians must exhibit both faith in God's daily provision and prudence in planning for the future.

[7] For an explanation of the broader Biblical basis of caring for creation which goes beyond the creation mandate in Genesis 2:15 see Wright, *Old Testament Ethics for the People of God and Wright, The Mission of God's People*.

[8] Wolterstorff, *Justice in Love*, (Wm. B. Eerdmans Publishing Company, 2011), 90.

[9] Wolterstorff, 154.

[10] Wolterstorff's care-agapism is similar in some ways to C.S. Lewis's charity in *The Four Loves*, (Harcourt, 1960), but importantly makes the connection that "treating the neighbor justly is an example of loving him, a way of loving him" (Wolterstorff, 83).

[11] Wolterstorff, 109.

[12] Wright, *The Mission of God's People*, 88-92.

[13] Wright, 92-94.

[14] Wolterstorff, 80.

[15] Wolterstorff, 132.

[16] Jonathan Chaplin, "Loving Faithful Institutions: Building Blocks for a Just Global Society," *TheOtherJournal.com*, (April 15 2010). http://theotherjournal.com/2010/04/15/loving-faithful-institutions-building-blocks-of-a-just-global-society/

[17] Acknowledgment to Ernest P. Liang who identifies three of the eight foundations (risk aversion, time preference and information asymmetry), although he does not identify them as part of God's created foundation of finance. Ernest P. Liang, Modern Finance Through the Eye of Faith: Application of Financial Economics to the Scripture, *Christian Business Academy Review*, Volume 7, No1 (Spring 2012), 69-75.

[18] See Paul Mills, "A Brief Theology of Time – Part 2: Resisting the Tyranny of Time," *Cambridge Papers*, Vol 11 No 4, December 2002 for a summary of the Biblical account of time.

[19] Jonathan Kana, "Time: A Non-Renewable Resource," *Perspectives*, Volume 25, Number 10 (December 2010)

[20] Kent D. Miller, "Risk and Rationality in Entrepreneurial Process", *Strategic Entrepreneurship Journal*, Volume 1 (2007), 57-74.

[21] James M. Buchanan and Viktor J. Vanberg, "The Market as a Creative Process", *Economics and Philosophy* 7 (1991), 167-186.

[22] See Edmund Phelps, "Uncertainty bedevils the best system", *Financial Times: The Future of Capitalism* (May 12, 2009) 46-47.

[23] Samuel Gregg and Gordon Preece, "Christianity and Entrepreneurship: Protestant and Catholic Thoughts", *The Centre for Independent Studies*, 1999, 10.

[24] See Philippians 4:11-13 and Howard Vanderwell, "Contentment in Uncertainty", *Calvin Theological Seminary Forum*, (Fall 2009), 12-13.

[25] See for example Proverbs 11:15; 22:26, 27; John M. Boersema, "Examining a Christian Perspective on Finance", Chapter 8 in Edward J. Trunfio Ed., *Christianity and Business: A Collection of Essays on Pedagogy and Practice* (Christian Business Faculty Association, Wenham, MA, 1991); Robert Brooks, "Financial Risk: an Alternative Biblical Perspective", *The Journal of Biblical Integration in Business* (Fall 1996), 16-24; Ernest P. Liang, "The Global Financial Crisis: Biblical Perspectives on Corporate Finance", *The Journal of Biblical Integration in Business,* Volume 12, (2010), 48-61; and John P. Tiemstra, "Financial Crisis and the Culture of Risk", *Perspectives*, Volume 24, Number 5

(May 2009), 6-10.

[26] Niels Henrik Gregersen, “Risk and Religion: Toward a Theology of Risk Taking”, *Zygon*, Volume 38, Number 2 (June 2003), 355-376.

[27] Gregersen, 368.

[28] Van Duzer, *Why Business Matters to God: (and what still needs to be fixed)*, 144-146.

[29] “For in him all things were created: things in heaven and on earth, visible and invisible, whether thrones or powers or rulers or authorities; all things have been created through him and for him. He is before all things, and in him all things hold together”, Colossians 1: 16-17.

[30] Van Duzer, *Why Business Matters to God: (and what still needs to be fixed)*, 145, quoting John Howard Yoder, *The Politics of Jesus* (Eerdmans, Grand Rapids, 1994), 141.

[31] Some have argued that paper money which is not backed by gold is morally wrong. Exploring those arguments is beyond the scope of this article and would not inform the main points of this article.

[32] Jacques Ellul, *Money and Power* (Inter-varsity Press, Downers Grove, 1984), argues that society’s way of thinking about money, wealth and resources is contrary to Biblical teaching. Although Ellul highlights the evil arising out of money, he is writing about wealth and material possessions, and not about currency as a medium of exchange.

[33] This is consistent with Catholic doctrine as outlined in Compendium of the Social Doctrine of the Church, (Pontifical Council for Peace and Justice Justice and Peace, Libreria Editrice Vaticana, 2004, Reprint April 2005), Paragraph 208.

[34] David McIlroy, “Christian Finance?”, *Ethics in Brief*, Vol. 16, No. 6, (Spring 2011), urges us to structure intermediaries in ways, perhaps smaller, which allow a stronger connection or “fellowship” between borrowers and savers as a way to better serve both parties.

[35] We consider the topics of charging interest to the poor and of charity to the poor later in this article.

[36] For brevity, we will use the term “interest rate” in this article to denote the more general concept that two parties to a financial instrument anticipate a rate of return for sharing resources over time.

[37] For more on this see Paul Mills, “Interest in Interest: The Old Testament Ban on Interest and its Implications for Today,” *Jubilee Center Publications Ltd.*, 1993; Eric Elder, “The Biblical Prohibition

Against Charging Interest: Does It Apply to Us?", *The Journal of Biblical Integration in Business* (Fall 1999) 32-41; Brian E. Porter, "Charging Interest: Is it Biblical? A Response", *The Journal of Biblical Integration in Business* (Fall 1999) 43-46; or Liang, "The Global Financial Crisis: Biblical Perspectives on Corporate Finance".

[38] Brian Rosner, "Greed as a False Religion", *Ethics in Brief*, Vol. 12 No 5 (Spring 2008) argues that greed is closely associated with idolatry and represents an attack on God's exclusive claim to our worship.

[39] Robert Shiller, "A Failure to Control Animal Spirits", *Financial Times: The Future of Capitalism* (May 12, 2009) 14-16.

[40] Joseph E. Stiglitz, "Who Do These Bankers Think They Are?", *Harvard Business Review* (March 2010) 36.

[41] John Terrill, "The Moral Imperative of Investment Banking", *Cardus* (February 26, 2010).

[42] Van Duzer, *Why Business Matters to God: (And hat Still Needs to be Fixed)*.

[43] Gerald F. Davis, "The Rise and Fall of Finance and the End of the Society of Organizations", *Academy of Management Perspectives*, Volume 23, Number 3 (August 2009) 27-44.

[44] "Asset-backed Insecurity," *The Economist*, January 19, 2008, accessed online at http://www.economist.com/node/10533428 on January 1, 2014.

[45] For a caution against worshipping the market and for an analysis of how markets fit with governments and NGOs see Van Duzer, *Why Business Matters to God: (and what still needs to be fixed),* Chapter 6.

[46] McIlroy, "Christian Finance?", refers to this as the "virtue of generosity" and calls for interest free loans and other support for the poor.

[47] Microfinance is an example of loans at high interest rates to the poor extended in a loving supportive community. Although this model seems to work in certain cultures, it is hard to argue that charging a high interest rate to the poor is a Biblical model.

[48] Richard Chewning, "Hermeneutics and Biblical Ethics: An Illustration – God's Immutability and Human Integrity", *The Journal of Biblical Integration in Business* (Fall 2000) 49-68.

[49] Tiemstra, “Financial Crisis and the Culture of Risk”.

[50] As explained in "What Finance Is", we are using “borrower” to capture all those households, businesses and governments who have current use for resources and thus borrow those resources, to be returned at a later date.

[51] For one example see Rob Moll, “Overturning the Money Tables”, *Christianity Today* (July 15, 2008).