The End of Money and the Future of Civilization
New 2024 Edition

Chapter Twenty

Exchange, Finance, and the Store of Value

One crucial way debt relations become immoral is when they cease to be embedded in and serve prior relations of trust, obligation, and mutuality. —Luke Bretherton [1]

Liberating Saving and Investment

Concurrent with the liberation of the exchange process, it is crucial (as we descried in Chapter 16) that we liberate the investment process by reclaiming our savings from mega-banks and "big finance" which use them to magnify their own power and wealth. They have achieved those results by usurious lending and the accumulation of capital into gigantic pools under their control which they use to buy political influence and direct the course of corporate business activities.[2]

But savers have a choice; they can instead allocate their savings directly to businesses and economic sectors that share their values and promote their own interests, strengthen their communities, and serve the common good. This was once common, and still is, especially within particular cultures, ethnic groups, and immigrant communities, as a way of helping each other to thrive financially and economically while strengthening their social bonds within environments that are often hostile to them.

The modern resurgence of this practice has been assisted by the creation of online platforms that facilitate "crowd funding" and "crowd sourcing" which aggregate small amounts of funds from large numbers of individuals. Some of these platforms, like *GoFundMe*, help individuals and small charitable groups to collect small donations for various purposes ranging from personal emergencies, to education funds, to social relief projects. But most arrange loans or equity investments that promise a return on investments. *Honeycomb Credit*,[3] for example, gives borrowers an alternative to banks for borrowing while allowing savers to earn interest in the process of lending to small businesses they believe in, or patronize, and wish to support. *StartEngine*,[4] on the other hand, offers savers the opportunity to buy equity shares in new startups. I cite these not as endorsements but only as examples of the many opportunities that exist in this developing investment landscape. Of course, every investment decision carries some risk of loss, so each saver must carefully consider each investment decision based on their own due diligence.

In previous chapters we made the distinction between the *exchange function* and the *finance function*. In this chapter we delve deeper into why that distinction matters and what each of these functions requires to achieve its proper purpose.

In the Charles Dickens novel, *David Copperfield,* there is a famous bit of advice from Mr. Micawber that goes like this: "*Annual income twenty pounds, annual expenditure nineteen nineteen and six, result happiness. Annual income twenty pounds, annual expenditure twenty pounds ought and six, result misery*." The simple message here is that having an income greater

than one's expenditures leads to happiness, while having a deficiency of income in relation to one's expenditures leads to misery.[5]

If you are among those fortunate enough to enjoy the happy circumstance of a bit of surplus income, you will wonder what to do with it—how you can preserve it to satisfy some future need, or even find some way to make it grow. There are a great many people who are quite willing to give you advice about that or even "manage" your **"**investment portfolio" for you. Think for a moment about how you save your money now. I would guess that, like most everyone else, you have very little of your wealth in the form of cash, i.e., paper bills on hand or checking account balances. The amounts held as these "transaction balances" are typically sufficient only for small day-to-day payments. The rest will be kept in a portfolio of various other assets that generate some regular income or the possibility of capital gains. The latter are mainly long-term financial claims, but they are not money. We tend not to distinguish them from money because markets are so highly developed that such financial claims can be readily liquidated, i.e., converted into money, by selling them or borrowing against them. But your savings do not remain idle; they provide the money needed by others for business expansion and development that brings new value into the market later in the form of additional goods and services in the process called "capital formation." Thus, savings and investment are two sides of the same coin, each of which implies and enables the other.

The Exchange Function

The exchange function requires short-term, interest-free credit which enables producers and sellers to pay their workers and suppliers during the period of time when they are producing and preparing their goods and services for sale. In accounting terms that means financing these "current assets" (CA) by using "current- or short-term liabilities" (CL). Included in the latter category are such items as wages-payable, accounts payable, taxes payable, interest payable, and other payments which are due within a few weeks or months. The ability of a business to meet these obligations is measured by the "current ratio," which compares the CA (e.g., accounts receivable and goods inventories which will produce revenue in the near future) with the amount of CL. If CA are less than CL, that means that the business, although it may be perfectly sound, may be "illiquid" and in need of additional short-term financing to satisfy the market demand for its products and services, which also means that the economy needs more money to facilitate the exchange of the available goods and services.

All businesses start out illiquid. Imagine an economy in which there is no money. How would it be possible for producers to sell and for consumers to buy? The answer is credit. We've already described how banks create money by making loans, i.e., by providing credit to producers, but it is only by government fiat and privilege that they have been able to monopolize the allocation and management of **our** credit. But as we've shown previously, the basis for credit is the productive capacity of the producers themselves, so it is within their power to give each other credit directly without involving banks. As businesses generate inventories and **grant credit** to their own customers (which are recorded as accounts receivable), they must **receive credit** from their suppliers, employees, and service providers (which are recorded as accounts payable liabilities). Thus, money is created by businesses in the process of their creation of value. At present, money is created indirectly by bank middle-men when businesses requests a loan based

on the value of their current assets. But it should be clear by now that businesses have the ability to cut the middle-men out of the process by going directly to savers and getting credit on friendlier terms. Bona-fide money is, in essence, a virtual representation of the value of goods and services that are already in the market and ready to be sold within a few weeks or months. As we will describe shortly it is entirely feasible to create real, honest, "producer" money as a substitute for monopolized, political, fiat money.

Storing Value—The Finance Function

In Chapter 14 we spoke about the proper basis of issuance for a currency and first made the distinction between *exchange credit* (also called *turnover credit*) and *investment credit*. The reader is encouraged to go back and reread that section, but here I repeat that the finance function requires long-term credit to enable the expansion or renewal of the economy's capacity to produce consumer goods or services which will not come to market immediately but at some more distant future time. Those "capital investments" should therefore not involve the creation of new money but should generally be financed from savings. Borrowing by consumers (consumer finance) should likewise not involve the creation of new money because it does not bring goods to market but takes goods from the market. It, too, must come from savings. In either case, to do otherwise is fraught with the risk of causing price inflation (too much money chasing too few goods). Table 20.1 below repeats the summary in Table 14.1.

Table 20.1 ***Two Distinct Kinds of Credit***

	Exchange Credit	**Finance Credit**
Duration	Short term	Long term
Purpose	To facilitate exchange	To fund capital development
Relationship to money	Newly created money	Reallocation of existing money from savers to entrepreneurs

A fundamental principle in finance is that long-term obligations require long-term financing while short-term obligations require short-term financing. It has also been observed that long-term investments are generally risker than short-term investments. For that reason, interest yields on long-term investments are usually higher than those on short-term investment, but there are sometimes conditions in which that logic is inverted.

Debt Claims Versus Equity Claims

There are two basic types of financial claims, debt and equity. Quite simply, when you lend money to someone, you expect that at some future time they will pay it back; it becomes a debt to them and asset to you. You are their creditor, and they are your debtor. The loan agreement will usually specify some repayment schedule and a rate of interest. As the creditor you may also ask for the pledge of some collateral, a house, a car, or some other asset that can be legally confiscated if the debtor fails to live up to the agreement. Banks often foreclose on home mortgages when the borrower has missed several payments, and auto finance companies will repossess a vehicle when the buyer likewise fails to perform according to the repayment agreement.

An equity claim, however, is effectively a partial ownership. It is an arrangement in which the various parties to the agreement share both the rewards and risks on an enterprise. There are various kinds

of equity agreements, but the basic character of an equity claim is such that there are no fixed obligatory returns, repayment schedules, or collateral demanded of one equity holder by another. Let's consider some common financial securities which will serve to distinguish more precisely between debt and equity claims.

In the securities markets, debts take the form of bonds, notes, and bills while equities are represented by such things as preferred and common stocks of corporations or shares of limited liability partnerships. Mutual fund shares represent claims against an assortment of securities, often a combination of corporate shares and corporate or government bonds. There are very important distinctions between debt claims and equity claims. Debt claims are contracts that take legal priority over equity claims in the payment of money. A corporate business, for example, might be financed through the use of both debt and equity. It might issue several types of bonds and both preferred and common stocks. The agreed interest on debt must be paid regardless of the level of profits, even if the company is experiencing losses. Also, if the company goes bankrupt and is forced to liquidate its assets, the bondholders (along with the other creditors) must be paid before the stockholders can receive anything.

Consider the following example. The ABC corporation sells a million shares of common stock for $10 per share, yielding $10,000,000. It also sells 1,000 shares of preferred stock for $1,000 per share yielding $1,000,000. The preferred shares have a specified yearly dividend of $100 per share. The company also sells $5,000,000 of first mortgage bonds, secured by its factory building, and $5,000,000 of subordinated debentures (a debenture is a bond that is secured not by any specific assets but by the general assets of the company). The first mortgage bonds carry an interest rate of 7 percent per year, and the interest rate on the debentures is 9 percent.

Profits are distributed in this way: The bond and debenture holders must receive their interest payments before the stockholders can receive any dividends at all. Even if there are no profits, the interest must be paid. The first mortgage bond holders usually have priority over the debenture holders; they must receive their interest before the debenture holders can receive any interest payments. Once the bond and debenture interest has been paid, the preferred stockholders can receive their dividends, but only if there is enough profit available to pay them. The common stockholders are last in line for the distribution of profits. They may or may not receive dividend payments, and the amount will be at the discretion of the board of directors of the corporation.

What happens if the interest on the bonds or debentures is not paid? In that case, either group can force the company into bankruptcy and secure payment of the debts through liquidation of the company's assets. In the event of liquidation, the first mortgage bond holders get paid out of the proceeds from the sale of the collateral (in this case, the factory building). Any remaining amount due on the principal and accrued interest will be paid from the proceeds obtained from sale of the remaining assets. (This part of the bond-holders' claims may or may not take precedence over the debenture holders' claims, depending on how the contracts are written.) Next in line for payment come the debenture holders. Once they are paid in full, the preferred stockholders can receive the par value of their stock plus any dividends that are in arrears. Common stockholders come last and divide up whatever may remain, which is why they are called "residual owners." The priorities for these claims is summarized in Table 20.2 below.

Table 20.2 Payment Priority in Liquidation		
Rank	**Type of Claim**	**Description/Notes**
1	Secured Debt (e.g., Mortgage Bonds)	Backed by specific collateral (like property or equipment). Holders have first claim on proceeds from the sale of pledged assets.
2	Unsecured Senior Debt (e.g., Debentures)	Not backed by collateral, but still senior to equity. Paid after secured creditors are satisfied
3	Subordinated Debt / Junior Debt	Debt that contractually ranks below senior unsecured debt. Paid only after higher-priority creditors are satisfied
4	Preferred Stock	Equity with priority over common stock. Holders may have fixed dividends and liquidation preference, but they rank below all creditors.
5	Common Stock	Residual claimants. Paid last, only if anything remains after all other obligations are met.
6	Other Financial Claims	-**Taxes owed to government** and **employee wages** often have statutory priority, sometimes even before unsecured creditors. - **Trade creditors** (suppliers) typically fall into the unsecured category, ranking with debentures.

As pointed out earlier, one of the problems with a debt contract is that it forces the entrepreneur to assume all of the business risk. Another problem is that interest must usually be paid according to a specified time schedule, along with a portion of the principal. This requirement holds regardless of the level of profits earned and the ability of the business to pay. Any failure to comply with the terms of the loan contract constitutes default, which allows the creditors to foreclose or force mergers, financial reorganization, or liquidation of the business assets as a way of recovering their investment. The relationship between the lender and borrower is, therefore, an antagonistic one. Creditors will sometimes renegotiate the terms of repayment, but only if it is more to their advantage than seizing the collateral assets. On the other hand, an equity investment, since it represents a part ownership in the business, makes the entrepreneur and the investor partners who share both the risks and the rewards of the enterprise. In my opinion, shared ownership (equity) financing is preferable to borrowing and lending at interest, because it does a better job of

harmonizing the interests of all the parties involved by sharing both the rewards and the risks associated with a venture. Shared equity also satisfies the requirements of various religious traditions which emphasize social justice and the avoidance of predatory practices like usury.

Savings and Investment within Complementary Exchange Media

When I tell people about alternative exchange media, the question invariably arises as to how one would use them to save up for retirement or to make some major purchase later on. The answer is that it would occur in much the same way as with conventional fiat money. As credit clearing and complementary currencies develop, those who accumulate surpluses in the alternative currencies or credit systems will want to save or invest them. This will give rise to opportunities for entrepreneurs to use the alternative currencies and trade exchange credits as another means of financing new enterprises or expanding existing ones. Some process to match complementary currency savings with complementary currency investments will be set up either as part of a credit clearing exchange or by independent entities. Your temporary surplus of credits or complementary currencies can also be allocated to be used by someone else in consumer finance, just as your savings at a Credit Union or Savings and Loan, might be loaned to another member to enable them to buy a new car.

For example, if you happen to have accumulated a surplus of some private currency that has been issued by some credible seller of desired goods and services, and that currency is transferrable, you might use it to buy some long-term investment instrument like a bond or a note or lend it to some small business, just as you would with your surplus fiat money. Of course, since the private currency is not legal tender, acceptance by the recipient must be entirely voluntarily.

What about the case of trade credits within a mutual credit clearing association? Consider this example. Suppose you have a successful business and as a member of a local credit clearing association you have been accumulating credits faster than you care to spend them. You might wish to save your surplus credits to enable you to make a large purchase (say, for replacement office equipment) two years from now, a purchase that would exceed your allowed line of credit. What might be your available options?

The simplest case would be to make a direct loan to some other member of the trade exchange who has a present need for purchasing power. Let's suppose that Geoffrey is also a member of the credit clearing exchange who owns a popular and successful coffee shop in a space that is now too small to adequately serve his growing customer base. He would like to lease an adjacent space, knock out the wall in between, and renovate and reequip the entire shop. He needs to hire a carpenter, an electrician, and a plumber, and he needs to buy some new restaurant equipment. Many of these are available within the credit clearing association, but his credit line is not high enough for him to acquire these things on his current account. He makes it known that he will borrow the necessary credits on favorable terms from any members who have extra credits to spare for, say, a period of one year.

Being a faithful customer of Geoffrey's shop and knowing him to be a competent businessperson, you agree to make the loan. Geoffrey gives you a promissory note describing the terms and the duration of the loan, and you transfer your surplus credits to Geoffrey's account at the credit clearing exchange. Now you've accomplished your savings goal, and Geoffrey has the credits he needs now to expand his business.

Note that the credits are still circulating within the trade exchange, but now they belong to Geoffrey instead of you. They will circulate to other members of the exchange as Geoffrey spends them to acquire the services and equipment he needs. Note too that these credits, which had been a collective obligation of the associated members to you, have now become a private obligation of Geoffrey to you. You have taken on some additional risk because if Geoffrey defaults, the loss will be borne by you personally and not by the collective membership. So it is with **any** investment, though many ways have been devised to mitigate such risks. This is the business of finance. Assuming that all goes well, Geoffrey's business will thrive, his trade credit earnings will increase during the coming year, and he will have the credits needed to repay his loan to you.

This is but one possibility. As in the conventional money realm, there is an endless array of possible private debt, equity, and hybrid arrangements that might serve as vehicles for savings and investment.

Preventing Stagnation in Mutual Credit Systems

To repeat what we said earlier, the primary purpose of a mutual credit or currency system is to provide a medium of exchange. It is therefore essential that trade credits be kept circulating within the exchange; they should not be hoarded or used as a savings medium. That can be prevented by placing limits on credit balances as well as debit balances to assure a healthy flow of credits through the system. Those holding *debit* balances have bought more than they have sold. If such an account is idle, that member is, in effect, not adequately honoring her or his commitment to the members of the system. Having received value, she or he is "committed" to deliver like value in a timely manner. Although there may be no specified time limit for honoring such a commitment, there is the expectation that a continuing effort will be made to keep the balance within agreed limits and moving back toward zero. Some earning activity in an account shows "good faith" and indicates that a member is willing and able to provide something that the community needs or wants. If a member does develop a chronic debit balance, however, some action may need to be taken.

In keeping with the basic principles of a local, limited, personal, and convivial system, chronic debit balances should not be dealt with in a punitive fashion. A mutual credit system is designed to be friendly and helpful rather than dominating and exploitative. A chronic debit balance may be perfectly acceptable as long as there is continuing flow of credits through the account, but if the account balance is static, that may indicate that a member is having some kind of personal trouble, in which case fellow members would probably want to help in some way. Perhaps that member has a spending addiction or limited abilities to produce. Maybe they need to improve the quality of the products or services they provide, or perhaps they need to acquire some new skill to provide something the community needs. In a personal, local system, these matters can be handled in a helpful way by those closest to the problem, rather than impersonally and coercively by distant and unresponsive bureaucracies.

Those holding *credit* balances in a mutual credit system, on the other hand, have sold more than they have bought. If an account with a credit balance is idle, that member, in effect, is not demanding from the system value that is due him or her. Having delivered value, such a member is entitled to receive like value. Although there may be no specified time limit within which credits must be spent, the expectation is that credits will be spent, not saved or hoarded. Saving credits has the effect of preventing, to some extent, those with debit balances from selling enough to get their account balances moving back toward zero.

In commercial trade exchanges it is common to employ "brokers" whose role is to help members with debit balances to sell more within the exchange by connecting them with other members who need what they have to offer, or to help them develop new products and services. They also connect members having credit balances with others who offer something they can use. Brokering assistance can help but it is even more important to try to prevent such imbalances in the first place by proper allocation and management of credit among the members, which we've already discussed in Chapters 14 and 15.

In my earlier book, *Money: Understanding and Creating Alternatives to Legal Tender*, I went further in describing my preferred approach to managing credit imbalances by adding a savings and investment role to the operations of the clearing organization.[6] The following is adapted from that volume.

Current Account vs. Capital Account

I have proposed that each member in a credit clearing system might have two accounts, one a "demand" or "current" account for payment in the exchange process, and the other a "capital" or "savings" account for long-term investment and business development. The current account would be the normal "medium of exchange" account, similar to your checking account at a bank or credit union, while the capital account would provide a way for members to save surplus credits, as you might by having a savings account at the bank. The membership agreement would limit not only the amount of a member's debit balance but also the amount of the credit balance that could be maintained in the current account. At the end of an accounting period, any credit balance in excess of the limit would be automatically transferred to the member's capital account from which it would be allocated by an "investment committee" to qualified member borrowers to finance their longer-term capital needs. In the early stages, the investment committee might limit financing arrangements to lending, but they might eventually consider, with the saver's approval, equity investments as well.

What About Interest?

This ability to save and lend surplus trade credits once again raises questions about that old bugaboo, interest. Would long-term loans of trade credits require the payment of interest, or would the preservation of capital be sufficient reward for saving? Given what we have already said about the destructive effects of usury, I maintain that both savings and loans should be made interest-free. As Silvio Gesell argued, money, as a human artifact, does not decay the way real things do in nature, so interest exists not because capital is productive or because savers deserve compensation, but because it costs nothing to hold money while those who save by holding goods suffer losses through their natural deterioration—rotting, rusting, and quality degradation.[7] That gives money-holders the power to demand interest from producers who cannot afford to wait, but that is only under circumstances in which money is scarce. The unearned income that interest provides in the fiat money realm is the cause of chronic money scarcity, increasing economic inequality, and recurring boom and bust cycles. But all of that can be avoided. Instead of interest on trade credit loans, the imposition of a small insurance fee can adequately handle whatever losses might occur from defaulted loans.

A Shared Equity Mortgage

A mortgage to buy a home is perhaps the largest debt that most middle- and lower-income families will ever take on, and it is taken for granted that it is the only route to home ownership. As I showed

in Chapter 6, in such a loan the borrower will end up paying between two and three times the amount borrowed, or even more, depending on the interest rate demanded by the lender. It was in the mid-1990s that I first began to think about the possibilities of shifting that debt burden to a shared ownership arrangement, expecting that it would be a less costly and more equitable arrangement between home buyer and the provider of capital. I then proceeded to make a study of what I called a "shared equity mortgage" based on some assumptions about the terms of the contract that seemed reasonable to me at the time. I completed that study and analysis sometime in the late 1990s, and an abridged version of it was published in *Islamic Horizons* magazine[8]. I later included that study in the first edition of *The End of Money and the Future of Civilization*, and subsequently published it as a monograph[9] on my website where it can be freely accessed. For my purpose here I'll simply describe the key features of my plan and then mention some other models that might share some similarities.

Key Features of my Shared Equity Mortgage

- **Initial co-ownership:**

The home buyer makes a down payment in equity, e.g., 10% of the purchase price.
A Co-op bank or other investor contributes the rest, e.g., 90% of the purchase price.
This results in equity shares of 10% and 90% respectively.

- **Rent instead of interest:**

The owner/occupier pays rent at the prevailing market rate at the time of purchase instead of paying interest on a loan.
Rent is treated as payment to all owners in proportion to their equity, so at the start the buyer receives 10% and the Co-op bank receives 90% of the rent.

- **Gradual equity buyout:**

I assume that the owner applies their rent share to purchase additional equity from the bank, so over time their equity share increases while the bank's share decreases.
But the owner has the option to purchase additional equity from the bank at any time

- **There is no foreclosure in the conventional sense:**

If the owner **cannot continue making principal payments**, they simply stop increasing their equity share.
If the owner cannot pay rent, their occupancy can be terminated (like any tenant), but their equity share remains.
Upon sale or re-renting, they still receive their share of rent or sale proceeds.

- **Aligned incentives at sale:**

Both parties have the same objective to receive the maximum possible price from the sale.
There is no senior/junior claim, just proportional equity.
This approach is essentially a partnership in which risk is shared in proportion to the equity shares, and the buyer eventually ends up buying out the Co-op bank's or other investor's share.
There is no debt and no interest.

Based on the assumptions I have used, this model, compared to the conventional debt model, can result in considerable savings to the home buyer, depending upon the prevailing interest rate level, but further analysis is needed to determine how this model compares with similar models like co-housing, shared appreciation models, and diminishing *Mushārakah* in Islamic finance, as well as with a conventional mortgage debt using different rent, interest rate, and pay-back assumptions. I leave that for others to investigate further.

[1] Luke Bretherton, *The ethics of debt and the nature of social flourishing*. https://www.abc.net.au/religion/ethics-of-debt-and-the-nature-of-social-flourishing/12783096. Accessed January 25, 2026.
[2] See for example, *Greenwell, Megan. Bad Company: Private Equity and the Death of the American Dream. First edition. New York: Dey Street, 2025.*
[3] https://invest.honeycombcredit.com/. Accessed January 12, 2026.
[4] https://www.startengine.com/seedinvest. Accessed January 12, 2026.
[5] In the pre-decimal British currency of Dickens' time: 1 Pound (£) = 20 Shillings, 1 Shilling (s) = 12 Pence (d). Micawber is illustrating that the difference between "happiness" and "misery" is a mere sixpence.
[6] *Chapter 16 Medium of Exchange or Savings Medium?* https://beyondmoney.net/wp-content/uploads/2025/12/money_pdfsam_merged_with_front.pdf.
[7] Silvio Gesell's answer to this problem was "shrinking money," which instead of earning interest would be penalized to match the loss of value that real goods experience in nature. His idea was taken up by celebrated economist Irving Fisher during the Great Depression and applied to many issues of Stamp Scrip that were circulated at that time. Such a penalty fee has since been incorporated as a feature in some alternative currencies and exchange systems and is referred to as "demurrage." See *The Natural Economic Order.* https://web.archive.org/web/20060909111523/http://www.utopie.it/pubblicazioni/gesell.htm. Accessed January 4, 2026.
[8] *How Does Halal Mortgage Compare With a Conventional Mortgage?* Islamic Horizons, September/October 1998.
[9] https://beyondmoney.net/wp-content/uploads/2026/01/a-shared-equity-mortgage.pdf. Accessed January 25, 2026.