

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

Chapter Seventeen

A Complete Internet-Based Trading Platform

A platform ultimately enables ... value creation by facilitating transactions.
—Alex Moazed and Nicholas L. Johnson¹

Platforms and Networks—the New Dominant Business Model

Over the past decade, internet-based platforms have evolved from disruptive novelties into the defining business model of the 21st century. According to Moazed and Johnson, in their 2016 book, *Modern Monopolies*, “The aggregator and creator of business value is no longer a company’s supply chain or value chain but rather a network’s *ecosystem*. Value has moved from creating products and services to facilitating connections between external producers and consumers. The firm has collapsed as a center of production and instead has become the center of exchange. The areas where businesses could create and add economic value have shifted away from production and toward curation and management of networks. This is where platform businesses come in.”²

Modern monopolies aren’t built on control of resources—they’re built on control of **connections**. In a world where **value flows through networks**, platforms are not just winning—they’re redefining how business is done. In 2025, seven of the top ten U.S.-based companies by market cap are platform-centric technology superstars. Nvidia, Microsoft, Apple, Amazon, Alphabet, Meta Platforms, and Broadcom (the “Magnificent Seven”) collectively command trillions of dollars in value³ and account for approximately one-third of the S&P 500’s total market capitalization.⁴

My point is not that I favor the emergence of business monopolies, but rather that platforms and networks provide the strategic route toward business success, which can be applied to solving “the money problem.”

The Changing Pattern of Payments

Worldwide, credit card and debit card usage at the retail level is giving cash a run for its money as the primary payment medium, with an estimated 4.48 billion Visa cards in circulation, followed by Mastercard with around 3.16 billion.⁵ Other electronic payment options include debit cards, mobile wallets, and cryptocurrencies of various sorts. In the United States, for example, in 2025 there were over 800 million credit cards in circulation, accounting for approximately 31% of all payment transactions.⁶ In Japan, one-third of all payments are made with credit cards.⁷ In the Eurozone, cash payments are down to 52% (a decrease from 79% in 2016), and credit cards now account for 39% of all transactions.⁸

But what is a credit card, anyway, and how did it come to be such an important part of our daily lives and the global financial landscape? There was a time not so long ago when most purchases were paid for by check or paper currency, and not so long before that they were paid for by gold or silver coins or by currencies that were redeemable on demand for gold and silver coins. But it is in the nature of things to evolve, to change form, and to adapt to new conditions. So it is with money, or to be more precise “payment media” and other exchange systems that are making money obsolete. It

hardly makes sense to use the word “money” anymore, given its muddled meaning and careless usage which derive from the successive transformations that have taken place in the realm of exchange, banking, and finance. As we’ve shown in Chapter 9, money today is not what it used to be, and tomorrow... well, tomorrow we won’t use money at all.

The Convenience Factor

A Visa card may be either a credit card or a debit card. I have one of each. If the former, the card-issuing bank allows the card holder to make purchases and cash withdrawals against a line of credit, i.e., the bank will “lend” the card-holder enough money (up to some limit) to pay for their purchases or cash advances. Most card issuers provide a grace period within which no interest is charged on purchase balances, but if a balance is carried beyond the current billing period, the cardholder must pay interest on that balance at rates which are currently around 24 percent,⁹ and if one is late in making a payment, the bank may impose a penalty fee as well as an increase in the interest rate on remaining balances.

A debit card, on the other hand, works like a check. The cardholder must already have money in his or her bank account. Purchases and cash withdrawals are charged immediately against the balance in the cardholder’s account. In either case, the card allows the holder to pay for purchases made at millions of businesses scattered all around the world. In short, Visa is a self-described “global payment system.” Visa (along with its sister, MasterCard, and a few lesser card systems) has been enormously successful and provides great convenience to the cardholder. At one time I did quite a lot of international travel and it is remarkable that one can walk up to a hole in the wall in most any country of the world, insert a piece of plastic, and get some slips of paper (the national currency) that allow one to acquire whatever they might need for their sustenance and comfort.

Visa cards and Mastercards are issued by banks which, while they may compete with one another to some extent for your business, also cooperate together as members of a financial services cartel to make their common business extremely profitable. While the card payment system provides a great deal in the way of convenience, it has (as presently structured) a major downside for the users and merchants, and for the economy as a whole. We’ve already described in previous chapters the dysfunctional nature of the political money system showing how it is overly centralized, exploitative, unstable, and unsustainable. As part of that system, credit cards and debit cards simply provide new ways of using the political debt-money that banks create by making loans.

Further, while they are more efficient than checks, the use of cards is much more expensive to both consumers and merchants than they ought to be. While providers of services that are voluntarily subscribed deserve to earn a fair profit, the privileged status that the banks enjoy limits competition and makes the emergence of competing payment systems difficult, so people think they have little choice. We’ve already mentioned the high rates of interest that cardholders must pay on outstanding balances, but there is also a charge to the merchants. Merchants typically pay up to 3.5% of each credit card transaction in processing fees, but they also pay a monthly access fee, equipment rental fee, and various other fees. And while big companies may enjoy sufficient market dominance to allow them to pass those expenses on to their customers, smaller enterprises are typically in no position to do so. For that reason substantial numbers of small retailers still do not accept credit cards (for example, in Germany, where that proportion is 34%).¹⁰

Besides the excessive cost of using bank-issued credit and debit cards, there is the loss of privacy that goes with having every transaction recorded and traceable. While that may be beneficial in helping to solve and deter criminal activity, it also poses a threat to privacy and personal freedom.

Brett Scott has done a masterful job of describing the threats posed by the emergent “cashless society” in his articles, *10 Reasons to Fight Cashless Contagion* and *The Cost of Cash...lessness*.¹¹

Improving the Exchange Process—Challenge and Opportunity

We can do better than that. While there has been recurrent debate about reforming the system of money and banking by new legislation and political initiatives, improvement is much more likely to come through private, voluntary, free market approaches that apply technological and business innovations that provide real alternatives. The implementation of such systems provides both a transformational advance for civilization and a huge market opportunity for entrepreneurs who undertake it. Imagine a democratically structured global payment system that is operated in the interests of the general welfare, with membership open to all in which the exchange medium is abundant and readily available to mediate as much trading as people need to do, and which provides each member with an interest-free line of credit in proportion to their ability to produce and sell. This is more than a pipe dream. Such a system is entirely feasible using well-established principles and procedures of sound money and banking, and as we already described, prototypical systems have been operating successfully for a long time. I have prepared and posted on YouTube a seven minute video that describes *VITA*, my vision of such a system.¹² Like so many other reasonable things, the main obstacles to implementation have been political and organizational, not technical, but recent social and technological developments provide the means by which those obstacles can be overcome.

As we proceed to consider emerging technologies and their expected impact upon money and the exchange process, it is useful to recapitulate some essential points that were made in earlier chapters:

- The primary role of money is to serve as a medium of reciprocal exchange.
- Honest money is nothing more than a credit instrument that promises redemption for some real goods or services.
- Current methods of allocating and managing credit are overly centralized and neither optimal nor sustainable.
- New methods that are more effective, efficient, and equitable are already available and are being effectively and profitably applied.
- Complementary currencies and credit clearing exchanges can be established by community groups, NGOs, entrepreneurs, business associations, and municipal and regional governments.

Significant Trends and “Disruptive Technologies”

In his book *The Innovator’s Dilemma*, Clayton Christensen contrasts two types of technologies—“sustaining technologies” and “disruptive technologies.” He uses a broad definition of technology, saying that “Technology means the processes by which an organization transforms labor, capital, materials, and information into products and services of greater value.”¹³ By this definition, technology includes marketing, distribution, investment, and managerial processes, as well as design and production. This makes his concepts entirely applicable to economic and financial processes of the sort we are considering in this chapter.

Christensen’s technological dichotomy is reminiscent of Thomas Kuhn’s distinction between “ordinary science” and “revolutionary science,” which is also relevant. Ordinary science is “tradition-preserving,” while revolutionary science is “tradition-shattering.” Mark Buchanan’s account makes

this distinction: “In normal scientific work, theories are extended, observations are made more accurate, and understanding grows by a process of accumulation. A scientific revolution, on the other hand, involves throwing out cherished ideas and replacing them with new ones; scientists come to see the world in a different light.”¹⁴ Likewise, sustaining technologies are comprised of improvements to established ways of doing things that enhance the position of dominant companies, while disruptive technologies consist of new approaches that, in Christensen’s words, “Bring to market a very different value proposition than had been available previously.” They typically “underperform established products in main-stream markets, but they have other features that a few fringe (and generally new) customers value.”¹⁵ While disruptive technologies may underperform in the short run, they often have the potential to eventually dislodge established technologies and dominant companies.

While it was too new to be mentioned in Christensen’s book, digital photography provides a perfect example. Initially, digital photography was greatly inferior to the established technology based on chemicals and film, but there were a few applications where it was “good enough” and found a sufficient market to support its further development. Eventually, digital photography became the norm and companies that had been dominant in the field of imaging were dislodged from that position. In fact, the Eastman Kodak Company, which had dominated the photography market for almost 100 years, eventually went bankrupt. And do you know how ironic that was? The technology of digital photography was first developed in the research labs of the Eastman Kodak Company but when it was shown to management, their response was, “That’s cute — but don’t tell anyone about it.”¹⁶

Strengths and Vulnerabilities of Political Money and Conventional Banking

In order to comprehend the points of vulnerability of political monies, we must be aware of their strengths and the main features that have made them so dominant in the market.

- They are universally accepted within wide national, continental, or even global domains.
- Inertia—the public is habituated to their use.
- Political monies are easily exchanged for one another through well-organized foreign exchange currency markets and widespread money change offices and kiosks.
- There is still a lack of easily accessible and viable alternatives for mediating exchange.
- The intensive support and protection they obtain from national governments.
- Their true costs and “side effects” are obscured and not widely recognized.

But despite these enormous advantages, they also have inherent weaknesses and vulnerabilities that we have already described. As Christensen points out, dominant companies often “overshoot their markets.” This makes them vulnerable to displacement for a number of reasons.

- Their focus is mainly on continuing improvement of established products or services.
- They eventually give established customers more than they need or are willing to pay for.
- They often overplay their dominant position and overexploit their customers.
- Others simply become complacent, ossified, or unresponsive to developments and the demands of both established and emerging markets.

Remember that credit card companies are actually consortia of banks. It is the banks that issue the cards, and the banks that reap the profits. The banks that participate as members of the Visa and MasterCard duopoly, while engaging in limited competition with one another to attract cardholders, have cooperated to raise interest rates, add more fees upon fees, and gradually add more stringent

clauses to the cardholder agreements. All of this has made them ever more exploitative of users, especially those who are caught in the “debt trap” with little hope of ever paying what they owe.

Christensen observes that dominant companies often ignore or try to suppress disruptive technologies. This has been particularly true in the case of money and alternative credit institutions. Whenever competing currencies have appeared, the power of government has been used to quash them. The successful Great Depression–era currencies in Wörgl and Schwanenkirchen are but two among numerous such examples.¹⁷ The Swiss WIR cooperative clearing circle, described earlier, was a notable exception that (for a while at least) was allowed to subsist, though it was ultimately restructured into a conventional bank, which largely neutralized it as a threat.¹⁸

Finally, if dominant companies ever do adopt the new technology, they are usually too late to be competitive with nimble start-ups that have had a head start. Banks especially should be expected to be very late in adopting technologies that will create a wholly different, more competitive economic and financial playing field, which they have long tried to suppress.

From Disruptive to Sustaining—Moving Upmarket

If exchange alternatives are to gain a foothold within such a protected (for the banks) milieu, they will need to first find small niche markets where their special qualities are recognized and valued. As performance improvements are achieved, they will be able to attract more of a mainstream market. This has already been happening for some time in both the grassroots and commercial trade exchange sectors. In the former, the attraction has been mainly ideological. Complementary currency and exchange have been seen as a means for achieving social justice, economic equity, local self-determination, and environmental restoration. Most grassroots initiatives have tried to incorporate features that promote such ideals. In a few cases, like Argentina, the impetus has been more practical, as we’ve already described in Chapter 13.

Within the commercial sector, the features that have been most highlighted are the ability of trade exchange membership to mobilize the excess capacity of members in the face of scarce official money by providing a supplemental medium of exchange in the form of trade credit, and the marketing advantage that comes from preferred access to the membership base. In both cases, a strategic approach will need to be taken to avoid the legal and regulatory minefields that have been laid to inhibit market advances from newcomers to the field of exchange services. Since the usefulness and marketability of credit clearing services is determined by both the scale and scope of the network, it would seem essential that critical mass must be quickly achieved. That goal necessitates that all levels of the supply chain must be included from as early in the process as possible. But how does one recruit participants into an emerging network?

The Emergence of a Complete Internet-Based Trading Platform

Since the end of the twentieth century, commerce of all kinds has increasingly migrated onto the Internet. Barring some major catastrophe that would disrupt the information and communications infrastructure, this trend will only continue to accelerate. If there is such a thing as a “monetary science,” it is presently undergoing a revolution—and the technologies that are arising from it are sure to bring about enormous changes. Compared to conventional money and banking, the complete Internet-based trading platform we will describe here will achieve the innovative potential that Christensen writes about.

Within my own lifetime, I have seen a number of so called “blue chip” companies dislodged from their lofty perch. This has been especially true in the fields of computers, telecommunications, and photography. Yet many of those companies have either ceased to exist or have been eclipsed by others that developed and marketed what seemed initially to be inferior technologies.

During the early 1980s I was doing some work for a company that was owned by one of my former MBA students. Many of their clients were professional and trade associations that wanted input on the needs and levels of satisfaction of their members, which presented a significant business opportunity for us together to conduct survey research for them. I was engaged to apply my expertise in designing the survey questionnaires, conducting the statistical analysis, and writing the final reports.

We had been buying time, at some considerable expense, on a university mainframe computer and had to put up with long turnaround times. It began to seem sensible to consider acquiring a computer system that would enable us to bring the computing work in-house. Among the proposals that were submitted to us was one from DEC (Digital Equipment Company) for a multi-station minicomputer. This was at the time when desktop microcomputers were just beginning to provide some significant computing power, and local area networks (LANs) were becoming functional. Fortunately, we realized that the DEC system and other minicomputers would soon become obsolete. We decided instead to acquire one of the new IBM-AT-type microcomputers, along with the newly published statistical software (SPSS) to go with it. We thought that these products would serve our immediate needs and, if necessary, other similar computer workstations could be added later.

That solution did prove to be quite satisfactory for our purposes, and at a small fraction of the price asked for the obsolescent minicomputer. DEC was not nimble enough to adapt to the fast-changing computer technologies and market conditions. It made an early foray into the microcomputer market with the DEC Rainbow desktop machine, but it was overly expensive and not “IBM-compatible.” Where is DEC today? An interesting analysis of DEC’s failure to succeed in the personal computer market is provided by Christensen.¹⁹ He notes that DEC had all the necessary resources to succeed, but their processes and values did not permit them to effectively compete in that market. IBM, Eastman Kodak, and Xerox are still viable companies, but they are nowhere near as dominant in their industries as they once were.

The entrenched position of the money and banking establishment far exceeds that of any single company or other sort of cartel. Its position, as we have described, has been established and long sustained through political privilege and the suppression of competition rather than by the quality and value of the services it provides. Given that situation, what are the prospects that it might be dislodged anytime soon? The U.S. Postal Service long enjoyed a monopoly in the delivery of mail, but that did not stop the massive shift to newer, faster, electronic communications channels like fax, text messaging, e-mail, instant chat, internet file transfers, and phone service and video conferencing over the Internet using wireless communications.

What are the “disruptive technologies” that are emerging within the realm of money, banking, and the exchange process? They are:

- Direct credit-clearing among buyers and sellers.
- The use of the Internet to create online marketplaces.
- Transparency in Internet-based accounting, information, and exchange systems.
- Strong identity verification.

- Encryption and secure transfer of information over the Internet.
- Social networking.
- Reputation ratings of vendors and buyers that are continually updated and available on-demand.
- The re-emergence of mutual companies, co-responsibility, and localized
- Internet-based markets.

It is not any of these individually but all of them in combination that will result in structures that will provide superior performance in mediating the process of reciprocal exchange. Worsening economic and financial conditions, such as those experienced around the 2008 global financial crisis, will create enhanced market opportunities and further impetus for the adoption of these sorts of nonpolitical trading platforms, and will assure their eventual implementation and wide acceptance.

Essential Components of the Complete Internet-Based Trading Platform

Management guru Peter Drucker has expounded the following “law”—profits migrate to the supplier of the missing component necessary to complete the system. What system are we talking about, and what is needed to complete it? It is what I call a complete Internet-based trading platform, and it requires these four basic functional components.

- A marketplace
- A social network
- An independent means of payment
- A measure of value or pricing unit

There are already numerous Internet-based marketplaces—eBay, Amazon, and Craigslist, to name just a few—and there are numerous social networks—Facebook, LinkedIn, Telegram, and so on. But what about payment systems? And what about measures of value? This is where major gaps remain. Yes, PayPal is a payment system of sorts—but it only allows the transfer of the same old bank-created debt-money. The only real advantage it provides is in enabling you to pay an online vendor without the risk of revealing to them your credit card or debit card information. PayPal plays the role of a trusted intermediary. That is a useful service, but it does not provide a true alternative payment system.

With regard to value measures, there are many (like dollars, euros, pounds, and yen) but each is a political unit, the value of which is dependent upon the policies of their respective government and central bank. These are the very measures of value that are unstable and problematic and subject to inflation. But before proceeding with that line, let us consider each of the four components a bit more fully.

A marketplace is a “space” where buyers and sellers come together to display their offerings, express their needs and wants, and negotiate the terms of trade. It need not be a physical space, as we see with the emergence of marketplaces on the Web. It is important to recognize that there are marketplaces that bring businesses together with consumers (B2C), marketplaces that specialize in business-to-business transactions (B2B), and some that enable all types—B2C, B2B, and even C2C.

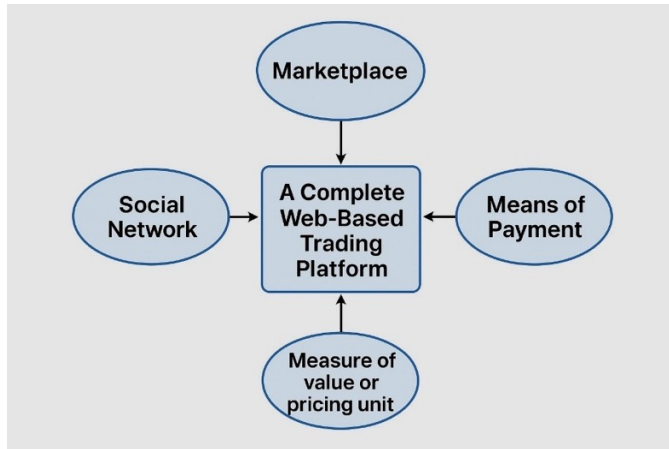


Figure 17.1 The Four Essential Components of a Complete Internet-Based Trading Platform

A social network enables participants to make themselves known to one another and to communicate more effectively. It allows one to establish their identity online, to post their credentials, and to provide other information for others to see. It also can track correspondence and behavior within the network, establishing one's reputation and enabling an impersonal medium to serve as a tool for building a matrix of trusting relationships that can lead to collaboration and coordinated action on many levels. Social networks are enabling an inherently impersonal medium to become an effective tool for forging very personal relationships across all sorts of boundaries. A means of payment facilitates the exchange process and transcends the barter limitation of coincidental wants and needs.

Possible payment media include:

- official money,
- private currencies, and
- direct clearing of traders' credits and debits.

Everyone understands the use of official money as a means of payment. Thus far, Internet-based payment systems have been mainly limited to the transfer of conventional bank-created money from one party to another. The emergence of various cryptocurrencies like Bitcoin has begun to make people realize that other payment possibilities exist. But the use of cryptocurrencies, as they are currently manifested and understood, is not an adequate solution to the exchange problem. The reasons for that will be taken up more fully in the next chapter, but for now it will suffice to point out that almost all existing cryptocurrencies are artificial virtual commodities the value of which is purely speculative. A proper currency, on the other hand, is a credit instrument that promises to be redeemed for some real, desired, and useful goods or services. As we have already shown, private credit-based currencies have long served the payment function and have experienced periods of resurgence, like the Great Depression of the 1930s, when the flaws inherent in the centralized fiat money system have become more obvious.

A measure of value enables comparison in the marketplace of the values of distinctly different kinds of goods, services, and contracts, including financial claims and currencies. In times past, values and prices were expressed in terms of some standard commodities, most notably a specified amount of gold or silver. As described earlier, those value measures were obliterated by legal tender laws that caused the various national currencies to be regarded as both a means of payment and a measure of value. It is hoped that at some point, legal tender laws will be abolished, but we need not wait for

that to happen. Buyers and sellers are right now free to adopt some nonpolitical measures of value to use in pricing their goods and services for sale.

Completing the Internet-Based Trading Platform

Recalling Drucker's Law, we propose that the missing components that are needed to complete the edifice of a complete Internet-based trading platform are (1) a means of payment that utilizes no political currency for payment and (2) a concrete, objective, universal measure of value that provides a unit of account that is independent of all national currency units. Of these, the first is more critical; the second can be temporarily deferred.²⁰

What we propose as the innovative means of payment is direct credit clearing, which has already been described. And what we propose as the objective measure of value is a composite commodity standard such as the one which I thoroughly described in my 1990 book, *Money and Debt: A Solution to the Global Crisis*.²¹ These missing components need to be properly integrated with an online marketplace and adequate social networking tools. When these things are accomplished, the trading platform becomes an integrated milieu that subsumes the functions of both a marketplace and a bank.

Finally, the application of the available technologies and the deployment of complete Internet-based trading platforms needs to be done with the fundamental purpose of serving the common good. The dominant players in Internet-based commerce today, like eBay, Amazon, or Etsy, may try to exploit this opportunity, but it will more likely be some nimble start-ups that have the right values and motivation and the flexibility required to develop the necessary internal processes, lean enough to accept the small initial returns, and venturesome enough to develop new markets. The past three decades have seen great progress in the development of private commercial trade exchanges that provide direct credit clearing among their business members. These and other examples provide adequate proof of concept. Optimizing their design and operating protocols, putting all the pieces together, and taking these networks to scale are the remaining tasks that will revolutionize money and banking and enable the evolution of civilization toward greater peace, prosperity, and sustainability.

¹ Alex Moazed and Nicholas L. Johnson, *Modern Monopolies*. New York: St. Martin's Press, 2016, p. 39.

² *Ibid.*, pp. 69-70.

³ *Top 10 largest tech companies in the world by market cap in 2025*.

https://www.forbesindia.com/article/explainers/top-tech-companies-world-market-cap/95180/1?utm_source=chatgpt.com. Accessed September 5, 2025

⁴ *The Magnificent Seven Monitor*. <https://www.reuters.com/data/magnificent-seven-monitor-2024-10-30/>. Accessed September 5, 2025.

⁵ <https://capitaloneshopping.com/research/credit-card-ownership-statistics/>. Accessed August 21, 2025.

⁶ *The state of credit cards in 2025: 50 stats you need to know*. <https://use.expensify.com/blog/credit-card-statistics>. Accessed August 21, 2025.

⁷ *The cashless payment ratio in Japan was 39.3% in 2023, of which, credit cards accounted for 83.5%*. https://www.meti.go.jp/english/press/2024/0329_002.html. Accessed August 21, 2025.

⁸ *Even in the euro zone, king cash is about to lose its throne*. <https://www.reuters.com/markets/europe/even-euro-zone-king-cash-is-about-lose-its-throne-2024-12-19/>. Accessed August 21, 2025.

⁹ <https://www.investopedia.com/average-credit-card-interest-rate-5076674>. Accessed August 21, 2025.

¹⁰ <https://osthaven.com/en/blog/germany-pays-digitally/>. Accessed August 21, 2025.

¹¹ Find these and other articles on his website, <https://www.asomo.co/>. Accessed August 21, 2025.

¹² *VITA, a Universal Transaction System*. <https://youtu.be/IX0u5oF7iT4?si=xGnLfaNZ0-d1h5z>. Accessed September 5, 2025

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- ¹³ Clayton Christensen, *The Innovator's Dilemma*, (1997), p. xiii.
- ¹⁴ Mark Buchanan, *Nexus: Small Worlds and the Groundbreaking Science of Networks*, p. 47.
- ¹⁵ Clayton Christensen, Op. cit. p. xv.
- ¹⁶ Harvard Business Review, <https://hbr.org/2016/07/kodaks-downfall-wasnt-abSeptember 5, 2025out-technology>, accessed. See me tell that story in the context of exchange system design in a presentation I gave in Malaysia in 2017, *Disruptive Technologies Making Money Obsolete*. <https://www.youtube.com/watch?v=ty7APADAA8g>.
- ¹⁷ These are discussed in my previous book, *Money: Understanding and Creating Alternatives to Legal Tender*, pp. 64–69. Authoritative sources relating to the Wörgl currency can be found at <https://beyondmoney.net/case-studies/>.
- ¹⁸ See the documents we mentioned earlier at <https://beyondmoney.net/the-wir-economic-circle-cooperative-resources-information/>
- ¹⁹ Clayton Christensen, op.cit. pp. 170–71.
- ²⁰ The measure of value function was thoroughly discussed in Chapter 12.
- ²¹ Appendices A, B, and C. https://beyondmoney.net/wp-content/uploads/2025/06/money_and_debt_part3_lo.pdf