

# **How Americans Invented Modern Money, 1607-1692**

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## **Abstract**

English America experienced the fastest monetary evolution in history. Within less than a century, simple commodity money was followed by sophisticated commodity money, coins, banknotes, and an original invention of fiat money – which spread from there to the rest of the world. I attribute this evolution to English regulation. Regulation of religion in England and regulation of colonial currency, land, trade, piracy, and polity, inadvertently propelled the evolution of money in America and especially in Massachusetts through various channels, including the English revolutions and civil wars that turned colonial regulation on and off.

For we must consider that we shall be a city upon a hill. The eyes of all people are upon us.

- John Winthrop, Governor of the Massachusetts Bay Company, 1630

In this extremity they presently found out an expedient, which may serve as an example, for any people in other parts of the world, whose distresses may call for a sudden supply of money to carry them through any important expedition.

- Cotton Mather, minister in Boston, 1697

## **1. Introduction**

On December 24th, 1690, as most of the English nation gathered to celebrate Christmas Eve, the mood among the English subjects in Massachusetts could not have been less festive. For one thing, the Puritans did not celebrate Christmas, which they considered a pre-Christian holiday. More importantly, Massachusetts was broken – militarily, spiritually, morally, and financially. A large expedition sent to occupy Quebec returned defeated. Instead of spoils of war that were supposed to pay for the expedition, the troops brought smallpox. In an extremely cold winter, the sick, hungry, “mutinous” troops demanded pay. A caretaker revolutionary government had nothing to offer them. Previously confident of an easy, divine victory against Catholic French Canada, the Puritan government wrote to its agents in London: “Our Father spit in our face.” These agents were trying to restore Massachusetts’ charter which had been revoked in 1684. There was much anxiety about the war and the future of the Puritan haven.

In order to pacify the troops, it was on that gloomy day, December 24<sup>th</sup>, 1690, that the Massachusetts government gave birth to modern money. By ‘modern money’ I mean the only type of currency that people all over the world have known since the Great Depression: a piece of cheap material (paper or base metal) that is produced by a central bank and that nobody is obliged to convert into gold or silver or any other commodity. In the United States the words ‘legal tender’ are engraved on the paper, disclosing the limited legal rights that its holder does have. Although the physical use of this currency in purchases is declining, it is still the foundation of the entire financial system, most of which consists of nothing more than promises to pay it (e.g., bank accounts, credit cards,

bonds, stocks, mortgages, student loans, insurance policies). Ron Paul notwithstanding, this unbacked, non-convertible, irredeemable 'fiat money' is probably here to stay.

The type of money which Massachusetts invented was America's first great invention. It had far-reaching consequences for humanity. By releasing the quantity of money from the availability of gold or silver, governments which imitated Massachusetts obtained enormous political and economic powers, as Cotton Mather predicted. Paper money spread to the other American colonies. It has been credited with financing the American Revolution and the French Revolution, and also with ending the Great Depression. It created ruinous inflationary episodes throughout the world. The one in 1920s Germany derailed a young democracy and paved the way to disaster. In the Global Financial Crisis which began in 2008 an excess of this money was blamed as the main culprit, and yet – amazingly – the way out of the crisis was producing *more* such money rather than less. In short, modern money has been one of the most powerful forces of the modern era.

1690 America was not an important place. Perhaps 5% of the 5-million strong English nation lived there, and they all thought of themselves as ordinary English subjects. It seems puzzling that such a momentous invention was made there, and not in the financially sophisticated Amsterdam or London. A closer look at the facts reveals that it is actually befitting that this most consequential innovation happened in America, because 1690 was only the climax in an extraordinary evolution that money had in America.

Monetary evolution is the change in forms of money. Many societies independently used their agricultural products, such as grain, as their first money.

Transition was later made from this simple commodity money to more valuable objects such as gold pieces. Later these pieces were stamped to authenticate their content and weight and became coins. Next came banknotes which represented precious metal coins that were supposed to lie in banks' vaults. The next, non-trivial step was to get rid of metal altogether, which is what we have for modern currency. It took humanity about 5,000 years to complete the evolution in 1971. Colonial Massachusetts went through the exact same sequence in just 60 years. Moreover, at the end of this brief period, the Massachusetts government was the original inventor of the last step in the evolution. In order to understand the end product of that evolution, we need to understand this unprecedented, spectacular evolution and the forces which propelled it.

The great variety of different types of money in America has long been noticed by economic historians. Following the colonists' complaints, scholars have attributed this variety to a chronic shortage of proper money – English silver coin. The mainstream explanation of the coin shortage is that the colonies exported too little and imported too much. Their export of agricultural products was not enough to pay for imported English manufactured goods. This deficit in the balance of trade had to be settled with coin. Then there was no coin left for internal trade within each colony. England could have sent coin to the colonies for use in their internal trade, or allow colonists to take coin with them, but like most countries England did not allow exportation of its coin because it too felt a shortage of coin. China's transition from paper money to uncoined silver absorbed enormous amounts of silver from Europe for many decades. Colonial mints might have solved the problem, but the English king would not allow any colony to infringe on his

prerogative of minting the only coins of the empire and determining what was legal money.

My recent work shows that English regulation even affected alternatives to coin. When Massachusetts tried to start a note-issuing bank based on land titles, new regulation of such titles killed the bank. With both coin and land out of the picture, Massachusetts resorted two years later to paper money which was backed by no real asset.

The money problem got worse over time because of the rapid population growth which increased the size of the American economy. When an economy is growing, a fixed amount of coins results in deflation, which sometimes leads to recession. Colonial Americans were aware of the problem, so they could not be content even with a fixed quantity of money. They had to increase the quantity in every possible way – including the invention of new types of money – just to catch up with the population growth and avoid deflation.

In this project I look at the big picture and behind the scenes of the above explanations – trade imbalances, population growth, and coin and land regulation. All these issues, I argue, were in fact symptoms of a *single* underlying problem: English regulation.

In brief, the reasoning is as follows. The trade balance was initially negative in all colonies because they were built from scratch with English supplies before profitable exports were developed. The coin regulation resulted in a universal reversion to the most primitive commodity moneys. Attempts to mimic contemporary Old World solutions to the money problem failed because most colonies lacked the human and physical capital that were required to pull off such plans and to improve on them.

The turning point was the regulation of religion in England. From a pure economic point of view, it led unlikely immigrants (middle class Puritan families) to settle in an unlikely land ('cold, barren New England'). The high material demands of these families, coupled with the lack of staple goods like tobacco, led directly to an exceptionally severe trade imbalance. These families were not exposed to tropical diseases so they reproduced quickly and increased the pressure on the limited amount of money. With few servants and slaves, this rapidly expanding economy was the most commercialized one. All this forced New England – headed by the commercial center in Boston – to think hardest of solutions. Thanks to the intellectual quality, experience, and accountability of its leaders, and its financial resources, Massachusetts was able to devise solutions to its monetary problems far more than all other colonies could.

English regulation did not stop there. It led to Civil Wars in England which had a double effect. First, English monetary theory and practice leaped forward with private coinage, goldsmith-banking and land banking. These ideas were gradually exported to America. Second, the fall of monarchy allowed Massachusetts to get away with a mint. When monarchy returned, the mint was shut down, and England regulated the colonial polity, trade, piracy, and land. The land regulation killed a land bank the colonists wanted as a substitute for the mint. Massachusetts was thus challenged again and again to find new solutions to the money problem. Another revolution in England – again related to regulation of religion – then switched regulation off again, but only partially. This resulted in the invention of fiat money.

Massachusetts was the only seventeenth century colony that emerged from the primitive world of commodity money. Its mint and bank were killed not by domestic

failure as in other colonies but only because of English regulation. Nevertheless, it did not operate in a vacuum, but borrowed ideas from everyone around, including Natives and English, French, Dutch and Spanish colonies.

I begin with a rudimentary theory of monetary innovation in Section 2 and background on England in Section 3. Because political events in England were the most important force in the evolution of American money, the story is organized chronologically (rather than according to colony or type of money). In Section 4 I discuss money in the English colonies before the founding of Massachusetts (1607-1629). Section 5 is about 1629-1640, before the Civil Wars. Section 6 is about the time of political chaos in England (1640-1660). Section 7 is about the reigns of Charles II and James II – 1660-1689. To complete the background for the upcoming invention of fiat money, two sections digress a bit from the chronological sequence, discussing the French Canadian convertible card money of 1685 (Section 8) and a biography of the presumed inventor of fiat money (Section 9). Section 10 then recounts the fiat money of 1690-92. Section 11 is an epilogue. Section 12 concludes.

## **2. A Theory of Monetary Innovation**

Before thinking why anyone would invent money, it needs to be clear when money is needed at all in a pre-industrial society.

### **2.1. Demand for Money**

There are two reasons why a household might need money: trade and unilateral payments. Unilateral payments include taxes, fines, tributes, and contributions to religious authorities. They are required by law and their existence depends on the political structure of society. As for trade, it is affected by the level of income. Food

producers may want to trade some of their food only if they have enough to spare. Their desire to trade depends on their demand for variety in consumption. This demand may depend on the physical environment, social customs, the household's composition (from a single person to a couple with minor children), and psychological factors. Such demand for variety may lead some people to supply it by producing non-food goods and services. Then they must trade in order to survive. Trade can change dramatically during wars, not only because of disruptions and destruction, but also because the government suddenly increases its demand for supplies and paid troops.

All this desire to obtain goods from others does not always imply a need to pay for it. Some organizations, such as commercial companies, military units, and communes, avoid payments between their members just as in a household. Otherwise, if a payment needs to be made, the simplest method is barter on the spot. If the other party wants to consume the household's produce then the household does not need money. This is most likely to happen if variety of goods is not important to the other party. In a pre-industrial society, barter was most prevalent with servants and slaves: their produce and services for food, clothes and housing provided by their master.

An alternative payment is with credit: book credit, a promissory note (IOU), or an oral promise. Credit could substitute money entirely if debts are set off against each other and cancelled. Credit requires either legal enforcement or a community with effective reputation. A defaulting debtor might never again get credit from anyone if the community is prone to gossip. That is, if it is small, stable and cohesive. Credit also requires numeracy and often literacy.

Money is needed only if all of the above fail: payment is required, barter is not feasible, and credit is either not feasible or only postpones the final payment. Money can have problems: it can be physically inconvenient to handle; if metallic – clipping, filing, and sweating reduce its intrinsic value; it can suffer from inflation due to an increasing quantity; or the quantity might not be enough to conduct trade.

## **2.2. Demand for Monetary Innovation**

Although the quantity theory of money promises that prices will always decline enough to accommodate a low money supply, this is not true in practice because the lowest denominations of coin, and its physical dimensions, form a lower bound. Coin is not perfectly divisible like fudge. A total of five silver coins will not suffice for a large community. Once this bound is reached, a shortage of liquidity arises. The society can try to increase the quantity of money but a superior government might prohibit that. Inventions of new types of money often result from an attempt to get around regulation that restricts an increase in the quantity of the existing type of money (Sylla 1982).

## **2.3. Supply of Monetary Innovation**

Such need for more money could lead to an invention, but not necessarily so. In his attempts to explain why the Industrial Revolution happened in Europe and specifically in Britain, Joel Mokyr argues that not everyone has the capacity to create and implement a successful invention. History is full of losers who had the incentive to invent but failed and perished: firms failed to invent new products, and states failed to invent new weapons. Some people are more likely than others to be inventors, and they are not equally distributed across societies. Mokyr's studies of technological innovation distinguish between four categories of people: scientists, who understand how nature

works; engineers, who implement that knowledge in a physical object; technicians, who produce, maintain, and debug that object; and finally there are the users. All of them are potential inventors or improvers.

It seems appropriate to use Mokyr's framework to understand the monetary revolution that happened in America and specifically in Massachusetts. Who then are the analogous people in the context of money? The 'scientists,' before there was Economics, were all intellectuals and specifically natural scientists. Those with high education may have read the Aristotle-Plato debate on whether money was its metallic value or a mere symbol. They may have read about money in other times and places. Those able to formulate abstract models of causality in complicated systems could lead the way, and thus natural scientists were well positioned to think about money (Copernicus and Newton did). Equipped with the unprecedented skepticism of the Scientific Revolution (see below), they could ask: must money really be based on metal?

The 'engineers' of money are physical and legal experts because these are two aspects of money. Designing the production of a durable object which is difficult to counterfeit requires specialized skills and expensive machinery. The legal status of money can also be critical for its success. Laws can recognize privately created money or create money from scratch. Experts in commercial law can be especially helpful. The legislature enacts the law only if it really wants to solve a problem. This is more likely to be the case in a democracy because then the legislature is accountable. It could, however, get in trouble with a superior government and might cause an economic crisis if the invention fails, so low risk aversion and a rebellious spirit might be needed as well.

The ‘technicians’ are also physical and legal. Mint or printing press workers, for example, are necessary for the production process and might come up with improvements. The legal ‘technicians’ are judges and lawyers in legal cases where money laws are involved. They might also come up with ideas of improving the money.

As for the users of money, some people use money (and its alternatives) more than others. Financiers and merchants are more likely than others to come up with improvements. Merchants also know most about money elsewhere. Even their neighbors in a port city are exposed to new ideas from incoming merchants, travelers and immigrants. The society can benefit from that only if it is culturally open to accepting new ideas from other cultures, even from enemies or ‘inferior’ nations.

### **3. English Background, 1603-1692**

#### **3.1. Politics**

The end of the Tudor dynasty in 1603 brought the Scottish House of Stuart to the English throne. King James I enjoyed tranquility thanks to his talent of not getting into trouble. His son Charles I, who inherited him in 1625, risked everything for the Anglican Church. He did not allow Puritan ministers to purge more remnants of Catholicism from the church. Ministers were punished and fired for not following the approved rituals. Parliament was unhappy and in 1629 Charles prorogued it, thus losing his ability to impose constitutionally permissible taxes. After 11 years of “personal rule,” his religious enthusiasm drove him to meddle in Scottish affairs. The Scots responded by invading England. Charles had to resort to Parliament to get funds. Parliament did not give up the opportunity and in 1642 the power struggle led to two consecutive Civil Wars.

In 1649 the losing king was executed by a military regime headed by the Puritan Oliver Cromwell. Various constitutional experiments followed and failed, so that by 1660 Parliament ordered restoration of monarchy. The dead king's son, Charles II, returned from exile. He was busy at first fighting the Dutch, the Great Fire of London, and the Plague. Internal conflict was resumed in the mid 1670s. Having no legitimate sons, Charles's throne was destined to go to his Catholic brother James. To deal with the public's objection, Charles revoked charters of local jurisdictions and corporations in an attempt to increase his control, and renewed persecution of Puritans in the early 1680s.

In 1685 Charles II died and James II was crowned. He tried to rig elections for a Parliament which would revoke anti-Catholic laws. In 1688 members of the elite invited his son-in-law and nephew William of Orange to invade from Holland. William invaded and started the Glorious Revolution. After James escaped to France, in 1689 William was crowned with wife Mary. William drafted England to his Protestant war against France.

### **3.2. The Scientific and Intellectual Revolutions**

The Scientific Revolution of the seventeenth century was important in England. James I had intellectual pretensions. He had the Bible translated anew and wrote about the existence of witches. One of his most senior executives was the polymath Francis Bacon. Bacon called for sustained effort to learn nature in order to use it so as to improve the condition of human living. His research agenda was picked up with enthusiasm mostly by the Puritans who believed that the final days were coming. At the return of Jesus all the secrets of the world were about to be revealed to the elect. Those making advancement in the understanding of nature proved to themselves and to society that they were of the elect. A group of scholars set up the Invisible College in the 1640s. They presented and

discussed new practical ideas to improve the quality of life. After the Restoration, they transformed into the Royal Society of London. The Scientific Revolution reached a climax with the 1687 publication of Isaac Newton's *Principia*.

Seen together with the enormous variety of political and religious ideas and experiments that surfaced during and after the Civil Wars (e.g., republicanism, communism, and Quakerism), some historians refer to 'The Intellectual Revolution.' The entire century was marked by a general, unprecedented willingness to throw aside ancient authorities and to experiment bold, untried ideas. It was befitting that in that century some Englishmen would throw metal out of the concept of money.

### **3.3. Money, Credit, and Banking**

Most of England was fully monetized since the late Middle Ages. In 1603 England had mostly silver coin and some gold coin. Both types of money were old, worn and clipped. What set England apart from the continent was the royal coinage monopoly which gave it a unified coinage. Counterfeiting coin was considered high treason. The state's power over coin was strengthened in a 1605 legal case, when it was ruled that after a debasement a debtor could offer the same quantity of debased coins instead of older coins. Legally, the value of money was not its metallic content but the king's will. Following up on that, James I introduced token coinage during a shortage of small change. The public rejected it due to inflationary fears, producing illegal private lead coins instead. After the abolition of monarchy in 1649, thousands of small businesses throughout England openly issued their own token coinage. It was suppressed by the new king in 1672. Export of English coin was illegal throughout the century.

England's financial system was backward relative to Europe. To save on costs of coin shipment, merchants used bills of exchange like all Europeans, but when the Exchequer borrowed coin from financiers it gave them as receipts wooden tallies, on which the amount of debt was marked by cuts in the wood. An attempt to introduce paper bonds and sell them to the general public ended after the Exchequer defaulted in 1672.

Troops were usually discharged with debt instruments which acknowledged the state's debt to them. These were called debentures in the army and tickets in the navy, and they were followed by payment in coin if and when the state wanted. In the Civil Wars debentures were problematic, but in 1667 the use of tickets was disastrous. Sailors defected to more credible paymasters and led a Dutch attack into the Thames and on the main naval base in Chatham. It was the worst naval defeat in English history.

Formal banking did not exist in the early Stuart days. Proposals for a royal bank were not implemented. Merchants deposited their money for safe-keeping in the Tower of London. In 1640, Charles I needed money for the Scottish war so he stole that money. The Tower's reputation gone, this led to banking by goldsmiths. They gained prominence during the Interregnum and became an indispensable part of London finance by 1680, because they introduced private, coin-backed paper money, as well as checks. Large-scale banking could not arise due to the lack of royal credibility. Nobody in his right mind would put a big pile of money in some big bank for the Stuarts to grab.

After the Civil Wars much land was confiscated from the royal family and its supporters. Soldiers could use their debentures to buy this land. A large market developed, in which rich officers bought hungry soldiers' debentures in order to accumulate land. This financial use of land inspired the idea of banks based on land

instead of coin. People would deposit their land titles and get in return a loan of small denomination banknotes, as in a pawn shop. Leaders of the Scientific Revolution, who envisioned and promoted unbounded economic growth, saw an expanding quantity of money as necessary to accompany that growth, lest deflation would strike. After despairing of increasing the money supply with alchemy, they resorted to supporting banks. Many tried to launch these 'land banks,' but none materialized under the Stuarts.

Some people in England knew about earlier paper moneys. Marco Polo, translated in 1579, told about paper money he saw in China around 1300. It was backed only by the death penalty for any who refused it. Instead of the government committing to convert the money into a commodity, it forced private sellers to do so. Such level of totalitarianism was inconceivable in England. There were episodes of 'siege money' in Europe when an army ran out of coin and issued a paper substitute. That money was supposed to be redeemed in coin at the end of the siege. The most widespread and recent case was in Dutch cities in the 1570s during the war with Spain. English records also have obscure, vague references to leather money in earlier times.

The only contemporary foreign paper money was that of Stockholms Banco. This semi-private bank was authorized in 1661 to print paper to replace 40 lb copper coins in circulation. Fraudulent over-issue soon followed and the printing press was shut down. Other European banks, the most famous of which was Amsterdam's Wisselbank, did not issue paper money or checks but only non-transferable receipts for coin depositors. Money transfers and debt payments were made in the bank's books. The law compelled merchants to settle their large transactions in such a way.

## **4. Before Massachusetts, 1607-1629**

### **4.1. Virginia**

Virginia started as a colony of a commercial company. It experienced chaos from 1607 to 1611, and then a military regime until 1619. The colonists were then granted an elected assembly. In 1622 Natives killed one third of the colonists, and this led to a royal takeover in 1624. The assembly remained in place.

The 1606 Virginia charter allowed a local mint but the 1609 and 1612 charters omitted that. Since the colony belonged to a company and was later a military unit, the first decade saw little use for internal trade and money. Trade with the company's magazine was based on barter and there was hardly any private property. Most of the population quickly became specialized in tobacco and corn, the former to sell to outsiders and the latter for subsistence. There was little internal trade for food, except for the long war years (1609-14, 1622-32) that sometimes interfered with self-subsistence.

Most colonists were poor, feeding on corn and water, having very few clothes, and living in lousy housing. They were mostly young, poor, single men, who had no much material requirements. Most of them were servants who were not allowed to trade.

Virginia was infamous for having no cities or towns. Jamestown decayed throughout the century until it was abandoned. The small size of plantation communities was conducive to credit but the enormous mortality rate from disease and war – often more than 50% a year before 1630 – was not. Overall, demand for money was low. Most Virginians could go on for days without needing money.

Still, they needed some medium of payment for occasional taxes, fees, fines, land rents, and hired artisans. The colony wanted to pay rewards for those who imported

people into the colony. Coin was not available because the balance of payments was negative: tobacco was very profitable only for a few years, and the colonists paid much for shipping and insurance provided by English and Dutch merchants.

Three media of payments emerged. Importers of people were paid in land. It was a medium of payment but not a medium of exchange, because most land grantees kept it and did not use the land title in further shopping. Technically, this would have been quite inconvenient. The first planters who rented individual plots were ordered to pay rent in tobacco and corn, assuming that these would be their crops. Remarkably, planters did not grow enough corn for subsistence, and tobacco became the only currency for both unilateral payments and trade. It replaced English coin not only in the medium of exchange role of money, but also in the unit of account role of money. Colonists stopped speaking in pounds and shillings. They spoke, and wrote monetary amounts in their laws, only in pounds of tobacco. It was a dismal reversion to practices not seen since the Bronze Age.

#### **4.2. The Northern Colonies**

Newfoundland was the last colony to receive a charter with a coinage privilege (1610), but colonization failed to materialize there. Bermuda had special coins shipped from England. They disappeared from circulation and were replaced by tobacco by 1620. Generally, colonies resorted to the most primitive commodity moneys – their most common agricultural produce: Fur in French Quebec, Dutch Fort Orange [Albany], and Plymouth; corn in Plymouth; and tobacco in the West Indies. It is unknown whether they copied the idea from each other. To see what relevant characteristics they had in common

and which might have caused this similar path, we will need to examine Massachusetts, which alone had a very different experience.

The only exception was wampum, the Natives' seashell money-jewelry. Produced in Long Island Sound, it was adopted first in Dutch New Amsterdam [New York City] and then in Plymouth. Wampum was on a higher level on the evolutionary scale of money: a processed precious material that had high value relative to its size. It was analogous to the gold and silver pieces or jewelry used as money during the West's Iron Age and which the colonists read about in the Old Testament. Most colonists did not value wampum for its esthetic quality. They used it in their internal trade with other colonists only because there was some entity outside that market (Native America) which always stood ready to provide valuable goods for wampum. From the colonists' perspective it was effectively, though not legally, like a banknote which could be redeemed for a gold coin. This was before goldsmith-banking took over London finance. It was a lesson in monetary economics that no other Englishmen learned.

Plymouth's Pilgrims had lived in the United Provinces (Netherlands) for more than a decade before moving to America. Incidentally then, both colonies which first adopted wampum – New Netherlands [New York] and Plymouth – came from the United Provinces. That financial center of the West, led by the Wisselbank, also had the most widespread use of paper 'siege money' merely two generations earlier (see Section 3). It is thus disappointing that neither colony went beyond wampum.

In Plymouth, intellectual and physical poverty may be the culprit. The colony's leaders were simple peasants and artisans who came with little capital and remained poor for decades. They had few material requirements even though they came as families,

cherishing their political and religious independence more than anything. Perhaps Plymouth's accountable government did not receive many complaints because the typical Plymouth town was ideal for credit. It was a small, stable and cohesive community of literate people with proper law enforcement.

## **5. Massachusetts takes the Lead, 1629-1640**

### **5.1. Massachusetts**

The political and religious troubles of the late 1620s led some leading Puritans to consider the settlement of New England. Since New England was granted to the Council of New England in 1620, legal tricks – aided by the cover of war with France – were used in 1629 to obtain on part of that territory a charter that could be taken out of England. The decision to relocate the company itself and its charter a few months later transformed a commercial corporation into a near-sovereign colony.

About a thousand immigrants arrived in 1630. This was a huge quantity in comparison to the initial population of older colonies. Massachusetts had high quality leaders from the beginning. Many were mid-level officials in England, graduated from Cambridge, or had background in law. They were not accountable to anyone in England. The population was different from that in the older colonies. Middle class families were the core. Entire extended families arrived together, following their ministers and nearly emptying some English villages. The exodus lasted throughout the personal rule of Charles I. Almost 1000 immigrants arrived every year. The older immigrants' income was based on selling goods to the new immigrants. Large physical resources were brought to make sure there would be no starvation. These resources, together with a critical mass of colonists, jump-started Massachusetts to an almost normal life style.

Before the decade was over Massachusetts had a college (Harvard) and a printing press, putting it intellectually way ahead of the other colonies.

Normal life also included commercial economic activity, thanks to the absence of an initial communal period that Virginia and Plymouth had. The problem of debt payments arose at once. Already in 1631 corn at market value was recognized for discharging all debts expressed in English units, unless coin or fur were specified in the contract. This allowed the maintaining of English units (unlike Virginia). The same year all promissory notes were allowed to be assigned to third parties or more. This enabled their use as private paper money. England would not have such law until 1705. In 1632 the exportation of coin out of the colony was prohibited, reflecting a sovereign mentality. From 1634 the legislature included towns' deputies and so became more accountable, even if the suffrage was limited to church members.

In 1635 taxes could be paid in "merchantable" grain, where one bushel discharged five shillings in tax liability. Setting this rate prevented disputes between taxpayers and tax collectors about the market value that was used in the 1631 law. Virginia would do this only decades later. This law also prevented taxpayers from dumping their worst grain on the treasury. The grain values set for taxes varied over the years, and they form the longest and most stable monetary tradition of seventeenth century Massachusetts. The default form of payment until 1691 would be grain, not coin. From an initial value for grain in general, the law expanded quickly to differentiate between types of grain, probably because of divergence of market values. Usually the list included wheat, rye, barley, and corn. The standard of "merchantable" grain probably affected private transactions. Many sellers probably received grain of threshold quality in trade just

because they knew that an outside entity – the Treasury – would accept it from them in tax payments. What the Treasury accepted therefore mattered for private market transactions. This was an important lesson in monetary economics.

In 1635 the tricky ways of getting the charter and moving it to America were exposed back in England. Massachusetts prepared for invasion. In the middle of war preparations, the General Court found the time to exclude English token coins from the legal money supply and replace them with lead bullets. This puzzling first monetary invention of Massachusetts can be explained by recalling that in England the king tried to force this token coin on the population which minted lead coin instead. The 1635 law was probably, at least in part, a symbolic step to signal independence. In a different way from wampum, these metal bullets were also analogous to the metal pieces used as money in the West during the Iron Age. They were easily molded into balls of standardized sizes to fit muskets, and thus their use as coin substitutes is not as strange as it seems.

All this was not enough, because there was little to export to England. The land and climate were unfit for tobacco, while Plymouth had almost depleted the New England beaver population. Both because they came from the middle class and both because they came as families, the Puritans could not put up with a miserable quality of life as in early Virginia. They demanded an enormous variety of manufactured goods. The severe trade imbalance had to be settled with coin, most of which probably came illegally with new immigrants. While most New England towns were ideal for credit just as in Plymouth, Boston was too large. On the other hand, as the region's main port of entry, it received coin from immigrants and travelers, who could not expect to buy there on credit.

Given all these problems, the proud Puritans also had to adopt wampum in 1637. Its recognition in tax payments was important. It was now accepted in trade not only because it could be converted by Natives into other goods, but also because the Treasury had to accept it at whatever value the legislature imposed. The lesson: a subjectively intrinsically useless object, which nobody legally promises to redeem in gold or silver, could circulate if accepted for taxes. This lesson could not be learned in England. Wearing the form of paper money in 1690, this would be a lesson that Massachusetts would teach the rest of the world. Incidentally then, wampum may have been more than a curiosity. It may have made a considerable contribution to monetary history by familiarizing some Englishmen with tax-based representative money.

## **5.2. Virginia**

In this decade there were attempts in Virginia to return to normal. Governor John Harvey fought the monetary reversion to tobacco as part of his general attempt to bring the colony back to English law. New laws expressed payments in English units. In response, the colonists deposed Harvey and sent him back to England.

Tobacco leaves were very inconvenient to use and handle as money. They had a wide spectrum of quality, they were fragile, perishable, and because of their light weight they occupied large volumes in transportation. Alternatives were therefore quickly sought. In 1632 the burgesses petitioned England to send coins debased by 25%. Debased coins were common in Europe as a method to keep precious metal at home. If 20 Virginia shillings would have only as much silver as 15 English shillings, then it would be worthwhile not to send coin to England. Over there it would only buy 15 shillings worth of goods, whereas in Virginia it would buy 20 shillings worth of goods. This naive

reasoning ignored the inevitable rise of Virginia prices to compensate for the lower quantity of silver in Virginia coins.

A year later, the colony tried to imitate the Wisselbank. The Dutch merchants who frequented Virginia perhaps inspired this. All tobacco was to be brought to county storehouses. Officers were to give credit for it in the storehouses' books. All tobacco payments between colonists, of whatever amount, were to be made by transfers in the storehouses' books. A difference from the Wisselbank was that no tobacco was ever to leave the storehouse except on a one-way ticket to Europe. European goods would be bought by planters using the credits they had in the storehouses' books. This bold attempt at banking apparently came to nothing. The records speak of continued use of tobacco as cash paid hand to hand. Hints for the reason of the failure are available from the king's independent suggestion in 1638 to establish a few general storehouses. The burgesses said that it would be too expensive and difficult to get boats for that from each plantation, and the tobacco would be ruined on the way. Perhaps this is why their banking attempt failed.

Also in 1638 the king suggested sending copper token coins of the kind rejected by the English public. The burgesses rejected the offer, arguing that the worthless coins would be rejected by everyone. They asked again for shipments of silver coin from England, arguing that it was necessary in order to facilitate internal trade and specialization in areas other than tobacco. Nothing came of that. England was just fine with colonies specializing in agricultural exports instead of having normal economies with internal trade. The idea of sending coin to a colony seemed utterly perverse. The whole point of colonization was to increase the amount of coin in England. If failing to

dig precious metal or steal it from Natives or Spanish, colonists at least had to produce goods which would be sold by England in Europe for coin (e.g., tobacco), or produce goods which would save England the need to spend coin to buy these goods in other countries (e.g., silk). Longer term thinking – that normal trade in Virginia might encourage ten times more immigrants to settle there and plant tobacco, silk, and other goods – was too much for English policy makers.

That decade also saw the establishment of a nearby Catholic refuge – Maryland. It followed Virginia in using tobacco as money.

## **6. Interregnum, 1640-1660**

### **6.1. Massachusetts**

When Parliament assembled in 1640 immigration stopped and even reversed a bit. This plunged Massachusetts into a deflationary depression. The surplus of agricultural products was sold from then on to Caribbean colonies which specialized in tobacco and sugar. Massachusetts ships took those products to England and bought manufactures there for sale in Massachusetts. Massachusetts became the great intermediary and carrier of north Atlantic trade, controlling the inter-colonial coastal trade, and even delivering fish from Newfoundland to Spain. This increased the number of transient people in Boston, together with their foreign coins and news about monetary developments elsewhere. In 1642 Massachusetts was the first English colony to assign an official value for Spanish and Dutch coins. They were recognized as money at a rate 11% above their silver value.

The colony kept growing even though immigration stopped. The families reproduced at a high rate. Children were virtually guaranteed cheap land further to the

west. Unlike Plymouth, there was plenty of capital to buy land from Natives and to clear it for agriculture. There was no economic reason to limit reproduction. There were no tropical diseases and so mortality was low. The economy grew both because of increasing population and also because of the Puritans' disciplined hard work. The growing economy necessitated a growing amount of money. But for now, nothing more was done.

As in Virginia, the easiest way for the government to make a very large payment was to grant land. Land was granted to high-level officials in lieu of salary. Based on Old World customs, Connecticut granted land to soldiers of the only war of the period. It was the Pequot War of 1637 which was near its territory and involved the quick destruction of the violent Pequot tribe. On most other monetary practices, the small colonies which splintered from Massachusetts (Connecticut, Rhode Island, New Haven, New Hampshire), and older Plymouth, followed Massachusetts.

Events in England again changed everything for the colonists. The abolition of monarchy voided the royal coinage prerogative. Massachusetts established the first mint in English America in 1652. Silver coins were made, debased 22% compared to English coins. Apparently no permission was asked from Cromwell. Perhaps the inspiration was the flourishing of private minting in England. Massachusetts finally had monetary arrangements befitting the sovereign country it almost became. Coinage was joined by laws that prohibited its export and gave it a higher value in tax payments, just in case someone would think of exporting it anyway.

## 6.2. Virginia

Virginia experienced internal strife while England was fighting. There was temporary occupation by Parliamentary forces during the Interregnum. There was also a war with Indians in 1644-46.

A 1643 act ordered that all lawsuits for debts in coin were to be thrown out of Virginia courts. Plaintiffs were free to take their lawsuits elsewhere. It might have seemed as an affront to the king, but the alternative – forcing creditors to accept tobacco in lieu of his coin – might have been seen as even more offensive. Forcing creditors to accept something as money was a sovereign power.

In 1645 Virginia despaired of any help from the losing king. It made Spanish silver coin – the ‘piece of eight’ – worth 6 shillings in payments. Its silver value was 4.5 shillings, so this was the 25% debasement they had asked for. In the same act, a mint of copper token coins was authorized. John Upton, a former servant who became captain and burgess, was appointed mint master. Difficulties in getting the mint started are reported in 1646 and no coins are known to have been produced.

The Assembly declared that carrying tobacco as money between plantations was so inconvenient that it “enforces us to engagements by bills, bonds and other writings” instead. These IOUs sometime were dormant and not redeemed for years – again because of the cost of transporting the tobacco received for them. Such IOUs had great potential to circulate as money, but the Assembly eliminated that golden opportunity by conditioning the IOU assignation to third parties on the original debtor’s prior consent.

One exception to the repeated failures should be noted. In 1645 Virginia pioneered the general rule of setoff in English law. A sued debtor could present a

counter-debt of the creditor in order to cancel out the debts and avoid litigation. However, the stated reason for this rule, adopted almost a century before it was enacted in England, was not to save on the use of currency, but to avoid litigation as part of a general campaign to crack down on lawyers.

In 1660 Maryland tried to mint special coins in England and ship them to the colony, but the attempt was sabotaged by the government in the last days before the Restoration. During those years most of the West Indies left tobacco for sugar, both as their staple product and as their currency.

## **7. Later Stuarts, 1660-1689**

### **7.1. The First Banks**

Banking attempts accelerated with the Restoration. In 1660 a land bank promoter in England got permission from the king to experiment the idea in Barbados. Nothing came of it. In 1662, Governor of Connecticut John Winthrop Jr., who came to London to get a colonial charter, became a member of the new Royal Society of London. Trained in science and law, he presented to the Society a bank plan. All we know is that he said the plan was for a bank *not* based on land. He would not have said so had it been a coin-based bank, because by default “bank” was based on coin. Following Massachusetts, his colony accepted grain for tax payments but it was the first to initiate setoffs between town treasuries and the colonial treasury to save transportation costs. The bank was therefore probably based on clearing of debts and credits, backed by agricultural produce.

In 1669, the colony of Antigua, where the leading colonist was John’s brother Samuel, opened two public tobacco banks. Unlike Virginia’s attempt of making all

payments in the bank's books, Antigua issued paper money for deposited tobacco. The banks were abolished in 1675 after banknotes were fraudulently over-issued.

## **7.2. Massachusetts: The Empire Strikes Back**

Royal commissioners who were sent to America in 1664 reported the Massachusetts minting but nothing was done because the king was too busy at home. In 1671 there was a first attempt by minister John Woodbridge to create a land-based clearinghouse in Boston, based on ideas he learned in London.

After 40 years of peace, a major war engulfed all of New England in 1675-76. King Philip's War with Natives was a battle of life and death for both sides. Before a key battle known as the Great Swamp Fight, the Massachusetts government promised to grant land to its soldiers. Later all the colony's public lands were legally made a collateral for the colony's debts. After a year of brutal fighting the Natives were either subdued or destroyed. Some soldiers later petitioned the government and were granted land in return for their service, but there was no general massive land granting.

Shortly before the war was over, a royal spy from England arrived. He returned to London with a long list of accusations against Massachusetts and started a campaign to revoke the Massachusetts charter. He emphasized the mint's violation of the royal coinage prerogative, interpreting it as counterfeiting (i.e., high treason) because the coins were in English units and were debased. The colony's agents in London had to apologize only for the coinage offense, and the king was angry that minting still continued after that. At the time, Charles was revoking as many charters as he could, and so Massachusetts had no chance. In 1684 the charter was revoked. The mint was shut down at about the same time. An English customs collector was appointed to enforce the

Navigation Acts which prohibited direct colonial trade with foreigners. The important staples had to be shipped to England or other English colonies. This made it much more difficult to obtain Spanish coin. Even laws against piracy were enforced after the peace with the Dutch, further reducing the inflow of Spanish coin.

With both polity, trade, piracy, and coinage regulated to the point of death by England, Massachusetts was nearly saved by *more* English regulation. Due to the renewed domestic persecution of Puritans, some of them immigrated from England to Boston. One of them was John Blackwell, Cromwell's Treasurer-at-War and the master of debenture trading after the Civil Wars (see Section 3). In 1682 he was involved in one of the failed land bank projects in London. In 1684 he took the prospectus to Boston. With abundant land and widespread land ownership, America seemed ideal for land banking. Blackwell joined the elite's rush on the lands won in King Philip's War.

### **7.3. The Dominion of New England**

In May 1686 the new form of government arrived. The dictatorial Dominion of New England was headed first by the local Joseph Dudley. Blackwell made Dudley a co-director of his bank plan and got the plan approved by Dudley's Council. The Council promised to make the notes of this formally private bank acceptable for all debts and even for taxes. While the bank plan was advancing, Sir Edmund Andros came from England as governor to replace Dudley in December 1686. The money situation was so bad at the time that one town paid for taxes its main produce – (empty) buckets. Andros did not help. His main policy was regulation, in fact invalidation, of all land titles. He informed everyone that their titles were defective because the lands reverted to the crown

upon the charter's revocation and Natives were not eligible to sell land. Granting land to his cronies, he provoked legal battles and complaints in London by colonial agents.

The bank plan continued to progress privately and banknotes were already printed. On July 5th, 1688, Andros received a new royal commission that did not rebuke his land policy and even gave him New York and New Jersey. Emboldened by this, a week later he prosecuted notable land owners for supposedly invading the king's land. With land titles practically void, the land bank was aborted four days later.

Blackwell then became Governor of the new colony of Pennsylvania, where the elite approached him about a bank plan. He put them on hold while corresponding with the proprietor William Penn about it. News of the Glorious Revolution put everything on hold. Boston also heard the news, and an April 1689 revolution dismantled the Dominion.

### **7.3. Virginia: Giving up**

Tobacco prices fell throughout the century, which meant that even small payments became bulky. George Washington's grandfather must have needed a big boat to carry the 3600 lb of tobacco he was given in 1682 for the loss of a horse and arms he lent to the colony. That year the colony once again tried to reduce tobacco production in order to raise the price, but then debtors had no tobacco to pay tobacco debts. The government thus created a detailed list of 22 alternatives. For example, a bushel of wheat could discharge a debt of 4 shillings or a debt of 40 pounds of tobacco. This was the climax of a grotesque monetary system.

Why did Virginia fail to develop an advanced money? In the West, agricultural produce had been the dominant form of money only during the Bronze Age and the Middle Ages. Tobacco was so bad that it hampered even the use of alternatives based on

it: carrying it to the proposed county banks or taking it in redemption of an IOU was too costly. In the Old World, difficulties in transporting coin inspired use of state-sponsored paper money. Examples include the great distances within China and 40 lb copper coins in Sweden. Virginia failed to solve a similar problem in a similar way. As in other areas of life, Virginia aimed high and achieved little. It aimed for a bank and a mint just as it initially aimed for a college and a university. As historian Bernard Bailyn argued, there was a leadership problem in that century. The high quality individuals of the nobility and gentry who were inspired by the great romantic colonizing venture at its beginning could not achieve much in the initial chaotic years. They then left the colony in the hands of mediocre surviving planters, who passed it on to young, inexperienced gentry immigrants. The leadership was not able to devise a physical and legal solution to the problem. No great ideas could be expected from the poor, uneducated population. There were no local merchants, financiers, or scientists. Virginia could only try to imitate European institutions and methods, and it mostly failed. The lack of accountability may have been another problem. Virginia was controlled from London by a company and later by a king, with appointed governor and councilors. Complaints of the simple people may not have been heard enough.

Generally speaking, the other non-Puritan colonies aimed lower than Virginia and achieved just as little. For example, a new southern colony was founded during this period. Like the rest of the south, Carolina adopted its staple product as money: Rice.

### **8. Canada's Card Money: 1685 and Beyond**

French Canada came to rely on an annual shipment of standard French coin from France. In 1685 a shipment was late, at a time when a French military reinforcement guarded the

colony from recently agitated Natives. Jacques de Meulles, the law-trained intendant who was in charge of all military and financial affairs, improvised a temporary money from playing cards. He created small, convenient denominations, signed the cards, and forced all sellers to accept them at par with coin. He promised redemption in coin once that would arrive and fulfilled the promise when the coin arrived a few months later.

It was in fact European siege money transplanted in America without modifications. Inadvertently, Canada brought the siege money idea to Massachusetts' attention. By 1691 Massachusetts would know about this money. One possible route of information flow is through French-ruled Acadia [Nova Scotia]. After redeeming the cards, Meulles surveyed Acadia. He stayed there all of the 1685-86 winter with a former governor. The Acadian elite was close to, and dependent upon, Boston merchant John Nelson who served as their main provider and banker. By marriage Nelson was related to the Massachusetts leadership, he had been a diplomat to Quebec, and he was a leader in the 1689 revolution. He may have learned from Acadia about the card money.

There could have been other ways for Massachusetts to learn about the card money. A Huguenot exodus from France and its colonies had just started following the 1685 revocation of the Edict of Nantes that had granted religious freedom. Dozens of Huguenots reached the Dominion and a committee collected contributions for them. Many French fur traders lived in the woods between the French and English colonies. They spent their money in New France but traded with New York and New England. These woods were also the route for occasional deserters from cold, militaristic Canada.

## **9. The Massachusetts Legislator: The Case of Elisha Hutchinson**

Backed only by taxes, fiat money had to be invented in a legislature and not in the marketplace like simpler forms of money. How could the Massachusetts legislators have had the knowledge necessary for the intellectual breakthrough of 1690? I examine the background of Elisha Hutchinson, who would have a prominent role in that invention.

In the late 1630s a religious dispute almost tore Massachusetts apart. Known as the Antinomian Controversy, it ended with the expulsion of proto-Quaker Anne Hutchinson. Her son Edward remained in Boston and in 1641 his first son Elisha was born. Edward was a merchant who invested in land. Elisha entered both lines of business. He helped his father's trading with Rhode Island and the Caribbean islands and would handle bills of exchange all his life. He also became a professional land surveyor. His captain father was the highest ranking fatality of King Philip's War. A year later Elisha's first wife, daughter of a merchant, died, and he married the widow of another merchant. He thus inherited much land all over New England, and led the largest land investment venture. In mayor-less Boston he was regularly elected from 1678 as member of city council, judge of the local court, and inspector of weights and measures in the market. In 1679 he became militia captain. In 1680-83 he was elected to the colony's lower house, serving as substitute speaker and member of key military, land, legal and financial ad-hoc committees. As a leader of those who opposed compromise with England regarding the charter, in 1684-85 he was elected to the upper house. That was also the executive authority (governor's council) and the supreme court.

In the Dominion's appointed government there was no place for him. In 1686 he headed the Huguenot aid committee, settling some of them on his own land. He was a

partner in Blackwell's bank. An early victim of Andros's land policy, he went to England in 1687 to lobby against Andros. Joining the lobbying of Harvard President Increase Mather, he witnessed the lingering damage to the colony's image caused by the Boston mint. He visited the Royal Mint and saw the goldsmiths' notes in their heyday. He was still in London during the 1689 Boston revolution.

Hutchinson came from a dynasty of tragic celebrities. Just like his grandmother Anne, his grandson Thomas – a famed historian and the last civilian governor of colonial Massachusetts – would also be banished by the people of Massachusetts. In spite of such circumstances, and his incredibly diverse activities, no historian ever bothered writing a biography of Elisha Hutchinson. The reason is that his diverse experience in land, trade, politics, legislation, judiciary, and military, was entirely standard for a member of the small Massachusetts elite. These people specialized in neither sources of income nor public activities. This would help inventing a new type of money, as we will see below.

Having learnt about the Canadian card money and Hutchinson, we are now ready to return to the main storyline.

## **10. Making Money, 1689-1692**

After the 1689 revolution the colonists resumed their pre-Dominion government as a caretaker government, without formally resurrecting the charter. The Massachusetts lobbyists asked the new king William III to restore the charter. The revolution in England turned into a war with France, which supported the deposed James II. The war spread at once to America, and put all English colonies on war with Canada.

Massachusetts easily occupied Acadia and in August 1690 sent a 2000-men fleet to Quebec, which had just seen its third generation of card money. In October the costs

were calculated and in November taxes were raised 20 times their normal level as the defeated troops returned. The government failed to obtain a loan, and as tax payments (in grain) were not paid quickly enough, a major crisis developed. The hungry, freezing, smallpox-stricken troops were paid with debentures and were reportedly “mutinous.”

Hutchinson had a major role in all this. Returning from England in late 1689, he joined the council and became a major. He was a member of all the relevant committees: the logistics committees that prepared both expeditions, the committee that calculated the public debt, and the committee that tried to get a loan (this one he headed). He is the only one on record, after interrogating a French prisoner, who said about occupying Quebec: “it might easily be accomplished, and plunder enough taken to defray all the charges.” That year he was also elected tax commissioner of Boston.

In late November, John Nelson happened to appear before the council as attorney of the captured Acadian governor. It would have been timely for him to tell the council about Canadian card money and perhaps he did. On December 10th, the General Court convened for a special session. A draft bearing that date states: “This bill of twenty shillings, due from the Massachusetts Colony to the possessor shall be in value equal to money, and shall be accordingly accepted by the Treasurer, and receivers subordinate to him, in all public payments; and for any stock at any time in the Treasury.” The “stock” was grain, the usual tax receipts. *If* there would be any, it would be used to redeem this bill. Otherwise, the bill could be used to pay taxes. Taxes appeared first, conditional conversion into grain later. And that was all. It was not forced on troops, sellers, or private creditors, and did not credibly promise coin, land, or even grain. Being anonymous, it could be easily transferred from hand to hand. On December 24th, a law

passed. A five-men committee was authorized to issue 7000 pounds in such bills to troops who wished to receive them. This was one sixth of the debt.

Never before has history seen such a weak money. It wasn't even called money but "bills." But there was nothing else that could be done. While begging the king to restore the charter, the colonists could not anger him by violating the coinage prerogative again. They could not issue coin or impose anything on any soldier, seller or private creditor. They could, however, impose the bill on the issuing government itself – in tax payments. Andros's ruling that all land reverted to the king was not yet overruled by the new king. The lobbyists in London were working hard to obtain such a decision, so at that moment it would have been risky to back the colony's paper money with the "king's" land, even if land backing was the hottest financial idea of the time.

This money was created by skilled legislators who understood the constitutional problem with England and the status of land, appreciated the power of taxes in supporting money, believed that tax-paying sellers would accept the bills from troops, believed that troops would accept the bills as pay, and maybe heard about Canada's money. It should come as no surprise that the head of the paper money committee was Elisha Hutchinson – a diplomat, land surveyor, land trader, land banker, legislator, judge, tax commissioner, merchant, market regulator, military officer, and friend of Huguenots. Treasurer John Phillips, who should have led the most important financial operation in the colony's history, was significantly listed second in the committee. Except for the Treasurer, all committee members were Boston merchants.

The paper money fell at first to a large discount. Blackwell, recently returning from Pennsylvania, wrote an open letter to Hutchinson, supporting the money. Increase

Mather's son, the minister Cotton, wrote a similar letter to the Treasurer. Both cited the Canadian money as a positive example, thus hinting that the General Court might have been inspired by Canada. The discount disappeared quickly and the full debt of the expedition was so monetized. The recurring provisions in tax laws about grain and its valuation were gone forever. In late 1691 a new charter was obtained. Once it arrived in 1692, there was no reason to disguise the new money any more as a mere "bill." It was extended to cover private debts and not only taxes, as any proper money does.

### **11. Epilogue: 1692-2012**

The currency we use today is essentially the same as the money created in Massachusetts in 1690-92. Now it is called 'legal tender' for debts and taxes, and it is neither backed by, nor redeemable in, gold or anything else. How did we get from then to now? Massachusetts' monetary revolution, in which money's acceptability became anchored in monetary obligations rather than goods, was kept quiet for political reasons. Massachusetts knew that its brilliant wartime expedient would be useful in peace as well and so it maintained it. Wars and recessions caused the other continental English colonies to adopt this invention. They printed too much money and the result was high inflation. British regulation thus returned as the Currency Acts of 1751 and 1764. This time, regulation did not stimulate more monetary innovation as it had in the seventeenth century because Americans ran out of monetary ideas. Instead, they came up with a political idea – Independence.

The implementation of this idea was critically supported by paper money itself, which died in hyperinflation. Before the United States returned to metal, it set an example to Europe. Russia and France started financing wars with fiat money. In 1797 the British

suspended convertibility. By 1800, the following sovereign nations had used unbacked paper money on a massive scale: The United States, Great Britain, France, Russia, and (early) China. It might not be a coincidence that those willing to take the great risk and opportunity of unbacked paper money would become the permanent members of the United Nations Security Council a century and a half later.

While the Gold Standard dominated the nineteenth century, it became conventional wisdom that in time of serious war, paper money should take over. Nobody ever again debased their gold coins to finance wars. Both sides in the U.S. Civil War printed money, and in 1914 all of Europe left gold. Unbacked paper money then became both the villain and the hero. The hyperinflation in Germany derailed a young democracy and set the world on a course to disaster, but abandoning gold was the way out of the deflationary Great Depression. Paper money lost then its convertibility to gold, and in 1971 the weak quantitative anchor that tied it to gold was gone as well. In the past decade paper money has been once again the villain and the hero. Its excessive quantity is blamed for causing the housing bubble, but the way out of the recession was to produce much more of it, rather than less.

## **12. Conclusions**

Based on the tax law and contract law of an early modern government, fiat money both reflected the growing importance of the state and helped shaping it further. It was born because of the disorder of the hyper-regulating English state of the seventeenth century. England not only provided America with restricting regulations across the board, but its domestic regulation of religion sent to America colonists who faced the toughest money problem but also had the greatest capacity to solve it. The unintended consequence was

the fastest and most consequential monetary evolution in history. The excessive English regulation unleashed the power of unbacked paper money, which was later used against England itself in both the American and French Revolutions. Poetic justice, perhaps.

The sequence of that monetary evolution was random, driven at every point by shocks coming from England, and did not have to be the same as that which characterized the rest of the world. While others have invented paper money before America, it was the American paper money which stuck in the long run and spread to the rest of the world. Just like Leif Erikson was the first European to discover America, but Columbus was more consequential, so it happened that the American invention of paper money was the most consequential. This is mostly attributed to distance from England, the political wisdom of Massachusetts, and a willingness to permanently throw away sacred Old World institutions such as metallic money.

Massachusetts led the way because it excelled in quality and accountability of leadership, merchant population, physical equipment, rebellious attitude towards English regulation, and population growth, while having the worst trade balance and the lowest risk aversion. However, many others inadvertently contributed. The Natives provided wampum, which the Dutch introduced to the English colonies. The Spanish provided the main coin of the era, while the French provided the idea of siege money. Banking ideas were tried or mentioned in Virginia, Barbados, Antigua, Connecticut and Pennsylvania. Seen in this context, Massachusetts was not the only contributor to the first great American invention, but only its leader.

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