

A History of Universal Currencies

In January 1999, members of the European Union introduced a single currency, the Euro. In 2002, the Euro will replace national currencies, and each country's currency will cease to exist. It is our belief that within the next ten years the Euro will merge with the Dollar to create a single currency for the United States, Europe, and eventually for other countries. These articles explore the impact of this transition to a single international currency.

This article provides a brief overview of the history of currencies, beginning with primitive monies and moving up to modern times. The article attempts to show two things. First, whenever feasible, countries and empires have introduced a single monetary standard within their political regions because the benefits of a single currency exceed the costs. Second, historically the existence of currency areas has been based more upon political than economic factors. For these two reasons, a single currency for the United States, Europe and for the rest of the world appears to be the inevitable goal toward which the world is heading.

A History of Single Currencies

A review of monetary history shows that there have been numerous attempts to introduce a single currency. There has been a continuous desire for and attempt to move toward a single currency. Whenever economic and political stability have enabled international trade to expand, attempts have been made to introduce a universal currency that meets the demands of trade.

Because of the political benefits of introducing a universal currency, a single monetary standard has usually followed the expansion of political power. The Roman Empire, the Chinese Empire, and the British Empire all established a single currency standard for the regions over which they ruled. Although there are economic reasons for having a universal currency, history suggests that politics, and not economics, has been the chief determinant of currency areas in the past and today.

In the past, as long as economic and political stability persisted, unified currency areas served the needs of business. Only when economic, or more often political, stability faltered were alternative currencies introduced. This article will look at the historical attempts to provide a single currency in the past, analyzing to what extent the currency area succeeded or failed. This history will help us to judge the viability of a single currency for both the United States and Europe in the next decade.

The Ancient World

In the beginning, there was barter. Barter is an inefficient way of carrying out economic transactions because of the problem of the double coincidence of wants. If two people do not desire what the other has, it is impossible to carry out an economic trade. The reason for the creation of money is to provide a good that everyone is willing to trade for, enabling economic transactions to be carried out.

Almost every society has found a universal common currency. In the past, it was usually a commodity that was transportable, divisible, had a high intrinsic value, was desirable by consumers, was difficult to counterfeit, could maintain its value over time, and act as a store of value. Primitive monies included cowrie shells, animals, metal ingots, giant stones, beads, feathers, salt and similar items. These primitive monies were eventually replaced by metal coins, then by paper currency and today by electronic blips.

A single currency usually requires a common social, political or economic culture, a single government, and a wide trading area that can benefit from the use of the common currency. Historically, universal currencies had to await the creation of political empires in Europe, the Middle East and Asia before they could be introduced.

According to *Money: A History* by Jonathan Williams, in ancient Egypt and Mesopotamia, any gold or silver object could be used for transactions, including common jewelry. Using everyday items for money made it necessary to check them for weight and quality, making transactions difficult to carry out. Having the government cast standardized metal ingots of a

uniform weight and quality solved this problem. The ingots took the form of bronze dolphins cast on the Black Sea, or of bronze spade money and bronze knife money in ancient China. In ancient times, government-produced currencies and private forms of money coexisted.

When large transactions are made, however, using a large number of bronze ingots makes carrying out large transactions difficult. One solution to this problem was the introduction of coins made of electrum (a combination of gold and silver) in ancient Lydia (today part of Turkey) around 600 BC. Because of the difficulty of standardizing coins made of two metals, electrum coins were soon replaced by coins of pure gold, or more often, pure silver. Cities, which were lucky enough to have silver mines within their territory could mine the silver, turn them into coins and export them for goods which would generate seignorage for the exporting city-state. By producing a standard coin of good quality, cities could produce coins that would be accepted throughout the ancient world, such as the Athenian owl tetradrachm.

The true advent of a universal currency had to wait the establishment of the Roman Empire around the Mediterranean region, and of the Qin and Han dynasties in China. Prior to the Roman empire and Qin dynasty, each geographical power issued its own currency which was accepted within its economic realm, but which acted as bullion beyond its own borders. Athenian tetradrachms could be used in Bactria, but no one could be forced to use them as legal tender there. Rome was able to introduce a single coinage system for the entire Mediterranean region using the gold aureus, silver denarius and bronze as. The bronze wuzhu, introduced in 118 BC. in China, continued in basically the same form for the next 700 years.

In the early years of the Roman Empire, the riches Rome took from newly occupied regions paid for its needs. The purpose of conquest was to subsidize Rome, not its newly conquered territories. The benefits of introducing a single currency were well understood by traders in the ancient world. The plethora of local currencies was replaced by Roman coins wherever the Roman Empire ruled. However, the costs of having a single currency were soon to become evident. Once the Romans were no longer able to rely upon the riches of the lands they had conquered to support their empire, they began debasing the currency in order to raise revenue.

Many pre-Roman coins have a chisel cut in them, showing that the purity of the coin's silver content had been tested, but Roman standardization made this unnecessary because Rome turned its coins into fiat money, whose value was based upon government decrees and not upon bullion content. Fiat money allowed Rome to gradually reduce their coins' silver content without reducing the value of the coins they were minting. The result was an incredible increase in the number of coins that were minted. Modern scholars estimate that hundreds of millions of Roman coins were minted.

By the third century, Roman coins were dipped in silver rather than made of silver, and the inevitable inflation resulted. Diocletian's introduction of price controls in 301 AD failed, as have all attempts to control prices whenever the government is debasing the currency. It is no coincidence that the economic, political and military instability of the later Roman Empire was reflected in its coinage. Reforms of the coinage would last for a few years before debasement inevitably returned, and became worse than before the reform was introduced. Similar problems occurred in China when its empires began to falter.

A single currency area persisted in Rome and in China as long as political and economic stability continued, but when the economy became less stable, the financial system also suffered. In these two cases, economic and political instability contributed to the failure of the single currency in ancient Rome and in China.

The reason for this is simple. Debasement of the currency is a form of taxation. Not only does debasement make individuals poorer, but it creates uncertainty which can inhibit trade. When governments debase the currency, it only acts as a temporary solution to the financial government's problems before the debasement itself becomes the government's primary problem. Without the introduction of a universal currency and government control over the currency, universal debasement and inflation would have been impossible in both of these cases.

The Middle East, Ancient Rome and China provide patterns that have been repeated for the past two millennia. Whenever economic and political stability have increased, and especially when some form of political hegemony existed, standardization of money inevitably followed because of the economic and political benefits which a universal currency provided. The

introduction of a single currency enabled trade to expand, but it also enabled the government to debase the currency to its benefit when political or economic stability increased.

The Medieval World

Since the fall of the Roman Empire, no single political entity has succeeded in taking control over all of Europe, or over the Mediterranean basin, despite many attempts to do so. Whether it was the Holy Roman Empire, Napoleon or Hitler, every attempt at uniting Europe by force has failed. The lack of political unity has been mirrored by the lack of monetary unity, though periods of economic stability have pushed Europe toward this goal.

After the Roman Empire divided into the multiparous western half and the stable Byzantine empire in the East, western Europe went without a common currency of any kind for centuries. This was not the case in the Byzantine Empire where the gold tremessis (also known as the nomisma or solidus) maintained its value for one thousand years until the fall of Byzantium in the fifteenth century. The Byzantine solidus acted as the primary currency for international trade for almost a thousand years.

Western Europe lacked the resources to issue gold coins until the issuance of the Florentine Florin and the Genoese Genovino in 1252 and the Venetian Ducat in 1284. Until then, Europe relied on silver pennies for transactions, but because the value of the individual pennies was so low, this hampered large international transactions until the introduction of gold coins in the thirteenth century. By coincidence, the introduction of the single currency in Europe in 2002 will occur on the 750th anniversary of the reintroduction of gold coins in Europe.

China took a different route from medieval Europe because the Han and Tang dynasties provided the political stability that Europe lacked. The Tang dynasty introduced a golden age in China in the seventh century at the same time that Europe was reaching its nadir. The Tang dynasty introduced a new coinage system that was used throughout the Chinese Empire. Moreover, the Kao-tsung dynasty (650-683) introduced the first paper money, almost a thousand years before paper money was introduced in Europe.

There is still debate as to whether or not the Chinese issues were paper money in the modern sense, i.e. officially issued, legal tender exchange notes without a date limitation. The earliest notes were certainly not legal tender in the modern sense, since acceptance was voluntary. The Chinese paper currency were non-interest bearing notes which could substitute for coins, rather than legal tender. However, paper currency allowed the Chinese emperors to expand the money supply, hoard bullion and supplement their tax resources.

The introduction of paper money created a Chinese version of Gresham's Law (bad money drives out good) as paper money became used more widely. In 1074, China lifted the ban on the export of coins (formerly punishable by death) and paper money replaced coins, which were then exported to Korea, Japan and other countries where paper money was not in use and coins had greater purchasing power. In China, prices began to be quoted in terms of paper currency, and not coin.

During the Yuan dynasty (1206-1367), coinage was banned and was replaced by the printed State Treasury Notes of the Mongol emperors. It may not come as any surprise that the result was inflation during which people lost faith in the paper currency.

Paper money produced greater problems of counterfeiting by individuals and inflationary overissue by governments than did the fiat money of ancient Rome. The Chinese government minimized the first of these problems by punishing counterfeiters with beheading and by rewarding informants. Counterfeiting, however, has always been a lesser problem than the overissue of currency which has been seen as a government privilege rather than as a crime. It has always been governments, and not individuals, who eventually ruined the currency.

Modern Times

Because of the lack of political unity, gold and silver bullion, rather than paper currency became the standard currency of Europe. Because of the difficulty of transporting large amounts of bullion over long distances, the bill of exchange was introduced in fourteenth-century Italy to

transfer money between cities, but these notes could only be used by the bearers of the bills, and were not legal tender.

Until the nineteenth century, paper currency was only issued in Europe during political or economic emergencies. The first European money was issued in Leyden in the Netherlands during the 1574 Spanish siege of the town. The issuance of John Law's notes in 1720, Assignats in revolutionary France and continental dollars during the revolutionary war in the United States all ended in inflations which inhibited the introduction of paper currency for decades in France and in the United States.

However, not every introduction of paper currency ended in an inflationary overissuance of currency. When paper currency was issued because bullion was in short supply, as in Sweden during the 1600s or in colonial America in the 1700s, paper could successfully supplant metal coins without inflation becoming inevitable. Unfortunately, the failures of paper currency stayed in the collective memory longer than the successes.

Though Europe has never had anything approaching the single currency that China enjoyed in medieval times, this did not prevent Europeans from speculating on the introduction of a universal currency for all of Europe. The first to raise this issue was Bernardo Davanzati who published *A Discourse Upon Coins* after delivering his ideas to the Florence Academy in 1588. According to Pierre Vilar, Davanzati tried to reconcile the "money created by the State and money whose value varied in the course of market transactions." State money had its value by government fiat whereas bullion had its value by supply and demand. State money was only accepted within national boundaries, while bullion was accepted everywhere. The problem was to introduce a state money acceptable outside of the realm. Even today, a solution to Davanzati's problem has not been found.

The First Modern Currency Union

The first attempts to create an international currency for Europe occurred in France in the 1800s. The French Revolution, which introduced the metric system, tried to do the same for

currency when Napoleon's finance minister, Francois Nicholas Mollien, wanted to supplement the uniform system of measures with a uniform currency. Increased travel and trade during the 1800s made a common currency desirable since it would make coins within countries interchangeable and would make the calculation of exchange rates simpler.

The vice president of the Conseil d'Etat, de Parieu, was instrumental in promoting the Latin Union in continental Europe, and in so doing created the first modern international currency. The Latin Monetary Union was established in 1865 with France, Belgium, Switzerland and Italy as members (Greece and Romania joined in 1866). Member countries agreed to mint coins to a single standard and to limit the minting of their coins. Coins that conformed to this standard would be accepted as legal tender by government offices in any of the member countries. The Latin Monetary Union continued until World War I broke out in 1914.

The relative success of the Latin Monetary Union led to a push for a single currency beyond the six member countries. The International Monetary Conference of 1867 tried to create a single monetary standard for all of Europe. One idea introduced at the conference was to mint a coin equal to 25 French Francs, 5 U.S. dollars or 1 British pound which would have the same gold content and could be used throughout Europe and the United States. But the idea fell through, and no monetary changes followed the conference. In 1878, the United States called an International Monetary Conference in the hopes of establishing a bimetallic gold/silver standard, but this conference also failed.

While no international conference could establish a single currency, business found a way of creating common currencies for their own use. In the Far East, the Mexican silver dollar became the common standard for trade and paper currencies in China, Singapore and other Asian countries. United States Trade Dollars were produced for use in Asia, and European mints produced Maria Theresa Thalers for export to Africa where they were used throughout the continent for over a century.

Although no international currency was established in Europe, within countries, monetary diversity eventually turned into monetary unity. The United States introduced a national currency during the Civil War, replacing the plethora of local bank notes that had been issued in the United

States until then. During this same time, both Germany and Italy were unified into single political entities requiring a single monetary standard. Prussia promoted the unification of German monies and introduced the Reichsbank to maintain a single German currency. The same result occurred in Italy under Cavour when it was united. (Kindleberger, p. 463)

The Gold Standard

The ultimate result of these economic changes was the gold standard, under which each country's currency could be exchanged for gold on demand. The gold standard had been introduced in England as early as 1717, but it did not become universal throughout Europe until the 1870s. In the United States, Alexander Hamilton established the US currency in 1792, and the first gold coins were issued in 1795.

Without a single European government or international currency agreement, the gold standard was the closest the world could get to a universal currency. Currencies were fixed to gold, and gold fixed currencies to each other. The result was almost a complete elimination of currency fluctuations among the world's major currencies.

Countries could issue paper currency, but only if it were backed by sufficient gold reserves. As evidence of the stability produced by the gold standard, consider the US Dollar and the British Pound. With the exception of the civil war, when the United States went off the gold standard, there was no more than a 1% fluctuation in the relative value of the U.S. dollar to the British pound from 1839 to 1914. For 75 years, exchange rates had a degree of stability that often only lasts a few weeks today.

The establishment of the gold standard made it easier for countries to reintroduce paper currency. Whereas the continental currency of the United States or the Assignats of Revolutionary France had had no bullion backing, countries began issuing notes which were fully redeemable in gold.

It should be remembered that the gold standard was not universal before World War I. Many countries, such as those in Latin America or the Far East, adhered to a more inflationary

silver standard rather than the gold standard. Ideally, a fixed gold/silver ratio could have fixed gold and silver currencies to each other to maintain stability between gold and silver currencies, but new discoveries of silver made this impossible. Rather than having a single bimetallic standard for the world as the U.S. wanted, the result was a double standard of gold for Europe, its colonies and North America, and a silver standard for the rest of the world.

The pound sterling was the primary international currency until 1914. The Bank of England, in effect, became the central bank for the world and managed the international gold standard through interest rates, and it acted as a forerunner of the European Central Bank. The specie-flow mechanism maintained the system of exchange rates. If a currency became overvalued, gold would flow out of that country and into other countries, restoring the exchange rate to its normal level.

The gold standard worked smoothly until August 1914 when World War I forced countries to suspend their currency conversion. Countries were then free to print money they could not raise through taxes in order to fight World War I, but high and varying rates of inflation resulted. Despite various attempts to return to the gold standard in the 1920s and the 1930s, any success proved temporary at best.

Bretton Woods

Despite numerous attempts to stabilize the international financial system after World War I, any success was only temporary. Without political and economic stability, any attempt at introducing a single currency was doomed to failure. When the Bretton Woods Conference began in 1944, many participants felt that the international financial instability of the interwar period (in the form of competitive devaluations and hot money flows) had contributed to the political instability which and the length of the Great Depression. During the inter-war period, the British were too economically weak to run the international financial system in the way they had prior to World War I, and isolationist pressures meant that the United States was unwilling to take Britain's place.

The period after World War I had seen horrible inflations in Germany, Czechoslovakia, Hungary, Austria and other countries. Many economists felt that the problems created by the German hyperinflation contributed to the rise of the Nazis. The Bretton Woods conference was designed to insure that the economic problems that followed World War I did not occur after World War II.

Bretton Woods established a dollar standard to replace the gold standard. The value of the dollar was fixed to gold at \$35 to the ounce, and the world's currencies were fixed to the dollar. Exchange rates were fixed in the short run, but flexible in the long run. In the 1950s, most currencies were not freely convertible, and the low level of international capital flows and international trade made it relatively easy to manage the Bretton Woods system.

As it became easier to send money between countries, trade increased, and countries began pursuing different monetary policies, the Bretton Woods system began to break under the pressure. The Bretton Woods system was fundamentally different from the gold standard.

The gold standard worked, in part, because every country agreed to have the same commodity as the basis for their currency. Although the price of gold might change relative to other goods, it would have the same value everywhere in the world. During the inter-war period, countries went off the gold standard and fiat money replaced gold and silver forever.

After World War II, every country now had its own currency whose value was determined by international supply and demand. The combination of the specie flow mechanism and the Bank of England's control over interest rates had helped to stabilize the gold standard. With no similar mechanism in place during the Bretton Woods period, once countries began pursuing different economic policies, the system of fixed exchange rates could not survive.

By the early 1970s, the world had changed dramatically from 1944. The demands for increased government spending, combined with the desire of governments to minimize economic downturns through Keynesian fiscal policy, and through the subordination of monetary to fiscal policy, produced inflationary pressures throughout the world.

There have been worldwide inflations in the past, but the inflation that followed World War II was gradual and persistent, taking place in every country in the world. In 1973, Bretton Woods collapsed, and flexible exchange rates replaced system of the fixed exchange rates.

European Monetary Union

The devastation of World War II created the desire for greater economic and political union in Europe, in order that World War III would never be fought. The Treaty of Rome was signed in 1957, taking the first step toward economic and political union. Coincidentally, it was in 1957 that the first Eurodollars (dollar denominated deposits and loans made outside of the United States) were introduced, but it wasn't until 1962 that the European Commission proposed a single currency for Europe.

The Werner Report, which was approved in 1971, proposed a single currency by 1980 in its Report to the Council and the Commission on the Realization by Stages of Economic and Monetary Union in the Community. The first step in this plan was to tie Europe's currencies to each other through the "snake" which ended up becoming more of a Deutsche Mark currency bloc than a single currency.

Membership in the currency union was fluid. France left in 1974, rejoined in 1975 and pulled out again in 1976. Sweden left in August 1977, and Norway left in September 1978. Greece joined its successor, the European Monetary System, in 1984, Portugal and Spain joined in 1986, and the United Kingdom left in 1992.

The next major step for the European Currency Unit was the establishment of the European Monetary System in 1978, which limited exchange rate fluctuations between member countries. This succeeded where the snake had failed because it "introduced the European Currency Unit as a parallel currency, provided two measures to aid in narrowing fluctuations of national exchange rates, constituted a European Monetary Fund, and provided a system of credit facilities for mutual payments support." (Kindleberger, p. 459)

Parity rates between the currencies were periodically readjusted, and membership remained voluntary. Britain joined the monetary union, then left in 1992. France stayed in, but had considered leaving in 1982 when Francois Mitterand was elected. The result was a core of currencies that were strongly tied to the Deutsche Mark, such as the Belgian Franc, Dutch Guilder, and several peripheral currencies, such as the Italian Lira, which had problems maintaining their currency's peg to the Deutsche Mark.

The current push for monetary union began with the Delors report of 1988, which advocated a gradual move toward a single currency. This was the basis for the Maastricht Treaty, signed in 1992, which set the timetable for the move to a single currency by January 1, 1999. Any move to a single currency requires strong political leadership, and the joint leadership of Helmut Kohl in Germany and Francois Mitterand and Jacques Chirac in France has been instrumental in making the Euro a reality rather than an idea.

The rejection of the Maastricht treaty by a Danish referendum in 1992 led to a speculative attack on the European Rate Mechanism in September 1992 which led to devaluations by Britain and Italy, and caused Britain to withdraw from the system. While this instability fed British fears of being part of a single currency, the speculative attack reinforced the desire of Italy and other countries to join the stability of the Euro rather than be left to the uncertainties of a floating currency. Only Britain, Denmark (though they will fix their currency to the Euro) and Sweden have opted out of the single currency, though they retain the right to join at a later date. Greece failed to qualify for membership in the Euro.

On January 1, 1999, the European Monetary Union begins, and all eleven members' currencies will be fixed to the Euro. If all goes well, on January 1, 2002 Euro notes and coins will be introduced, and on July 1, 2002, national currencies will cease to be legal tender. The European Central Bank will run the monetary union, and agreements reached under the Maastricht treaty will restrict fiscal policy to help the Euro succeed.

Other Currency Unions Since World War II

There have been numerous attempts to form currency unions since World War II, though politics has often played a more important role in their formation than economics.

Currency unions have succeeded in two cases, first when a small country tied its currency to a larger country's currency, and second when several countries gave up control over their monetary policy to a supranational central bank. Belgium and Luxembourg have been in a currency union since World War II. Similarly, Swaziland, Lesotho and Namibia have all tied their currencies to the South African Rand.

Britain's former colonies were part of the Sterling Area. They tied their currencies to the Pound Sterling, and maintained their link by keeping 90% of their reserves in Pounds Sterling. After the pound devalued in 1967, many of these countries broke their link with the Pound Sterling. Ireland broke its link in March 1979.

Arab countries made several attempts to share a common currency. Bahrain, Kuwait, Qatar and the United Arab Emirates tried to establish a common currency in 1975, and in April 1977, the Arab Monetary Fund tried to establish an Arab Dinar tied to the SDR. Neither of these unions was successful.

Only two multinational currency unions have worked since World War II. The smaller success story has occurred among the islands of the East Caribbean. The British Caribbean Currency Board was established in 1950 and included the British West Indies, Trinidad and Tobago, Barbados, The Leeward Islands (Anguilla, Saba, St. Christopher, Nevis and Antigua), the Windward Islands (St. Lucia, Dominica, St. Vincent, Grenada), British Guiana, and the British Virgin Islands.

The currency union continues among the smaller islands, though Guyana, Barbados, and Trinidad and Tobago have left the union. A similar currency union (the East Africa Currency Board) occurred among the British colonies of Kenya, Tanganyika, the Sultanate of Zanzibar and Pemba, Uganda, and British Somaliland before they gained their independence from Britain.

By far, the most successful currency union has been the *Communaute Financiere Africaine* (CFA) which has continued a successful currency union among its members since the former French colonies gained their independence in the early 1960s. The CFA Franc is shared

by Benin, Mali, Senegal, Burkino Faso, Cote d'Ivoire, Togo, Niger and Guinea-Bissau in western Africa and by Cameroun, the Central African Republic, Chad, the Congo, Equatorial Guinea and Gabon in central Africa.

The CFA is currently run by two central banks, the Banque des Etats de l'Afrique Centrale (BEAC) and the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO). The majority of their reserves are held in French Francs, though the BEAC can maintain 20% of reserves in non-Franc currencies, and the BCEAO 35%. Most states have some types of foreign exchange controls, and membership is fluid. Since 1960, Mauritania and the Malagasy Republic have left the currency Union, while Mali and Equatorial Guinea have joined it. A common currency is issued for all member countries, though a letter on the currency can identify which country the note was issued in. A 1000 Franc note issued in Senegal is legal tender in Togo.

The key to success in the Eastern Caribbean and French Africa has probably been the establishment of a common central bank for all member countries. Neither the fact that member countries have colonial links with one another, or even the knowledge that each country is better off being part of a larger currency union, rather than on their own, has determined the currency union's success. If this were true, the currency unions among Arab countries, which did not share a central bank, would have succeeded.

There is little doubt that the currency unions in the East Caribbean and French Africa have provided these countries with a degree of economic stability which would have been impossible to achieve without membership in the currency union. The economies of French Africa are as diverse, if not more diverse, than the economies of Europe, and their own success bodes well for the future of the Euro.

Financial Integration Outside of Currency Unions

In countries that do not share a single currency, economic necessity and technological change have pushed the world toward a single monetary standard. Though Maria Theresa Thalers and Mexican silver dollars are no longer international currencies, US dollars are accepted

almost everywhere. It has been estimated that about half the United States' outstanding currency, and the majority of its \$100 bills, are held outside of the United States.

Today technological progress has placed paper currency in the same position that copper and silver coins held under the gold standard. Although currency plays an important role in the monetary system, it exists mainly to smooth out economic transactions. Currency has little effect on the overall stability of the financial system.

Electronic money has replaced paper currency and bullion as the foundation of the monetary system. The central bank influences the money supply through the discount rate, open market operations, and repurchase agreements rather than printing currency. Excessive use of expansionary open market operations, rather than excessive use of the printing mills, creates inflation today.

Technology has unified the world's currencies in a way which is fundamentally different from either the era of the gold standard or from Bretton Woods. Gold and paper currency have become secondary in the financial system. Over one trillion dollars in currency is traded every day, and currency crises can lead to, and can produce, recessions and political change. Given this, it is not difficult to imagine the massive savings that could occur by the introduction of a universal currency.

At the same time that the financial world has become more integrated, corporations and products have been internationalized to a degree that would have been unthinkable a generation ago. The reduction in world trade barriers and tariffs through GATT and the World Trade Organization has allowed companies to transcend national barriers. Automobiles include parts from over 20 countries, and Coca Cola can be purchased in almost every country in the world. Similarly, the Internet has tied every country to each other providing a single source of information to everyone in the world.

These trends will continue and accelerate in the future. The fall of the Soviet Union and Eastern Europe, along with the introduction of the market in China, has returned the world to an environment in which market transactions, rather than ideological differences, are the focus of the international economy. A country such as Taiwan may be ostracized politically, but this keeps few

countries, including China, from trading with it. With these trends growing stronger by the day, the move toward a new universal currency seems inevitable.

Conclusion

Even though more currencies and countries exist today than have ever existed in history, the international economy has become more integrated than ever. Outside of Europe, governments have pushed toward more currencies rather than fewer currencies. As soon as each country of the Commonwealth of Independent States broke away from the Soviet Union, they quickly set up their own currency as a symbol of their national sovereignty.

Though political trends have been moved toward greater plurality, finance, technology and economics have moved toward greater integration. Greater economic integration inevitably leads to demands for greater financial integration to reduce the transaction costs of economic activities. Though the world's economies can become more economically integrated without requiring more political integration, forming a currency union entails a reduction in national control over monetary policy.

In the past, because of the difficulties of getting national governments to give up financial sovereignty, universal currencies have resulted from political integration, not from international agreements. Whether it was the Roman Empire in the Ancient World, the Han Dynasty in China, or German Monetary Union in the 1800s, all these currency unions resulted from the existence of or desire for political unification. Modern China had a multitude of currencies until the People's Republic did away with all competing currencies in 1949.

The political integration that was required for financial integration in the past is no longer necessary today. The fact that a universal currency could be introduced without imposition by a single government shows how much the modern world differs from the past. Since World War II, economic and financial integration of the world's economies has continued apace without any political integration being required. Because of this, there is no reason to believe that monetary integration in the form of a single currency could not occur in the near future.

As detailed elsewhere, the theory of optimum currency areas reveals the economic benefits of a single currency. A universal currency is a public good that makes the prices of goods more transparent, it lowers transaction costs, it increases competition, it increases economic stability, and as a result, encourages economic trade and growth. As this survey has shown, from the ancient world to the modern, whenever it has been possible in the past, people have moved toward the establishment of a single currency. The reason for this is simple, the benefits of having a single currency exceed the costs.

The problem is how to make the transition from many national currencies to a single currency. Within a single national boundary, introducing a single currency has not been a problem because governments can make choices for all citizens within their political domain. As the experience of the International Monetary Conference of 1878 or the inter-war conferences of the 1920s and 1930s showed, getting sovereign governments to make this change is very difficult. But it is not impossible. The introduction of Bretton Woods in 1944 and the Euro in 1999 proves this.

What this change requires is strong leadership and a determination to achieve this result. No international financial standard existed between World War I and World War II because there was no leadership by the United States or Great Britain to provide a stable, international currency. Bretton Woods succeeded because of the dedication of the United States and other allied countries in establishing a stable economic system after World War II. The Euro could not have come into existence without the leadership of Germany and France.

If a single currency for Europe and the United States (and ultimately for the rest of the world) is to be introduced, it can only result from strong leadership. Which leaders will push for the universal currency remains to be seen, but history seems to show that the move toward a single currency is only a matter of time.

In a world which has become as economically integrated as ours is today, having almost 200 currencies requiring over \$1 trillion to be traded on a daily basis seems to be an inefficient anachronism whose time has passed. The problem, of course, is how to get from a world of 200 currencies to a world in which most economic transactions are carried out in a single currency.

The other papers in this series will explain why, for the first time in history, the world is in a position to create a universal currency union.