

International Economics:

How did a nice country like Iceland go bust?

In 1992, George Soros made nearly \$1 billion in a single day for the investment funds he managed. Most people need several weeks to make a billion dollars, or even a month. Soros made his billion on a single day in October by making a huge bet on the future value of the British pound relative to other currencies. He was right, making him arguably the most famous “currency speculator” ever.

How did he do it? In 1992, Britain was part of the European Exchange Rate Mechanism, or ERM. This agreement was designed to manage large fluctuations in the exchange rates between European nations. Firms found it more difficult to do business across the continent when they could not predict what the future exchange rates would likely be among Europe’s multiple currencies. (A single currency, the euro, would come roughly a decade later.) The ERM created targets for the exchange rates among the participating countries. Each government was obligated to pursue policies that kept its currency trading on international currency markets within a narrow band around this target. For example, the British pound was pegged to 2.95 German marks and could not fall below a floor of 2.778 marks.

Britain was in the midst of a recession, and its currency was falling in value as international investors sold the pound and looked for more profitable opportunities elsewhere in the world. Currencies are no different than any other good; the exchange rate, or the “price” of one currency relative to another, is determined by supply relative to demand. As the demand for pounds fell, so did the value of the pound on currency markets. The British government vowed that it would “defend the pound” to keep it from falling below its designated value in the ERM. Soros didn’t believe it—and that was what motivated his big bet.

The British government had two tools for propping up the value of the pound in the face of market pressure pushing it down: (1) The government could use its reserves of other foreign currencies to buy pounds—directly boosting demand for the currency; or (2) the government could use monetary policy to raise real interest rates, which, all else equal, makes British bonds (and the pounds necessary to buy them) more lucrative to global investors and attracts capital (or keeps it from leaving).

But the Brits had problems. The government had already spent huge sums of money buying pounds; the Bank of England (the British central bank) risked squandering additional foreign currency reserves to no better effect. Raising interest rates was not an attractive option for the government either. The British economy was in bad shape; raising interest rates during a recession slows the economy even further, which makes for bad economics and even worse politics. *Forbes* explained in a postmortem of the Soros strategy, “As Britain and Italy [with similar problems] struggled to make their currencies attractive, they were forced to maintain high interest rates to attract foreign investment dollars. But this crimped their ability to stimulate their sagging economies.”¹

Nonetheless, Prime Minister John Major declared emphatically that his “over-riding objective” was to defend the pound’s targeted

value in the ERM, even as that task seemed ever more difficult. Soros called the government’s bluff. He bet that the Brits would eventually give up trying to defend the pound, at which point its value would fall sharply. The mechanics of his billion-dollar day are complex,* but the essence is straightforward: Soros bet heavily that the value of the pound would fall, and he was right? On September 16, 1992—“Black Wednesday”—Britain withdrew from the ERM and the pound immediately lost more than 10 percent of its value. The pound’s loss was Soros’s gain—big time.

International economics shouldn’t be any different than economics within countries. National borders are political demarcations, not economic ones. Transactions across national borders must still make all parties better off, or else we wouldn’t do them. You buy a Toyota because you think it is a good car at a good price; Toyota sells it to you because they can make a profit. Capital flows across international borders for the same reason it flows anywhere else: Investors are seeking the highest possible return (for any given level of risk). Individuals, firms, and governments borrow funds from abroad because it is the

* Soros borrowed a huge sum in British pounds and immediately traded them for stronger currencies, such as the German deutsche mark. When the Brits eventually dropped out of the ERM and devalued the pound, he swapped his currency holdings back for more pounds than he had originally borrowed. He paid back his loans and kept the difference. Numbers make this all more intuitive: Suppose Soros borrowed 10 billion pounds and swapped them immediately for 10 billion deutsche marks. (The exchange rates and amounts are contrived to make the numbers easier.) When the pound was devalued, its value fell by more than 10 percent, so that 10 billion deutsche marks subsequently bought 11 billion pounds. Soros swapped his 10 billion deutsche marks for 11 billion pounds. He paid back his 10-billion-pound loan and kept the tidy balance for himself (or, more accurately, for his investment funds). Soros supplemented his currency gains with ancillary bets related to how the devaluation would affect European stocks and bonds.

cheapest way to “rent” capital that is necessary to make important investments or to pay the bills.

Everything I’ve just described could be Illinois and Indiana, rather than China and the United States. However, international transactions have an added layer of complexity. Different countries have different currencies; they also have different institutions for creating and managing those currencies. The Fed can create American dollars; it can’t do much with Mexican pesos. You buy your Toyota in dollars. Toyota must pay its Japanese workers and executives in yen. And that is where things begin to get interesting.

The American dollar is just a piece of paper. It is not backed by gold, or rice, or tennis balls, or anything else with intrinsic value. The Japanese yen is exactly the same. So are the euro, the peso, the rupee, and every other modern currency. When individuals and firms begin trading across national borders, currencies must be exchanged at some rate. If the American dollar is just a piece of paper, and the Japanese yen is just a piece of paper, then how much American paper should we swap for Japanese paper?

The rate at which one currency can be exchanged for another is the exchange rate. We have a logical starting point for evaluating the relative value of different currencies. A Japanese yen has value because it can be used to purchase things; a dollar has value for the same reason. So, in theory, we ought to be willing to exchange \$1 for however many yen or pesos or rubles would purchase roughly the same amount of stuff in the relevant country. If a bundle of everyday goods costs \$25 in the United States, and a comparable bundle of goods costs 750 rubles in Russia, then we would expect \$25 to be worth roughly 750 rubles (and \$1 should be worth roughly 30 rubles). This is the theory of purchasing power parity, or PPP.

By the same logic, if the value of the ruble is losing 10 percent of its purchasing power within Russia every year while the U.S. dollar is holding its value, we would expect the ruble to lose value relative to the U.S. dollar (or depreciate) at the same rate. This isn’t advanced

math; if one currency buys less stuff than it used to, then anyone trading for that currency is going to demand more of it to compensate for the diminished purchasing power.*

I learned this lesson once—the hard way. I arrived in Guangzhou, China, in the spring of 1989 by train from Hong Kong. At the time, the Chinese government demanded that tourists exchange dollars for renminbi at ridiculous “official” rates that had no connection to the relative purchasing powers of the two currencies. For a better deal, backpackers typically exchanged money on the black market. I had studied my guide book, so when I arrived at the station in Guangzhou I knew roughly what the black market rate for dollars ought to be, subject to the usual bargaining. I found a currency trader right away and made an opening hardball offer—which the trader accepted immediately. He didn’t even quibble, let alone bargain.

It turned out that my guide book was old; the Chinese currency had been steadily losing value ever since publication. I had swapped my \$100 for the Chinese equivalent of about \$13.50.

Purchasing power parity is a helpful concept. It is the tool used

* Economists make a distinction between the nominal exchange rate, which is the official rate at which one currency can be exchanged for another (the numbers posted on the board at the currency exchange), and the real exchange rate, which takes inflation into account in both countries and is therefore a better indicator of changes in purchasing power of one currency relative to another. For example, assume that the U.S. dollar can be exchanged at your local bank for 10 pesos. Further assume that (1) inflation is zero in the United States and 10 percent annually in Mexico; and (2) a year later your local bank will exchange \$1 for 11 pesos. In nominal terms, the U.S. dollar has appreciated 10 percent relative to the peso (each dollar buys 10 percent more pesos). But the real exchange rate hasn’t changed at all. You will get 10 percent more pesos at the currency exchange window than you did last year, but because of inflation over the course of the year, each peso now buys 10 percent less than it used to. As a result, the total purchasing power of the pesos that you get from the bank teller this year for your \$100 is exactly the same as the purchasing power of the (fewer) pesos you got for your \$100 last year. Any reference to exchange rates in the balance of this chapter refers to real exchange rates.

by official agencies to make comparisons across countries. For example, when the CIA or the United Nations gathers data on per capita income in other countries and converts that figure into dollars, they often use PPP, as it presents the most accurate snapshot of a nation's standard of living. If someone earns 10,000 Jordanian dinars a year, how many dollars would a person need in the United States to achieve a comparable standard of living?

In the long run, basic economic logic suggests that exchange rates should roughly align with purchasing power parity. If \$100 can be exchanged for enough pesos to buy significantly more stuff in Mexico, who would want the \$100? Many of us would trade our dollars for pesos so that we could buy extra goods and services in Mexico and live better. (Or, more likely, clever entrepreneurs would take advantage of the exchange rate to buy cheap goods in Mexico and import them to the United States at a profit.) In either case, the demand for pesos would increase relative to dollars and so would their "price"—which is the exchange rate. (The prices of Mexican goods might rise, too.) In theory, rational people would continue to sell dollars for pesos until there was no longer any economic advantage in doing so; at that point, \$100 in the United States would buy roughly the same goods and services as \$100 worth of pesos in Mexico—which is also the point at which the exchange rate would reach purchasing power parity.

Here is the strange thing: Official exchange rates—the rate at which you can actually trade one currency for another—deviate widely and for long stretches from what PPP would predict. If purchasing power parity makes economic sense, why is it often a poor predictor of exchange rates in practice? The answer lies in the crucial distinction between goods and services that are tradable, meaning that they can be traded internationally, and those that are not tradable, which are (logically enough) called nontradable. Televisions and cars are tradable goods; haircuts and child care are not.

In that light, let's revisit our dollar-peso example. Suppose that at the official peso-dollar exchange rate, a Sony television costs half as

much in Tijuana as it does in San Diego. A clever entrepreneur can swap dollars for pesos, buy cheap Sony televisions in Mexico, and then sell them for a profit back in the United States. If he did this on a big enough scale, the value of the peso would climb (and probably the price of televisions in Mexico), moving the official exchange rate in the direction that PPP predicts. *Our clever entrepreneur would have a hard time doing the same thing with haircuts.* Or trash removal. Or babysitting. Or rental housing. In a modern economy, more than three-quarters of goods and services are nontradable.

A typical basket of goods—the source of comparison for purchasing power parity—contains both tradable and nontradable goods. If the official exchange rate makes a nontradable good or service particularly cheap in some country (e.g., you can buy a meal in Mumbai for \$5 that would cost \$50 in Manhattan), there is nothing an entrepreneur can do to exploit this price difference—so it will persist.

Using the same Mumbai meal example, you should recognize why PPP is the most accurate mechanism for comparing incomes across countries. At official exchange rates, a Mumbai salary may look very low when converted to dollars, but because many nontradable goods and services are much less expensive in Mumbai than in the United States, a seemingly low salary may buy a much higher standard of living than the official exchange rate would suggest.

Currencies that buy more than PPP would predict are said to be "overvalued"; currencies that buy less are "undervalued." *The Economist* created a tongue-in-cheek tool called the Big Mac Index for evaluating official exchange rates relative to what PPP would predict. The McDonald's Big Mac is sold around the world. It contains some tradable components (beef and the condiments) and lots of nontradables (local labor, rent, taxes, etc.). *The Economist* explains, "In the long run, countries' exchange rates should move towards rates that would equalize the prices of an identical basket of goods and services. Our basket is a McDonald's Big Mac, produced in 120 countries. The Big Mac PPP is the exchange rate that would leave hamburgers costing

the same in America as elsewhere. Comparing these with actual rates signals if a currency is under- or overvalued.³³

In July 2009, a Big Mac cost an average of \$3.57 in the United States and 12.5 renminbi in China, suggesting that \$3.57 should be worth roughly 12.5 renminbi (and \$1 worth 3.5 renminbi). But that was not even close to the official exchange rate. At the bank, \$1 bought 6.83 renminbi—making the renminbi massively undervalued relative to what “burgeronomics” would predict. (Conversely, the dollar is overvalued by the same measure.) This is not a freak occurrence; the Chinese government has promoted economic policies that rely heavily on a “cheap” currency. Of late, the value of the renminbi relative to the dollar has been a significant source of tension between the United States and China—a topic we’ll come back to later in this chapter.

Exchange rates can deviate quite sharply from what PPP would predict. That invites two additional questions: Why? And so what?

Let’s deal with the second question first. Imagine checking into your favorite hotel in Paris, only to discover that the rooms are nearly twice as expensive as they were when you last visited. When you protest to the manager, he replies that the room rates have not changed in several years. And he’s telling the truth. What has changed is the exchange rate between the euro and the dollar. The dollar has “weakened” or “depreciated” against the euro, meaning that each of your dollars buys fewer euros than it did the last time you were in France. (The euro, on the other hand, has “appreciated.”) To you, that makes the hotel more expensive. To someone visiting Paris from elsewhere in France, the hotel is the same price as it has always been. A change in the exchange rate makes foreign goods cheaper or more expensive, depending on the direction of the change.

That is the crucial point here. If the U.S. dollar is weak, meaning that it can be exchanged for fewer yen or euros than normal, then foreign goods become more expensive. What is true for the Paris hotel is also true for Gucci handbags and Toyota trucks. The price in euros

or yen hasn’t changed, but that price costs Americans more dollars, which is what they care about.

At the same time, a weak dollar makes American goods less expensive for the rest of the world. Suppose Ford decides to price the Taurus at \$25,000 in the United States and at the local currency equivalent (at official exchange rates) in foreign markets. If the euro has grown stronger relative to the dollar, meaning that every euro buys more dollars than it used to, then the Taurus becomes cheaper for Parisian car buyers—but Ford still brings home \$25,000. It’s the best of all worlds for American exporters: cheaper prices but not lower profits!

The good news for Ford does not end there. A weak dollar makes imports more expensive for Americans. A car priced at 25,000 euros used to cost \$25,000 in the United States; now it costs \$31,000—not because the price of the car has gone up, but because the value of the dollar has fallen. In Toledo, the sticker price jumps on every Toyota and Mercedes, making Fords cheaper by comparison. Or Toyota and Mercedes can hold their prices steady in dollars (avoiding the hassle of restocking every car on the lot) but take fewer yen and euros back to Japan and Germany. Either way, Ford gets a competitive boost.

In general, a weak currency is good for exporters and punishing for importers. In 1992, when the U.S. dollar was relatively weak, a *New York Times* story began, “The declining dollar has turned the world’s wealthiest economy into the Filene’s basement of industrial countries.”³⁴ A strong dollar has the opposite effect. In 2001, when the dollar was strong by historical standards, a *Wall Street Journal* headline proclaimed, “G.M. Official Says Dollar Is Too Strong for U.S. Companies.” When the Japanese yen appreciates against the dollar by a single yen, a seemingly tiny amount given that the current exchange rate is one dollar to 90 yen, Toyota’s annual operating earnings fall by \$450 million.³⁵

There is nothing inherently good or bad about a “strong” or “weak” currency relative to what PPP would predict. An undervalued currency promotes exports (and therefore the industries that produce them). At

the same time, a cheap currency raises the costs of imports, which is bad for consumers. (Ironically, a weak currency can also harm exporters by making any imported inputs more expensive.) A government that deliberately keeps its currency undervalued is essentially taxing consumers of imports and subsidizing producers of exports. An overvalued currency does the opposite—making imports artificially cheap and exports less competitive with the rest of the world. Currency manipulation is like any other kind of government intervention: It may serve some constructive economic purpose—or it may divert an economy's resources from their most efficient use. Would you support a tax that collected a significant fee on every imported good you bought and used the revenue to mail checks to firms that produce exports?

How do governments affect the strength of their currencies? At bottom, currency markets are like any other market: The exchange rate is the function of the demand for some currency relative to the supply. The most important factors affecting the relative demand for currencies are global economic forces. A country with a booming economy will often have a currency that is appreciating. Strong growth presents investment opportunities that attract capital from the rest of the world. To make these local investments (e.g., to build a manufacturing plant in Costa Rica or buy Russian stocks), foreign investors must buy the local currency first. The opposite happens when an economy is flagging. Investors take their capital somewhere else, selling the local currency on their way out.

All else equal, great demand for a country's exports will cause its currency to appreciate. When global oil prices spike, for example, the Middle East oil producers accumulate huge quantities of dollars. (International oil sales are denominated in dollars.) When these profits are repatriated to local currency, say back to Saudi Arabia, they cause the Saudi riyal to appreciate relative to the dollar.

Higher interest rates, which can be affected in the short run by the Federal Reserve in the United States or the equivalent central bank in other countries, make a currency more valuable. All else equal, higher

interest rates provide investors with a greater return on capital, which draws funds into a country. Suppose a British pound can be exchanged for a \$1.50 and the real return on government bonds in both the United Kingdom and the United States is 3 percent. If the British government uses monetary policy to raise their short-term interest rates to 4 percent, American investors would be enticed to sell U.S. treasury bonds and buy British bonds. To do so, of course, they have to use the foreign exchange market to sell dollars and buy pounds. If nothing else changes in the global economy (an unlikely scenario), the increased demand for British pounds would cause the pound to appreciate relative to the dollar.

Of course, "all else equal" is a phrase that never actually applies to the global economy. Economists have an extremely poor record of predicting movements in exchange rates, in part because so many complex global phenomena are affecting the foreign exchange markets at once. For example, the U.S. economy was ground zero for the global recession that began in 2007. With the U.S. economy in such a poor state, one would have expected the dollar to depreciate relative to other major global currencies. In fact, U.S. treasury bonds are a safe place to park capital during economic turmoil. So as the financial crisis unfolded, investors from around the world "fled to safety" in U.S. treasuries, causing the U.S. dollar to appreciate despite the floundering American economy.

Countries can also enter the foreign exchange market directly, buying or selling their currencies in an effort to change their relative value, as the British government tried to do while fighting off the 1992 devaluation. Given the enormous size of the foreign exchange market—with literally trillions of dollars in currencies changing hands every day—most governments don't have deep enough pockets to make much of a difference. As the British government and many others have learned, a currency intervention can feel like trying to warm up a cold bathtub with one spoonful of hot water at a time, particularly while speculators are doing the opposite. As the British government

was buying pounds, Soros and others were selling them—effectively dumping cold water in the same tub.

We still haven't really answered the basic question at the beginning of the chapter: How many yen should a dollar be worth? Or rubles? Or krona? There are a lot of possible answers to that question, depending in large part on the exchange rate mechanism that a particular country adopts. An array of mechanisms can be used to value currencies against one another:

The gold standard. The simplest system to get your mind around is the gold standard. No modern industrialized country uses gold any longer (other than for overpriced commemorative coins), but in the decades following World War II the gold standard provided a straightforward mechanism for coordinating exchange rates. Countries pegged their currencies to a fixed quantity of gold and therefore, implicitly, to each other. It's like one of those grade-school math problems: If an ounce of gold is worth \$35 in America and 350 francs in France, what is the exchange rate between the dollar and the franc?

One advantage of the gold standard is that it provides predictable exchange ranges. It also protects against inflation; a government cannot print new money unless it has sufficient gold reserves to back the new currency. Under this system, the paper in your wallet *does* have intrinsic value; you can take your \$35 and demand an ounce of gold instead. The "gold standard" has a nice ring to it; however, the system made for catastrophic monetary policy during the Great Depression and can seriously impair monetary policy even during normal circumstances. When a currency backed by gold comes under pressure (e.g., because of a weakening economy), foreigners start to demand gold instead of paper. In order to defend the nation's gold reserves, the central bank must raise interest rates—even though a weakening economy needs the opposite. Economist Paul Krugman, who earned a Nobel Prize in 2008 for his work on international trade, explained recently, "In the early 1930s this mentality led governments to raise interest rates and slash

spending, despite mass unemployment, in an attempt to defend their gold reserves. And even when countries went off gold, the prevailing mentality made them reluctant to cut rates and create jobs.¹⁶ If the United States had been on the gold standard in 2007, the Fed would have been largely powerless to ward off the crisis. Under the gold standard, a central bank can always devalue the currency (e.g., declare that an ounce of gold buys more dollars than it used to), but that essentially defeats the purpose of having a gold standard in the first place.

In 1933, Franklin Roosevelt ended the right of individual Americans to exchange cash for gold, but nations retained that right when making international settlements. In 1971, Richard Nixon ended that, too. Inflation in the United States was making the dollar less desirable; given a choice between \$35 and an ounce of gold, foreign governments were increasingly demanding the gold. After a weekend of deliberation at Camp David, Nixon unilaterally "closed the gold window." Foreign governments could redeem gold for dollars on Friday—but not on Monday. Since then, the United States (and all other industrialized nations) have operated with "fat money," which is a fancy way of saying that those dollars are just paper.

Floating exchange rates. The gold standard fixes currencies against one another; floating rates allow them to fluctuate as economic conditions dictate, even minute by minute. Most developed economies have floating exchange rates; currencies are traded on foreign exchange markets, just like a stock exchange or eBay. At any given time, the exchange rate between the dollar and yen reflects the price at which parties are willing to voluntarily trade one for the other—just like the market price of anything else. When Toyota makes loads of dollars selling cars in the United States, they trade them for yen with some party that is looking to do the opposite. (Or Toyota can use the dollars to pay American workers, make investments inside the United States, or buy American inputs.)

With floating exchange rates, governments have no obligation

to maintain a certain value of their currency, as they do under the gold standard. The primary drawback of this system is that currency fluctuations create an added layer of uncertainty for firms doing international business. Ford may make huge profits in Europe only to lose money in the foreign exchange markets when it tries to bring the euros back home. So far, exchange rate volatility has proven to be a drawback of floating rates, though not a fatal flaw. International companies can use the financial markets to hedge their currency risk. For example, an American firm doing business in Europe can enter into a futures contract that locks in some euro-dollar exchange rate at a specified future date—just as Southwest Airlines might lock in future fuel prices or Starbucks might use the futures market to protect against an unexpected surge in the price of coffee beans.

Fixed exchange rates (or currency bands). Fixed or “pegged” exchange rates are a lot like the gold standard, except that there is no gold. (This may seem like a problem—and it often is.) Countries pledge to maintain their exchange rates at some predetermined rate with a group of other countries—such as the nations of Europe. The relevant currencies trade freely on markets, but each participating government agrees to implement policies to keep its currency trading within the predetermined range. The European Exchange Rate Mechanism described at the beginning of this chapter was such a system.

The primary problem with a “peg” is that countries can’t credibly commit to defending their currencies. When a currency begins to look weak, as the pound did, then speculators pounce, hoping to make millions (or billions) if the currency is devalued. Of course, when speculators (and others concerned about devaluation) aggressively sell the local currency—as Soros did—then devaluation becomes all the more likely.

Borrowing someone else’s strong reputation. At the end of 1990, inflation in Argentina was more than 1,000 percent a year, to no one’s great

surprise given the country’s history of hyperinflation. Is that a currency you want to own? Argentina had long been the world’s inflation bad boy—the monetary equivalent of someone who stands you up for three straight dates and then tries to tell you that the fourth time will be different. It won’t be, and everyone knows it. So when Argentina finally got serious about fighting inflation, the central bank had to do something radical. Basically, it hired the United States as a chapron. In 1991, Argentina declared that it was relinquishing control over its own monetary policy. No more printing money. Instead, the government created a currency board with strict rules to ensure that henceforth every Argentine peso would be worth one U.S. dollar. To make that possible (and credible to the world), the currency board would guarantee that every peso in circulation would be backed by one U.S. dollar held in reserve. Thus, the currency board would be allowed to issue new pesos only if it had new dollars in its vaults to back them up. Moreover, every Argentine peso would be convertible on demand for a U.S. dollar. In effect, Argentina created a gold standard with the U.S. dollar substituting for the gold.

It worked for a while. Inflation plummeted to double digits and then to single digits. Alas, there was a huge cost. Remember all those wonderful things the Fed chairman can do to fine-tune the economy? The Argentine government could not do any of them; it had abdicated control over the money supply in the name of fighting inflation. Nor did Argentina have any independent control over its exchange rate; the peso was fixed against the dollar. If the dollar was strong, the peso was strong. If the dollar was weak, the peso was weak.

This lack of control over the money supply and exchange rate ultimately took a steep toll. Beginning in the late 1990s, the Argentine economy slipped into a deep recession; authorities did not have the usual tools to fight it. To make matters worse, the U.S. dollar was strong because of America’s economic boom, making the Argentine peso strong. That punished Argentine exporters and did further harm to the economy. In contrast, Brazil’s currency, the real, fell more than

50 percent between 1999 and the end of 2001. To the rest of the world, Brazil had thrown a giant half-price sale and Argentina could do nothing but stand by and watch. As the Argentine economy limped along, economists debated the wisdom of the currency board. The proponents argued that it was an important source of macroeconomic stability; the skeptics said that it would cause more harm than good. In 1995, Maurice Obstfeld and Kenneth Rogoff, economists at UC Berkeley and Princeton, respectively, had published a paper warning that most attempts to maintain a fixed exchange rate, such as the Argentine currency board, were likely to end in failure.⁷

Time proved the skeptics right. In December 2001, the long-suffering Argentine economy unraveled completely. Street protests turned violent, the president resigned, and the government announced that it could no longer pay its debts, creating the largest sovereign default in history. (Ironically, Ken Rogoff had by then made his way from Princeton University to the International Monetary Fund, where, as chief economist, he had to deal with the economic wreckage that he had warned against years earlier.) The Argentine government scrapped its currency board and ended the guaranteed one-for-one exchange between the peso and the dollar. The peso immediately plunged some 30 percent in value relative to the dollar.

Funny money. Some currencies have no international value at all. In 1986, I crossed through the Berlin Wall into East Berlin, behind the Iron Curtain. When we crossed into East Germany at “Checkpoint Charlie,” we were required to change a certain amount of “hard currency” (dollars or West German marks) for a certain amount of East German currency. How was that exchange rate determined? Make believe. The East German mark was a “soft” currency, meaning that it did not trade anywhere outside of the communist world and therefore had no purchasing power anywhere else. The exchange rate was more or less arbitrary, though I’m fairly certain that the purchasing power of what we got was worth less than the purchasing power of what we gave

up. In fact, we weren’t even allowed to take our East German money out of the country when we left. Instead, the East German border guards took what we had left and “put it on account” (that’s really what they said) for our next visit. Somewhere in the now unified Germany, there is an account with my name on it that contains a small amount of worthless East German currency. So I’ve got that going for me.

Soft currencies were a more serious problem for the few U.S. companies doing business in communist countries with soft currencies. In 1974, Pepsi struck a deal to sell its products in the Soviet Union. Communists drink cola, too. But what the heck was Pepsi going to do with millions of rubles? Instead, Pepsi and the Soviet government opted for old-fashioned barter. Pepsi swapped its soft-drink syrup to the Soviet government in exchange for Stolichnaya vodka, which did have real value in the West.⁸

That all sounds so orderly, except for the riots in the streets in Argentina. In fact, the Argentina-type currency meltdown is surprisingly frequent. Let’s revisit a line from a few pages ago: “Investors take their capital somewhere else, selling the local currency on their way out.” Only now, let’s dress that statement up to more closely approximate reality: “Investors panic, weeping and screaming as they sell assets and ditch the local currency—as much as possible, for whatever price is possible—in hopes of getting out the door before the market completely collapses!”

Argentina, Mexico, Russia, Turkey, South Korea, Thailand, and the country for which we’ve named the chapter, Iceland. What do they have in common? Not geography. Not culture. Certainly not climate. They are all countries that have suffered currency crises. No two crises are exactly the same. They do have a pattern, usually a play in three acts: (1) A country attracts significant foreign capital. (2) Something bad happens: a government borrows too heavily and stands at risk of default; a property bubble bursts; a country with a pegged exchange rate faces devaluation; a banking system is exposed as rife with bad loans—or some combination of all of these things. (3)

Foreign investors try to move their capital somewhere else—preferably before everyone else does. Asset prices fall (as foreigners sell) and the currency plunges. Both of these things make the underlying economic problems worse, which causes asset prices and the currency to plunge further. The country pleads with the rest of the world to help stop the downward economic spiral.

To get a sense of how this all plays out, let's look at the most recent victim: Iceland. Iceland is not a poor, developing country. In fact, Iceland was at the top of the UN Human Development Index rankings in 2008. Here are Iceland's three acts, as best I can figure them out:

Act I. In the first decade of the twenty-first century, Iceland's currency, the Icelandic krona, was extremely strong, and real interest rates were high by global standards. Iceland's relatively unregulated banks were attracting capital from all over the world as investors sought high real returns. At the peak, Iceland's banks had assets 10 times the size of the country's entire GDP. The banks were using this huge pool of capital to make the kinds of investments that seemed very smart in 2006. Meanwhile, the high domestic interest rates induced Icelanders to borrow in other currencies, even for relatively small purchases. An economist at the University of Iceland told CNN Money, "When you bought a car, you'd be asked, 'How do you want the financing? Half in yen and half in euros?'"⁹

Act II. The global financial crisis was bad for the world and disastrous for Iceland. Iceland's banks suffered huge losses from bad investments and nonperforming loans. By the fall of 2008, the country's three major banks were defunct; the central bank, which had taken control of the largest private banks, was technically in default as well. The *New York Times* reported a story in November 2008 that began, "People go bankrupt all the time. Companies do, too. But countries?"

As the krona plummeted, the cost of all those consumer loans in foreign currencies skyrocketed. Think about it: If you borrow in euros,

and the krona loses half its value relative to the euro, the monthly payment in krona on your loan *doubles*. Of course, many of the assets that Icelanders had purchased with those loans, such as homes and property, were simultaneously plummeting in value.

Act III. The Icelandic krona lost half its value. The stock market fell by 90 percent; GDP fell 10 percent; unemployment hit a forty-year high. People were angry—just like in Argentina. One woman told *The Economist*, "If I met a banker, I'd kick his ass so hard my shoes would be struck inside." And she was a preschool teacher.¹⁰

Even the Big Mac Index had a sad postscript in Iceland. In October 2009, Iceland's three McDonald's restaurants closed after becoming victims of the financial crisis. McDonald's required that its Iceland franchisees buy their food inputs and packaging from Germany. Because the krona had plummeted in value relative to the euro and because the government had imposed high import tariffs, the cost of these inputs from Germany roughly doubled. The owner of the Iceland franchisees said that to make a "decent profit," a Big Mac would have had to sell for the equivalent of more than six dollars—higher than anywhere else in the world and an untenable price for a country in the midst of a deep recession. McDonald's closed its doors in Iceland instead.¹¹

The economic wreckage that results time after time as investors flee a country suggests an obvious fix: Maybe it should be harder to flee. Some countries have experimented with capital controls, which place various kinds of limits on the free flow of capital. Like many obvious fixes, this one has less obvious problems. If foreign investors can't leave a country with their capital, they are less likely to show up in the first place. It's a bit like trying to improve revenues at a department store by banning all returns. A group of economists studied fifty-two poor countries between 1980 and 2001 to examine the relationship between financial liberalization (making it easier to move capital in and out of the country) and economic performance. There is a trade-