

## **The East Asian Financial Crisis of 1997**

These notes discuss the Asian Financial Crisis of 1997. This is a great example of a currency crisis that propagates across an entire region. Beginning in Thailand, it spread to at least 6 other countries triggering a severe regional recession and becoming a global drag on growth. In this example, the regions Central Banks are ancillary players compared to some of the other case studies we have looked at.

Prior to the crisis, economists frequently spoke of the East Asian “growth miracle,” where numerous East Asian economies experienced rapid economic growth that elevated them from their previous, impoverished, status. Some like Japan, Korea, and Singapore grew to be among the wealthier economies in the world. The crisis that we are discussing specifically refers to the following 8 economies:

1. Korea
2. Thailand
3. Malaysia
4. Singapore
5. Indonesia
6. Phillipines
7. Hong Kong
8. Taiwan

Note that this list excludes the regions two largest economies: Japan and China. They were affected, but less directly. At the time Japan was the region’s juggernaut. It had already begun, however, a period of mediocre macroeconomic performance that continues through today. Because it had a floating exchange rate, however, it was not subject to a currency crisis. China was also less affected despite a fixed exchange rate. This is because China was still relatively closed, shutting off many of the mechanisms that allow for propagation.

The following chart shows real time estimates (from 1997) of past and upcoming output growth for several Asian economies:<sup>1</sup>

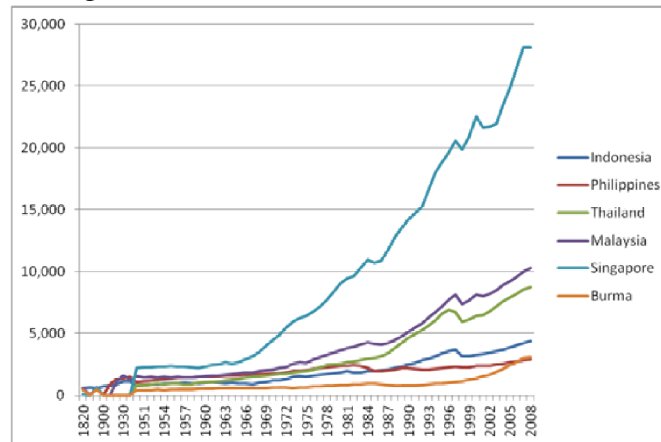
Figure 1: Real Time Data on Asian Economic Growth

	GDP per head 1996*, \$	% annual average 1970-96	GDP growth		
			Estimate 1997	Forecast† 1998	Forecast† 1999
China	3,120	9.1	8.9	6.3	7.5
Hong Kong	25,400	7.5	5.1	1.8	3.8
Indonesia	4,280	6.8	5.4	-5.2	2.9
Malaysia	9,703	7.4	7.4	1.6	1.8
Philippines	3,060	3.6	4.8	1.9	4.0
Singapore	25,650	8.2	7.6	2.7	5.0
South Korea	12,410	8.4	5.6	-2.5	1.7
Taiwan	17,720	8.3	6.3	5.0	5.7
Thailand	8,370	7.5	-0.7	-4.0	3.7
Rich industrial countries	22,700	2.7	2.8	2.6	2.6

Sources: World Bank; OECD; EIU  
 \*At purchasing-power parity †Average of forecasts by Crédit Lyonnais, HSBC James Capel, J.P. Morgan

The next chart takes a longer view of output growth for many of the economies we are discussing.<sup>2</sup>

Figure 2: Southeast Asian Economic Growth



### Background

The background to the crisis is the heart of the story. By understanding why the region was

<sup>1</sup>Source: “Tigers Adrift.” March 5, 1998. *The Economist*

<sup>2</sup>Source: Wan Hamni

vulnerable, the currency crisis that follows becomes entirely predictable. We consider several major factors:

1. Optimism about growth. Recall that currency crisis usually happen when an economy is already in a macroeconomic downturn. Because these economies had grown so rapidly for so long, the public was overly optimistic about their future prospects for growth. If economic growth is strong, then demand for these economies' currencies would remain high, preventing the depreciation that defines a currency crisis.

Recall that Mexico's Tequila Crisis had occurred only a few years earlier. But because the Asian economies had a good track record, while Mexico did not, the public did not believe that the Mexican experience was especially relevant for East Asia. In believing this, they ignored many fundamental flaws in these economies that suggested growth would slow. One of these is simple convergence, as an economy becomes wealthier, easier opportunities for growth are exhausted and growth rates tend to slow (it would not be possible, for example, for a developed economy like the United States to grow at 7% a year for a sustained period of time). Other fundamental problems are discussed below.

2. Moral hazard in financial markets. Paul Krugman has referred to this type of moral hazard as "heads firms win, tails taxpayers lose." It refers to cases where lenders come to expect that in the event of a crisis, they will be rescued either by their government or by an international entity such as the International Monetary Fund (which would eventually organize a controversial bailout). This was probably a rational belief. Many of the affected economies' governments did have a track record of making these sorts of bailout and one of the IMF's missions is to provide relief to countries in crisis. The incentive problem is straightforward. If lenders expect to keep the profits if times are good, but not bear all of the losses if times are bad, then they will make more loans than is efficient. It does seem clear that East Asia was experiences a credit boom not unlike what led to the Financial Crisis in 2008 in the United States and other countries.

Jefferey Sachs has offered the following quote about the financial systems in regions prone to

currency crises, including East Asia:<sup>3</sup>

Throughout Latin America, Central Europe and South-East Asia, banks have been deregulated and privatized in recent years, allowing them much greater latitude to borrow from abroad. Banks and near-banks such as Thailand's now notorious financial trusts become intermediaries for channeling foreign capital into the domestic economy. The trouble is that the newly liberalized banks and near-banks often operate under highly distorted incentives. Under-capitalized banks have incentives to borrow abroad and invest domestically with reckless abandon. If the lending works out, the bankers make money. If the lending fails, the depositors and creditors stand to lose money, but the bank's owners bear little risk themselves because they have little capital tied up in the bank. Even the depositors and the foreign creditors may be secure from risk, if the government bails them out in the case of bank failure

We hear about moral hazard any time there is a large scale bailout. This case study is a good example. Moral hazard is important and has to be weighed against the benefits of any potential bailout. And bailouts should be designed to minimize the moral hazard that results.

3. Financial System Fragility. This point is certainly related to #2. Prior to 2007, many East Asian governments had significantly de-regulated their financial and banking sectors. This reduced capital requirements and capital controls and generally made it much easier for lenders to extend credit. Motivated by the other factors on this list, they did so.

Here are the fraction of non-performing loans for all eight countries:<sup>4</sup>

i. Thailand: 13%

ii. Korea: 8%

iii. Hong Kong: 3%

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<sup>3</sup>Source: Sachs, J, July 30, 1997. *Financial Times*

<sup>4</sup>Data taken from Corsetti, G., Pesenti, P., and N. Roubini. 1999. "What Caused the Asian Currency and Financial Crisis." *Japan and the World Economy*, Vol. 11(3): 305-373.

- iv. Indonesia: 13%
- v. Malaysia: 10%
- vi. Philippines: 14%
- vii. Singapore: 4%
- viii. Taiwan: 4%

4. Poor profitability. In these economies, many firms, including financial institutions, had begun to exhibit poor profitability. In many economies, large scale lenders were insolvent in that their assets were worth less than their liabilities. These firms were doomed once their short term access to credit dried up. In other cases, the return on capital (the expected profit made against borrowing \$1) was less than the cost of capital (the interest paid against borrowing \$1). This is a sign that credit has become too easy.

5. Low foreign reserves. These 7 countries were all on some type of fixed exchange rate. This did not always mean that the currencies were on a strict float. But in all cases, the Central Bank intervened in order to keep the value of the currency fairly high. Recall that keeping a currency strong in this manner requires that the Central Bank hold adequate reserves. By '997, however, the level of reserves (often measured as a ratio of the money supply) had become dangerously low in several countries.

This point is critical. When reserves are low, it becomes profitable for speculators to attack the currency. Just such a speculative attack against the Thai Baht would mark the start of the crisis in 1997.

Here is the ratio of the M2 money supply to foreign reserves in 1997:<sup>5</sup>

- i. Thailand: 5.29
- ii. Korea: 10.50
- iii. Hong Kong: 3.18

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<sup>5</sup>Data taken from Corsetti, G., Pesenti, P., and N. Roubini. 1999. "What Caused the Asian Currency and Financial Crisis." *Japan and the World Economy*, Vol. 11(3): 305-373.

- iv. Indonesia: 7.37
- v. Malaysia: 4.99
- vi. Philippines: 6.97
- vii. Singapore: 1.17
- viii. Taiwan: 6.30

We can think of ratios above 5 as being dangerously high in terms of inviting speculative attacks.

6. Political instability. This is harder to measure than many of the other factors on this list. But there is ample evidence that the region was suffering from increased political volatility compared to earlier years. We can see this in the shuffling of cabinet ministers.

Political instability is problematic in this case study because it has a tendency to make policy more short-sighted than if the political climate were more stable. There may, for example, be a tendency to allow for easier credit in exchange for the short run benefits while paying less attention to the long term risks of such a policy. Or there may be a reluctance to gradually depreciate the currency because the government does not want to hit households with a higher cost of living, in order to reduce the long term risk of a currency crisis.

7. Current account deficits. The current account is the change in assets between a country and the rest of the world. A country that is running a current account deficit is thus becoming more indebted to the rest of the world while an economy in current account surplus is becoming less indebted.

A trade balance is part of the current account balance. If Country A consumes \$200 billion more imports than it exports, then the rest of the world must acquire \$200 billion of Country A's assets to compensate. Here a trade deficit becomes a current account deficit. But the current account includes other factors like foreign direct investment, the most boring topic in economics.

Here are the current account deficits for some of the countries we are discussing:<sup>6</sup>

- i. Thailand: 8.5% of GDP (in deficit since at least 1990)
- ii. Korea: 4.8% of GDP (in deficit since at least 1990)
- iii. Hong Kong: 2.4% of GDP (in deficit since 1995)
- iv. Indonesia: 3.3% of GDP (in deficit since at least 1990)
- v. Malaysia: 3.7% of GDP (in deficit since at least 1990)
- vi. Philippines: 4.7% of GDP (in deficit since at least 1990)

Only Taiwan and Singapore ran current account surpluses. Note that Thailand's deficit was the largest. Thailand had been running large current account deficits since at least 1990. This is not unrelated to their being the first domino to fall.

Many economists believe that current account deficits are not too worrisome for economies on a floating exchange rate like the United States. But large and sustained current account deficits can be problematic for countries on managed exchange rates for a pair of reasons. First, they may signal that the currency is overvalued thus inviting a speculative attack. Second, the change in assets may include a decline in the monetary authority's foreign reserves, thus making the economy more susceptible to a currency crisis.

7. Japan. Given its status in the region, we might have expected Japan to play a role similar to the that of the United States in Tequila Crisis. But whereas the U.S. had been macroeconomically sound in 1994, Japan had already entered what has come to be known as its "lost decades." Slowing Japanese demand for imports was contributing to the current account deficits of the affected countries. It also limited Japan's ability to more directly intervene to boost the regional economy.

8. Foreign debt. Here, I am not generally referring to sovereign debt which was generally at sustainable levels. Instead, it is clear that private firms in these countries were holding a lot of debt in foreign currencies. This made them vulnerable to a depreciation of their currency which would

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<sup>6</sup>Data taken from Corsetti, G., Pesenti, P., and N. Roubini. 1999. "What Caused the Asian Currency and Financial Crisis." *Japan and the World Economy*, Vol. 11(3): 305-373.

increase their debt burden, measured in the domestic currency, and thus expose them to potential failure when the crisis hit. It may also have made the Central Banks reluctant to devalue their currencies to avert a currency crisis.

Here are the fraction of foreign debt as a share of GDP all eight countries in 1996:<sup>7</sup>

- i. Thailand: 50.05%
- ii. Korea: 28.40%
- iii. Hong Kong: 15.44%
- iv. Indonesia: 56.74%
- v. Malaysia: 40.06%
- vi. Philippines: 49.75%
- vii. Singapore: 10.74%
- viii. Taiwan: 10.07%

This, along with more expensive imports, is a main way in which currency crises often lead to recessions. This applies to this case study.

These eight factors are complex and interrelated. Fundamentally, we should see the regional economy as suffering from excessive credit, including foreign debt, in an environment where monetary policy was erring by keeping currencies to overvalued without adequate foreign reserves.

### *Events of the Crisis*

Keep in mind that recession causes currency crises and currency crises cause recession. In the discussion that follows, this dual causation manifests itself as a currency crisis making an existing recession worse.

By 1997, the troublesome financial system had already begun to create a round of bankruptcies among distressed firms. This was especially prominent in Thailand and Korea where a large num-

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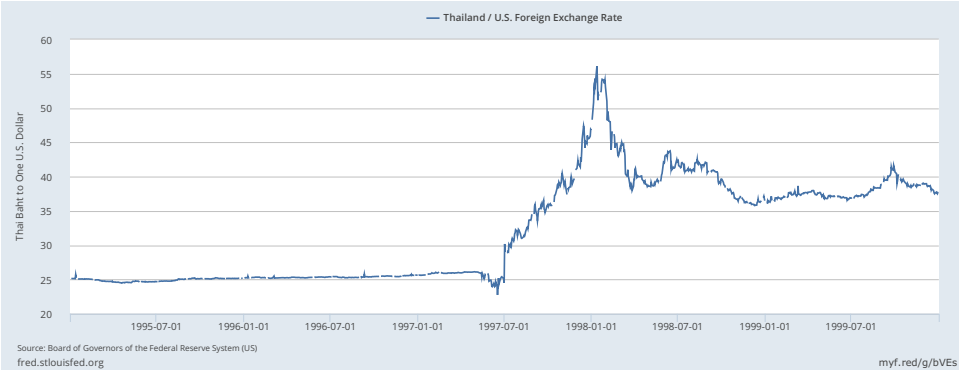
<sup>7</sup>Data taken from Corsetti, G., Pesenti, P., and N. Roubini. 1999. "What Caused the Asian Currency and Financial Crisis." *Japan and the World Economy*, Vol. 11(3): 305-373.



ber of financial firms were already insolvent before the currency crisis began. These bankruptcies led to a decline in economic growth across the region.

The crisis itself begins in the Spring of 1997. Thailand, as shown earlier, was the most vulnerable economy in the region. As its foreign reserves dwindled, attacks on the Baht intensified and on July 2, 1997 the Thai government abandoned its management of the exchange rate and allowed the Baht to float.

Figure 3: Baht to Dollar exchange rate



Following the speculative attack, the value of the baht against the dollar fell by about 50%. The effects of this are straightforward. Firms carrying foreign debt failed as their debt burdens, measured in the domestic currency ballooned. Imported goods became far more expensive. These effects amplified the effects of the existing recession sending Thailand into a severe recession:

Figure 4: GDP for Thailand

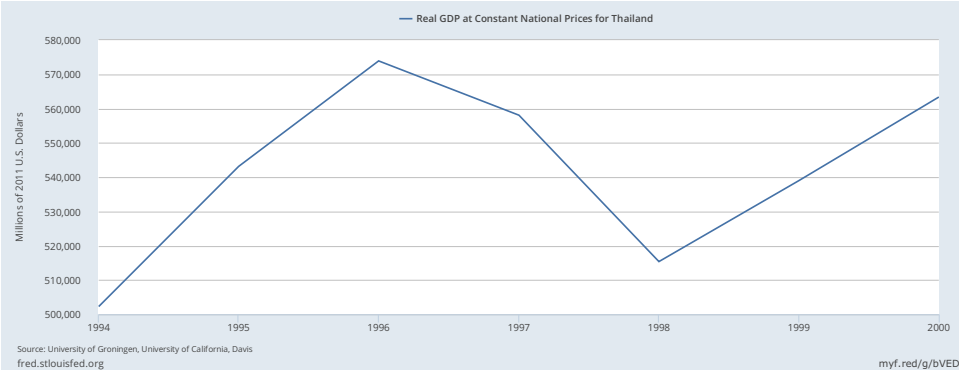


Figure 5: Youth Unemployment for Thailand



The next countries to be affected later in July were Malaysia, Indonesia, and Philippines. The macroeconomic fundamentals of these countries were similar to those of Thailand. It is hard to say how related these crises were to that of Thailand. Given the similarities, they may have been independent events. It is also possible that the Thai crisis spurred speculative attacks in other countries thus moving up the timing of subsequent currency crises. But all three of these countries soon saw large scale devaluations as shown below.<sup>8</sup>

We next turn our attention to Korea to illustrate another way in which this type of crisis can propagate. Korea was among the wealthier and larger economies in the regions. As a result, a fair amount of foreign debt was held by Korean firms and much of the foreign debt was denominated in the Korean won. Korea had already been hard hit by bankruptcies, especially in the financial sector, that were caused by poor fundamentals and not the regional currency crisis. Korea was able to resist a depreciation until late in 1997. The ensuing depreciation was, however, severe.

When devaluations lead to failures in the affected countries, the holder of this debt are also harmed if it causes default. Because of its position in the region, this effect hit Korea especially hard. The recession that followed in Korea was severe and long-lasting.

Currency crises were not inevitable. This can be seen in the examples of Hong Kong and Singapore. Although also having a managed exchange rate, these countries were fundamentally

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<sup>8</sup>Source: [www.slideshare.net](http://www.slideshare.net)

Figure 6: Selected Asian Currency Devaluations  
**Selected Asian Exchange Rates Against US\$**  
 June 1997 = 100

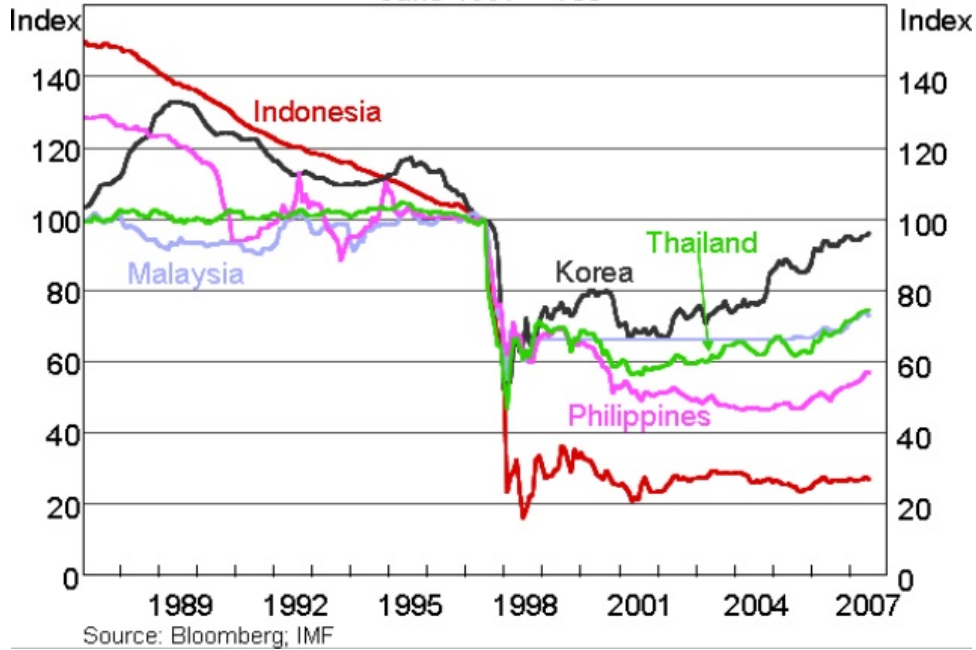
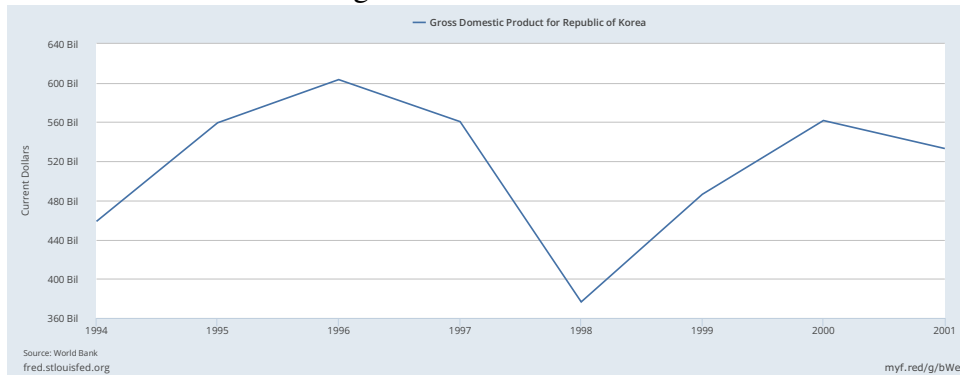


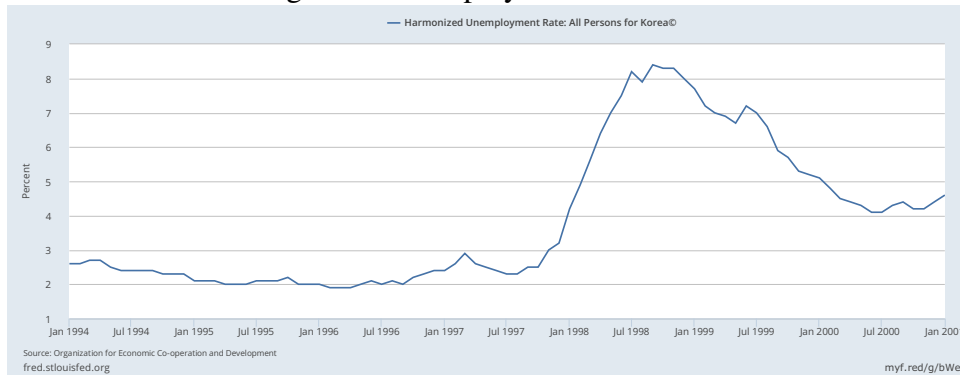
Figure 7: GDP for Korea



sound enough to avoid significant depreciations. Taiwan was an intermediate case. It experienced a depreciation, though minor in comparison to Thailand or South Korea.

China was also able to maintain its exchange rate peg. There are a few reasons. First, it was not as interconnected with the regional economies. Second, it had set a peg that resulted in a devalued currency in contrast to the overvalued pegs of the countries discussed here.

Figure 8: Unemployment for Korea



### *The Role of Monetary Policy*

The regions Central Banks made two critical decisions that contributed to the crisis:

1. They chose to set exchange rate pegs that overvalued the currencies. In hindsight, these policies seem short-sighted. Overvalued currencies provide a short-term benefit because they make imports cheap thus providing an immediate benefit to households. This can benefit a government that is concerned primarily with its short-term survival (see the earlier point on political instability as a contributing factor). This point illustrates the desire for a politically independent Central Bank. It is notable that the Central Banks of the region are not as independent as the Federal Reserve.

The downside, however, is that such a monetary policy puts pressure on the Central Banks to defend their pegs. This case study shows the downside of such a course of action. It also may have adverse long-term effects by depriving the country of the chance for export-based growth. Export-based growth was a significant factor in the impressive regional economic growth demonstrated up until the crises.

2. One way that a Central Bank can defend a peg and fight off speculative attacks on the currency is to raise interest rates. Such a policy increases the return to holding the currency and thus increases demand.

The region's Central Banks did not, however, raise interest rates. Doing so might have prevented the currency crisis. We should point out that it is not obvious that raising rates was a

desirable policy. First, doing so could have deepened the recession due to the ordinary contractionary effect of higher interest rates. Second, the Federal Reserve has been pilloried for raising rates in 1931 in an ill fated attempt to defend the U.S. gold standard which operated similarly to a fixed exchange rate. If keeping interest rates low was a mistake, it was not obvious at the time.

### *The IMF Bailout*

The International Monetary Fund (IMF) was created at the Bretton Woods Conference. Although its most important role is to keep the demand for macroeconomists high and thus drive up my salary, it was also tasked with the job of international lender of last resort. Its job is thus to intervene by offering liquidity in situations like the Asian Financial Crisis.

The IMF did provide liquidity to the affected countries. Notably, however, IMF support was conditional. Countries accepting a bailout had to adopt contractionary monetary policy (higher interest rates) and contractionary fiscal policy. The motivation is that these policies would prevent further depreciations of the currencies that would have made the crisis even worse. Recipients also had to adopt structural reforms of to their financial sector that included closing some banks and generally reducing access to credit. The motivation here is to fix the underlying cause of the currency crises.

The IMF response has been heavily criticized. The reasons include:

1. Higher interest rates may have done more harm than good. They have the ordinary effect of contracting the economy. Furthermore, they may have hurt the balance sheet of already distressed financial institutions which now had to pay higher rates on domestic debt and which would have a harder time finding credit worthy borrowers to extend credit to.
2. Fiscal austerity may also have deepened the recessions affecting the region. The IMF would come under similar criticism for insisting on similar austerity measures when participating in recent European bailouts in countries such as Ireland.

3. It is clear that the region's financial system needed significant structural reforms. IMF critics argue that the time to enact these reforms is after the crisis has passed, not when the crisis is still in full force. These structural reforms placed a large burden on already distressed financial firms.

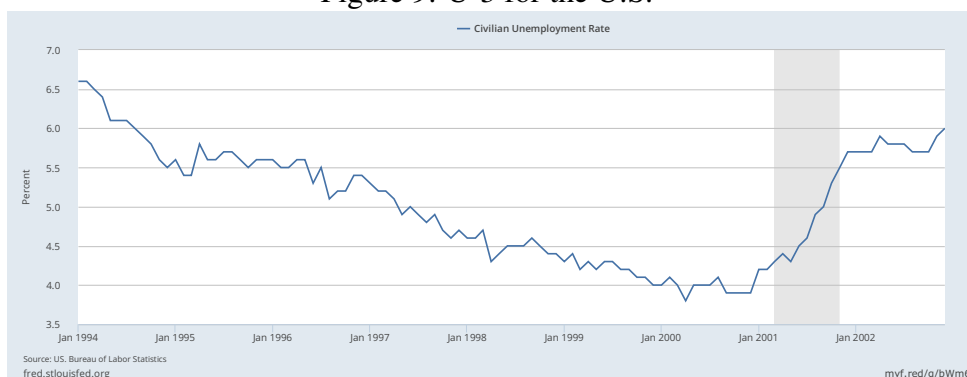
Finally it is worth consider the relationship between the IMF and moral hazard. Recall that the expectation of a bailout, including from the IMF, likely contributed to the credit boom that helped lead to the crisis. Thus the bailout itself may have contributed to future crises throughout the world. It is also reasonable to consider how the conditions imposed by the IMF may have affected moral hazard. Did the structural reforms to the banking sector, for example, increase the cost of failure to these firms, thus mitigating moral hazard concerns?

### *The Effect on the U.S*

The U.S. had two obvious sources of exposure to the crisis. Most importantly, the East Asian recession reduced the demand for U.S. goods and thus harmed U.S. growth through the export sector. Second, and less importantly, some U.S. firms were directly exposed to defaulting East Asian debt. As seen in Figure 1, this led to a small reduction in expected U.S. economic growth.

The U.S. economy was historically strong at the time. The U-3 unemployment rate would continue to fall to under 4% in late 2001. Soon thereafter, the U.S. would enter a mild recession.

Figure 9: U-3 for the U.S.



It is very unlikely that the East Asian Crisis caused the later U.S. recession. In addition to the

time lag being quite long, the bursting of a bubble in the market for technology stocks is a far more likely explanation for the U.S. recession.

The biggest effect on the U.S. may have come much later. Asian economies responded to the crisis by increasing their holdings of foreign assets which help protect against future currency crises. China would, for example, increase their holdings of U.S. assets to over \$1 trillion. This represents savings on the part of the Asian economies and borrowing from the American perspective. This has been referred to as the *Global Savings Glut*.

The Global Savings Glut increased demand for U.S. debt, reducing interest rates in the United States. These low interest rates may have incentivized mortgage lending in the U.S., contributing to the housing bubble that would end with the Financial Crisis of 2008 and ensuing Great Recession. This theory is controversial and many economists argue that the relationship between the Global Savings Glut and Great Recession is tenuous. It does, however, illustrate how one crisis can set the stage for another crisis many years later.